THE SCOTCH WHISKY INDUSTRY (1939-1961)

An Economic Study.

THESIS SUBMITTED FOR THE DEGREE OF

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by

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'The true reason why Highlanders are so fond of distillation is that it costs them little labour, and brings them what they conceive to be profit.'

Sir G. Mackenzie,

'A General Survey . . . of the Counties of Ross and Cromarty, 1810.

PREFACE AND ACKNOWLEDGEMENTS.

The writer was encouraged to make a study of a Scottish industry on account of an interest stimulated by Professor Emeritus A. L. Macfie, late of the Department of Political Economy, and Professor D. J. Robertson of the Department of Social and Economic Research, both in the University of Glasgow. The writer has spent about four years of her life in Strathspey, and her curiosity was early aroused in the Highland Economy of these parts with its prosperous distilling industry. These two influences had a catalytic effect upon each other, and the present study of the Scotch Whisky Industry was thus initiated. Scotch Whisky lends itself to reminiscence and anecdote, but this study is an attempt to present a contemporary economic analysis of a typically Scottish industry, which is enjoying unprecedented levels of activity.

As the firms in the Scotch Whisky industry are highly interdependent, each firm presumes to know what its competitors are about, and there is a more than usual reticence to impart information. The industry seems to take pride in the fact that it is inscrutable. The

collection of material for this study was therefore formidable. The writer has drawn conjectural conclusions from such data as came to hand - conclusions which are open to correction if substantial proof is forthcoming.

Post graduate research has been pursued in the Department of Political Economy in the University of Glasgow under Professor Thomas Wilson. Mr. E. B. Gibbs has supervised the writer's investigations, and his criticism and guidance have been invaluable. Grateful acknowledgement is made to him and his colleagues for their help and interest.

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INTRODUCTION.

The following study of the Scotch Whisky industry during the period 1939 to 1961 is an economic one. It is impossible in reality to disentangle and isolate the economics of an industry from its social consequences. Every economic choice is made between competing ends to the attainment of which there are only scarce means. The question of the 'rightness' or morality of the choice is one of which the economist is well aware. The chapters which follow are in no way to be interpreted as a justification of the industry on social or moral grounds. Such a judgement lies outside the scope of this thesis.

At the same time, however, it is well to remember to what extent the economy of this country is peculiarly indebted to this one industry - both for its supreme effort in war time to pay for essential importation, and in peace to increase the British export drive.

To the economist, it may be disturbing to find the British economy so dependent upon an industry whose product is so vulnerable to discrimination abroad, where 75% of the total annual output of Scotch whisky is consumed. The volume of Scotch whisky despatched overseas, to such

nations as the United States of America, is impressive for it is the largest single importer, but Scotch whisky forms only some 9% of all the whiskies therein consumed.

These are not all the economic facts which have to be borne in mind. Standards of living in Scotland, its employment structure, and many other economic variables would be affected were the Scotch whisky industry to be taxed or otherwise legislated out of existence. With what would it be replaced?

The conspicuous success of the industry both during and since the Second World War is thus both a cause for gratification and for alarm - alarm at the extent to which the economy leans upon an industry whose product is so subject to trade restrictions overseas, and at the same time, gratification with the achievements of a pro-:gressive and uniquely Scottish industry.

SECTION I.

Chapter 1.

A SURVEY OF THE SCOTCH WHISKY INDUSTRY.

THE SCOTCH WHISKY INDUSTRY.

The Scotch whisky industry is a peculiarly Scottish industry - by tradition and repute, and also by legal definition at both Scottish and English law.

All whiskies, whatever their country of origin, are different forms of ethyl alcohol. Due to their different home lands, their raw materials and other constituents may vary, and each will have certain characteristics modified by its method of processing, bonding, and in some cases, by blending. Scotch whisky can thus be clearly distinguished by both the expert and the ordinary consumer from Rye and Bourbon Whiskies (distilled mainly in the United States and Canada) and from its neighbour, Irish Whiskey made in Eire or Ulster. Imitations of Scotch whisky made in countries as far apart as Japan and Argentina have signally failed to copy the unique attributes of Scotch whisky.

The word 'Scotch' in conjunction with whisky has therefore a geographical significance, in contrast to many products which were once typical of a particular location, but which now are commonly made anywhere.

Two types of whisky are produced in Scotland. The first and oldest is pot still or malt whisky, made wholly from malted barley. It contains some 0.5% of residuals, such as esters, aldehydes and higher alcohols, which, it is asserted, give it a distinctiveness and aroma which mark it off from all other whiskies. Pot still whisky is made by a time-honoured process of distillation and because the human element of tradition enters so largely into its manufacture, it could be described as a craft product. Its origins in Scotland have been traced back to the late 15th century.

The second and more modern type of Scotch whisky is patent-still whisky made from a mixture of unmalted barley and other cereals (e.g. maize) with a small proportion of malted barley. Patent still whisky is made in a Coffey still, named after Aeneas Coffey, who operated such a still in Dublin about 1831. Prior to this date, a Scot, Robert Stein of Kincardine, Fife, had patented a similar still to produce alcohol by continuous distillation. Coffey's still was an improvement upon it. In the Patent still, the distillation is carried out to limit the volume of residuals to about 0.1%, and the resulting whisky has much less character and bouquet than pot still whisky. It is a grain spirit made by continuous process.

About 1860 the practice arose of blending pot still whiskies with patent still whiskies, and it was found that a blended whisky was readily accepted by the public. The proportions in a blend may vary but most consist of from 70% to 30% patent still whisky, the remainder being pot still whisky. It is maintained that the latter alone can give character to the blend, because even experts find difficulty in distinguishing between the lighter and blander patent still whiskies. Blending demands both skill and knowledge, for some whiskies combine more harmoniously than others. Furthermore, in seeking a continuing market for a blended whisky both the quality and constancy of the blend must be maintained.

The Definition of Scotch Whisky.

Although Scotch whisky has now been differentiated from other whiskies by legal process, this development is comparatively recent. Blending brought a greatly increased market for 'Scotch Whisky' especially in Lowland Scotland and England, and it was then that a demand was made for some action to be taken to define what constituted certain classes of spirits. The problem initially arose in Ireland, where in 1876 Irish pot whisky distillers complained to the Inland Revenue that Scottish patent still

whiskies were being blended with those from Irish pot stills. No action was taken, but in 1891, a Select Committee of the House of Commons, appointed to inquire into 'matters relating to spirits', reported that there was no legal definition of whisky anyway, and it declined to give any. There was a noticeable divergence in trade opinion. The pot still interests refused to allow the name 'Scotch Whisky' to be applied either to grain whiskies or blended whiskies from Scotland.

Matters were brought to a head by prose-:cutions in London in 1905 when persons selling blended 'Scotch' and 'Irish' whisky were convicted of 'not supplying an article demanded'. Although the accused were convicted, the grain distillers supported them in their appeal, and by propaganda and advertisement on an extensive scale they kept the issue before the public. This 'What is whisky' case eventually was examined by a Royal Commission in 1908. Although there was conflicting evidence, its decisions appeared to favour the patent still distillers. It defined 'whiskey' as 'a spirit obtained by distillation from a mash of cereal grains saccharified by a diastase of malt'. In the Commission's view 'Scotch Whiskey' (sic.) is "whiskey as above, distilled in Scotland." The result was a blow to the traditional malt whisky distillers with their time

consuming distillations in pot stills, but it was the green-light to the patent still distillers.

Thereafter it was not until the Finance Act of 1933 that legislation gave effect to this recommend-:ation. In fact the 1908 definition could have included Rye and Bourbon whiskies had they been made in Scotland. It has been estimated however that as late as 1938 about 10% of all blended Scotch whisky placed on the market was a mixture of Scotch pot still whisky and Irish patent still whisky. This practice was the result of scarcities in Scottish grain whiskies after the First World War. Similarly pot still whisky from Scotland and Canadian patent still whiskies were sold in Canada by Scottish firms as 'Scotch Whisky'. *1 The blending of two whiskies of Scottish origin was thus not uniform and universal up to the second war.

In 1939, in the Justiciary Appeal Court of Scotland these issues of great concern to the whole Scotch whisky industry were settled. The Scotch Whisky Association *2 of firms had appreciated during the

*1 In several countries, alcohol, made from an admixture of domestic spirits and imported Scotch malt whisky at present provides an unwelcome form of price competition.

*2 The Scotch Whisky Association is a trade association of all the principal firms of distillers and blenders engaged in the Scotch whisky industry. See Appendix I, 6.

inter-war phase that no authoritative definition could be made by the Government or any other competent body until members had first sold the Irish patent still whiskies which they held, even although the majority of blenders, and indeed the largest combination in the trade,*1 acted to the contrary.

The case in the Appeal Court concerned the proprietors of a blended Irish patent still and Scottish pot-still whisky sold as 'Scots whisky', but without intent to defraud. The Lord Justice General ruled that to merit the description 'Scotch Whisky' the entire contents of a container must be made in Scotland. Thus the geographical sense of 'Scotch' must be kept. According to the Merchandise Marks Act of 1887, the proprietors offended by giving a false trade description, and their Appeal was dis-:missed. During the proceedings, it was established that only pot still whisky, or patent still whisky manufactured in Scotland could merit the coveted title of 'Scotch Whisky'.

The Customs and Excise Act (1952) includes the most recent description of Scotch whisky. It states that 'spirits described as Scotch Whisky shall not be deemed to correspond to that description unless they have been

*1 D.C.L. (See Appendix I, 7).

obtained in Scotland from a mash of cereal grain saccharified by the diastase of malt and have been matured in warehouse in cask for a period of at least three years'. The Scotch Whisky Association, while supporting this definition, also specify that the whisky must be distilled in Scotland from malted and unmalted barley and other grains in pot stills or patent stills respectively. There the matter has rested since 1952.

The Location of Scotch Whisky Distilleries.

Locational factors have had, and continue to have, a strong influence on the distribution of the Scotch whisky industry. To the blender, and even the discerning consumer, the pot still whiskies especially savour of a certain locality. They may be subdivided into four distinct groups.

The first of these are the Highland malt whiskies made in pot stills north of the so-called Highland line from the Firth of Clyde to Strathmore. Because of its high repute and antiquity as a region of whisky distill-:ation the Glenlivet area is singled out from the others. All whiskies made there are prefixed by the name 'Glenlivet',

and connoisseurs consider these malt whiskies the finest. Elsewhere, whether it be in Skye or the Buchan area, or even Orkney, the whiskies are merely 'Highland' malts.

Pot still whiskies produced in Islay, however, are another group, all of which are characterised by a heavy smoky flavour attributed to peat. They are used for blending purposes rather than direct consumption, because their full flavour does not appeal to the consumer in the Lowlands and overseas.

A small third group is also recognised. These are the Campbeltown malt whiskies, which were at one time of great significance when the town had over 20 dis-:tilleries in it about the turn of the century. Production has now dwindled, until today only two distilleries are in production.

The Lowland malt whiskies are made in Central and Southern Scotland. These have a lighter character than the other malt whiskies, and are not so well known as the others, but they are well suited to blending. Out of a total of nine, no fewer than six are in the West Lowlands from Dunbartonshire as far South as Wigtownshire, the rest being in the East.

In contrast to the pot still whiskies, each

of which has a certain uniqueness, the grain whiskies have no attributes which could be derived from their distillation environment. They are all very similar. The majority of the large grain whisky distilleries are to be found in the Central Lowlands of Scotland; indeed, only one is in production North of the Highland Line.

As shown in Table 1, in 1961, out of a total of 112 distilleries operating in Scotland, 11 were producing grain whisky in patent stills and the rest malt whisky from pot stills. *1 Each grain whisky distillery however made 7 to 10 times the volume of alcohol produced in each malt whisky distillery, and employed about a hundred persons to cope with its continuous production. The malt whisky distilleries require some 20 - 30 men only; these distilleries may have a 'silent period' of non-production for several weeks between July and September. During this time plant is over-hauled and workers go on holiday. This hiatus in distillation is partly traditional, for it originated in scarcities of water in high summer which prevented satisfactory volumes of water for cooling and steeping being obtained,

*1 Some distilleries on Strathspey, and also in Islay, no longer produce whisky, but have been converted to maltings preparing malt from barley, while others are used for storing whisky. These are not included in the figure for malt whisky distilleries in Table 2.

particularly in the drier Eastern Highlands.

Malt whisky distilleries are found today in areas where the sma' stills of former times made their whisky for local consumption, and, as the market became wider, for regions outwith the Highlands. The Board of Excise was instituted in 1707, and it subsequently levied a duty of 3d. per gallon on whisky. The duty was increased, and as Highlanders objected to paying for the privilege of making their whisky, a flourishing illicit trade developed. Glenlivet in the Eastern Highlands became the nucleus of this activity. As the tax increased, so did legislation become impossible to enforce in areas where the Excise Officers were despised, and of which they had often a tenuous knowledge. The illegal enterprises became almost commercial ventures as the scale of smuggling grew: Glenlivet prices ruled the market.

During the Napoleonic Wars the duty rose further. The form of the legislation did not favour the makers of Scotch whisky for it was influenced by the require-:ments of English gin-makers. The levy was based on the volume of wash placed in the still as compared with the volume of alcohol produced from it. By 1814, a tax of £7.16. Od., was placed on each gallon of a still's content.

Sma' still operators were handicapped because they preferred to use a weak wash which yielded only a small volume of spirits. In consequence, the illicit stills were producing better whisky than the legal ones, and their activities pros-:pered further. Some indications of the flourishing state of sma' still production may be gained from the fact that 859 detections of illicit distillation were made in 1798 - probably 4 to 5 times that number continued unchecked.

In 1823, the Government was obliged to reduce the duty to 2s. 3d., per proof gallon to attempt to kill the illegal trade. There then followed a period of consolidation during which licences were taken out, and owners of sma' stills gradually became owners of distilleries, often located on or near the same site.

The modern malt whisky distilleries, of which there are 92 in the Highlands of Scotland, and 9 in the Lowlands, use the same basic materials as the sma' stills required - pure water, often off granite country, barley (preferably locally grown), and peat from the surrounding moors. They have adapted themselves to modern conditions by increasing their volume of production and by accelerating their rate of output, while at the same time preserving the distinctive attributes of their malt whiskies. Locational

factors have a strong influence on the distribution of malt whisky distilleries, but the crucial aspect is the knowledge and practice of malt whisky distilling. This is the outcome of generations of experience and accumulated skills which ensure the maintenance of a tradition, especially in the persons of the brewer and the stillman, the key employees in such a distillery.

Government interference was the first serious set back which malt whisky interests encountered; the second, more ominous development was the establishment of grain whisky distilleries in Lowland Scotland. The patent still, producing grain whisky, brought mass production methods into competition with the pot still distillers. From the 1850's onwards many patent still distilleries were erected, and some of these survived *1 to become large scale industrial undertakings of a technological nature, whereas the malt whisky distilleries remained small scale craft enterprises.

The patent still, giving alcohol of greater purity, but less character, made distilling a science.

*1 Many of the early patent stills must have been 'fly by night' affairs. Nettleton states that over 90 were in production in Scotland in the 1860's, but by 1893 this number had dwindled to 12.

Potable alcohol was yielded in one continuous process; grain whisky was, and is, cheaper to produce, and is independent of special locational factors in comparison with malt whisky. Grain whisky is ready for blending at the age of 3 to 5 years, whereas malt whisky may require 5 to 12 years or more to reach its peak. (This greater length of maturation naturally increases the cost of stockholding malt whiskies.) Each grain distillery requires much greater volumes of water for processing, greater supplies of cereals, of coal or oil for fuel, and of timber for casks. In contrast to the Highlands, these raw materials and fuels are readily procured in the Central Lowlands of Scotland, either because they already exist there (e.g. coal) or may thence be imported. Furthermore, large markets were available in Lowland Scotland for the whisky produced, and industrial labour was abundant. Just as other mass-production industries are situated in the Central Lowlands, so are ten out of the eleven grain distilleries now in operation, located there. It is from these distilleries that some 60% of the alcohol used to produce blended Scotch whisky comes. A wide variety of chemical by-products is also derived from them in the form of industrial carbon dioxide, animal feeding stuffs, and industrial alcohols made from residuals and non-potable distillates.

The Scotch whisky industry is self conscious of the success of the grain whisky distilling interests within it. It is devoid of the romance of the Highlands which invests the pot-still distilleries. There is a reluctance to discuss grain whisky distillation, and as a result, this side of the industry has been neglected and cloaked in mystery. The malt whisky distillers even yet harbour some antipathy towards grain whisky and its distillers, because its development exposed the pot-still owners to bitter competition. A whisky boom was induced in the 1890's, which subsequently collapsed, bringing contraction, and even ruin, in its train. For these and other crises, the rise of grain whisky distilling was blamed.

The two types of Scotch whisky have gradually become complementary. Blending is a wise recognition of this economic symbiosis in the Scotch whisky industry. Grain whiskies are not sold in Scotland as 'single' whiskies for consumption by the public; single malt whiskies do have a vigorous market in the Highlands of Scotland, because there blended Scotch whisky is regarded as a mass produced product which is to malt whisky as vin ordinaire is to a vintage claret. It is the connoisseur who drinks malt whisky; blended whiskies, although many are very reputable

and contain a high proportion of malt whiskies, are for mass consumption.

There are said to be over 3,000 different blends of Scotch whisky. Some twelve of these are widely known, while the rest have a more limited market. (Some blends may even be put up in bottles for one customer). The major blends of Scotch whisky are renowned for their quality - their blending formula contrives to bring whiskies of the same character together to give a recognisable flavour and bouquet, in contrast to other blends which may be composed of a heterogenous variety of whiskies, which like wines, may be good or bad.

The origin of blending is principally due to the firm of Usher of Edinburgh. The Spirits Act of 1860 had permitted the blending of malt and grain whiskies, and Ushers experimented with it about that time. A blended Scotch whisky was found to be less costly to produce*1 and less full flavoured than single malt whiskies, and it quickly secured a large market in Central Scotland, and

*1 In 1961 grain whiskies were 30 and 35% cheaper to produce than malt whiskies. The filling price (or price ex-distillery for newly distilled spirit) being about 8s. per proof gallon for grain whisky and 11s. to 13s. per proof gallon for malt whisky.

subsequently in England and abroad. Blending is now a necessity in Scotch whisky production for the output of any one malt whisky distillery would be quite unable to meet the demand for a large proprietory brand, which requires the equivalent of several malt distilleries' outputs in terms of volume.

The larger Scottish cities where whiskies of different origins could be brought together, warehoused, and subsequently marketed,became the foci of this trade. Blending and bottling demand a satisfactory water supply for diluting the whisky to the customary strength of 70° proof (for the home market) and 75° proof (for some overseas markets). *1 Subsequently blending of whisky spread to England, in particular to the London area, because it was and is a major centre of distribution and consumption. The 'capital' of the blended Scotch whiskies is Glasgow, where there is a notable concentration of blending establish-:ments, situated close to port facilities, financial institutions, and enjoying an excellent water supply of almost unique purity. Edinburgh, with Leith, is second in importance to the Glasgow region in this respect.

*1 See Appendix I, 1 and 2.

In the Lowlands, the blenders find close at hand industries to supply them with bottles, closures and packaging materials. *1 The bottling of the current exported proof gallonage of Scotch whisky (amounting to 27.7 million proof gallons to the year ended March 1962) required about 250 million bottles. The quantity of labels used by the industry each year exceeds 500 million. Packaging needs large quantities of carton material. While many of these items are obtained in Scotland (e.g. bottles), some are brought from England, while the major portion of the raw materials - paper pulp, tin, cork and wood - originates overseas.

The local market for blended whiskies in industrial Scotland was the nucleus from which the Scotch whisky industry grew. Today, the home market has been eclipsed by the overseas trade of the industry. Before the Government encouraged the export drive the industry had already acquired an export bias developed during the Second War. By limiting supplies for the home market and by levying a heavy duty on spirits sold in the home market, Scotch whisky was diverted abroad. The traditional pattern

*1 Little whisky is exported in bulk (a measure which ensures the uniformity of the product, for the industry maintains that the cost of transporting bottled Scotch whisky overseas is justified to achieve this end.)

of its markets was radically altered. At present, over 75% of the total annual consumption of Scotch whisky occurs abroad. The United Kingdom market is not buoyant; duty now stands at £11.11.11d., per proof gallon of Scotch whisky sold for consumption in Britain; this means that the Exchequeur receives 27s. 1d., of every bottle sold at 41s. 6d. (See Table 9). The Scotch whisky industry strongly resent being subjected to such taxation on their product, which they believe had justification in a war economy, but is now unreasonable. They believe that the performance of Scotch whisky, as Britain's largest single dollar-earning commodity, merits some fiscal recognition of its achievements.

Since 1959, Scotch whisky has become more freely available in the United Kingdom, and the volume of advertising of Scotch whisky has grown pari passu with the increased volume of stocks. That more than a decade should elapse before whisky stocks were adequate to meet demand in the United Kingdom is remarkable. It emphasises a unique aspect of the Scotch whisky industry, namely the time lag between the production of the whisky, and its consumption.

It is claimed by the industry that no other product in Britain has such a gap between production and

consumption. The period of maturation (which for Customs and Excise purposes must be at least 3 years for whisky consumed in the U.K.), creates problems of finance and storage, which grow as stocks expand. In addition, there is the hazardous task of attempting to forecast demand perhaps five years ahead, when stocks are being laid down. From the War Years, when scarcely any Scotch whisky was made, the industry inherited badly depleted stocks, and an insatiable demand for its product overseas, and (notwithstanding the duty) also in the home market.

Supply and demand are now more nearly in equilibrium in the United Kingdom, but abroad, the demand for Scotch whisky is still growing as standards of living rise. Despite disturbances of trade caused by import restrictions in Commonwealth and foreign countries, the Scotch whisky industry appears to be enjoying great prosperity, and gives signs of continuing to do so. Overproduction has been discussed in the trade, but firms continue to invest in new plant, and to increase their output. It is estimated that some £6 millions have been spent by the whole industry over the past five years on equipment and reconstruction. Indeed, the dynamic qualities of the industry, particularly in export markets, and its expansion of production in

Scotland, afford a demonstration of the gains which may accrue to an industry when it becomes export orientated.

Labour and Employment in the Scotch Whisky Industry.

It has already been stressed that the distilling of malt whiskies is essentially a craft, fostered by traditions which are jealously guarded and handed on from one generation of men to another. Although each pot still distillery employs only some 20 to 30 men, there are opportunities for various specialised trades, such as those of maltmen, brewers, stillmen and coopers, to be pursued. In addition, there are maintenance men, from copper smiths to electricians who are often local tradesmen, and who benefit greatly by work obtained in distilleries. The numerous recent reconstructions and enlargements of distilleries have brought considerable employment to them. Business is also given to grain merchants and haulage contractors. Whisky distilling thus indirectly stimulates much economic activity, particularly in Highland Scotland. Each distillery also has a manager, and clerical staff, while at least one Excise Officer (known as a Distillery Officer) is in constant attendance.

While whisky distilling plays only a minor

role in the employment structure of such towns as Elgin or Inverness, in smaller burghs (such as Keith or Dufftown) or in landward parishes of Strathspey or Islay, distilleries are a distinctive and vital element in the local economy. In 1951, Dufftown *1 with a total population of some 1,500 people, had about 200 men employed in distilling in its seven distilleries. The whole county of Banff, which has 30% of all the pot still distilleries in Scotland within its boundaries, had then 700 persons (out of a total population of 50,000) directly employed in distilling.

Labour problems in such distilleries are almost non-existent. The manager has great authority, including the right of 'hire and fire'. The majority of the workers are unskilled or semi-skilled men who are essen-:tial to complement the highly skilled work of the brewer and stillman. Many have long periods of service, and sons follow fathers in serving the distilleries. Because of the small number of employees a team spirit is readily fostered, which is often lost in larger concerns.

Pot still distilleries have little turnover in labour. There are not the competing attractions of

*1 1951 Census of Scotland, H.M.S.O.

other industries to entice people away, but there are facilities provided for workers to encourage them to stay. Housing, for example, is usually provided for distillery workers, and transport is made available by distilleries not only to take men to and from work, but also for use by their families in their recreation. If a distillery happens to lie more than ¼ of a mile from a market town, then accommodation has to be provided for the Distillery Officer by statute.

The distilleries are operated continuously, apart from the silent period in July or August, during which time the employees go on holiday, assist in maintenance work, or perhaps cut peat. Supplies are then replenished for the new season. The men are divided into 3 shifts, and may work a seven day week. The processes of making whisky are phased in two parts called brewing and distilling periods. Brewing, for example, may begin on a Thursday, and continue until the following Tuesday or Wednesday, while at the same time, the distilling period may operate from Sunday until the following Saturday, so that the processes succeed one another with a slight overlap. This demar-:cation is to aid Excise control in the production of Scotch whisky.

It is probable that less than 3,000 persons (mainly men) are employed in pot still distilling in the Scottish Highlands, but the total effect of the industry on trade and employment is much greater than is generally realised, because it gives rise to so many secondary sources of work. Its expansion since the Second War has been a conspicuous growing point in an otherwise relatively stationary economy. The fact that 92 malt whisky distilleries are located in the Highlands, whereas only 9 are found in Lowland Scotland, is ample proof that, despite the costs of transporting raw materials and fuels, excellent conditions obtain for distilling malt whisky there. The most significant of these conditions is the accumulated experience of operating pot stills, and utilising locational factors, such as pure water supply, to the best possible advantage.

In contrast, grain whisky distilleries draw their labour mainly from among people living in urban areas. Each grain whisky distillery employs between 70 and 150 persons. Although production has increased to a remarkable extent since 1945, there has not been a corresponding expansion in the numbers employed. The personnel are predominantly unskilled or semi-skilled, who are engaged in moving

materials, or in supervising automatic systems. Many of the grain whisky distilleries appear to have a considerable turnover in labour. One reported an almost complete change of personnel (apart from the skilled brewers and stillmen) within the period 1958 - 1962. *1 The distilleries are in continuous production with no 'silent period', apart from stoppages due to breakdowns or to routine maintenance. The numbers of workers employed in grain whisky distillation have an insignificant effect upon the employment structures of such regions as Glasgow or Edinburgh, but in the Montrose or Alloa area, with smaller populations, the importance of grain whisky distill-:ation increases.

With respect to the blending of Scotch whisky, Lowland Scotland enjoys several advantages over the Highland region. It has pools of unskilled or semi-skilled labour in sufficient numbers in a particular location to staff blending establishments. Each blending house may employ several hundred persons. Teacher (Distillers) Ltd., employ over 300 persons at their Craigpark

*1 Much depends on the attitude of the firm, and on the availability of other employment in the locality. D.C.L. is reported to have a turnover in labour of less than 3% at its grain distilleries.

premises in Glasgow, while John Dewar & Sons Ltd., of Perth, give employment to over 600 workers in their blending halls. All the blending concerns are now highly mechanised, with automatic bottling and packaging plant. Teachers' employees are predominantly male workers, but Dewars, and indeed the majority of firms, employ women and girls. Pressure has been put on the blending firms to resist employing persons under 18, unless no other labour is available, because such persons are debarred from purchasing alcohol by law. It is therefore argued that they should not take part in its preparation. Men are always employed in the work of blending, which is a highly skilled task, demanding the selection of many whiskies, their admixing in appropriate quantities, and subsequently the translation of the blend in terms of casks, rather than glasses full. The blender enjoys the status of a professional man in the Scotch whisky industry. Male workers are responsible for the vatting and dilution of the blended whisky, but, in general, women complete the bottling and packaging phases.

The Ministry of Labour Gazette quotes wage rates currently in operation for various industries in the United Kingdom. 'Drink industries' wage rates show a wide gap between the rates paid to male, and those to female

workers. The average rate for men is 5s. 10d., per hour, whereas that for women is 4s. 2d., per hour. The general procedure in the Scotch whisky industry seems to be to offer a basic wage rate, to which overtime may be added.

Blending firms have been expanding rapidly since the Second War; they have reconstructed old premises and built new ones. They have created much employment in Scotland by such activity. By direct employment they give work to some 5,000 people, principally in the Lowlands, although Scotch whisky is also blended outwith Scotland in such areas as the London Region. Furthermore, there is a prospect of new plant being set up, and, as the scope of the industry increases, the numbers employed in blending may be expected to rise. This would afford a valuable source of employment and economic stumulus in such regions as the Vale of Leven, Dunbartonshire, whereablending and bottling establishment is at present under construction.

S E C T I O N I.

Chapter 2.

THE STRUCTURE OF THE SCOTCH WHISKY INDUSTRY.

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1. The Distillers' Company Limited.

2. a) Larger distilling and blending firms.
   b) Smaller distilling and blending firms.
   c) Firms owned by Canadian or American interests.

3. Independent distillers.
   a) Malt whisky distillers.
   b) Grain whisky distillers.

4. Others:-
   a) Brokers.
   b) Warehousemen.
   c) Exporters.
   d) Other Blenders.

The problems of classifying the various types of firms, which are included in the Scotch whisky industry, is complex. There are such firms as the Distillers' Company Limited whose interests also lie in the chemical field; indeed it rivals Monsanto for the position of the second largest producer of chemicals in Britain. The industry covers firms whose only business is to distil whisky, and some who only blend whiskies; but others are concerned with every process from production to final market-:ing. In addition, there are brokers, acting as middlemen, buying and selling stocks of whisky; there are also warehouse and bonded store keepers, and exporters of Scotch whisky. On the periphery of the industry are the distri-:butors of Scotch whisky, both wholesale, and retail, at home and overseas. Thereafter come the host of firms whose fortunes are bound up with those of the whole industry - the distillery engineers, suppliers of many essential materials, such as labels and closures, and the advertising agencies who have made many original contributions to the industry's continuing growth. There is thus a great diversity in the type of business organisation encountered in the Scotch whisky industry, but it is with the distillers and blenders of whisky with which the following analysis is concerned.

1. The Distillers' Company Limited.

The Distillers' Company Limited, which is said to make about 70% of all the whisky currently produced in Scotland, is unquestionably the dominant firm in the industry. Prior to the development of whisky blending, in 1856, the leading patent still distillers made a trade arrangement to allocate their business in fixed proportions as between certain markets. In 1865, this arrangement was renewed; the price of grain spirit rose during the period to their advantage, but little progress was made in other directions. It was from such tenuous trade agree-:ments that in 1877 the Distillers' Company Limited was formed from six *1 constituent firms, all firmly entrenched in grain whisky production. The period of intense competition and price cutting was at an end.

The Scotch Whisky industry enjoyed a phase of remarkable expansion until 1898, when a Leith firm, Pattisons Ltd., went bankrupt, and the whisky 'bubble' burst.

*1 The six grain whisky distilling firms were:-

M. Macfarlane & Co., Port Dundas Distillery, Glasgow.
John Bald & Co., Carsebridge Distillery, Alloa.
John Haig & Co., Cameronbridge Distillery, Fife.
Robert Mowbray, Cambus Distillery, Alloa.
McNab Brothers & Co., Glenochil Distillery, Menstrie.
Stewart & Co., Kirkliston Distillery, West Lothian.

There was a prolonged whisky slump until the First World War, in the course of which many small family concerns were ruined. Over production from a proliferation of distilleries was pruned back. The new company, however, succeeded in weathering this economic storm, and began to acquire first malt whisky distilleries, and later blending establishments.

During and after the First World War, the Distillers' Company strengthened its position. The company acquired more malt whisky distilleries from the 1920's onwards; these were moulded into a subsidiary company, Scottish Malt Distillers, created in 1930 for the purpose. At present, this unit consists of some 41 malt whisky distilleries.

The Distillers' Company was thus built from a remarkable series of take overs and amalgamations, through which, it was believed, stability in production, and also in quality, would be achieved in the Scotch whisky industry. The 1914 - 18 War fostered this aim for the Distillers' Company played a vital part in the supply of yeast and industrial alcohols, two by-products of its Scotch whisky interests which it had developed. It was favourably placed therefore to bargain with the government in the face

of restrictions and taxation policies which the industry found increasingly irksome.

There was thus a predisposition for a closing of the ranks among the other grain distillers and blenders, who had hitherto found the Distillers' Company anathema. The firms who rivalled the Distillers' Group had flourished in an atmosphere of flamboyant entrepreneur-:ship, and to leaders of such firms amalgamation was an admission of defeat. Nevertheless, in 1915, James Buchanan & Co. Ltd., had already merged with John Dewar & Sons Ltd., of Perth, and this trend was confirmed as the years passed. The D.C.L. acquired control of Haig & Haig in 1919. Between 1925 and 1927, the remainder of the firms in the Scotch whisky industry which had constituted the 'Big Five' *1 agreed to amalgamate under the aegis of the Distillers' Company.

At present, therefore, D.C.L. has six major grain whisky distilleries, producing 'Cambus', 'Carsebridge', 'Port Dundas', 'Cameronbridge' and 'Caledonian' grain whiskies, which receive their names from their distilleries of origin.

*1 These five firms which composed the 'Big Five' were:-

John Haig & Co. Ltd., Markinch.
James Buchanan & Co. Ltd., of Glasgow and London.
John Dewar & Sons Ltd., of Perth.
John Walker & Sons Ltd., of Kilmarnock.
White Horse Distillers Ltd., of Glasgow and London.
(Each already owned one or more malt whisky distillery.)

Together with their malt whiskies distilleries, the Distillers' Group have an unchallenged supremacy on the distilling side of the Scotch whisky industry.

Despite the rationalisation consequent upon its formation and growth, the D.C.L. does represent a notable example of decentralisation, particularly as far as the distribution of Scotch whisky is concerned. It controls seven major blending establishments - the original 'Big Five', which still keep their identity, and in addition, the firms known as the Distillers' Agency Ltd., of Edinburgh and Wm. Sanderson & Son Ltd., of Leith, along with many smaller blending houses. When these concerns are included along with the distillation capacity of the Group, it will be appreciated to what extent the Distillers' Company dominates the Scotch whisky industry.

The Distillers' Company is now a holding company, and just as it has extended its control in Scotch whisky, it has likewise spread its interests into other fields. Firstly, these developments were aimed at making full use of the by-products of alcohol production, such as yeast, carbon dioxide, and other residual material. The company also began to diversify its output by entering the organic and biochemical fields to produce pharmaceutical

products, plastics, adhesives, and in association with another company, hydrocarbons. In addition the D.C.L. also manufactures gin and rectified spirit. But of the 73 companies at present within the Group, no less than 39 are directly concerned with some, or all, of the stages in producing Scotch whisky.

The Distillers' Group have many advantages compared with their competitors, whose existence must in the nature of things be marginal. It is not unusual for the D.C.L. to be equated with the entire Scotch whisky industry - a conclusion, which is erroneous, but not altogether surprising. The Group has reaped the benefits of producing and marketing within one financial organisation. As far as Scotch whisky is concerned, the production of whisky, the buying of barley and research are some of the few activities which are centralised. Distribution and advertising are the concern of the subsidiary companies, which have thus succeeded in maintaining their own identities, although broad lines of policy are laid down for the Group.

It is the Scotch whisky element which has been the spring-board to further development, and which remains the pivot round which the newer interests have been built. On the admission of the D.C.L., it has been the

Scotch whisky element which has sustained their progress during recessions in the chemical field in 1952 and again in 1961. In the latter year, the Group turnover exceeded £267 millions, and the Scotch whisky companies probably contributed over 63% of the profits of the Group; the whisky and gin companies together earned over 88% of the total group profits.

The D.C.L. has greater opportunities for research than other firms, but these have led to advances in biochemical fields, rather than to 'improvements' in Scotch whisky as such, although production methods have benefitted. This has resulted from the application of work study techniques in the larger plants, in the installation of automatic systems, and the use of mechanised handling equipment. Scotch whisky output must therefore benefit by the £1.75 millions which the D.C.L. spends on research each year.

Furthermore the Group is able to support an extensive sales and export machine, and may obtain first-hand information on the state of overseas markets <u>via</u> its subsidiaries operating abroad; smaller firms cannot hope to compete with the D.C.L. on such a scale.

Since the Second War, in order to support

its expansion of sales at home, and more especially overseas, the Groups' investment in Scotch whisky has been concerned not only with the laying down of extensive whisky stocks, but also with the enlargement of plant and the renewal of equip-:ment. No new distilleries have been constructed by the D.C.L., although the Imperial Distillery on Speyside (closed in 1925) was equipped and re-opened as late as 1955. Instead the investment in plant has been directed towards providing new warehouses, doubling still capacity, and in erecting extensions to bottling and blending plant.

The Group as a whole employs about 20,000 people, of whom perhaps 7,000 are concerned with some aspect of Scotch whisky production or marketing. These persons include not only distillery staff, but also engineering departments, packing departments, research personnel, shipping and head office staff, and their associated selling organisa-:tions. (In England, the D.C.L. also has large establish-:ments arranging some aspects of Scotch whisky business. e.g. Distribution, property, grain purchase, etc.).

As recently as 1957, and despite the continuing expansion in their chemical interests, the Distillers' Company admitted that some 75% of their total earnings were derived from sales of Scotch whisky. This

statement appeared to be confirmed by the disclosures made in August, 1962, to which reference has already been made. As the volume of Scotch whisky produced and marketed by the Group continues to rise, it is probable that this figure will hold good for some time to come.

The impression conveyed by such a concern as the Distillers' Group is of a monolithic enterprise. It has often been criticised for its lack of dynamic force. To a large extent, the part played by Scotch whisky in the economy of the Group is concealed. 'The Economist' has chided the Group for the 'tartan curtain' which veils its affairs. *1 This reluctance to disclose details about its activities may partly stem from a fear of more government intervention, and possibly increased taxation, because whisky is such a prosperous interest, or it may stem from an unwillingness to give information which might be useful to its small but vigorous competitors. To them, it is the 'combine', against which they attempt a brave show of competition. On the other hand, sheer size and great financial power within the industry, in which the D.C.L. is the price leader, should bring confidence. Notwithstanding, the D.C.L. Group tends to be on the defensive.

*1 'The Economist': August, 1957.

2A. The Larger Distilling and Blending Firms.

Beneath the superstructure of the Distillers' Company are the remaining firms in the Scotch whisky industry. Firstly, the larger enterprises outside the D.C.L. tend to be microcosms of the whole industry in so far as they distil, blend, bottle, and market Scotch whisky, thus being interested in every stage of its production. Unlike D.C.L., however, their interests terminate with Scotch whisky, and they do not enter the chemical field, except in so far as they process by-products arising from whisky manufacture. These firms may be subdivided into two distinct groups, either according to size, or according to the origin of the capital employed in them.

If size is taken as a criterion, there are four or five firms which stand out from the rest, but which in themselves cannot be compared to the Distillers' Company. These larger firms may control a few Highland malt distilleries, and have their blending houses and marketing organisation located in the Lowlands. Firms of this type would include Teachers Ltd., Wm. Grant & Co. Ltd., and Arthur Bell & Sons Ltd. None of these units distils grain whisky, and therefore they must purchase grain whisky for blending. In addition, considerable volumes of malt whisky will also

be bought from distilleries other than their own, and in return their own malt whiskies may be sold to other firms. (For example, Teachers Ltd., control two pot still distilleries, and they claim that their 'Highland Cream' Whisky has 3% of the sales of the whole industry.) Such trade may take place in a two-way direction with the Distillers' Company itself, and thus the inter-connections within the industry are tangible and widespread.

The capital of the firms mentioned above is mainly Scottish (or British in origin). Teachers Ltd. is a public company, with an issued share capital of £.75 millions, while the others as yet remain private, and often, family, companies. All have undertaken ambitious pro-:grammes of modernisation and improvement in the post-war years. Probably each employs a total of 300 to 500 persons mainly on the blending, bottling and marketing side.

2B. <u>The Smaller Distilling and Blending Firms</u>.

The smaller firms, which have interests in each aspect of the Scotch whisky industry are less conspicuous, but nonetheless vigorous. They are mainly family concerns, owning perhaps one malt whisky distillery,

and a moderately sized blending and bottling plant. They may operate as wholesale warehousemen holding agencies for other alcoholic beverages, such as rum and wines. *1 Scotch whisky is thus only one item in a range of output marketed by them. The demand for their Scotch whiskies depends upon the preferences of a small, but loyal, group of customers often in a particular locality. Unlike the larger firms they may feel able to cater for minority tastes. They are mainly private companies, and a typical unit may employ 100 to 150 persons.

2C. Firms Owned by Canadian and American Interests.

On the basis of origin of capital, all the firms already discussed belong to the group whose capital is predominantly Scottish. There are also concerns in the Scotch whisky industry whose capital and financial connections are North American.

George Ballantine & Son Ltd., Dumbarton, is a subsidiary of Hiram Walker & Sons Ltd. It is the oldest and largest of the 'independent' North American interests, and is probably the second largest single

*1 An example of this type of firm would be Lang Brothers, Ltd., of Glasgow.

enterprise in the Scotch whisky industry. It controls six malt whisky distilleries as far apart as Kirkwall and Dumbarton, as well as a malting establishment at Kirkcaldy. Ballantines' also operate a large grain whisky distillery at Dumbarton, where their blending and bottling houses are situated. It is estimated that over 700 persons are employed by the firm, and as 'Ballantine's' is a best selling blended whisky, the firm claims to contribute over 5% of world sales of Scotch whisky.

By comparison, the other North American interests are post-war ventures. Long John Distillers Ltd., a subsidiary of Schenley Industries, own three malt whisky distilleries, one of which, Tormore, was opened in 1960. Their grain distillery (and one pot still distillery) lie in Hutchesontown in Glasgow.

Chivas Bros., controlled by Seagrams of Canada, have two Highland malt distilleries, and a blending house at Paisley. Their output is mainly of de luxe whiskies for export, although they have been marketing on an increasing scale in Britain.

In these concerns, the capital is mainly Canadian, or originates in the United States. The Parent companies have interests, not only in other whiskies,

but also in other spirits and alcohol by-products in North America.

Two recent ventures have emphasised the significance of firms having an aggresive sales policy operated by export agents who are particularly attuned to the U.S. market.

The first of these is the International Distillers and Vintners, a merger of United Wine Traders and W. S. Gilbey & Sons Ltd., which occurred in 1962. Gilbey's owned three malt whisky distilleries, but only one of its blended whiskies had achieved much success, for its main interest was in gin. The United Wine Traders, in contrast, had no distilleries, but the success of its J. & B. (Rare) Scotch whisky in the United States since 1956 had been dramatic. Through taking over companies it had acquired considerable volumes of maturing stocks. Its enterprise had lain in the direction of marketing and salesmanship through the Paddington Corporation of the United States. The amalgamation has created a world-wide distribution net-work, and facilities for every aspect of Scotch whisky production. Since mid-1962, J. & B. (Rare) whisky has appeared in Britain; prior to this time, it was consigned solely for export. It is believed that this

blend has almost 5% of the total world sales of Scotch whisky.

A comparable group is that of the 'Cutty Sark' interests. The 'Cutty Sark' blend was until recently not available in Britain, although it was, and is, the largest selling Scotch whisky in the United States. Its success is the outcome of a trade arrangement between Robertson & Baxter Ltd., of Glasgow, Berry Bros. & Rudd, Wine Merchants of London, and the Buckingham Corporation, who act as their U.S. importing and distributing agents, and who have supplied financial support. An additional trade connection includes the Highland Distilleries Ltd., controlling five malt distilleries, and which has a 35% share in the firm of Robertson & Baxter Ltd.

These new groups have considerably strengthened their position since 1956, and the increasing influence of American finance of Scotch whisky may be expected to continue. The independent firms outside D.C.L. are not so much disturbed by the financial aspects, as by the determined sales policy and distribution facilities such financial links confer. In general, firms believe that if D.C.L. continues to be the dominant concern in the industry they will be protected by its benevolent dictatorship, which is

to be preferred to that of North American interests in their estimation.

3. The Independent Distillers.

The third type of firm in the industry consists of the distillers, whose sole interest lies in the distillation of Scotch whiskies for further processing. Firstly, there are the independent malt whisky distillers such as the firm of George and J. G. Smith Ltd., of Glenlivet, who produce one malt whisky only. Such firms may yet remain in the control of family groups, but there has been a marked tendency for them either to close their ranks by amalgamating with other independent distillers, or else to be taken over by blending concerns. In 1952, Smiths of Glenlivet and another famous distillery (that of Glen Grant) owned by J. & J. Grant Ltd., came together to form a small public company, the Glenlivet and Glen Grant Distilleries Ltd. The Tomatin Distillers Ltd., the Highland Distilleries Co. Ltd., and others are now also public companies. The drawing together of these firms is partly for financial reasons, and it results in a strengthening of the independents against the 'combine', the Distillers' Group.

The independent firms have also been investing heavily in new plant, in particular in new stills and warehouses. None of them bottles its own whisky on its premises, although a small percentage of their 'single malts' may be bottled for them to meet a local demand, but in general their sizeable stocks are despatched elsewhere for blending.

Secondly, there are also independent grain whisky distillers, outside the D.C.L. or the larger firms. The North British Distillery in Edinburgh, and the Invergordon Distillery in Ross-shire (which was opened in 1961 to help to relieve local unemployment created by the contraction of a naval base) are of this kind. The latter employs some 70 persons, but the former is a much larger establishment whose shares are owned by persons or firms within the Scotch whisky industry. On the demise of the shareholders, the shares revert to the company, which the industry regards as a form of co-operative ownership.

The fortunes of these independent distillers who either operate as one unit, or in a small group, are utterly interwoven with those of the blenders. It is probable that their trade takes place principally with firms outside the control of the D.C.L., but, as has been

indicated, some part of their business may be with units in the Distillers' Group itself.

4. Other Types of Firm in the Industry.

Around the complex of firms already described, there exists a great number of units with multifarious interests in Scotch whisky - some in blending and marketing, others in brokerage, and yet others in warehousing and exporting.

(a) Brokerage.

Scotch whisky is an appreciating asset, and as there is a gap of three to ten years between distill-:ation and consumption, there is an opportunity for the holding of 'portfolios' of stocks, both by whisky brokers, and by persons outside the regular industry who may secure fillings. There is thus a speculative element inherent in the industry, which was conspicuous up to 1958, when stocks first began to accumulate in excess of current needs.

Brokerage of Scotch whisky is now less profitable than it was. Blenders tend to arrange their supplies directly with distillers, or through their agents.

If they encounter a shortage of a particular age and type of whisky they may have recourse to the open market. There is thus a free market in maturing stocks of whisky, which gives the blender some freedom in adjusting his stocks to bring them into line with forecasts of sales prior to blending.

(b) Warehouse Owners.

The problem of providing bonded warehouses adjacent to blending halls in Lowland towns is considerable. There is often a scarcity of suitable sites, and there is also the hazard of fire. In Glasgow, there are some eighteen bonded warehouses of which twelve are owned by one company, which represents a substantial investment in buildings and equipment. The majority of these are used for bonding Scotch whisky (which is under Customs and Excise control from its moment of creation until its release from bond prior to point of sale) and must meet certain Customs and Excise standards of security and safety. Blending and bottling facilities are a frequent adjunct to a bond. The income of the warehouse owners takes the form of rent for casks occupying warehouse space. While some owners derive additional income for undertaking the insurance and exportation of whisky, rent is their main

income. Such warehouses are not used by firms who have their own private bonded warehouses, but they are much used for whisky (and other exciseable liquors) in transit, or by blending firms too small to possess their own bottling plant.

(c) Whisky Exporters.

The larger blending establishments generally handle such an extensive export trade that they maintain specialised export departments of their own, making their arrangements without the assistance of whisky exporters. Small firms, however, who sell comparatively small volumes of Scotch whisky, do not find it economic to have such departments, or a network of agents and importers overseas, and for them the whisky exporting firm, with wide experience in foreign markets, is essential. There is a concentration of such concerns in the ports of Glasgow and Leith.

Scotch whisky for export is normally sold on a 'Cash against Documents' basis. The overseas buyer may first have to establish a credit in a local bank, which is released against the production of shipping documents. When confidence has been created, this rule is relaxed, and payment is accepted 'Cash against Documents' at port of destination.

(d) Other Blenders of Scotch Whisky.

Outwith the major blending companies in the industry are minor firms who produce their own blends of Scotch whisky, and firms whose interest in wines and spirits also embrace Scotch whisky blending.

The first group of small scale blenders may include wholesale and retail merchants of spirits and other beverages who may purchase stocks of whisky on the open market or may secure small volumes of fillings, which they hold and subsequently market themselves. There are also several blenders of liqueur whiskies, which are compounded from whiskies, herbs and other flavouring matter; sometimes honey is added to them. Compared with the total annual consumption of Scotch whisky, the sale of liqueur whiskies is very small. Only one firm has achieved a conspicuous success in this field, and the scale of its operations remains comparatively modest.

Firms who have interests in wines and spirits distribution may also distil and blend Scotch whisky, although it is a minor activity. Scottish Brewers have control of two whisky firms, and throughout their network of Houses their own whiskies are given

preference to those of any other firm.

CONCLUSION:

The Scotch Whisky industry both in its locational and structural aspects in unique. Firstly its Scottish-ness is distinctive. The enterprises are located in Scotland; only a little blending of Scotch whisky occurs in London, and a few other cities in England, and in the United States, (where bulk whisky exports have been increasing, because of tariff discrim-:ination against the bottled product). Secondly, the extent to which the industry is dominated by one major unit, the Distillers' Company, is also remarkable. Nevertheless, the tenacity and vigour of the small compe-:titors ranged round the Distillers' Group are impressive.

It has been said that both groups need each other. Trade flows between the two, and the more successful the minor firms are, the less will the dominant firm play the role of the unbridled monopolist. The D.C.L. has probably achieved the best of all possible worlds; it is the largest and financially strongest group in the industry. Its blending firms maintain a

competitive appearance of inter-group rivalry. Yet the fact remains that if the Company chose to do so, it could extinguish the others. A policy of 'live and let live' is, however, more profitable to both.

S E C T I O N I I.

Chapter 3.

THE WAR YEARS AND THE SCOTCH WHISKY INDUSTRY.

The following two chapters are an attempt to set out the most recent economic background of the Scotch whisky industry; the effect of the war years was apparent as late as 1959 when vestiges of the quota system for the release of Scotch whisky were finally abolished in the home market. Furthermore the sellers market created by the almost non-existent production of the war years has only recently altered in favour of the buyer. Supply is inflexible in the industry over a period of about five years, and there is thus an inexorable time lag until the gap between production and demand can be closed.

The Second World War: 1939 - 1945.

The Ministry of Food assumed control over the entire production of Scotch whisky on 1st March, 1940, when the Potable Spirits (Licensing and Control) Order was made. This Order prohibited the manufacture of any spirits from cereals except under licence from the Ministry. In addition, strict quotas were stipulated for the marketing of Scotch whisky in Britain; the percentage of supplies of Scotch whisky released in the U.K. was based on the pur-:chases made by any customer during the year ending 29th February, 1940, which was used as a datum by the Scotch

Whisky Association. (See Table 8).

The effect of these restrictions was to change the entire pattern of marketing of the industry. In 1938 - 39, only 53% of the Scotch whisky marketed was exported overseas, but by 1949, this proportion had risen to 75%. It was achieved by government directive, and constituted a spearhead of the drive to earn American dollars. So successful was this effort, that Scotch whisky became the largest single dollar earning export of the United Kingdom. A system of control of this kind required constant scrutiny, and the Customs and Excise authorities supervised the distilleries to ensure that production of whisky was restricted. In 1940, therefore, the output of Scotch whisky was limited to $\frac{1}{3}$ of the volume distilled in the year ended September, 1939, and production was limited to pot still distilleries. Grain distilleries in Scotland ceased to manufacture potable spirits after 1940. *1

By 1940 - 41, Scotch whisky was forming a basic return cargo in ships bringing essential supplies

*1 From 1942 until almost the end of 1944, no barley allowances were made for distilling, and unless it was made illicitly, no Scotch whisky was manufactured.

to Britain. *1 Losses of cargoes due to enemy action were considerable; the risks involved in transporting alcohol were heavy. Despite these hazards, it is claimed that Scotch whisky was the only British manufacture to be exported without interruption during the war years. The purchasing power it earned for Britain in the United States during the 'Cash and Carry' period was vitally important to the economy.

After 1940, exports of Scotch whisky declined, because, after 'Lend - Lease' was introduced, there was less immediacy in the payment of imports from the United States. This hiatus in trade was a timely resting period for the Scotch whisky industry, because stocks of matured whisky suitable for consumption had been falling rapidly. From 1939 until 1945, stocks fell by 60 million proof gallons (from 144 million proof gallons to 84 million proof gallons.) These figures are for 'original' proof gallons, and take no account of losses by evaporation during the maturing of the whiskies *2

*1 During 1940, the sales of Scotch whisky in the United States alone amounted to some £10.4 millions out of a total sales receipt by the industry in its overseas markets of £16.2 millions.

*2 See Appendix I, 2.

Hence the actual or re-gauge proof gallonage was very much lower, being probably by 1945 in the order of 70 million proof gallons.

There were also war casualties. The Caledonian Distillery, Edinburgh, owned by the Distillers' Company, was destroyed with the loss of some 1.2 million proof gallons. Other distilleries destroyed were at Yoker, near Glasgow, at Greenock, and at Banff. It was fortunate for the industry that bonded warehouses were fairly dispersed in distribution, apart from a marked con-:centration in the Glasgow area. Very little whisky was held in bond in England. The estimated loss of stocks has been placed at 4.5 million proof gallons, which consti-:tuted more than the entire output of Scotch whisky in the U.K. for 1941.

The Decline in Production.

For the duration of the Second War, the Ministry of Food controlled allowances for distilling. Before 1939, in a free market for barley, distillers had purchased any amount they required. The allowances of barley for distilling are shown in Table 4. The grain market went from one extreme to the other - from freedom

of contract to complete control. It may be noted that pre-war, the Distillers' Group had introduced a policy of price stabillisation for Scottish grown barley. Its aim was to encourage the growth of Scottish barley for its malt whisky distilleries. It therefore paid prices in excess of those ruling for either English-grown or imported barleys. The D.C.L. claimed that this policy prevented a debacle in Scottish barley prices. Unfortunately the effort was not sustained by other buyers of barley for distilling. *1 A Parliamentary Bill was in hand in 1938 to render the position more equitable both to agricul-:ture and to distillers, but the rationing of cereals rendered it unnecessary.

It is from the early forties that the parlous position of the industry in the post-war years stem. The balance of stockholding was disturbed and the orderly 'portfolios' of various types of whisky of different ages, suitable for blending,were destroyed. In the years after the Second War, when the export drive became the end-point of British economic policy, there was there-:fore a marked lack of fully matured whisky to meet every demand. If production had been maintained even at the

*1 See Appendix II: Grain Supplies.

low level of 3.2 million proof gallons to which it had fallen by 1942, this would have significantly helped the post-war position of the industry. It was not, however, until 1948 - 49 that the scarcity began to be remedied. Throughout the six years of the war economy about as much Scotch whisky was distilled as in the year 1939.

The decline in output was a choice of scarce means among competing ends: grain had to be used for food stuffs, rather than for distillation. The long-term view of the industry's economy was completely obscured by the necessities of war.

The Contraction in the Home Market.

At the commencement of the Second War, the Scotch whisky industry was avowedly stock piling. There was a shortage of whiskies over 5 years of age, as a result of the low production of the early 1930's. Apart from this deficiency, stocks were believed to be adequate to give a continuity of quality and age for several years ahead in normal conditions. The depletion of stocks was so rapid, that rationing had to be introduced in the home market. Distillers restricted deliveries and fillings of new whisky to all purchasers. The quota system operated by the

S.W.A. (to which reference has been made) came into existence in March 1940, and releases were regulated through the blending firms and thus to the licensed trade. The system would have been extended to export markets had not the government intervened and directed supplies abroad, and these were allowed full rein for growth in volume especially to dollar markets.

As certain firms and individuals were outside the S.W.A., and were therefore not bound by its decisions, home releases in the latter part of the war, and the immediate post-war period, were in excess of the volumes agreed upon by the Association and the Government in consult-:ation. The agreed releases on a percentage quota basis are shown in Table 8.

While the home market declined, pari passu, the overseas markets expanded - most dramatically in the United States. The foundations of this trade had been laid before the Second War. The Anglo-American Trade Agreement of 1939 contained the abolition or reduction of a number of import duties. *1 Scotch whisky was the

*1 1940: Treaty series (No. 3). of U.K. and other Powers. Trade Agreement between the U.K. and U.S.A.; Nov. 1938. The rate of duty was fixed at $2.50 per proof gallon on 'whiskey of all types and classes'. The previous rate of duty had been $5. per proof gallon, as set out in the U.S. Tariff Act of 1930.

main item of British exportation to benefit. The Agreement not only reduced the import duty on spirits to the United States, but also had the effect of permanently stabilising the rate of duty on the commodity for the duration of the Treaty. The Scotch whisky industry had thus begun to rebuild its trade, which had been killed by prohibition, before the Second War began.

The most rapid period of change in the home and export markets occurred between 1939 and 1941, when home consumption declined by 10%, and exports rose by the same amount. No comparable change took place until 1948, when the export drive was under way; the division of Scotch whisky sales by volume then became 25% to the home market, and 75% to overseas markets - a proportion which has been maintained to the present. (See Tables 7 and 11).

<u>The Rate of Duty.</u>

These changes in consumption not only reflect the efficacy of government and trade directives, but also the impact of increases of spirits' duty, the factor which the Scotch whisky industry blames above all others for the long-term recession in the home market which

it experienced. These increases are set out in Table 9. At the outbreak of the Second War, the duty stood at 72s. 6d. per proof gallon, but by 1943, it amounted to more than twice that amount, and the industry complained of its 'excessive burden'.

Many distillers firmly believed that their trade in Britain would be permanently impaired, with a consequential effect upon exports,if the high rate of duty was continued. Excise duty was made the scape-goat for a combination of factors which were bound to depress home trade, and indeed were intended to do so. (These factors were the export directives of the government and the quota system in the home market, as well as the rising level of duty). The rectitude of the government in a war economy of employing high rates of Excise Duty as an anti-inflationary device must be stressed. By this means demand and supply were more nearly aligned, at a time when Scotch whisky was scarce, and demand for it very great. From the fiscal point of view, demand for Scotch whisky has a relatively low elasticity; a rise in duty would not therefore be offset by a more than proportionate fall in consumption and diminution in revenue. (The receipts from duty are shown in Table 10.) For their part the Scotch whisky firms were justified in

complaining of the harm which would come to their long-term prospects in the home market, although their achievements in export markets more than compensated for the diminished significance of the former.

The increases in duty doubled the revenue accruing to the Exchequeur between 1939 and 1945. But the full effect of this increased revenue was offset by several factors. Firstly, inflationary tendencies diminished its purchasing power. Secondly, the rise in revenue was less than might be expected because total dutiable consumption by 1944 - 45 was only 8.3 million proof gallons in Britain, that is 20% less than in 1938 - 39. Finally, the quotas of Scotch whisky placed a ceiling on the volume sold in any one year, and thus limited the revenue yield.

The joint result of the increases in duty and the restrictions on releases for home consumption was to leave the way open for manufacturers of other spirits - notably gin and rum. The effect was to halve the U.K. consumption of whisky, while doubling the consumption of gin and rum during the war years.

The Return to Production.

After 1944, the Scotch whisky industry through the S.W.A., began to make representations to the Ministry of Food who had the responsibility for reviewing the cereals' supply in the United Kingdom. The Ministry had two priorities - the feeding of the population of the country, and the supply of feeding stuffs for its animals. There were not enough cereals to spare to permit of distillation. From 1942 to 1944 the industry was only allowed to complete any licensed production which had not yet been made. The industry became impatient of its curbs, the more rapidly its stocks declined. It claimed that limited production should be resumed, otherwise supplies for sale abroad would become inadequate and finally dry up, with a lasting effect on its overseas markets, as well as its home market. Scotch whisky, it was emphasised, was drunk as a matter of taste and tradition - but tastes could be changed by offering alternatives. In so saying the industry was touching on the Achilles' Heel of the government.

The arguments used by the S.W.A. rested on a number of assumptions. It was held by the Association that the income which could be earned from whisky exports

would be of great service to the post-war economy. The industry then enumerated a number of alternatives open to it, if the government failed to co-operate with it. Firms could either export less whisky, or deplete their stocks further (which might lastingly impair their stability), or else risk lowering the quality of their whiskies. The latter course would have to be achieved by using less mature, and therefore more deleterious, spirits.

Although this admonition to the Government contained warnings of what might occur, some of the 'alternatives' were already being resorted to when the protest was made. For example, the quality of some brands of Scotch whisky is known to have declined during the war. Supplies were adulterated and reduced below their normal strength to make whisky go further. Furthermore, although the maximum retail price was fixed by the Scotch Whisky Association, and dire consequences awaited those who deviated from it, the fact was that 'Scotch Whisky' was available in Britain at £5. to £6. per bottle. *1 The supplies of imported Scotch whisky to the United States were also inadequate relative to the

*1 It must again be stressed that many firms were outside the S.W.A., and hence were not bound by its decisions.

existing demand. As in Britain, under-the-counter stocks could be bought at exorbitant prices from cautious dealers. A Senate Inquiry was set on foot to enquire into sources and prices of domestic and imported whisky in the United States.

The S.W.A., therefore, concluded that the Government should spare some resources forthwith to permit the Scotch whisky distilleries to resume distillation. The immediate sacrifice of raw materials, it was argued, would be comparatively modest, because time and traditional skills entered so largely into the manufacture of Scotch whisky.

In August 1944, the industry achieved some measure of success, for the Ministry of Food allocated some 100,000 tons of barley to enable distillation to recommence during the following year. A number of distilleries, specially selected to distribute the work as evenly as possible in the Scottish distilling regions, went into production. The first fillings are said to have been made at Glen Rothes, as early as December 1944. (See Table 2).

Production for 1944 - 45, however, only amounted to 8½ million proof gallons, which the industry

regarded as a trifling amount. On the other hand, the firms had achieved their objective. The Scotch whisky industry was later to regard this tussle with the government as being their contribution towards the British export drive begun, on their own initiative, ahead of the official national effort to earn hard currencies.

The Effect of the War and Post War Years on the Structure of the Industry.

The larger firms with greater stocks, and more substantial financial resources withstood the strain of restrictions better than did the numerous smaller firms in the industry. The Distillers' Group, for example, took the shock of increased prices and higher taxation in its stride.

A survival of the Scotch whisky industry meant ensuring that stocks would last until production had been forthcoming for some four to five years at least. Matured stocks of whisky were the prerequisite of being economically viable in the post-war years.

As early as 1942, the D.C.L. was forced to admit that whiskies distilled less than seven years previously

were being used to hold the position of the company in its markets. For its own part, the Group believed that if its future sales were to be balanced out to give a reasonable volume of Scotch whisky for marketing in the years 1942 - 52, then it would have to prune both home and overseas sales drastically - otherwise, it would have no Scotch whisky to sell. When such a situation is translated to the scale of a small firm with interests lying only in Scotch whisky, the gravity of the position is intensified.

It is useful to compare the economic circumstances of a small blending firm with those of the D.C.L. Firstly, when the Government did not release barley for distillation during the Second War, there was a scramble to buy up stocks on the part of most firms. In consequence, the value of matured stocks reached astro-:nomical figures, and it was not uncommon for a parcel of whisky bought in 1939 for £40,000. to be valued at £4.5 million by 1943. This latter figure was only a book valuation, because as soon as the stock came to be sold, taxation creamed off the inflated profit levels. Small firms soon discovered that it was to their advantage to sell out, and reap the benefits of capital appreciation of their maturing stocks, rather than pay their profits

away in taxation. This was the opportunity for the Distillers' Group and others to buy over small concerns for their parcels of stocks. Very many famous firms became 'casualties' of war-time conditions in this way. The trend to absorption of small units has continued throughout the post-war years.

SUMMARY.

The conclusion of the war did not bring an easing of restrictions on Scotch whisky distilling. The industry found itself in the role of the goose who had laid the golden egg and was subsequently starved and ignored by the ungrateful recipient, namely the Exchequeur. Nevertheless, the firms had won some sympathy from the government, and more especially from the Prime Minister, then Mr. Winston Churchill. In April 1945, he wrote in a Minute to the Ministry of Food - "On no account reduce the barley for Whisky. This takes years to mature and is an invaluable export and dollar producer. Having regard to all our other difficulties, it would be most improvident not to preserve this characteristic British element of ascendancy."

Having thus made a favourable impression by its response to war time conditions at home and overseas, the industry seemed confident that duty levels would be lessened. This situation of hopefulness was to alter radically with a change of government and the introduction of less generous policies in a bleak and scarcity-ridden post-war Britain.

S E C T I O N I I.

Chapter 4.

THE FREEING OF RESTRICTIONS

1945 - 1954.

By 1945 - 46, distillers of Scotch whisky were licensed to use sufficient barley (with some rye for grain whisky) to produce about 43% of the volume of spirits made by them in 1939. But the new fillings of whisky gave no alleviation to the decline in stocks of matured whisky. (See Tables 3 and 5).

The allocation of cereals until 1954 was subject to a condition imposed by the government on the entire Scotch whisky industry, partially as a result of the industry's own successful advocacy of its earning power in export markets. The amount of grain assigned to the industry was made dependent upon the attainment of 'export objectives' which were fixed by the government in consulta-:tion with the Scotch Whisky Association.

As regards the need for an increased output, the Scotch whisky industry in 1945 was concerned with a Report made by the Industrial Alcohol Committee. The Report stated categorically that the D.C.L. held the dominant position both in the production of non-potable alcohols for industry, and also in the distillation of malt and grain whisky.

The Spirits Act of 1880 had subjected

all classes of distilleries to restrictions which added to their costs of operating, and thus to their unit costs. The Act was intended to prevent the evasion of duty and aid the control of manufacture for Excise purposes. To recompense distillers for this artificially inflated cost of production, an allowance was paid by the government in respect of whisky exported. It amounted to 3d. per proof gallon in 1902, but from 1906 the allowance was extended to include all potable and non-potable alcohols made in the U.K.

After the First World War, when the trading nations became more tariff conscious, the rebate was increased to 5d. per proof gallon as a form of protection, 'for the purpose of equalising the conditions as against the spirits of foreign manufacture.' By the early years of the Second War, the allowance exceeded £1 million annually - a comfortable subsidy of which D.C.L. got more than the lion's share.

A reform of the Manufacture of Spirits' Regulations was therefore carried out in 1945. It attempted to take a less antiquated view of the distillation processes, and of the government's control over them. The regulations had had the effect of interrupting the

continuity of output, and thus tended to increase costs mainly by slowing up the whole process of distillation. The removal of such impositions led to a greater and smoother flow of production, which proved beneficial both to the industry, and to the government, because it did not reduce revenue receipts.

By 1946, the Scotch whisky industry was making a rapid return to production with over 70 malt whisky, and 6 grain whisky distilleries in operation. There were however many set backs ahead. Firstly, in the 1947 distilling season, the world shortage of cereals curtailed all supplies for distilleries, and planning for future production was impossible. It was disconcerting for the industry, because the Ministry of Food had allowed it to anticipate a supply of grain on a pre-war scale. Even when some 43% only of the licensed amount was issued to it, the whisky industry believed more cereals would be forthcoming. Its hopes were confounded.

The industry pressed for further concess-:ions. Each ton of barley, it was argued, was capable of producing 100 proof gallons of Scotch whisky. According to the export quotas in operation in 1945, one ton of home grown barley converted into Scotch whisky could

earn £84. in overseas markets. At the same time, one ton of imported barley used for feeding stuffs cost about £16. If the foreign barley was used to allow the home-grown grain to be distilled, the net contribution to exports would be some £68. This was an incentive to the government to increase barley allowances.

Nevertheless, it was not until 1949 that the production of Scotch whisky reached its pre-war level, as the result of a timely increase in the allocation of cereals to a total of 250,000 tons in 1948 - 49. Additional distilleries were re-opened. The D.C.L. began distilling grain whisky in its Caledonian Distillery in Edinburgh. In all, some 90 distilleries were in operation; even with the enlarged quantity of cereals available, most of the pot stills had to close down before the distilling season would normally have ended.

Several firms were already anticipating a return to freer trading conditions, by undertaking an expansion and modernisation of their premises. The Distillers' Group took over a firm of distillers' engineers in Alloa probably to facilitate this process. The industry asserted however that their efforts to expand were being thwarted by high levels of taxation, which were an

annual drain on their resources. Such levies cut down the amount of capital available for improvements to plant, and moreover discouraged increased stock carrying. Despite this difficulty in obtaining funds for capital investment, stocks of whisky slowly accumulated.

By 1951, the output of Scotch whisky from new installations was coming forward, but firms found that increased costs of production and of selling were offsetting their expected gains. They still enjoyed a sellers' market; distilling was only restrained by limited supplies of suitable grains, and other materials, and in certain instances, by the inadequacies of their equipment. A temporary brake on production was a shortage of casks.

Scotch whisky is normally matured in sherry casks (which impart a distinctive colour to it, and possibly add to its bouquet). Other Scotch whiskies, particularly grains, are laid down in American oak barrels. As there was little opportunity to replace casks because of timber shortages, and as there was a lack of sherry casks during the war years, the growing volume of output from distilleries acerbated the situation. A more serious matter of storage concerned the limited space in bonded warehouses. Once spare accommodation, emptied of stocks

during the war, was used up, the industry was faced with the erection of new warehouses. Both to save casks and to save warehouse space, grain whisky began to be bonded at 20° over proof (instead of the usual 11°). This practice increased the capacity of existing warehouses by about 8%. In addition, it has been suggested that Scotch whisky was partially matured in bulk in wooden vats prior to blending to release casks for new whisky fillings.

Notwithstanding these difficulties, there was a 'boom' in Scotch whisky in the early 1950's. When a slight recession occurred in the D.C.L. chemical activities in 1951 - 52, it was the buoyant sector of its Scotch whisky interests which carried the Group through. It may therefore be concluded that the scarcities and restrictions, while irksome, were not seriously interfering with the production and growth of the industry.

It is interesting to note that when the Ministry of Food removed the limits on the quantity of cereals to be used by individual distillers in 1950, the amount of grain then being licensed to them was more than they could distil with their existing equipment. This position was remedied as quickly as possible, and the pro-:duction figures for the industry shown in Table 3, afford

evidence of its success in expanding its output as soon as circumstances would permit.

The Acquisition of Stocks.

The Scotch whisky industry at the close of the Second World War was undergoing a contraction in the number of its constituent firms, a trend which has already been remarked upon and which is continuing. In particular, there was a tendency for consolidation to take place among the blending firms. The Distillers' Group had the financial resources to buy up smaller firms to acquire additional stocks of Scotch whisky suitable for immediate blending. From 1946 onwards, the marked expansion in money capital of the D.C.L. was ascribed to their take-over of companies making potable spirits. In 1946, for example, Gilmour Thomson & Co. Ltd., of Glasgow, were bought up to secure their matured stocks.

In the immediate post-war period too, defunct and moribund firms were 'taken-over' by the more financially active interests in Scotch whisky. These were not absorbed in the concern providing the financial transfusion. The underlying reason was the fact that these firms were on the books of distillers, and were thus

qualified to be allocated 'fillings' quotas from distilleries. Meanwhile they appeared in the role of a separate firm maintained by a purchaser who, in return, was being supplied with more new whisky than he was entitled to receive. Firms giving support often claimed the entire allocation of the subsidiary.

Despite such attempts to bridge the gap in stocks of Scotch whisky, the major proportion of the existing whiskies in 1950 were immature, being less than three years old. While de iure Scotch whisky could be sold at three years of age, in fact it was often unfit for blending or consumption. Such volumes of grain whisky as had been distilled since 1945 were in use, but the vital essence, which would give character to the whole blend, namely the malt whiskies, were not yet ready to be 'married' with the grains. Of the stocks of 150 million proof gallons which were in bond by 1953, it is estimated that as much as 126 million proof gallons had been laid down within the pre-:ceeding five years. At least 50% of this volume would be grain whisky. If a maturation period of some six years is assumed, whisky for sale in 1955 would be distilled about 1949 - the first year of full production. It could therefore be expected that Scotch whisky would remain scarce until the middle 'fifties, and even longer in the case of blends which contained whiskies bonded for additional

years. The structure and composition of whisky stocks might be unsatisfactory for a still lengthier period.

In the face of this inescapable problem, firms within the S.W.A. affirmed (nominally at least) that the maintenance of a high standard of quality and age was as yet inconsistent with a free supply of Scotch whisky. Despite the higher prices ruling in the fading black market, it was their intention to produce and market reputable whiskies at a reasonable price, and thus maintain the well-established name of Scotch whisky. They believed, in spite of the success of those who were taking advantage of temporary market conditions and inflated demand, that such business was opposed to the long-term interests of the industry. If unchecked, it would do great harm in the future.

The Home Market from 1945 to 1954.

The rate of Scotch whisky distribution for the home market continued to be controlled in the post-war years on a percentage quota basis. To permit a greater gallonage of Scotch whisky to be exported, the home ration was drastically reduced in 1946 - 47. The Ministry of Food fixed the proportions of one proof gallon

for the British market to every three exported.

The enforced change in the industry's markets thus continued, and the trend in the home market confirmed all the industry's fears. Indeed, the uncertainties of the post-war years made firms anticipate lessened activity abroad. This gloomy prospect was due to the unexpected curtailment of current output, and the alarming run-down in stocks, which was the concomitant of the industry's augmented export objectives.

The Distillers' Group thus counted itself fortunate that it could entrench itself firmly in the plastics and chemical fields, and so diversify its interests further, and spread its risks. For smaller firms who depended solely upon Scotch whisky, and closely derived by-products, the outlook was more dismal.

In May 1948, the proportions of whisky allocated for the U.K. were further reduced. This time, 20% (2 million proof gallons), of the Scotch whisky released was destined for home consumption, while the remainder, as a quid pro quo for increased cereals alloca-:tions, was to be exported. This quota division was maintained unchanged until April 1950, when it was raised

to 25% for distribution to the home market - mainly because the industry insisted that their traditional national market was well nigh destroyed, while rival spirits, such as gin, benefitted at their expense.

Despite the fact that a quota system was maintained, releases of whisky at times exceeded the authorised level, probably because some firms were outside the control of the S.W.A., and did not submit to its impositions. In 1949, for example, home releases pegged at 2 million proof gallons are believed to have been 40% in excess of this figure. Those who abided by S.W.A. arrangements (which were generally regarded in the trade as both reasonable and justifiable,) were naturally angered by this outflow of stocks. It was claimed that part of these stocks came from the open or brokers' market, and the whisky was often disposed of at exorbitant prices. Meanwhile, firms in the Association complained that their trade was being strangled by limited home releases, and by high taxation on such profits as they made.

As far as retailers were concerned, the cost of whisky at the S.W.A. official wholesale price was so great and the quota allocation so meagre that only a limited profit could be earned, if the official prices were

followed. Hence it was not uncommon for whisky to be sold under a notice of dilution below 35° under proof. When selling the blended whiskies, whose prices and quality were more firmly controlled by S.W.A., the retailer might make an 80% margin if he charged 2 shillings for one-fifth of a gill. The allocation however was so small that firstly, the retail trade could only meet a fraction of the demand, and secondly, their turnover was very low. It was therefore quite general in Scotland, for Scotch whisky to be sold in a dilute condition well below the ordinary legal limit, on notifying its strength, and without any reduction in price.

In 1949, when the wholesale controlled price of whisky was 28s. 6d. per bottle, under these 'illegal' conditions, high profits could be made. Even when whisky, bought on the open market from brokers at £2. 5s., per bottle, and subsequently diluted, was sold, it could yield a handsome profit margin.

The S.W.A. firms believed that the release of more supplies would draw the teeth of those who were antagonising them by such practices. Excess whisky continued to come on to the market, until in 1953, releases in the United Kingdom were no less than 48% above

the agreed limit. Control had thus become a mockery, and one doubts whether even Association members were abiding by its dictates. After 1953, the sales arrangement between the industry and the government was consequently placed on an annual basis.

The free market returned however after 1st January, 1954, whereupon Scotch whisky firms could pro-:duce whisky without limit and were free to develop their own patterns of trade. *1 The opinion in the industry was that rationing was over ripe for abolition, in spite of the shortages which were bound to arise. There was no escape from the inexorable time-sequence between dis-:tillation and maturation. For many firms it was a period of crisis; the real problem of the industry was not encountered so seriously in the Second World War, but in the post-war years when matured stocks were exhausted.

Some firms anticipated that the distribution of home and overseas trade would alter. Others feared what their competitors might do, once the long-awaited 'buyers' market' returned. Others had a lack of capital

*1 The D.C.L. did not abandon its quota system in the home market for its standard brands until 1st April, 1959.

for laying down new stocks and modernising plant. The period from 1954 to 1958 was a time of flux in the industry. There was a scramble to acquire any matured stocks still extant. Train & McIntyre Ltd., was one of several firms bought up 'for the sake of the stocks'; as a result, the stocks held by the D.C.L. rose in value from £55. million to £62. million. Along with its competitors, the D.C.L. had to borrow on the market, partly to meet the cost of laying down new whiskies, and partly to finance a programme of reconstruction at distilleries and blending houses.

Notwithstanding these obstacles, by 1954, the Scotch whisky industry had laid the foundations for future growth, and in terms of consumption, Scotch whisky was well on its way to regaining its place as the major potable spirit drunk in Britain - a place which it had yielded from 1947 to 1951 to gin. (See Table 7).

<u>The Effect of Duty Increases.</u>

Although the Scotch whisky industry had shaken off many restrictions by 1954, one limitation it did not succeed in reducing in potency - the burden of duty payable to the Exchequeur on Scotch whisky consumed in the United Kingdom.

The basic duty had become £10. 10s. 10d., per proof gallon in 1948, and it remained at that level throughout the period under consideration. The industry maintained that the rate of duty, being at a penal level, would prevent any attempt to form a firm, but buoyant, home market when supplies of whisky should again become plentiful. Scotch whisky, at 35s. per bottle, had been placed beyond the purchasing power of consumers who needed it most - the invalid and elderly. Instead of being a national drink, it had been converted to a luxury spirit.

As the post-war years passed, through its Association, the Scotch whisky industry cajoled and threat-:ened the government to reduce duty on spirits, which, if allowed to continue, might cause the 'extinction' of Scotch whisky. The government admitted that Scotch whisky was "if not the most valuable", at least "one of the most important commodities the country possesses." *1 The industry thus earned compliments from the Chancellor, but the fiscal results were negative. Nevertheless, an annual pilgrimage to the Exchequeur, along with other supplicants, was begun. The industry held out the prospect of a higher

*1 The Chancellor of the Exchequeur in the House of Commons: Debate on Finance Bill, 1951.

revenue yield from greater sales if only duty would be cut.

It was doubtful however whether the demand for whisky was sufficiently elastic to achieve this end. Assuming that the duty was reduced by even 1/10th, (or about 2s. 5d. per bottle) in 1954, any increase in yield would have required a more than proportionate rise in demand. Consequently, additional supplies of about ½ million proof gallons would have been required, which, with its heavy export commitments, the industry would have found well nigh impossible. Any larger reduction in the rate of duty would have had to be backed by even greater home releases.

For its part the Exchequeur found that a rise in duty, as in 1948 - 49, did reduce consumption, but only temporarily. Within a year revenue yield did rise. It was not at all apparent that the demand schedule for Scotch whisky would, as it were, operate in reverse; the elasticity of demand for spirits was <u>not</u> commensurate with the possibility of raising a higher total revenue return at lower rates of duty. As Budget time approached, the 'precautionary motive' in Scotch whisky firms became stronger, and heavy clearances from bond were made to fore-:stall possible increases in duty. In the following year, stocks of duty paid spirits in the hands of traders

were substantial, and they did not draw on bonded spirits to the same extent. ("Consumption" of Scotch whisky in the United Kingdom is a record of withdrawals of spirits from bond, and not a measure of actual consumption of the spirit in Britain). In 1952, the precautionary motive was most conspicuous, because the 1951 Budget was expected to be unfavourable. *1

Exports in the Early Post-War Years: See Tables 11, 12 & 13.

From the conclusion of the Second World War, the entire production of Scotch whisky was made dependent upon certain export targets being achieved in return for increased grain supplies to the Scotch whisky industry. The very success of Scotch whisky overseas was bound to weaken its home market. So long as stocks were inadequate, the smallness of U.K. consumption was not disadvantageous, because export markets were expanding out of the industry's hands.

In consultation with the government, target figures were fixed in certain markets - particularly in the

*1 See Table 6; consumption of Scotch whisky; 3.8 million proof gallons were withdrawn from bond for U.K. consumption in 1951; in consequence 'consumption' fell the following year to 3.5 million proof gallons, because a lesser volume of duty paid whisky was then required.

United States, Canada and South America. The 'hard' currency markets were cultivated, while the home and 'soft' currency markets were purposely neglected. This sales arrangement continued in force until 1953. Thereafter an annual agreement was made between the Ministry of Food, the Board of Trade and the S.W.A.; this stipulated the amount to be sold for export, as well as a certain gallonage for home release. When the agreement was concluded the government named priorities among the overseas markets. In view of the U.K. balance of payments position in the post-war period, the dollar area was the principal choice. The fact that their markets abroad were not of their choosing angered the industry. They believed that a neglect of other markets in preference to the dollar area would harm their trade in the long run.

In the autumn of 1949, the devaluation of sterling occurred. The government succeeded in arranging that Scotch whisky imported to the United States would continue to pay the same dollar prices as those ruling prior to devaluation. Thus the sterling value of Scotch whisky exports to the United States showed a dramatic increase from some £11. million in 1949 (for 5 million proof gallons) to £16.7 million in 1950 (for 5.8 million proof gallons). In other overseas markets prices were also 'adjusted'. If

the dollar price in the U.S.A. had been reduced by the full amount of the devaluation, the Scotch whisky industry would have had to increase its sales by more than 40% to maintain its dollar earnings.

This estimate assumes a low elasticity of demand for Scotch whisky in the United States. It is unlikely that a reduction in price would have increased total earnings by the industry, because American types of whisky, such as Rye and Bourbon have the major share of the market. The American whiskey interests might have gone so far as to demand some form of protection, even although Scotch whisky constituted in 1949 only some 6 to 7% of the total U.S. consumption of whiskies.

Needless to say, exports of Scotch whisky exceeded their objective, just as releases to the home market overran their stipulated level. But in the case of exports, both the S.W.A. and the government took credit for the achievement. In 1954 for example, the export markets took over 76% of all Scotch whisky marketed. (See Table 11.).

The firms in S.W.A., notably the Distillers' Company, had been stressing the importance of maintaining quality to keep the world reputation of Scotch whisky unimpaired so that "the unchallenged excellence" of blended

whisky would be "a true and unvarying hall mark, universally recognised and respected." *1 Yet a growing volume of immature whisky was being exported. Discreetly, the keeping of high standards was recommended. As the stock position deteriorated, and demand overseas was unabated, the S.W.A. urged the government to place an embargo on all traffic in Scotch whisky under 3 years of age. The government responded by making trade in immature whisky subject to licence, and it disclosed that comparatively small volumes were being exported. At the same time, some countries had legislation forbidding the importation of such spirit, which also cut down outlets for it.

In 1952, however, the D.C.L. stated that "substantial quantities" of immature spirit, under the name of Scotch whisky, were being shipped abroad to countries with no legal requirements as to the age of the alcohol. The D.C.L. reaffirmed its opposition to this trade in 'fire water', which was utterly contrary to national interests. Unhappily this exportation has continued to the present time.

*1 Sir Henry J. Ross, chairman of S.W.A. and the Distillers' Company Limited: (1953, Annual Report).

SUMMARY.

The freeing of restrictions was but a partial triumph for the Scotch whisky industry. Gone were the cereals rations, the fixed targets for exports, the U.K. quota system, and the black markets. Yet from some restrictions there was no release. Excise Duty constituted 500% of the wholesale price of Scotch whisky. Abroad, where the industry looked for livelier growing points than those to be found in Britain, it discovered that restraint of trade had become habitual, and currencies were in short supply. But these matters belong to the present state of the industry and are part of its current problems.

S E C T I O N I I I.

Chapter 5.

DISTILLATION.

Since 1954, the production of Scotch whisky has increased steadily by between 7% and 14% per annum. This remarkable expansion has been achieved not so much by constructing new distilleries (of which only 3 have been built since 1945) but rather by using plant more efficiently. The time-honoured processes of distillation have remained unaltered, but the movement of materials has been mechanised, thus enabling the same number of employees to handle a greatly enlarged output. There have been some innovations - such as the develop-:ment of automatic malting systems, the introduction of oil-firing for stills, and improved methods of effluent disposal.

The Customs and Excise regulations govern-:ing production methods were revised in 1945. Some of the regulations had by interrupting the flow of production increased the cost of distilling Scotch whisky; they also lengthened the period of production. When the greatest continuous phase of expansion which the industry has known, was beginning, revenue control on output had already been substantially modified.

It has been stated that there are two main

types of Scotch whisky - the malt whiskies from pot-still distilleries and the grain whiskies from patent stills - but it is useful to examine the production processes required to obtain these alcohols, in order to highlight the economic contrast between the two methods.

Malt Whisky Production.

In the distillation of malt whisky, tech-:niques of some antiquity are employed. Malt whiskies are the descendants of the 'uisge beatha' *1 of the Celts - the water of life endowed with health-giving properties for some, and with qualities of well-being for others.

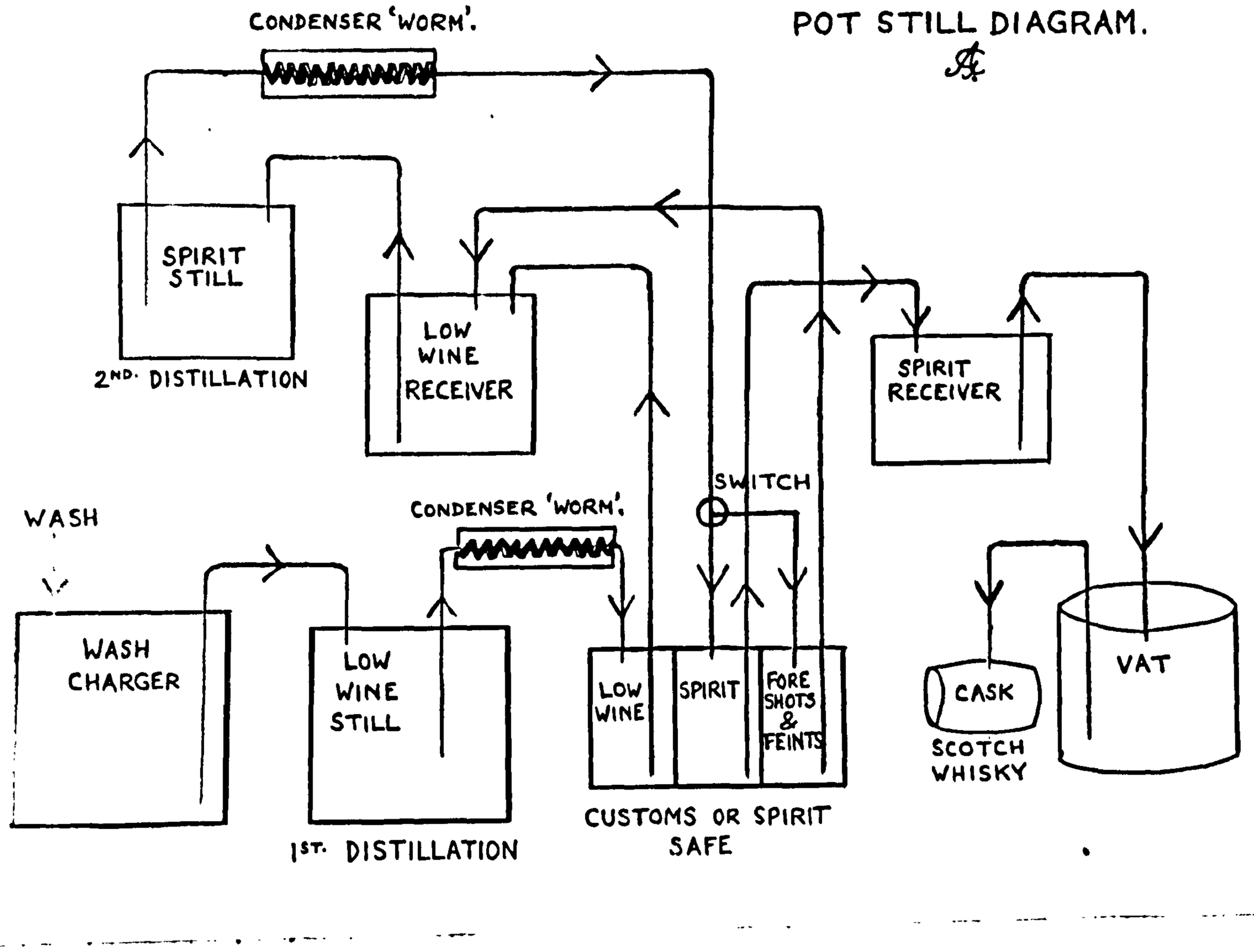
Malt whisky making was in a sense a cottage industry in the Highlands. The raw materials were at hand, and the skills required were preserved to be passed on from one generation to the next. Governmental mis-management in the past, which drove this common adjunct to a peasant economy underground to avoid excessive duty, caused a prosperous smuggling trade to arise. An Excise Act of 1823, which reduced the duty, was a turning point, for the first legal Scotch whisky distillery was licensed

*1

Uisge beatha: Gaelic: water of life.

POT STILL DIAGRAM.

A



in Glenlivet in 1824. Others soon followed its lead, thus marking the first steps in the change-over not only from illicit to legal distillation, but also from the pot-still concealed at 'ferm-toun' or croft, to the specialised buildings and plant of the modern Highland distillery.

(1) Malting.

The first stage in the making of malt whisky is the screening of the barley (the only grain used in its creation) to remove dust and extraneous matter. Thereafter the barley is ready for malting, the first major process in production. From the barley loft, the grain is conveyed to 'steeps', or steeping tanks, and soaked for 2 to 3 days in cold water, during which time the grain begins to swell.

The barley is spread on a concrete malting floor to a depth of about 5 inches, and under suitable conditions of warmth and moisture it begins to germinate. The temperature is regulated to ensure that it remains at about 60°F. for 8 to 12 days. In the course of time the grain germinates and sprouts. It is turned frequently with broad wooden shovels (known as shiels) to maintain uniform conditions throughout its depth. The grain may

also be raked over to prevent the growing rootlets from binding together. In winter, the 'couch' of barley tends to be made thicker to prevent loss of heat. Humidity is controlled by ventilation; the moisture content of the malted barley is kept at about 30% by weight.

The method described above is the traditional one employed at malt whisky distilleries, but it is being replaced by a mechanised system which is said to yield a more uniform malt. Floor malting requires about 10 days to allow 40 quarters of barley to achieve their maximum sugar content. By the new method, known as the Saladin Box, it is estimated that 100 quarters of barley may be processed in an 8 day period. The wet barley lies in troughs. Air is blown through it at intervals to control its temperature. A travelling implement rakes and turns the grain mechanically. Malt distilleries require from two to four of these boxes; the method is said to save the work of at least six men, because all grain is moved by elevators and conveyors. In time this system may oust the 'malting floor'.

During malting the barley secretes an enzyme, diastase, which begins to act upon the starch in

the grain converting it into sugars; the starches are 'saccharified'.

$$2\,(C_6H_{10}O_5) + H_2O \text{ --- } C_{12}H_{22}O_{11}$$

starch — water — maltose

diastase
(enzyme)

If growth were allowed to continue, the sugars would be fed to the developing plant. The maltmen endeavour to promote the maximum secretion of diastase, and sugars, with the minimum diversion of the latter to feed the embryo.

Germination is therefore stopped when the sprout is some $\frac{3}{4}$ of the length of the grain, by spreading the 'green malt', as the grain is now called, on a wire mesh floor in a kiln where it is dried. A fire of peat and coals is lit below; the fumes and smoke rising through the pagoda-like structure impart a distinctive aroma to the malted barley. The ideal temperature in the kiln is about $170^{\circ}F$, thereby reducing the moisture content of the malt to 2 to 3% by weight. It may then be stored with little risk of deterioration through decomposition.

(2) <u>Brewing.</u>

2 . A Melting Floor .

The dried malt is screened and ground preparatory to being mashed. It is fed through hoppers into mash tuns, large tanks in which it is mixed with hot water. Grinding breaks down the grains and renders the soluble sugars within them more accessible to the solvent action of the water. The maltose dissolves giving a sweetish liquid known as worts. During mashing, the malt is actually treated with a succession of hot waters.

The worts is drawn off through perforated plates in the false base of the mash tuns. The residue of spent grain is known as 'draff', and it may be sold wet or dry for cattle food. Because of its bulk, it is normally disposed of to local farmers. The liquid is cooled to about $70^{\circ}F$, and is pumped to fermenting backs where about 1% of yeast is added to the worts.

Basically, the yeast feeds upon the sugars converting them to alcohol.

$$\underset{\text{maltose}}{C_{12}H_{22}O_{11}} + \underset{\text{water}}{H_2O} \text{ --- } \underset{\text{glucose}}{2(C_6H_{12}O_6)}$$

$$2(C_6H_{12}O_6) \text{ --- } \underset{\substack{\text{zymose} \\ \text{(enzyme)}}}{4(C_2H_5OH)} + 4CO_2$$

glucose — alcohol — carbon dioxide

During fermentation the temperature rises to over 85°F, and as soon as alcohol begins to form the specific gravity falls. It continues to fall until all the sugars are converted to alcohol. There is also a loss of weight due to the production of carbon dioxide. Fermentation usually lasts about 48 hours.

The fermented liquor is known as 'wash' and it is ready for distillation. At this stage, it contains between 10% and 11% of alcohol by volume. Additional bacterial and chemical changes occurring during fermentation seem to account for some of the secondary characteristics of Scotch whisky peculiar to a certain distillery.

(3) Distilling.

The stillhouse in a malt whisky distillery has a minimum of two stills of a pot or kettle type, made of copper. Often several pairs of stills have been installed to deal with increased production. The larger of the two is the Wash or Low Wines still, and the smaller one is the Spirit still. They have altered little in design over the years.

The wash is pumped to a wash charger,

3 . A Pot Still .

from which the Low Wines still is filled. Normally, the stills are heated by coal fires, but the most modern ones are steam-heated stills supplied from oil-fired boilers. The wash is heated to almost boiling point in the Low Wines still: this first distillation separates the crude alcohol from the fermented liquor, the residue of yeast, and other waste matter. The congenerics, or secondary constituents, are cooked within the still, a happening which appears to intensify the character of pot-still whiskies. The inside of the still becomes coated with sticky by-products and residuals, and it is kept scoured by a device called a rummager, formed of rotating arms with a copper chain mesh, which is dragged round the bottom of the still. This apparatus helps to prevent the solids from burning on the base of the still. *1

The alcohol comes off as a vapour which ascends the narrowing neck of the still, until it is deflected downwards to the worm, the condensing unit, which is a coiled copper pipe of decreasing diameter encased in a water jacket. The 'worm' and 'worm-tub' are gradually

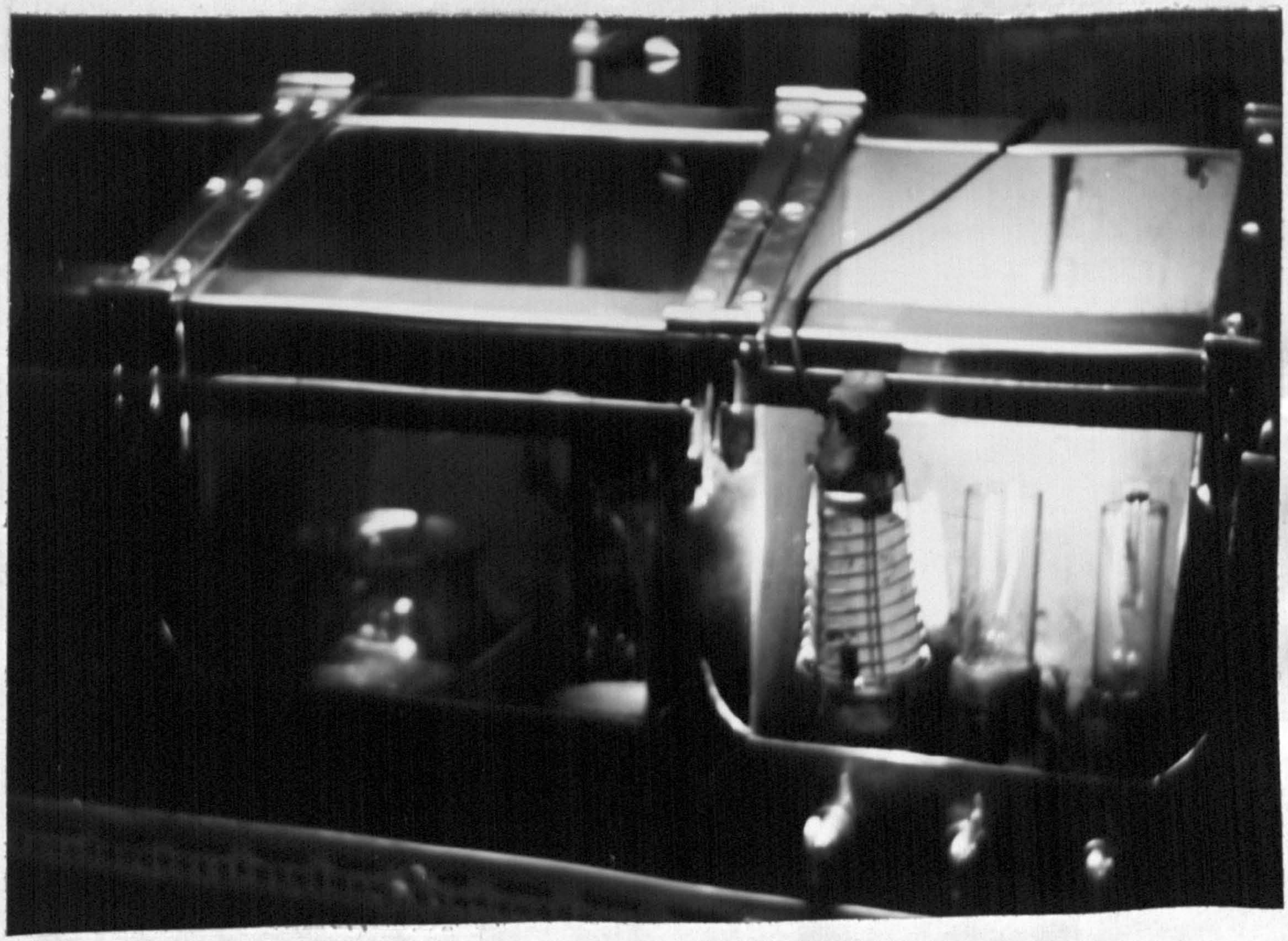
*1

In steam heated stills, a rummager is no longer considered necessary, because less 'cooking' of residuals occurs in such stills. Consequently, steam heated stills are much less costly to construct and maintain.

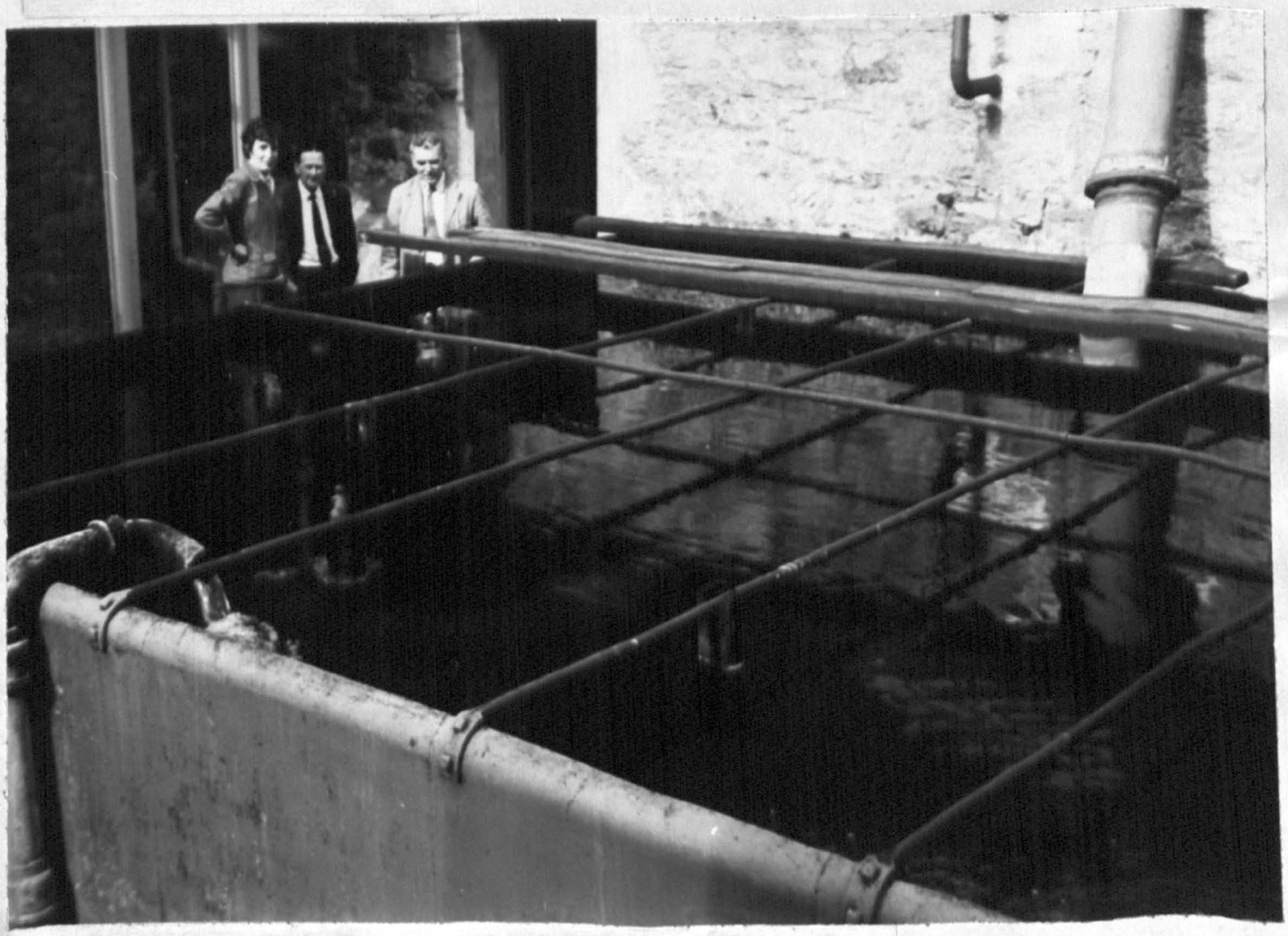
being superceded by a tubular type of condenser. The spirit is thus changed from a vapour to a liquid state. The distillate is called the 'Low Wines', and the spent wash which remains in the still (the pot-ale or burnt-ale) was formerly run to waste. (See Appendix VI: Effluent Disposal).

In the still house, there is a spirit safe; it is about 5 ft. long, with a glass front. Normally it is kept padlocked. During distillations, the alcohol in process runs through the safe at three different stages. (See Figure I). Within it are hydrometers for measuring the gravity of the liquids; these are a guide to the stillman and the distillery officer regarding the nature of the distillates. The purpose of the safe was originally for Customs' control.

The condensed spirit from the Low Wines still is about 30 degrees under proof as it gathers in the Low Wines receiver. Because the volume of spirit to be contained within it is smaller than the volume of wash which entered the Low Wines still, the capacity of the Spirit still is smaller. It has no rummager, for solid matter has been eliminated. The design of the Spirit still is regarded as an important aspect of the final distillation. Experts



4 . A Spirit Safe .



4 a. A Worm Tub , now largely superceded .

believe that both the height of the head of the still, and the angle of the pipe or 'Lyne-Arm', linking it with the worm, have a significant bearing upon the nature of the whisky produced.

In the course of the final distillation, the potable fraction of the distillate has to be separated from the first and last runnings of the vapourised alcohol driven off from the Low Wines. The first portion of distillate is called the 'Foreshots'; the last portion is termed the 'Feints'. Both are fed through the spirit safe, and thence returned to the Spirit still, after being mixed with a new charge of Low Wines, to be re-distilled.

The decision to begin and to terminate the taking of the potable spirit which will give good whisky depends almost entirely on the skill and knowledge of the stillman. The condensed alcohol running through the spirit safe may be switched from the 'Whisky' part of the safe to the Foreshots and Feints section at his discretion. (The residual fluid in the still, the Spent Lees, was also formerly run to waste, along with pot-ale.)

After the finest middle portion of the last distillation has passed through the safe, it goes to

the spirits receiver to be first placed in vats, and subsequently laid down in casks as whisky. This immature whisky is about 20° over proof in the spirits receiver. From the vats it is reduced in strength by the addition of water to about 11° over proof, under customs supervision. Thereafter it is placed in bond to mature.

The Production of Patent Still Whisky.

The invention of the Patent Still revolu-:tionised whisky distilling not only in Scotland, but also in Ireland. Aeneas Coffey's perfecting of a still to produce grain spirit by a single continuous process intro-:duced an element of mass production into a small highly localised industry. These Coffey stills or Patent stills were, and still are, cheap to operate in comparison with pot stills. Distillers claim that their use enables them to reap the economies of scale. The short comings of the product of the Patent Stills have been mitigated by blending the spirit produced with a proportion of malt whisky to impart some distinction to the final blended whisky.

The major drawback with all grain spirits produced by the Patent Still is that they are practically identical. Whether they come from distilleries in Glasgow,

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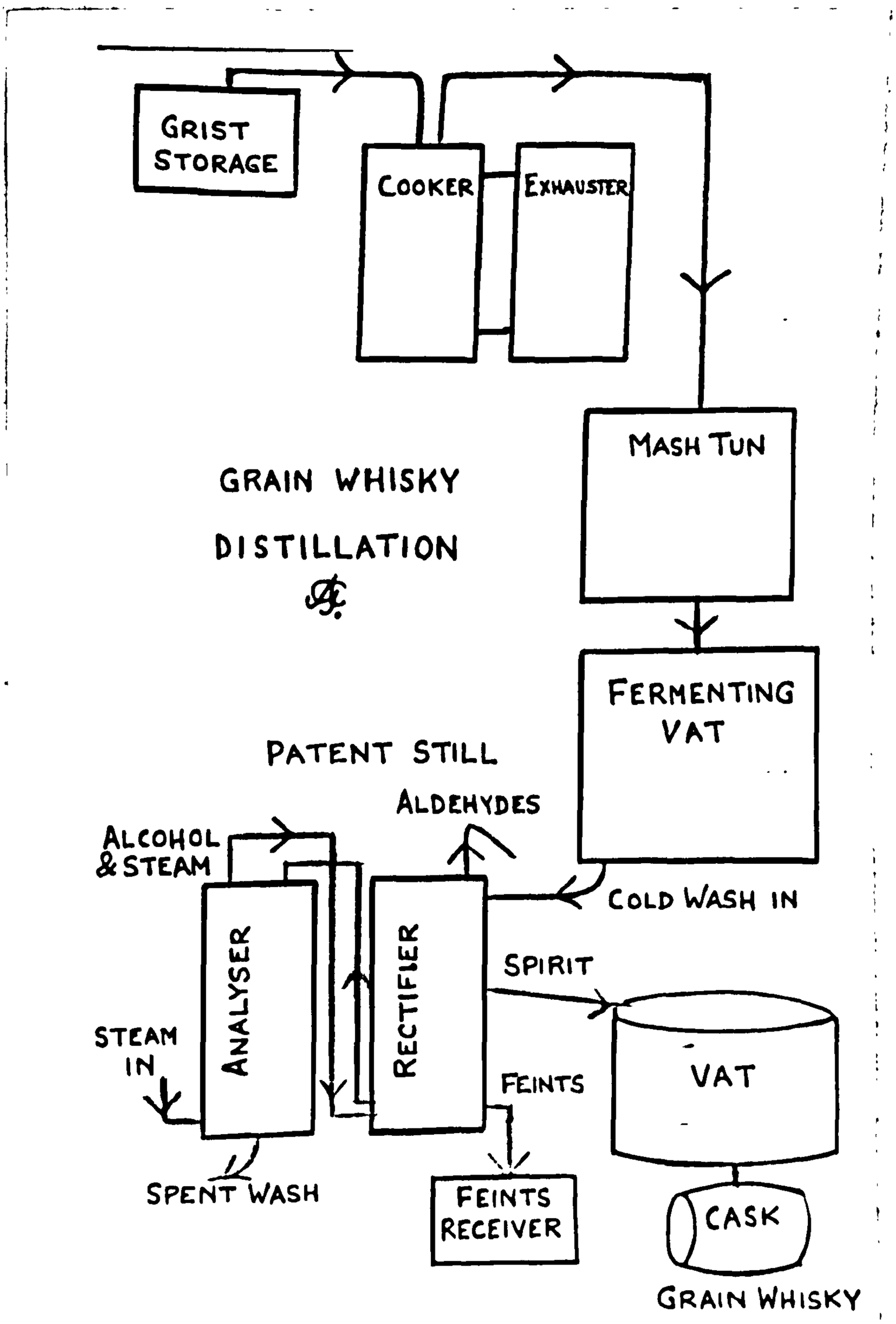
GRIST STORAGE
COOKER
EXHAUSTER
MASH TUN
GRAIN WHISKY
DISTILLATION
FERMENTING VAT
PATENT STILL
ALDEHYDES
ALCOHOL & STEAM
COLD WASH IN
ANALYSER
RECTIFIER
SPIRIT
STEAM IN
FEINTS
VAT
SPENT WASH
FEINTS RECEIVER
CASK
GRAIN WHISKY

Edinburgh, or Montrose, they are so alike that even experts cannot differentiate between them. The similarity is due to the limiting of the volume of secondary constituents in the alcohol to less than 0.1%.

Grain whisky is made in Scotland from a mash bill containing approximately 80% by weight of maize, rye, unmalted barley and sometimes other cereals. The entire operation from the mixing of the grains to the final distillation is much more mechanised and more automatic than is the making of malt whisky. The grains (known as grist) are ground down before the mash bill is made up in the correct proportions. The grist is placed in a cooker, in which it is partially cooked by steam. By this means the grains are converted into starches.

Thereafter the cooked grist is mixed with about 20% by weight of malted barley, which is specially selected for its content of the enzyme diastase. To the distillers it is known as 'a high diastatic barley malt'. The addition of this element is a most significant aspect in the production of grain whisky. The diastatic malt acts on the starches of the unmalted cereals converting them into sugars.

The method of preparing the malted barley

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in a grain whisky distillery is a large scale process, which may involve the employment of horizontal revolving drums, into which the grain is put, and within which temper-:ature and humidity can be readily controlled. The barley is kept in the drums for 8 to 10 days at a temperature of about 60°F, and thereafter is dried in kilns for about 3 days, depending on the atmospheric humidity prevailing.

After mixing, the malted and unmalted grains are placed in mash tuns, where hot water is added, while the cereal mixture is agitated. Three runnings of worts are drawn off. As the last running is weak in sugar content, it is returned to the cooker to wet the grains used in subsequent mashings. Draff is disposed of for animal feeding stuffs, after the worts have been removed.

Brewing.

A quantity of the sugary liquid from the first mashing is taken and run into fermenting tanks; the first running is the richest in sugar content. 'Bub', the term applied to a fermenting compound, is made by adding about 1% of yeast to some 9 inches of this liquid in a fermenting tank. Being rich in sugars, 'bub' stimulates

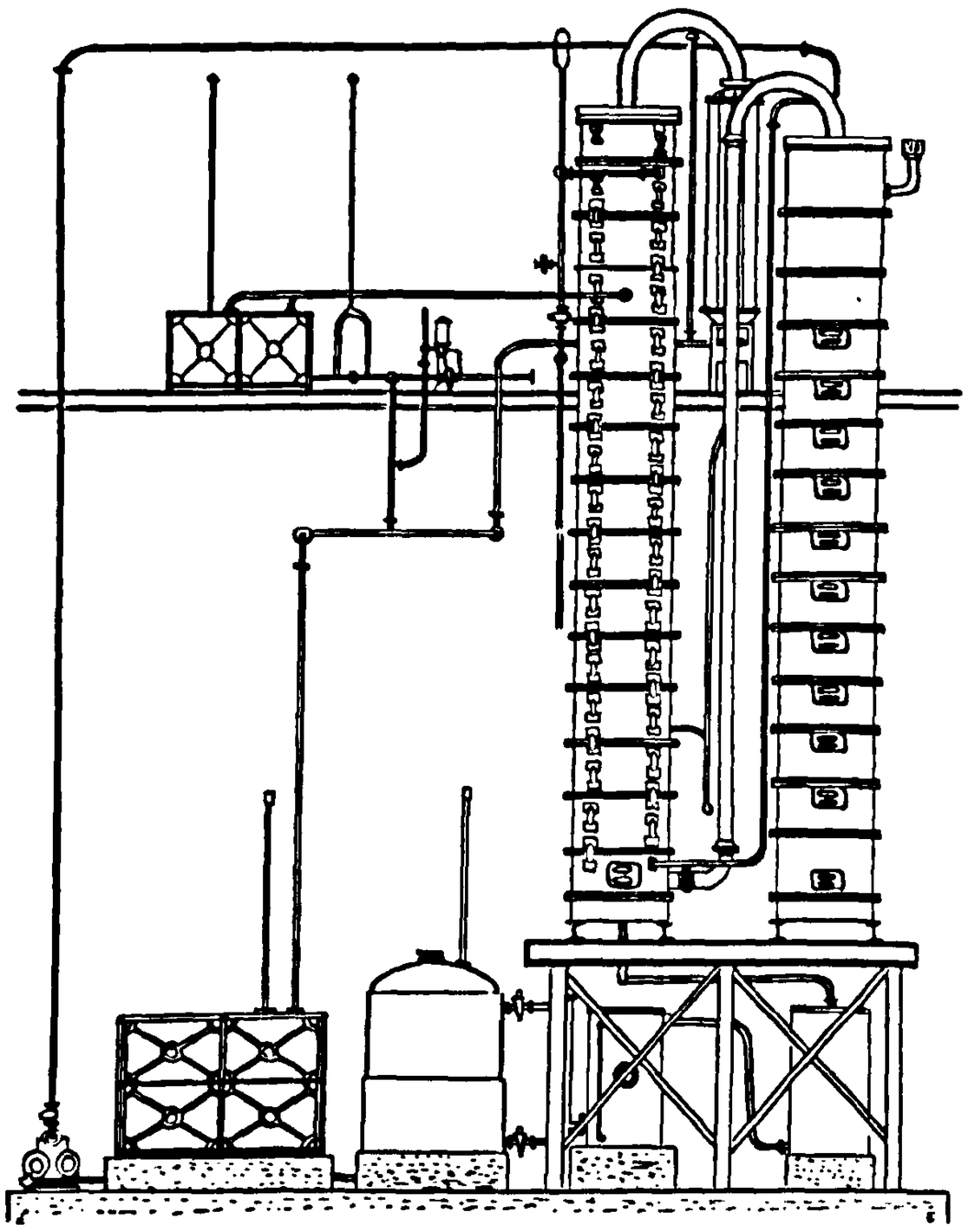


DIAGRAM OF COFFEY STILL SHOWING ANALYSER COLUMN, RECTIFYING COLUMN. CONDENSERS AND SPIRIT AND FEINTS COOLERS.

the yeast to grow and multiply under certain conditions of temperature and humidity. The 'bub' bubbles violently during this process, giving off carbon dioxide in quantity.

While the yeast is active, the remainder of the worts is divided, and placed in the fermenting tanks which contain 'bub', Fermentation on a large scale then begins. Sometimes air, in small amounts, is passed through the liquid, because oxygen stimulates the growth of yeast. Nevertheless, oxygen also discourages the formation of alcohols, and thus the air intake is cut back when the creation of alcohols becomes of greater importance than the increase of the yeast.

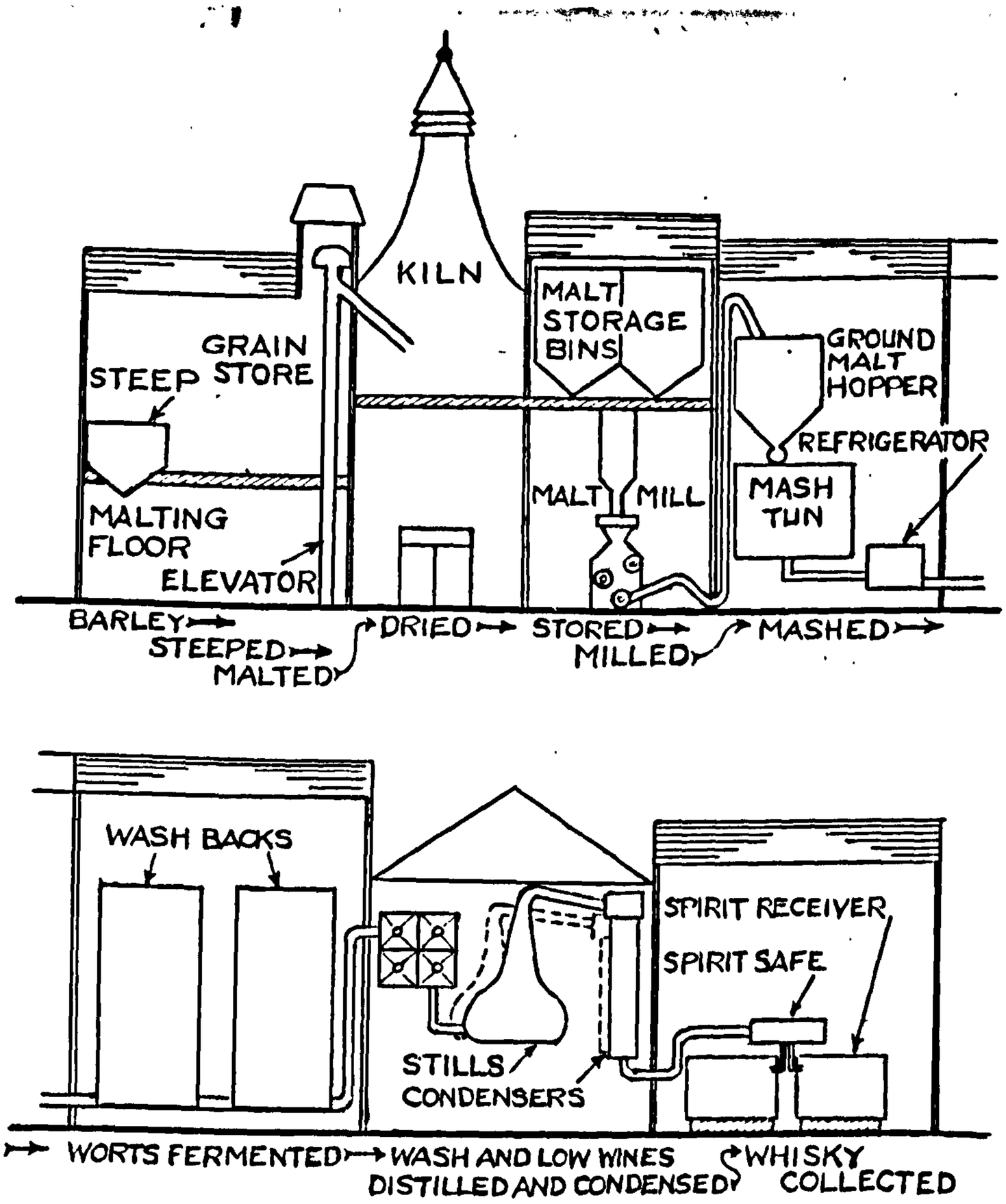
Throughout this time, the wash is in a state of agitation, and fermentation will continue until it ends de natura when the yeast exhausts its food supply of sugar. The alcohol content has then risen, and the specific gravity of the liquid has therefore declined. Carbon dioxide which is liberated tends to lie on the surface of the solution; it is drawn off through pipes often to be processed, and sold as liquid CO_2 for industrial and other purposes. Each fermentation lasts about 6 hours. In a grain distillery they follow one another continuously.

Distillation in a Patent Still.

When fermentation has been completed, the wash is led into a still of the Coffey or Patent type. It consists basically of two columns, a rectifier and an analyser. These stills vary in their capacity but their general arrangement is similar. (See Figure VI).

Both columns in a Patent still are divided horizontally into chambers. The fundamental principle underlying the design of the still is that of a heat exchanger. Cold wash enters the top of the rectifier, and flows downwards through pipes, in the course of which it is heated to some extent by steam and alcohol vapours rising in the rectifier outside the pipes. The wash passes to the base of the rectifier, and it is then liberated as hot wash (nearly at boiling point) into the top of the analyser. Hot steam is injected upwards from the bottom of the analyser.

The formation of spirit occurs in the analyser. The wash is fed on to a perforated plate, which forms the base of the top chamber. The rising steam under pressure does not allow the wash to escape downwards. The wash indeed cannot reach the lower chambers until it has



GENERAL ARRANGEMENT OF A MALT WHISKY DISTILLERY IN THE SCOTTISH HIGHLANDS ~

THIS DIAGRAM SHOWS THE SUCCESSIVE STAGES IN THE PROCESS OF DISTILLING A MALT WHISKY FROM THE TIME THE BARLEY IS STEEPED UNTIL THE WHISKY IS MADE.

risen to the level of a drip pipe, which lies above the perforated plate. This sequence is continued at each level. When the wash finally penetrates to the lowest chamber of the analyser its volatile alcoholic content has been vapourised by the ascending steam.

The steam, now laden with alcohol vapour, is led through a pipe back into the rectifier. The vapours, as they pass upwards in the column, are coming in contact with the cold pipes feeding the wash downwards. The rectifier thus acts as a condenser. At a certain part of the column a temperature will therefore occur which coincides with the condensation point of ethyl alcohol. From the chamber which corresponds with this area, a heavy copper sheet or spirit plate is fitted, so that any liquid which condenses or falls on to it, is drained away. The first vapours to be condensed are the feints; unlike pot-still distilling, the term feints is applied to both the first and last runnings of the Patent still. Once the potable spirit begins to condense, the patent still runs continuously so long as wash and steam are supplied to it. When a cycle of distillation is completed, the feints are returned to the new charge of wash to be re-distilled.

The patent still has several by-products.

It gives fusel oil, aldehydes, and dregs; the latter is often formed into a paste for animal feeding, while fusel oil may be marketed on a commercial scale.

It must be stressed that the patent still represents a great saving in fuel consumption, in cooling water, and in time. The steam and alcohol vapours pre-heat the cold wash. The latter in turn condenses the hot vapours. (By the addition of a second rectifying column the production of spirit for gin manufacture may be performed, *1 at the same time as ethyl alcohol is being made to become grain whisky).

The preparatory stages are also simpler and more expeditious than those required for malt whisky. For example, in grain whisky production only some 20% of the grain is malted, as against 100% for malt whiskies. In many instances the cost of the mash bill per ton may be lower, because a variety of cereals are used, and the proportions of these may be varied. For malt whisky, barley is essential.

Nevertheless, the rectifying part of the

*1
It has been suggested that gin manufacture occurs at some grain whisky distilleries in Scotland.

distillation of grain whisky deprives the distillate of the congenerics found in malt whisky, and to which it owes its aroma and fullness of taste. In the manufacture of grain whisky the processes are conducted so as to limit the residuals. Consequently, the grain spirit needs less time to mature, because it has fewer elements which require patient alteration by maturation and its associated bacterial changes. Within three or four years of being laid down in cask, grain whisky is ready for consumption as potable alcohol. Although malt whisky may be legally consumed after three years, it may in fact require seven to ten years to convert its fieryness into a mellow spirit fit to drink.

S E C T I O N I I I.

Chapter 6.

CUSTOMS AND EXCISE CONTROL.

The Customs and Excise Regulations governing the Manufacture of Spirits in the United Kingdom have a considerable influence on the modus operandi of a Scotch whisky distillery. The legality of distilling in Scotland was established by 1823; payment of a fee purchased a licence to distil. This procedure is still in force. Anyone may become a distiller of Scotch whisky by applying for a licence, although "the private individual" would not be granted one, unless his distillery was to be a commercial proposition. *1

What then do the authorities regard as a commercial proposition? Section 93(4) of the 1952 Customs and Excise Act states that where the largest still to be used is less than 400 gallons in capacity, a licence may be refused, or issued under such conditions as the Commissioners shall impose. In practice, stills of such a capacity are now non-existent. *2

Secondly, as distillery construction and equipment are very expensive, costs debar individual efforts to produce whisky. Even where a distillery has been

*1 See Appendix I; 4.

*2 The smallest still in use is reported to be at Edradour Distillery, Pitlochry, Perthshire.

erected, final approval by Customs and Excise authorities may be withheld. A new distillery, probably built as a speculative venture, has recently entered production, although final approval has not been given. (One of the conditions of approval is that satisfactory accommodation must be provided for Distillery Officers if the distillery is more than $\frac{1}{4}$ of a mile from a market town. As yet no houses have been built, and the establishment is staffed by unattached officers). It thus rests with the Commissioners to decide whether a distillery comes within their interpre-:tation of a commercial undertaking.

The Spirits' Manufacturing Regulations were first set out in a Spirits Act of 1860, which was subsequently modified in an Act of 1880. Their aim was to regulate and facilitate both the calculation of revenue and its collection. To this end both plant and processes in distilleries were carefully controlled and the liquids produced were gauged and recorded. At the close of the Second War, the Regulations *1 were again altered to speed up the flow of production coming from malt whisky distilleries, in particular, by increasing the use made of existing capacity. Total output was thus raised.

*1 The Manufacture of Spirits Regulations, 1945. (No. 1588).

The Act of 1880 had stated that the period of brewing (the making of wash) and the period of distilling spirits must be 'alternate' and 'distinct'. Distillers were forbidden to use a still until at least two hours had elapsed after brewing was completed. Conversely, they could not prepare any wash or wort during distilling. The 1945 Revision made a notable modification - 'brewing' and 'distilling' were permitted to be carried on concurrently, instead of consecutively. Production could thus be greater in theory, and less subject to interruption.

Contrary to a widely held opinion, the rules laid down for distilleries are not framed to prevent illicit distillation or smuggling. ('General officers' are employed on preventative work of this kind, or in detecting sales of uncustomed liquor). The requirements for the building and operation of distilleries and their warehouses are designed to prevent illegal abstraction and fraud by the distiller and his employees. Abstraction is the more serious problem. To obviate it, plant is kept locked up except when a Distillery Officer is in attendance, and all pipes, vessels and utensils are regularly inspected. The strategic point is the distillers' warehouse. The door is guarded to prevent large scale

theft; regulations governing the construction of bonded stores make breaking and entering a difficult job. Petty pilfering is however almost impossible to prevent.

As even the smallest distilleries now hold stocks in bond amounting to over 1 million proof gallons, their potential revenue yield is at least £10. millions, (at the current rate of duty of £11.11s.11d. per proof gallon). It is for this reason that such stringent pre-:cautions to counter loss of revenue are made. For their part, distillers would not welcome a large scale removal of control, because at present their stocks are guarded for them. If Customs and Excise control were withdrawn, it would have to be replaced by other checks on employees and other persons.

Before manufacturing operations may begin, the Distillery Officer must be notified so that he may follow the process from grain to alcohol and make rough checks at the brewing stage - for example, a certain weight of malt should yield a certain volume of wash of a known specific gravity. The authorities insist that the distiller conduct his production so that a cycle of brewing and distilling is completed at monthly intervals. This eases the recording of information and also the charging of

duty. In theory, there should be no impediment to distilling on account of such regulations. During the working season, Distillery Officers are required to be available at any time during the day or night to give attendance on immediate notice to unlock any part of the plant for adjustment or repair. In practice hold-ups in production occur when there are more things to be done than the available staff can handle. Such a situation may arise in 'single officer' stations when the officer may be watching the warehouses, and is called to the stillhouse. He then has no alternative but to summon the workmen and lock up the warehouse. If however, the distiller gives some days' notice that extra official attendance is required, there need be no delay. As most distilleries work somewhat below their maximum potential output, a half days' delay is not a serious matter.

There has been a gradual easing of restrictions on distilling since the major revision of 1945. The reduction in control has been mainly confined to the brewing side, where revenue loss is negligible. From the moment that alcohol begins to form in quantity, the Regulations see to it that the processes are watched with increasing vigilance. There has only been one relaxation in

distilling; the Low Wines still was until recently kept locked whilst at work, but it is now unlocked.

Each piece of equipment in the distillery must be named and numbered in the order in which it is to be employed, and all piping must be painted to denote its contents - thus black pipes convey spirits, blue, feints, and red, wash. At strategic points, crown locks are affixed - often where liquids enter or leave the process - but the final control point is the spirit safe.

Water in distilleries is strictly regulated. This is to prevent the abstraction of whisky and the topping up of deficiencies afterwards. In the filling store, where the whisky is placed in casks, the water tap is under a crown lock. When the whisky is reduced in strength to 11^{o} over proof, prior to bonding, the water is locked off, and no fraudulent substitution of water for whisky can then occur. It was formerly required that the strength of spirits in each cask be tested, but now it is only one cask in ten that is sampled. The work of the officer has thus been much eased.

The casks themselves must each be marked in accordance with a recognised formula, giving the cask

number, the distillery name, the casks' contents in gallons, and the year of warehousing. Once in bond, the casks are subject to inspection - they must be accessible for this purpose, and the distiller must hold himself ready to allow samples to be taken at any time. He is liable for any deficiencies which cannot be satisfactorily explained by evaporation or other justifiable causes.

The problem of control is more acute at the blending and bottling stage. The whisky is further reduced with water prior to bottling. The only official checks are a count of the number of bottles filled, and a 1-in-50 check of the strength and actual contents of a bottle. If water were not strictly controlled, the replacement of whisky by a bottle of coloured water would be relatively easy, and the chances of detection small.

To prevent supervision by officers becoming too involved, all the phases of production of Scotch whisky distillation, apart from malting, must be carried out in the distillery in which the final distillation will take place. The distiller may not house spirits distilled elsewhere, unless special permission is obtained. These measures help to prevent fraudulent returns being made.

It will thus be apparent that governmental

control on distillation and subsequent processing is very real and effective in the Scotch whisky industry. Probably no other industry in the United Kingdom has more rigorous supervision at each stage. The only weak point in the control system appears to be the bonded stores. To ensure that no alcohol is removed illegally the officer would require to follow each workman while he is in a warehouse, which would be impossible. Instead the doors are guarded, but the officer has no right of search. The distillers support the Distillery Officer; they do not tolerate theft, and employees found pilfering are dismissed.

Excise control in its present form could not be improved without placing excessive restrictions on the distiller which might lengthen production and increase his costs. On the other hand if controls were to be further relaxed, revenue would be exposed to considerable loss which at current levels of duty could not be tolerated.

Although the revised Regulations oblige the distiller to spend time on liaison work with his Distillery Officer, and although the flow of output may occasionally be impeded, there is a reasonable balance between revenue and distilling interests - a balance which would be difficult to adjust for the better.

S E C T I O N I I I.

Chapter 7.

MATURATION, BLENDING AND BOTTLING.

MATURATION.

Maturation is one of the crucial aspects of Scotch whisky production. The minimum legal requirement for the maturation of Scotch whisky in the U.K. is three years; thereafter, it is deemed fit for consumption. Most foreign countries to which whisky is exported have similar provisions. Production must take account of this inevit-:able time-lag, which is one of the main economic problems of the industry.

Scotch whisky is laid down in wooden casks of American oak, or preferably in old sherry casks. As the wood is permeable, oxygen is absorbed, bacterial changes occur, and volatile elements escape. Some 4 million proof gallons of whisky are lost in this way every year. Consequently, the Customs and Excise regulations permit allowances to be made to compensate for such deficiencies. The allowance is 2 percent per annum for each year (or part of a year) that the whisky is in bond, with an addition of 2 percent for whisky stored in butts, and 3 percent for whisky placed in hogsheads. *1

*1 This formula is derived as follows:-

Twice the number of years in bond, plus 2 or 3 depending upon the size of the cask. A 5 year old whisky warehoused in a butt would thus show:-
(5 x 2) + 2 % decrease in volume.

i.e. 12% decrease in volume.

The raw whisky gradually becomes mellowed, losing its coarser fiery elements. The process is influenced by the size of the cask, the time during which the whisky is bonded, the specific gravity of the alcohol, and by other factors. Most significant among these are the temperature and humidity of the warehouse. A low range of temperature throughout the year, coupled with little variation in humidity, seems to be a desirable attribute for warehouse locations.

It has been established from experiments with Irish whiskeys that changes in conditions within warehouses have a marked effect on the resulting whiskey. It was found that different types of whiskey could be formed from the output of a single distillery; these varieties could then be blended and marketed. There is no evidence that research of this kind has been done in Scotland. Empirical methods alone are used.

Pot still whiskies are normally aged for much longer than the statutory minimum period. Some may be left for fifteen years, but usually seven to ten years suffices. After twenty years or so, the whisky may acquire traces of woodiness if left in the cask, which would greatly detract from its true flavour and bouquet.

Two major variables have to be considered by firms laying down whisky stocks. One is the length of time required to age and mature the spirit, and the second is the problem of accommodating a continually rising output since 1954. The minimum usuage of warehouse space will be three years, and most will be occupied for longer periods.

Firstly, there is a widespread tendency for Scotch whiskies to be held in bond at, or close to, the distilleries where they originate. Whiskies appear to mature to better advantage there. There is also difficulty in obtaining sites for bonded warehouses (which are prefer-:ably single storey buildings) in congested urban areas. Those already in existence in Glasgow, Leith or elsewhere, have a perpetual turnover of stocks, being depots where whisky awaits processing or lies in transit, rather than reservoirs for undisturbed stocks. Scotch whisky is therefore being warehoused where the expansion of facilities is easiest.

In Banffshire alone, about twenty-four new warehouses have been erected since 1945. Elsewhere increased accommodation has been obtained in the following ways. Additional floors have been inserted in single storey buildings, thus doubling their capacity. Racks

have been devised for holding casks in tiers, so that they are accessible for Excise inspection and for repair. To save warehouse space the practice of storing grain whisky at 20° over proof (instead of 11° over proof) was begun after 1950; this measure increased storage capacity by 8 to 10 percent. With stocks approaching 330 million proof gallons, the practice has continued.

Because Scotch whisky bears a heavy duty, Excise regulations demand that every effort be made to eliminate loss. To the public, and to the retail merchant who handle comparatively small volumes of whisky, upon which duty has been paid, any loss of that whisky is a personal one. To the distiller or the blender, loss through fire or other hazard could be a commercial disaster. Marketable stocks cannot be built up rapidly to make good such a loss. Bonded warehouses, many of which contain over a million proof gallons of whisky, must therefore be well ventilated, and must incorporate comprehensive systems of alarms, sprinklers and fire-proofing devices. *1

*1 In the Cheapside bonded warehouse fire in Glasgow in 1960, some 998,000 proof gallons of whisky were lost, quite apart from the serious loss of life which occurred.

Insurance and Warehouse Charges.

In analysing the bonding of Scotch whisky two financial aspects are significant - those of storage itself, and of insurance. The onus of supplying casks to be filled by a distiller falls upon the purchaser of whisky. Probably over £1.5 million is invested by the Scotch whisky industry in casks to contain its present stocks.

When a cask is placed in a bond, it is its size which determines the rate payable, for it is space which is rented, with the services of the warehousemen in making repairs, and giving access for Excise inspection. The current rate (1962) is 8d. per butt, and 5d. per hogs-:head of whisky per week. No reductions are made for warehousing quantities of casks, nor does it matter whether they are bonded for a week or a year - the pro rata charge remains the same. The warehousekeeper has a 'lien' on all goods under his control for any claims which he may have against the owners in respect of rent or other charges. Rent must first be paid before the casks are released for sale.

Insurance charges vary markedly according to the location of the bonded premises, and to their suitab-

:ility for warehousing highly inflammable spirits. Hazards of other kinds (e.g. burglary) have also to be considered. Other things remaining equal, storage is more expensive in urban than in rural areas. A premium for a hogshead of whisky may be 30s. per annum - a charge which incorporates 10s. for fire risk, and 20s. for burglary or pilfering. For each cask insured, such a sum would cover a claim of up to £75.

It is the responsibility of the owner of the whisky to insure it. A notable result of the Cheapside fire, to which reference has been made, was the increased demand for insurance cover by owners of whisky, because much of the spirit in that bond was uninsured. Similarly, theft from bonded premises is also followed by a sympathetic rise in demand for insurance.

These factors, taken in conjunction, encourage distillers and blenders to build their own ware-:houses in order to minimise the charges payable for stock holding. Although the initial capital outlay is consider-:able, in soundly constructed, well designed premises, hazards are greatly reduced. It is in converted buildings, perhaps several storeys high, inadequately ventilated, and containing structural timber that the danger of fire is

inherent.

Throughout the period of bonding, the value of the Scotch whisky increases. A first class Highland malt whisky at 12 years of age may be worth 150s. per proof gallon on the open market. Insurance of stocks has accordingly to take account of appreciation in value; premiums thus rise as ageing proceeds.

The question arises of how duty is charged or made remissable on Scotch whisky lost by accident in warehouse, or in transit. Duty need not be paid provided the owner proves that the spirit was 'lost or destroyed by unavoidable accident'. Normally duty has to be paid to the Customs and Excise before Scotch whisky is released from bond for the home market. It may happen however that whisky is destroyed <u>after</u> duty has been paid, but before it is uplifted from bond. This sum is then repayable. Once the whisky has been removed, duty cannot be refunded by the Commissioners. For such a contingency, the owner has to obtain insurance for 'duty payable', in addition to whatever other forms of insurance cover he adopts.

<u>SUMMARY</u>.

The insurance of Scotch whisky and its

protracted warehousing are a major element in the economics of the industry. Firstly, insurance directs and crystall-:ises a large part of the industry's resources. With stocks at 330 million proof gallons, some five to six million casks will be in use. If each of these is insured at as little as 10s. per annum, it is apparent that a considerable sum is invested in insurance cover alone. Secondly, the warehousing of a hogshead for one year amounts to 34s. 8d. Consequently, firms will be increasingly compelled to build and own their own warehouses to save paying rent for this service. Furthermore, they will construct them to high safety standards, not only to satisfy Customs and Excise inspection, but also to reduce insurance charges to a minimum.

BLENDING.

The blending of Scotch whisky is defined as the admixture of two or more different whiskies. Since the process was initiated about 1860 by the Edinburgh firm of Andrew Usher & Co. Ltd., it has developed into a skill of high standing, as great, if not greater than that of the tea blender.

The blender endeavours to select whiskies

of a type which will reproduce the characteristics and standard of quality for which his particular blend is noted. Blended whisky tends to incorporate definite groups of whiskies - those of certain ages from certain distilleries will tend to be chosen year after year. If there should be a shortage of a particular whisky, the blender may resort to the open market to purchase stocks of it, or he may substitute another whisky which resembles it.

Because the single malt whiskies, which are the vital essence in the blend, are dissimilar and may vary a little annually (just as vintages vary), so the blender is guided by a standard which he attempts to reproduce.

During the selection of whiskies, duty free samples are drawn from every cask. The blender judges the whisky by its bouquet alone - none is drunk. Whereas some firms rely upon the 'nose' of one blender, many prefer to employ a team, because a pooling of opinion is said to give a more reliable result.

The whiskies are tested not only for aroma, but also for specific gravity, colour, clarity and other things. Sometimes as many as thirty or forty different whiskies may go into a blended Scotch whisky in varying

proportions. An average blend will probably contain 50% malt whisky to 50% grain whisky, although the trend for lighter whiskies is producing a 40% malt to 60% grain mixture. It is a widely held opinion that the greater the proportion of well matured malt whisky, the more satisfactory the blend will be.

Not only must the constituent whiskies be sound individually, but they must also be selected to blend together harmoniously. If the admixings were haphazard, the resulting whisky could be most unpalatable. It is the blended Scotch whiskies which have to carry the name of the whole industry across the world, and therefore well known brands must have a constancy and reliability to the consumer.

Once the whiskies are assembled in the numbers specified by the blender, the bungs are removed from the casks over stainless steel troughs, where "the whisky, which ranges in colour from the palest hue to rich amber ..... loses its identity in the glittering streams that run together and finally cascade into the blending vat." *1 These vats are glass-lined, and

*1 A special correspondent in 'The Times', Thursday, March 22nd, 1962.

vary greatly in size. The whiskies are mixed by compressed air. Thereafter the blended whisky is laid down in casks for some months to allow the diverse whiskies within it to 'marry'. When the constituent spirits have lost their identity, the blend is again carefully sampled. Some firms vary this practice by blending their malt and grain whiskies separately, leaving them to fuse in different vats, and only make the final intermixing before bottling takes place.

It is often asked what purpose lies in blending Scotch whisky. The industry answers that the process achieves the best of both types of Scotch whisky, and is thus justified. In addition, the output of any one malt distillery would be inadequate to sustain the demand for any widely known branded whisky at present day levels of world consumption.

It is also suggested by blending firms that malt whiskies by themselves are too robust for people in sedentary occupations, although they are still popular in the Highlands of Scotland. The industry strenuously denies that blending is a form of dilution, the grain whisky serving to give lightness to the spirit. Malt whisky distillers and cognoscenti in single malt whiskies disagree

with this view. Nevertheless, blending has popularised Scotch whisky at home and overseas, because it gives the distinction and flavour of the malt, with the quantity and reliability of the grain.

BOTTLING.

In contemporary bottling halls, the flow-line system is used, and bottling is mainly automatic, many types and sizes of container being handled. The blended whisky is first pumped to reducing vats where the whisky is diluted by the addition of water (under Customs and Excise super-:vision) to the proof strength permitted in the market to which it will ultimately be sold. Dilution requires a pure and abundant water supply. Glasgow water is well suited to this purpose, and has been sent to London for whisky blending. Nowadays, London warehouses blending and bottling Scotch whisky use demineralised water.

Prior to bottling, the colour of the whisky must be standardised. Many whiskies are clear, or only slightly yellowish, in colour. Contrary to popular belief, the colour of Scotch whisky has nothing whatever to do with the supposedly peaty water used in its distillation. The colour is mainly derived from the

casks in which the whisky is matured. American oak casks impart practically no colour to the spirit, but old sherry casks do give it a marked amber colouring. The consumer buying branded Scotch whisky would not wish to purchase bottles the shade of whose contents was always different, Such a variation could denote inferior whisky. Hence by the addition of colouring matter, usually caramel, this possibility is excluded.

After being warehoused for a period of five to ten years, whiskies become sedimented. Before bottling, clarity must be restored. The temperature of the spirit is first reduced by refrigeration equipment in order that filtration will be facilitated without harming the whisky itself. At this point, too, provision may be made for the removal of certain elements, such as copper salts, which are present. 'Purification' is sometimes necessary if the whisky is for consignment to certain markets, where statutory requirements limit the amount of 'impurity' permissable. *1

It is during the bottling processes that

*1 Traces of copper salts have to be removed if the whisky is to be sent to the United States of America.

mechanisation has probably reached its peak in the industry. Semi-automatic lines, requiring some handling, have a potential output of 3,000 bottles per hour, and fully automatic lines can fill and process upwards of 4,000 bottles in the same time. An essential adjunct to the bottling hall is the wash house where the bottles are rinsed and dried by compressed air. They pass to the bottling plant which is under bond, while the whisky feeds downwards under gravity from vats to the filling equipment.

One innovation in the Scotch whisky industry which is now taken for granted is the special cork closure. Up to 1914, whisky bottles were sealed with cork stoppers, which required to be opened with a corkscrew. About 1913, a new type of closure, over which a metal capsule was drawn, was introduced. This device was patented, but has since been widely copied and improved by other users. Once in bottle, Scotch whisky no longer improves, because bacterial activity is prevented when oxygen is excluded. The bottles pass before a checking device which magnifies them for sight inspection; this is one of the few operations not done by machine and it ensures that no foreign bodies or other defects have been acquired in processing.

Labelling is a most significant aspect of the presentation of Scotch whisky; the bottle must be distinctive and eye-catching. Each label states that the whisky has been distilled in Scotland; notwithstanding the efforts of the Scotch Whisky Association and the regis-:tration of trade marks, copying of labels for the selling of spurious 'Scotch' does occur. When every label is well designed, perfectly aligned and carefully mounted, such infringements are much more difficult. The precision with which the labals are affixed is achieved by machine, which may also apply special marks, such as Federal Law Seals, which are necessary for all Scotch whisky sold in the United States.

Specialised packing units then process some 700 cases of Scotch whisky per hour. Checking is continuous at every stage, for no case may leave the bond without being check-weighed and counted - probably electronically. Allowances for losses during these processes are made by the Customs and Excise; that per-:mitted during bottling being 2% by volume, while for previous losses in vatting, blending and reducing with water, the allowance is 1% by volume.

Mechanical handling equipment is widely

used for stacking and transporting cases of whisky. Indeed, it is in the application of automatic devices and handling systems that the industry has achieved great advances since the Second World War. The flow of output has been raised by some 10% per annum in the same period. Since 1959, there has been an investment of over £3. million in blending and bottling plant, the latest development being that of Dewar's of Perth.

None of these blending operations occurs at a Highland distillery. Only one single malt whisky is bottled at its distillery - it is the Glenfiddich distillery which produces a limited quantity of bottled whisky for consumption mainly in N.E. Scotland. The blending and bottling of Scotch whisky is a large scale enterprise, demanding the labour supply, materials and facilities which only Lowland Scotland can provide.

S E C T I O N I V.

Chapter 8.

THE FINANCE OF SCOTCH WHISKY.

Since the Second World War the profitability of investing in Scotch whisky has become increasingly apparent, because demand for the product abroad shows no signs of slackening, although home sales are not rising rapidly. For clarity of description it will be assumed that the distilling and blending of whisky are performed in separate enterprises, which is indeed a condition frequently encount-:ered in the industry. (It should be noted that there are overlapping spheres of influence, where firms are both distillers and blenders of whisky. Even where this is so, as distillers, a firm may sell whisky to other blending concerns, and, as blenders, they may purchase whiskies from distilleries other than their own).

The Scotch whisky industry faces unusual financial problems. Firstly, no other product made in the United Kingdom has such a gap between production and consumption. The carrying of stocks involves an invest-:ment which cannot be readily realised for three or more years. Secondly, firms who contemplate laying down stocks are making forward estimates of market conditions several years ahead.*1 This procedure is essentially empirical; firms examine their recent performance and guess shrewdly what volume of new whiskies should be purchased.

*1 Firms in 1962 were in fact tentatively ordering new whisky fillings to be made in the autumn of 1966, for marketing perhaps seven years thereafter.

If they have been doing well, and markets are expanding, they may add 10 to 15% more to their previous year's fillings order. It is a rule of thumb method of estimating demand.

Until 1958, there was rarely any opportunity for new 'unconnected' firms to secure whisky fillings. Each year the established firms with long-standing trade connections absorbed all the additional fillings placed at their disposal by distillers. There was always a desperate attempt by blenders to purchase stocks, particularly of good quality Highland malt whiskies. It was not until post-1958, therefore, that advertisements began to appear in the trade press advising blenders and others that distillers would take orders for fillings.

In addition to forming estimates of demand for Scotch whisky, blenders are financing stocks of whisky which appreciate in value as they mature. Scotch whisky experiences a noticeable rise in value after three years have passed, presumably because the spirit could then be consumed legally in the United Kingdom and many other countries. In other words, at law it is considered sufficiently matured, and is thus a marketable commodity whose 'liquidity' potential could be realised by the

stockholder.

Distillers do not generally finance Scotch whisky. Their problem ends once the whisky is filled into casks and is ear-marked for certain purchasers. The whisky may however remain physically in the distiller's control in bond. The distillers are concerned only with the purchase of raw materials, the payment of workers, and the maintenance and extension of plant. Each year they prepare an order book of fillings which are to be made for blending firms. Once these fillings have been laid down, the blenders are supposed to pay for the whisky within 30 days, but it has been suggested that this arrangement is seldom adhered to in practice. Some pay cash for their fillings; some do not do so.

Several alternatives are open to the blending firm which wishes to finance its whisky purchases. Self financing of stocks is accepted as the most wide-spread method of financing Scotch whisky at the present time.

The profitability of investing in whisky both for firms which are in the Scotch whisky industry, and for individuals who succeed in securing fillings, is shown by the following transaction.

In 1956, some 600 proof gallons of a Highland malt whisky were sold by a firm of whisky brokers for the sum of £1,500. *1 The price of this type of whisky on the open market could therefore be assumed to be £2. 5s. per proof gallon. The original filling price of the whisky was £400., which works out at a filling price of some 13s. per proof gallon.

Assuming that the whisky was then ware-:housed in hogsheads (each of which contains about 60 proof gallons) the number of hogsheads would be about 10. The warehouse charges (normally 6d. per hogshead per week), and insurance charges, over a period of say six years, might be put at £200. The net profit accruing to the owner at the conclusion of the transaction might amount to some £900. - which represents a profit of over 200% on the original outlay. Enquiries in the industry substantiated this level of profit on whisky investments as being in no way exceptional in the conditions prevailing until 1958. Thereafter profit margins began to decrease, as the scarcity of matured stocks abated. Nevertheless, it has been suggested that the return on an investment of whisky still remains as high as

*1
Civil action heard in Inverness, and reported in 'The Glasgow Herald', of 12th January, 1962.

50% or more on the original filling price. The reason why Scotch whisky fillings were, and still are, desirable will readily be appreciated.

Nevertheless, finance is not as easy as this calculation would make it appear. Firstly, for a new firm to establish itself would be a difficult process because the crucial phase in its struggle to gain a foothold in the industry would be its first five years, when it would be amassing stocks, building trade connections, and probably selling very little of its holdings of Scotch whisky. Such a blending firm would attempt to buy up already matured stocks, or whiskies approaching maturity which would be purchased on the open market. Even blended whiskies may be bought in bulk, and subsequently bottled and marketed, so that a small firm, with quite a modest capital could in theory make a beginning in the industry. Out of the proceeds of its sales, the firm may attempt to purchase fillings of new whisky at the price of 6s. to 8s. per proof gallon for grain whisky; it may find that the grain distillers vary their prices by as much as 25% to different customers. Investment will also have to be made in stocks of malt whisky, at perhaps 10s. to 15s. per proof gallon. As the spring distillations from a pot still are regarded as

producing a better quality of whisky than the autumn ones (when the plant is still being attuned to production) the firm will have to pay more for spring-distilled whisky, which may fetch 1s. to 2s. more per gallon.

It is now necessary to examine whisky brokerage in more detail, for it is an integral part of the Scotch whisky industry. Brokerage flourished in the post-war period when there was an unprecedented demand for matured whisky. The brokers of Scotch whisky fulfil much the same function as brokers on a Stock Exchange. There are two aspects to their work, namely that they hold 'portfolios' of whisky stocks and ferry them to the blender from the distiller when and where they are required, and that they have a speculative influence in the Scotch whisky industry. The whisky 'boom' of the post-war years stim-:ulated a demand for whisky stocks out of relation to <u>current</u> demand, although there was a possibility that consumption would continue to expand to absorb the surplus. In the event, the optimistic trend has been confirmed, thus justifying the cost of investing in whisky in a speculative way. The speculative element in the industry has lessened since 1958. In that year, there was anxiety about production being 67% in excess of current demand, and warnings were issued to the

industry by the Distillers' Group. Stocks then represented a coverage of some 7 to 8 years, at the level of sales then obtaining. Judgement was therefore needed to bring the distilling programme more into phase with demand, a factor that restrained the wilder hopes in the industry. Notwithstanding, the Scotch whisky industry is enjoying favourable forecasts of the future course of demand, which has a buoyant effect upon it.

It should be stressed that speculation is not the main spring of whisky brokerage, which is principally the purchasing of whiskies, from distillers, or on the open market, and the selling of these at a profit. At present, blenders appear only to resort to brokers when their estimates of their needs are out of line. For example, they may encounter a shortage of a four year old grain whisky, and have to seek quantities on the open market to feed into their production 'pipe-line' to prevent hold-ups at the blending and bottling stage. (The D.C.L. resorted to the open market in 1955 to buy matured whiskies, to such an extent that their profit levels are reputed to have declined as relatively high prices were paid for additional stocks.)

Brokers divide up their parcels of whisky on the basis of origin and age. A first class Highland

malt whisky over 12 years of age or more may fetch 150s. on the open market; likewise a one year old malt may sell for 15s. to 16s. per proof gallon. For certain types of whisky there is less demand. Some Islay whiskies show little appreciation, and after 3 years are still being marketed at their filling price. The broker usually anticipates hard bargaining by a well informed buyer, who knows exactly what whisky is wanted for blending. Over-:production means that buyers can afford to choose, leaving the whiskies which are heavy or peaty, and which are there-:fore less suited to modern tastes for lighter blends.

Advances and Delivery Orders.

While it is general practice for new stocks of Scotch whisky to be bought out of the proceeds of the old, which are continually being marketed, other methods of financing Scotch whisky exist. It is known that Scottish banks will finance stocks of whisky maturing in bond by means of advances against the security of 'whisky certificates'. These are a form of document of title, and are relatively common. They are classified as a bank advance.

The banks have devised a method of taking

delivery of the whisky, other than by possession, and making advances against it. Whisky does not pass all the tests of a good banking security, because there are risks of a fall in price, or of loss through damage or pilfering. Margins have also to be closely watched. Much depends on the integrity and business acumen of the borrower. *1

Under Scots Law, the lender must take delivery of goods to have security over them. At law, the banks take constructive delivery of the whisky by having it stored in a neutral warehouse, from which it cannot be released, until payment of duty is made. The title to the whisky is meantime made over to the bank; the warehouse warrant or a delivery order, granted by the owner of the whisky in favour of the bank becomes the bank's property.

As whisky is often held in warehouses at the owner's risk, the bank would usually insist upon the owner obtaining a fire policy. For his part, the warehouse owner may only insure the whisky in his bond to the extent of the original filling price. As the spirits mature, and their value appreciates the bank may have to obtain a policy to cover this additional value. Loss in transit may also occur during loading: the breaking of a cask of

*1 The advance and delivery order system has rarely been abused by individuals or firms in the Scotch whisky industry.

whisky may involve the loss of several hundred pounds, *1 and the bank may also insure against this risk.

When the whisky is about to be released from bond, the bank has to surrender its warehouse warrant endorsed on behalf of the bank, or if a warehouse keeper's receipt is held, issues a delivery order in favour of its client. The whisky is normally blended and sold, and the proceeds paid into the bank. Immediately, the client acts on the delivery order, the bank's security over the whisky is lost. Furthermore, a time lag of several months often occurs in whisky trading, and duty has to be paid before the whisky is released from bond. The bank may have to finance this outlay, in addition to parting with security.

In the industry it is widely believed that this system plays a significant part in whisky finance, thereby explaining why firms with a capital of thousands of pounds may carry stocks worth millions. Recently, the financial arrangements in the industry have been revealed more clearly by the disclosure of the development of firms such as Teachers Ltd. It is known that in 1929, whisky

*1 In 1962 a cask containing 50 gallons of malt whisky was broken in transit with the loss of over £600.

stocks worth £100,000. were purchased by Wm. Teacher & Sons Ltd., supported by the Commercial Bank of Scotland. In 1960 - 62, 'facilities' were again obtained from banks to secure additional stocks and to take over a distillery.

The Finance of Duty.

During the production period, the question of duty does not arise as the new whisky is stored under bond. Blending and bottling are normally also carried out in bonded premises. Scotch whisky may however be sold by wholesale firms under bond, a procedure which is adopted when a large volume is purchased. The duty is then not paid until the distributor is out of stock and requires to replenish it. By deferring the payment of duty, the wholesaler is able to minimise his outlay as much as possible. The other method is for the bottled whisky to be released from bond, when it is required by a retailer, who must finance the duty as well as the cost of the whisky.

Bills of Exchange.

When purchasing new whisky fillings, some blenders sign Bills of Exchange, which the distillers discount

at the bank, which charges the current discount rate. It has been suggested in the Scotch whisky industry that these Bills receive a finer discount rate in London. It is possible that Accepting Houses might be willing to finance Scotch whisky stocks by means of Bills of Exchange. Such Bills would however be regarded by the Bank of England as finance bills (not relating to the movement and the sale of goods), and would be looked at with some disfavour. An Accepting House doing such business would therefore probably hold these Bills in its own portfolios instead of attempting to re-discount them in the market. They would be Bills of Exchange in part, but the whole transaction would be in the nature of an advance by an Accepting House. This half bill/half advance is a possibility, but there is no concrete evidence to substantiate it from the London Discount market.

<u>The Finance of Whisky for Export.</u>

75% of all Scotch whisky marketed is consumed overseas, and therefore the finance of whisky for export is a major aspect of the industry. The Scotch whisky is shipped on board duty free, under Customs and Excise supervision. The burden of finance on the exporter

is consequently not so great as that which rests on his home market activities where duty has to be financed in many cases.

Scotch whisky for export is sold 'cash against documents'. The overseas buyer must first establish a credit in a local bank in his own country. Meanwhile the whisky exporter has to finance the shipment while it is in transit, and perhaps for some weeks after its arrival.

After the importer of the whisky has opened a credit in favour of the exporter with his own bank, either the London office or the correspondents of the foreign bank, issue to the whisky exporter a Letter of Credit, in which they undertake to accept a bill drawn on them by the exporter, against surrender to them of the shipping documents relating to the whisky.

When the Bill of Exchange drawn by the Scotch whisky firm under this credit has been accepted by the agents of the purchaser in Britain, the whisky exporter may have the Bill discounted at an agreed rate by a discount house. When the Bill matures the buyer of the whisky has to put his own bank in sufficient funds to meet the Bill.

The 'Letters of Credit' method of finance is the principal form used by Scotch whisky exporters consigning whisky to the United States of America. These Bills are seen in the London market but they are not regarded as being partic-:ularly important in amount, although their total may be significant relative to the export of Scotch whisky.

Where confidence has been established through the development of a large and valuable export trade, Accepting Houses may assist with financing whisky exports. They may place at the disposal of the whisky exporter, an acceptance facility - that is, they agree to accept bills up to a certain amount drawn by him on them. Such a credit may be granted for a fixed period (e.g. one year). When the whisky exporter's Bills have been accepted by the Accepting House, he may then discount them at a Discount House, thereby receiving his money. For security, the Accepting House may take possession of the relative shipping documents. *1 With borrowers of high standing, unsecured credit may be available, on the understanding that the Accepting House is given evidence of shipment of, or trans-:actions in, whisky.

*1
The Bills of Lading are sent to the Accepting House's own agent in the importing country for release to the importer of the whisky against payment for it.

Another form of finance for whisky exports may be arranged where the importer of the whisky informs an office of his bank in the U.K. to issue the exporter with a credit. Under this credit, the Bank undertakes to 'negotiate' bills drawn by the exporter of the whisky on the purchaser. The whisky exporter then presents the bills and relevant documents at the bank's office in the U.K. The bank buys them, and sends them to the importing country. There the foreign bank hands the documents to the importer of the whisky, against payment. This form of finance is a traditional one in British exporting practice, and it is also used in the export of Scotch whisky. Such bills as these are not however negotiable on the London Discount market, being classified as Foreign Domicile Bills.

The principal risk incurred in the export of Scotch whisky or any other product to overseas countries is the risk of bad debts. Many firms in the Scotch whisky industry therefore make use of such facilities as the Export Credits Guarantee Department to safeguard themselves against such occurrences. Furthermore, if a whisky firm wishes to enter a new market, the Scotch Whisky Association would furnish it with as much information on the state of the market, and on financing its trade, as possible.

S E C T I O N I V.

Chapter 9.

THE COST STRUCTURE OF THE SCOTCH WHISKY INDUSTRY.

Cost of Production.

The cost structure of the Scotch whisky industry is complicated by the fact that distilling and blending are not necessarily performed by the same firm, and thus distillers' costs may be expected to be very different in composition from blenders' costs. The latter vary considerably depending upon the type of business enjoyed, the scope of activities, and the strength of trade connections. The examples of costs given in this study may be taken to represent the average cost pattern facing the industry at the time specified and are based on confid-:ential information given by firms in the Scotch whisky industry.

The following table gives the comparative costs of producing Scotch whisky between 1939 and 1962. The cost of production shown refers to a full sized bottle of Scotch whisky at 70° proof; the cost given covers all production and selling costs, with profit margins. Over the period 1939 to 1962, duty has more than trebled.

TABLE I.

Year	1939	1948	1962
Cost of production.	4s.0½d.	8s. 9d.	14s. 5d.
Duty	8s.5½d.	24s. 7d.	27s. 1d.
Retail Price.	12s.6 d.	33s. 4d.	41s. 6d.

Source: Scotch Whisky Association.

Distilling Costs.

The industry ascribes the increase in costs to several factors, of which the rising costs of raw materials is the principal. The main raw material used is barley. Taking 1936 - 38 as the base year equal to 100, the price index for home-grown barley stood at 242 at the conclusion of the Second World War. Rising costs continued, and by 1951, distillers were paying over £40. per ton for barley.

TABLE II

Agricultural Products	Price Indices.
Costs of Home Grown Barley: 1936 - 38 = 100	
1936 - 38	100
1945:	242
1951:	415
1956:	268
1959:	271

Annual Abstract of Statistics: H.M.S.O.

A similar pattern of rising costs was encountered when purchasing other cereals, or fuels, but increased wage levels did not significantly contribute to the industry's growing expenditure. Labour costs constitute only a minor element in distilling, but are more significant at the blending and bottling stage.

TABLE III.

Cost elements in spirit distilling as shown in the 1957 Census of Production: Scotland.

	£ million	Percentage.
Gross output	22.3	100
Net output	6.5	29
Total stocks and work in progress - January	4.4	
December	0.3	
Cost of Materials and Fuel	15.8	67
Capital expenditure (less disposals)	1.8	
Wages and Salaries	2.3	10
Overheads and Profits	4.2	19

Distilling and wholesale bottling are not included in the same table in the Census of Production, with

the result that the Scotch whisky industry is examined under two headings; both tables are given for the purpose of comparison.

TABLE IV.

Cost elements in wholesale bottling as shown in the 1957 Census of Production: Scotland.

	£ million	Percentage.
Gross output	79.0	100
Net output	25.9	32
Total stocks and work in progress - January	67.8	
December	2.2	
Cost of Materials and Fuel	53.1	66
Capital expenditure (less disposals)	0.7	
Wages and Salaries	4.0	5
Overheads and Profits	21.9	27

(The above table includes establishments bottling beverages other than whisky).

Table III may be taken as being representative of distillers' cost patterns in Scotland, but Table V shows an actual cost analysis for a proof gallon of malt whisky

during the 1962 - 63 season. Raw material costs are seen to constitute a major charge on distilling firms (confirming the statement made regarding Table II) while wages are a relatively minor element.

TABLE V.

Filling Costs		Per Proof Gallon	
Highland Malt Whisky: 1962 - 63 Season.			
		S.	D.
Malted barley:	approx.	7	0
Fuel:	approx.		10
Wages:	approx.	1	0
Overhead Costs (e.g. Rates)			8
Profit Margin:		7	0
Current Filling Price		16	6

(Source: Confidential information received by writer).

The fuel cost in the above analysis is for oil, which is known to be a cheaper source of power than coal at present. The charge for casks is not included because customers are expected to supply their own casks for

filling, and to bear the cost thereof. The D.C.L. group usually charge 6d. per proof gallon less than the amount charged by the independent firms for new whisky.

Since 1938 - 39 when the filling charge was 5s. 6d. per proof gallon for a Highland malt whisky, labour and fuel costs have become a more significant con-:stituent of the total. The filling prices for the same type of whisky are set out in the table below for purposes of comparison.

One proof gallon Malt Whisky.	1939	1945	1954	1962
Filling price.	5s.6d.	10s.6d.	14s.0d.	16s.6d.

(Source: Confidential information received by writer).

Labour Costs.

Labour costs have risen in the Scotch whisky industry by about 20% since 1945, but in real terms the probable improvement in wage rates is on average about 7%.

On the distilling side, there is a variation in labour costs between the pot still distilleries and grain whisky distilleries. A pot still distillery employing an average of 30 to 35 men, has about five key employees, the rest being unskilled or semi-skilled men. The average wage for a 42-hour week is £18., at a basic rate of 4s.8d. per hour. Brewing and distilling cycles, however, cause much overtime and double time rates to be paid. In grain distilleries, the average wage rate is 5s.5d. per hour, although the basic rate is 4s.9¼d. The average wage is in excess of £20. per week. There is a lower ratio of skilled to unskilled men than in a malt whisky distillery.

Women are much employed in the bottling of Scotch whisky, although male workers are required for blending processes. Therates for female employees are 3s.6d. per hour at the age of 18. The average wage is reputed to be £9. to £11. per week, but there are also considerable opportunities for earning overtime rates.

These wage costs are 'arranged' for the entire industry by a formal agreement on wages entered into by the Distillers' Company Limited and by the National Union of Municipal and General Workers. This agreement sets the pattern of wage rates for the whole Scotch whisky

industry, because other firms honour it, just as they support the unofficial price agreements of the industry.

Blending Costs.

Insurance and warehouse charges have already been examined in Chapter 7, and their significance is shown in the cost analysis which is given below.

TABLE VI.

Blending Costs - 1962: Per case of blended Scotch whisky sold in U.K.: 70° proof.

	S.	D.
Raw whisky ex distillery.		
1.4 proof gallons.	15	5
0.56 proof gallons malt at 14s. p.g.		
0.84 proof gallons grain at 9s. p.g.		
+ 15% evaporation loss	2	3
Financing stocks for 5 years.	4	6
Storage rental while maturing.		9
Transport costs ex distillery.	1	6
Bottling and Packaging.	15	0
Blenders' overhead costs, selling costs, and profit margin.	30	7
Total:	70	0

Source: Confidential information received by writer.

If the cost to the consumer of a bottle of blended Scotch whisky is broken down into its constituent parts, the high margin allowed to the retailer becomes obvious. Duty in the United Kingdom is the largest element in the final price of a bottle of Scotch whisky, but the portion attributable to stock finance is considerable. Bottling and packaging are the processes which have the highest labour cost, and consequently the cost of containers, and labels is of lesser significance than wage payments under this heading.

The cost structure in the export market,of which the United States is the most conspicuous, serves as a comparison with that of the United Kingdom. In normal circumstances, a blender would earn a greater profit margin on export sales than on home sales, and this factor stimulates the Scotch whisky industry to become more and more export biased.

* TABLE VII.

Cost element: One bottle of blended Scotch whisky, 70°: 1962: U.K.

		S.	D.
Whisky ex distillery, including finance for 5 years.		2	4
Packaging.			9
Labour.			7
	Total:	3	8
Duty.		27	1
		30	9
Blender's margin per bottle.		1	10
Blender's price per bottle.		32	7
Wholesale margin.		1	2
Wholesale price per bottle.		33	9
Retail margin.		7	9
Retail price per bottle.		41	6

(Source: Confidential information received by writer.)

* Table VII. This analysis was obtained from a different source, and therefore differs from that of the other tables.

TABLE VIII.

Blending costs - 1962: Per case of blended Scotch whisky sold for export to the United States at 75° proof.

	S.	D.
Raw whisky ex distillery.		
1.5 proof gallons.	16	6
0.6 proof gallons malt at 14s. p.g.		
0.9 proof gallons grain at 9s. p.g.		
+ 15% evaporation loss.	2	6
Financing stocks for 5 years.	4	6
Storage rental while maturing.		9
Transport costs ex distillery.	1	6
Bottling and Packaging.	15	0
F.O.B. expenses.	1	0
Blender's overhead costs, selling costs, and profit margin.	37	3
	79	0

(Source: Confidential information received by writer).

The distribution and sale of Scotch whisky exported to the United States is in the control of importing agents who are often given the exclusive right to market a particular blend. The importing agent generally pays the

blender about $11. per case for standard, blended Scotch whisky, or about £4. 6s. 3d. Additional charges such as import duties and Federal tax must be met by the importer over and above costs of transport, advertising and marketing. The average retail selling price of blended Scotch whisky in the United States is reported to be $81. per case, or $6.75. per bottle, an amount which is composed in the following way.

TABLE IX.

Distribution costs per case of 12 bottles of Scotch whisky at 75° proof. (United States of America).

Blender's price. (£4. 6s. 3d.)	$11.00 - 12.00
Shipping charges.	3.00
Import duty, Taxation.	28.00
Importers' Costs and Profit Margin.	10,00
Margins to wholesale and retail merchants.	30.00
Total Price:	$ 81.00

(Source: Confidential information received by writer).

Scotch whisky has a higher retail price in

the United States than other comparable spirits, such as local whiskies, gin or vodka. As the price differential is equated with prestige and social status, the highest sales levels are attained in the more cosmopolitan areas such as New York and California.

Bulk exports, to which fuller reference is made in Chapter 12, have a significant cost advantage over bottled exports in the United States, but none of the major proprietory brands participates in this trade. New 'fly by night' brands bottled in the United States sell at $4.75. as compared with the standard retail price of $6.75. per bottle. Although the lower price has not hitherto attracted much custom, it may in time appeal to lower income groups in that market.

The second market for Scotch whisky is still the United Kingdom, despite its lack of dynamism which has already been discussed. Scotch whisky has little price advantage in comparison with other spirits in the U.K., nor is its high price equated with sophistication, for all spirits are similarly priced.

A noticeably lower margin is earned by the blending firms in Britain, partly because the D.C.L. maintains

price leadership, and also because bulk buyers of Scotch whisky, such as brewers, are resistant to price increases. The result has been that smaller firms have tended to concentrate on exports, leaving the home market to the major D.C.L. blends, but competition in the U.K. is now intensifying pari passu with the rise in stocks of matured whisky.

TABLE X.

Distribution costs per case of 12 bottles of Scotch whisky at 70° proof: United Kingdom.

	£.	S.	D.
Blenders' price.	3	10	0
Duty.	16	4	6
Wholesale margin and costs (average)	1	13	6
Retail margin and costs.	3	10	0
Total:	24	18	0

(Source: Confidential information received by writer).

Pricing Policy within the Industry.

The Distillers' Group through its control

of the 'Big Five' and other blending firms appears to lead the pricing policy of the Scotch whisky industry. In the home market there seems to be an unwritten law of resale price maintenance. Abroad, the same practice prevails, except where firms exploit some loophole in foreign import regulations, as in trade with the United States where Scotch whisky imported in bulk pays a lower rate of duty. After bottling, the price to the consumer is therefore less than that for U.K. bottled Scotch whisky. Notwithstanding, the Scotch Whisky Association recommends a standard policy of pricing for overseas sales.

Until 1954, the maximum retail price (37s. 4d. per bottle of Scotch whisky sold in Britain) was enforced by means of a trade court before which a firm could be summoned for charging more than the stipulated price. If the offence was proven the firm was placed on a stop list, published in trade papers, and in consequence its supplies of whisky were curtailed. The prices are now "recommended" both at home and overseas. It may have been fortuitous that the official price maintenance policy was abolished about the time that the Restrictive Practices Court was instituted.

The rigid pricing policy is claimed to give

security - in particular, to malt distillers, because it assures them of stable prices for their whisky. Both distillers and blenders are therefore able to plan future production with more confidence. Until post-1954, distillers did not require to doubt their market; the scarcity of whisky had caused a seller's market to form. As whisky became plentiful, the balance in the market was redressed in favour of the buyer. In normal conditions, there is thus a strong element of monopsony in the buying of whiskies. While distillers could in theory dispose of their product direct to retailers, it would involve the creation of blending and distribution facilities, in order to cut out the large blending interests who are the bulk buyers of Scotch whisky.

Even when a firm both distils and blends whisky itself, the monopsonistic trend becomes apparent when it purchases whiskies from distilleries other than its own. The blenders, on their own admittance, have profited most from the progress of the Scotch whisky industry, and for their part, continuity of supply, at a reasonable price, which shows little fluctuation, isgreatly to their advantage.

The Distillers' Company is the outstanding example of the blending and distilling interests having come

together to their mutual profit. It is represented as a triumph of financial expertise over the reckless competition of the small scale producers of the late 19th century. The D.C.L. maintains that the pricing policy of the industry is justified, because it has stabilised trade, and created order out of chaotic conditions. Probably in terms of economic efficiency, the Distillers' whisky firms are middle-of-the-run. Their vigorous but small competitors may well be more efficient, having lower costs per unit of output, because they have smaller overheads to meet. On the other hand, the less efficient firms tend to shelter under the price 'umbrella' held by the D.C.L.

The expressed policy of the industry is to produce and market a quality article at a reasonable price. If the duty on Scotch whisky were to be removed, the price to the consumer in Britain would be some 16s. per bottle - an amount which may hardly be termed exorbitant.

Despite the rigidity of its price structure in the wholesale and retail fields, there is a greater degree of fluidity in the prices charged by distillers for their whisky fillings. A variation of 25% in the price of grain whisky to blenders has already been indicated. Such a price range may be the result of the forces of demand and

supply, or it may be due to the monopsonistic influence of the well informed bulk buyer of whisky. There is also a variety of price for malt whiskies, but here the type of whisky differentiates the product of each distillery, making each pot-still whisky unique in its own way. A range in price is therefore more justifiable than in the instance of a grain whisky from one distillery being sold at different prices to its purchasers.

What then is the nature of competition in the Scotch whisky industry? Competition among its constituent firms is vigorous, but it has not been allowed to interfere with the good will which has grown up among them for several reasons. Firstly, the Distillers' Group maintains that its foresight has saved the Scotch whisky industry from self-destruction through price wars, and other wastes of competitive effort. Secondly, D.C.L. through the industry's Association, has been a formidable bulwark against government interference, although it has not been successful in winning tax concessions. The firms outside the Distillers' Group, which refer to themselves as the independents, have had to come to terms with 'the combine' of the Distillers' Company. The latter, being the largest and financially most powerful body, is the 'common enemy' of

the independents. More through fear, than love, these firms join the Distillers' Group when some external problem impinges on the whole industry. There is therefore some cohesion among all the firms, within and outside 'the combine'. Even among the many firms in the D.C.L., however, there is a considerable amount of competition. Like so many other large scale enterprises, whereas production has been ration-:alised, distribution has been left, within limits, to the constituent firms in the merger.

Competition shows itself in the Scotch whisky industry in an economic one-up-manship - to sell whisky of a higher quality, to use better formsof presentation, to display more effective advertisements, to have superior salesmanship, and to give more reliable service. In other words, competition is intended to win and hold larger markets, and make bigger sales at the accepted price agreed by the S.W.A. Firms believe that price cuts would make others follow suit. As the fortunes of all firms in the industry are linked together, they maintain that price wars could have a very disruptive effect on the production of Scotch whisky. Competition therefore takes many forms, but cuts in prices are practically excluded.

In conclusion, the overlapping of spheres

of interest in blending and distilling Scotch whisky militates against price competition. Furthermore a high level of excise duty and government intervention have tended to drive both the 'combine' and the independent firms together so that the nature of competition in the industry has changed greatly since the 19th century. Whereas one might expect prices both at home and abroad to be cut down to levels which would do little more than cover prime costs, there are strong contrary forces to prevent this. In particular, there is little scope for retail price cuts in most markets, because taxation is a large part of price to the consumer. *1 Secondly, both agents and retailers have been demanding and receiving higher margins. In 1958, the home trade price structure was revised to increase their margins. As marketing costs may continue to rise as a concomitant of the more competitive conditions in markets, the price level will have to take such increases into account. Finally, unless duty is lowered, the price of Scotch whisky to the consumer will be static or rising, provided profit margins are not allowed to decline severely.

*1 The cost of the actual whisky usually represents about 6% of the price of a bottle of whisky,

S E C T I O N V.

Chapter 10.

THE MARKETING OF SCOTCH WHISKY.

Advertising.

The advertising of Scotch whisky is a surprisingly modern aspect of the industry. Last century, even the retail trade in Scotch whisky was mainly confined to the buying and selling of quantities of whisky in bulk. Scotch whisky was not bought by the bottle, but in small casks, such as firkins. Little advertising was needed, for locally produced whiskies had their own regional markets.

Gradually blended Scotch whisky began to invade the markets in the Central Lowlands of Scotland. Bottling replaced the old form of presentation. As blends were standardised, brands were created. In addition to the quality of the contents, the highest standards in labelling, packaging and capsuling were adopted. Distinc-:tive wrappings were complemented with slogans and trade marks. In general, all advertising by the Scotch whisky industry stresses three things - firstly, the high quality of the Scotch whisky, secondly, its 'Scottishness', and thirdly, the social distinction gained by drinking it in a knowledgeable way. Advertisements are displayed in national newspapers, trade papers, periodicals and hoardings. No advertisements whatever, are shown on commercial television because it is not the policy of the Scotch whisky industry, or

of the spirits trade in Britain, to use that medium for such a purpose. No firm has sought to make a departure from this policy.

During the Second World War, advertising in the home market was placed on a 'caretaker' basis. The public were reminded of what they were missing, and they were bidden to look forward to better days when Scotch whisky would once again be abundant. (Nevertheless before the Second War, some firms had already become so export minded that their advertising was much reduced in Britain.) After 1945, Scotch whisky was 'advertised' by its scarcity. Supplies were totally inadequate in relation to demand in the home market, and some firms ceased to advertise their brands in the United Kingdom.

By 1954, after firms had become free to develop their own patterns of trade, advertisements reappeared. There was a tendency to concentrate on certain areas of Britain where economic conditions were favourable and money incomes growing most rapidly. London, the Home Counties and the Midlands were 'target' areas for many firms. It was realised that a new generation of consumers had grown up in the years of austerity to whom the merits of Scotch whisky were unknown, but the advertisements did not, and do

not, aim at young people.

Large scale advertisement campaigns were a notorious feature of the fierce competition out of which the Distillers' Company emerged. Instead of the 'Big Five' buying up five pages in prestige periodicals, as in the pre-1914 period, now only one full page advertisement suffices in each issue. The firms outside the D.C.L. are spurred on to advertise by the impact of the D.C.L. blends in Britain. In 1959, Teachers Ltd., a firm which never advertised in the national (or consumer) press, began to do so.

The forms and nature of the advertising undertaken by the industry are well known. Because the media of the press and the hoarding are 'traditional' methods, there has been an effort to advertise with a difference. White Horse Distillers and Dewars of Perth have displayed elaborate hoardings in conspicuous situations. These are known as 'bulletin boards' and are placed on sites with a high publicity value with good visibility. Each is a single advertisement painted on wood or metal, and often incorporates three dimensional or animated features. Other firms have shown their initiative in other ways. Teachers had Roland Emett, the cartoonist, illustrate 'A

Guide to Making your own Scotch Whisky at Home'. Despite such novel developments, the time-honoured symbols and trade names still appear. Johnnie Walker, 'Born in 1820 and still going strong'; and the Scottish terriers of 'Black and White', produced by James Buchanan Ltd., constantly remind the whisky drinker of where his allegiance should lie. Types of container, such as the dimple bottles of Haig's whisky, or the three sided bottles for Grants' 'Standfast' have also become part of the product by assiduous advertising. The former has been upheld as a trade mark in a court of Law.

Competition in advertising is thus very alive, and many firms claim that their sales have expanded even in the United Kingdom as a result of advertising rather than as a result of pent-up demand. In 1960, the average increase in sales experienced by Scotch whisky firms in Britain was reported to be 6%, but Teachers Ltd., claimed that their whisky sales had risen by 50% over the 1959 level, and growth was as great between 1960 and 1961. Schenley Industries reported in 'Business Week', an American business man's magazine, that its subsidiary Long John Distilleries had in six years (1956 - 62) increased its output fourfold. Meanwhile, as the result of advertising campaigns, sales in the United Kingdom had multiplied six times, and exports -

four times, since 1956.

In 1961, blends of Scotch whisky which had hitherto been sold only on the export market began to appear in the United Kingdom, supported by intensive advert-:ising. 'J. & B. Rare', the product of a group incorpor-:ation W.S. Gilbey & Co. Ltd., and known as International Distillers and Vintners, has appeared in Britain. This brand has been followed closely by 'Cutty Sark', a whisky marketed by Robertson & Baxter Ltd., of Glasgow, which for several years has claimed the largest share of the United States market. A further development in the home market has seen the promotion of two established blends of whisky, because their firms have been bought by Scottish Brewers Ltd., who have been able to force their public houses to sell a certain percentage of their own proprietory whiskies, and thus achieve a great control over marketing at point of sale.

It is difficult toarrive at an estimate of the annual amount spent by the entire Scotch whisky industry on advertising. Statements have been made suggesting that more money is spent on the advertising of Scotch whisky in the United Kingdom, than on any other commodity except cigarettes. The Statistical Review of Press Advertising attempts to estimate the expenditure by recording all material appearing in the

press (i.e. in newspapers and periodicals). The cost of advertising space is obtained, and an expenditure for firms can be deduced. The volume of press advertising tends to fluctuate; the Scotch whisky industry advertises on a more lavish scale in the winter quarter, while there is a reduction in the summer months. In the third quarter of 1960, the 'Review' estimated that some £130,000. had been spent on press advertising by Scotch whisky firms. It may therefore be concluded that upwards of £½. million is devoted to press advertising in the course of a year.

Direct expenditure on advertising space is only one aspect of advertising and publicity. The Scotch whisky industry is very 'publicity conscious'. Firms keep abreast of new developments by purchasing press cuttings, while they also finance trade publications, either through S.W.A. or independently. Nevertheless there is a great discrepancy between the amounts spent by various firms on advertising. The D.C.L. firms spent over £61,000. in the third quarter of 1960 on press advertising of Scotch whisky, while other concerns spent as little as £30. over the same period. *1 Outside the D.C.L., the heaviest expenditures were incurred by Wm. Grant & Sons Ltd., and

*1 The Statistical Review of Press Advertising.

George Ballantine & Co. Ltd. With respect to the D.C.L. group, it is notable that each constituent firm's advertising activities were in the hands of different agencies.

Scotch whisky advertisements are of many kinds, but the 'psychological' motive behind them is surprisingly uniform. It is not merely an endeavour to make people buy Scotch whisky. Much luxury and semi-luxury consumption is not truly pleasurable; the taste for Scotch whisky has to be acquired. Existing habits of consumption have to be broken. Thereafter, taste has to be refined so that the consumer becomes aware (or thinks he is aware) of differences in blending. Brand names then begin to have significance. He will no longer ask for 'Scotch' but for a particular variety of Scotch whisky, and will be loath to take another. Meanwhile from the hoarding, the morning paper, and the periodical through to the point of sale, the advertisers will be trying to excite his imagination by emphasising the Scottishness and high quality of Scotch whisky. One final subtilty is often apparent. Scotch whisky has become a status symbol among upper income groups. F. H. Knight writes that the consumer's "most conscious

desire is ultimately a wish to play a role, to be some kind of a person in some kind of a human world", [*1] and Scotch whisky is now presented to the public as an article which will confer such a distinction.

The advertising of the industry does not end with the home market. As their overseas sales are three times as great as those in Britain, it may be assumed that their advertising expenditure is correspondingly much greater abroad, particularly in North America. In other countries it is negligible, either because advertising of Scotch whisky is totally prohibited as in France, or because the market is very small as in Eastern Europe, and advertis-:ing is politically unacceptable. In advertising, it is rare indeed for a small outlay to bring rich rewards; big expenditures make big returns, and it is on the latter basis that the Scotch whisky industry has built its foreign trade using the same appeals to the consumer as it has tried and proved in the United Kingdom.

It is difficult to estimate how much effect advertising will have on consumption of whisky in Britain, and how far it will redistribute consumption among the major brands and well known advertisers. The blends of small firms may

*1 F. H. Knight: 'Risk, Uncertainty and Profit'.

be as good, or better than those of the famous, but widely advertised names have a secure market. As publicity for them increases, the lesser known blended Scotch whiskies may have a diminishing share of the market.

S E C T I O N V.

Chapter 11.

FISCAL POLICY AND THE BRITISH MARKET.

The United Kingdom is at present the second largest market for Scotch whisky, with a current annual consumption of 8 million proof gallons. Nevertheless the firms in the industry regard this total with dissatisfaction, and they attribute it to the taxation policies of successive governments.

The history of duty of spirits distilled in the United Kingdom is a long one. The Board of Excise was instituted in 1707, and a duty on whisky was first levied in 1709 at the rate of 3d. per proof gallon. The subsequent increases in duty have generally coincided with periods of wartime - the Napoleonic Ward, the Crimean War, the First World War and then, most dramatically, in the Second World War. Nevertheless, there have been three decreases in duty, twice in 1885 and once in 1895. There are thus precedents for reductions in taxation of which the industry has persistently reminded the government. The duty has been raised seven times since 1939, and now stands at £11.11s.11d., per proof gallon. (See Table 9).

The increases in duty since 1939 were designed to serve various purposes. Firstly, the govern-:ment utilised these levies as an anti-inflationary device

to drain off excess purchasing power generated through inflated war—time wage levels. Such action was quite justifiable on economic and fiscal grounds. The imposi-:tion,which was passed on to the consumer,was designed to bring demand and supply into line with each other. Too much money was chasing too little whisky and other desirable commodities; it was not unusual for Scotch whisky to be sold for over £5. per bottle. Secondly, there was a need to reduce demand at home in order to free supplies for export markets. These policies, as conceived in such terms, were successful for demand was restrained in Britain. The industry's claim that such continued tax-:ation was injurious to the future prosperity of the home market was inadequate so long as stocks were insufficient to meet both demand from overseas (which had prior claims upon it) and from the United Kingdom.

In the post-war years, inflation was not yet under control, and an export bias still had to be fostered to earn hard currencies. Heavy taxation had to be supported by the Scotch whisky industry and many others, in order to achieve certain economic ends of national importance. Both in 1947 and 1948 therefore, the duty on Scotch whisky was raised to a level which the

government hoped would limit demand.

From April 1948 to July 1961, the tax on Scotch whisky stood at £10.10s.10d. per proof gallon. Despite this burden, the industry had by 1956 gone far to rebuilding its home trade. 25% of all Scotch whisky marketed each year has since 1954 been sold in the United Kingdom; the proportion has remained constant. If it were to show a tendency to decline, then the industry's case for a reduction in duty would be much stronger.

The annual 'pilgrimage' of the industry to the Chancellor of the Exchequeur has been mentioned. When duties were reduced on imported wines, with some justification the industry felt that the Exchequeur was biting the hand which had fed it. The S.W.A. had compiled detailed statements of the comparative incidence of duty on alcoholic beverages in the United Kingdom. In 1960, the duty per degree of proof strength was 2s. 1.3d. on Scotch whisky, 1s5d. on foreign ports and sherries, and 1s. on beer.

A bottle of foreign port at 35° proof paid	6s.4d. duty
A bottle of Empire sherry at 35° proof paid	4s.8d. duty
A bottle of Scotch whisky at 70° proof paid	24s.7d. duty*1

*1 Since June 1961, the duty on spirits has been 27s.1d. per bottle.

Such calculations showed that if Scotch whisky, with the other spirits, were taxed in proportion, it would bear duty to the extent of some 10s. - 14s. per bottle. Since 1958 duties on other alcoholic beverages have been reduced in many instances - sherry and port by 48%, and beer by 28%; it is not surprising that the Scotch whisky industry complains of being singled out for 'punishment by taxation'. Furthermore, at a time when efforts were being most strenuously made to obtain some relief, the regulator system of supplementary taxation was introduced in July 1961. An additional 10% duty was levied on spirits produced in the United Kingdom; this was consoli-:dated in April 1962 to create the new Spirits Duty of £11.11s.11d. per proof gallon, giving a revenue from Scotch whisky consumed in the U.K. of over £80. millions per annum. (See Table 10.).

The results of this additional burden were two-fold. In the first place, the uncertainty occasioned by the increase was directly responsible for a running down in stocks by the distributive side of the industry. It was widely believed that the imposition was temporary. Secondly, the rate of growth in consumption of Scotch whisky in the U.K., which has never been buoyant in recent years,

slowed down. There was a minor diversion of demand to other products. The Scotch whisky industry also claimed that foreign governments became less receptive to the idea of reducing their duties on Scotch whisky, while some found it a convenient excuse for raising their tariffs. (It is equally possible, however, that such duties would have been increased in any case).

It is useful to examine at this point the nature and validity of the propaganda adopted by the Scotch whisky industry to win a reduction in duty. Its reasons for seeking a reduction have been widely publicised in S.W.A. pamphlets, such as 'Facts about Scotch Whisky'.

Malting barley production has undoubtedly been encouraged by the Scotch whisky industry; some firms have given grants for research into suitable types of barley for the purpose. Barley for distilling is a cash crop of some significance in Eastern Scotland. The S.W.A. argues that if the ready market for barley were impaired, agricultural interests would suffer. At present less than 40% of the barley used for malting is grown in Scotland, and it is hoped this proportion will increase. If there was a contraction in the distilling industry, the resulting hardship to agriculture is probably not as drastic as the

Scotch whisky industry believes.

In contrast, the repercussions upon distilling and blending, and many ancillary industries, would be more immediate and severe. With its allied trades, 'whisky distilling provides a most important source of non-agricultural occupation in economically marginal areas.' *1 Were it to fail, depopulation would proceed more swiftly, if no other sources of em-:ployment were created.

It has been claimed that the handicapping of the home market by heavy taxation has weakened it to such an extent that vulnerable and often mercurial foreign markets cannot be developed. With its present propor-:tion of 25% of total sales of Scotch whisky, can the British market be regarded as inadequate for a home basis for the industry? There are other products whose home basis is also slender. Less than one quarter of the Swiss watches, and Danish bacon produced are sold in their home markets. *2 It is therefore an exaggeration to

*1 Storrie, Margaret, C., Land Holdings, Land Utilisation, and Settlement in Certain Isolated Areas of Western Scotl and: Ph.D. Thesis, Glasgow, 1962.

*2 97% of the Swiss watches made each year are sold overseas.

say that the industry is 'precariously balanced' on home sales of only 25% of its total output.

Luxury and semi-luxury consumption, into which category Scotch whisky comes, will always be prone to the vagaries of trading conditions overseas. Notwithstanding fluctuations in demand abroad, the Scotch whisky industry has flourished in its foreign markets. Whether a reduction in duty in Britain would be followed by other governments has already been questioned. It is also doubtful whether the resulting increase in foreign exchange earnings by Scotch whisky would compensate for reduced revenue in the United Kingdom.

The S.W.A. have stated that the home market cannot absorb the volume of Scotch whisky available for release to it. Stocks in bond are described as being at 'a dangerously high level', which is an admittance that estimates of demand are out of alignment with supplies. (See Tables 6 and 14). Government fiscal policy however is not a remedy for miscalculations by industry. The D.C.L. have repeatedly warned the industry of the risk of over production. Yet firms both within and without the D.C.L., have been expanding rapidly in recent years. An 'Alice through the Looking Glass' situation has developed,

whereby firms are running as hard as they can to stay where they are - growing to maintain their place in the industry. Increased production has become habitual. Firms have been able to sell all the Scotch whisky they could make. A strengthening of competition may quicken the industry - lethargic firms must eitherrouse themselves or be overtaken. Since 1959, this indeed seems to have been happening in the Scotch whisky industry with the arrival of new interests in the field.

These are the main arguments advanced by the industry in favour of a decrease in its high taxation, which is regarded as a punishment for its past loyalty and present efficiency. The defence which the Exchequeur might put forward would probably take the following form. Currently the revenue to the Exchequeur from alcohol amounts to some £400. millions per annum; whisky and other spirits probably contribute 40% of this total. If the duty were reduced from its present level of 27s.1d. per bottle, the Exchequeur would have to be convinced that there would be a more than proportionate rise in demand to compensate for the smaller revenue per bottle sold to the consumer. It is doubtful whether demand would rise sufficiently, for Scotch whisky has a low elasticity of demand and the price reduction

to the consumer, and consequently the tax cut, would have to be large to be effective. The reduction might have to be in the order of 2s. to 3s. per full bottle. Although the Government is not a guardian of public morals, such a decisive reduction might not be sociably acceptable. The consumption of wine has been increasing greatly - an increase for which holidays abroad have been mainly responsible. While such wines are usually consumed with meals in an atmosphere of civilised enjoyment, the same conditions do not apply to the consumption of spirits at the present time.

The Government might add that the present level of duty has not increased illicit distillation in Scotland. The number of detections is negligible compared with those in Northern Ireland, where illicit distillation is a more flourishing tradition. High taxation does not therefore produce the same excesses as prohibition.

It may be said that despite the high level of duty, the Scotch whisky industry shows no sign of being taxed out of existence. The Scots may have departed from their reputed national drink, but they have been replaced by an international clientele. The case for a reduction in duty is most unlikely to succeed so long as the industry is enjoying its current prosperity, with an unprecedented volume

of Scotch whisky being marketed not only in Britain but throughout the world. Should the economic situation change to the industry's disadvantage, then the Government would be more favourably inclined to hear its appeals.

These possible rejoinders by the Exchequeur will not deter the Scotch whisky industry from its campaigns to win some relief. Yet its arguments, no matter how sound they appear, are somewhat unconvincing when set against the present prosperity and past achievements of the industry. The industry would do well to concentrate upon two aspects of its functioning both of which are unique. Firstly, the Scotch whisky industry is an employer of labour in economically marginal areas, such as Islay where some 17% of the male labour force are engaged in distilling as compared with some 40% engaged in agriculture. There is no doubt that depopulation and economic decline would ensue were the industry to fail for any reason. Secondly, the gap between production and consumption, caused by the time-lag in maturation creates peculiar problems of demand prediction. Uncertainty is always present, but it need not be fostered by inconsistent government pronouncements. For example, gratitude to the Scotch whisky industry has been publically expressed on more than one occasion by government personages.

Some firms have thereupon assumed that some concrete expression of thanks (i.e. a reduction in duty) would be given, and a false optimism has been created in which speculative elements have flourished.

In conclusion, the Scotch whisky industry should be heartened by reductions in duty on other alcoholic beverages, for these decreases may indicate that it too may have some success in its pleas. It has been written that if taxation were graded according to the contribution a product made to the national interest, whisky would rank for preferential treatment. This equitable practice does not unfortunately apply at present.

The trade of the industry has to be looked at on an international, nor a national, level. Without its prosperous export markets, the Scotch whisky industry would be unable to meet the levy of duty upon it. It is the overseas business which now carries the home market on its back.

S E C T I O N V.

Chapter 12.

THE EXPORT MARKET.

Changes in patterns of consumption on a world scale cannot be expected to occur rapidly. Today the swiftness with which opinions and ideas are transmitted from one country to another, together with the greater mobility of people, has hastened such changes. At one time the only potable spirit which entered widely into commerce was brandy. It had a long period of predominance until the middle of the 19th century when Irish whiskey began to be marketed overseas. Very slowly, it gradually yielded its place to Scotch whisky, and from the 1870's onwards the export market for 'Scotch' has expanded.

In the early days, whisky was shipped overseas in bulk, but shortly before the First World War the practice changed, and Scotch whisky was despatched in bottles. At this time, some 10 million proof gallons were exported, compared with the 22.4 million proof gallons sent overseas in 1961. The pre-1914 period was a crucial one for the future trade of the industry, firstly, because a reputation for quality and consistency was established, and secondly, because a marketing system was built up by creating agencies, and by sending out sales representatives. It was realised early that no matter how small or unpromising a market might appear, it had a potential demand which was worth investigating,

and cultivating.

In the inter-war years, there were reverses - such as the creation of prohibition in the United States - and the widespread uncertainties of world trading conditions. Although exports rose during the 1920's, and attained 8 million proof gallons in 1924 - 25, with the onset of depression, they never achieved their pre-1914 peak until the early years of the Second War. The repeal of Prohibition in the U.S.A. in 1933 released pent-up demand for Scotch whisky, and the industry set about rebuilding its markets there, which stood it in good stead during the Second War.

The peculiar situation facing the industry during the Second War has been discussed. The industry has become one geared to export markets mainly as a result of government pressure to export dollar earning commodities. The industry did not, and could not, allow the export market to grow out of hand. Stocks had to be safeguarded. Leading brands were rationed in overseas markets; most firms placed their supplies on strict allocation. This system was maintained until 1959, and by some firms was in operation as late as 1961. Short term profits were discounted by most exporters in favour of secure and sustained growth in demand. *1

*1 Throughout this chapter reference is made to Tables 11, 12 and 13.

Thus in the immediate post war phase, the industry was concerned with the maintenance of supplies of whisky - with the distribution of scarce means between com-:peting and expanding ends. Economic rather than political influences dominated its trading. As more adequate supplies became available, political conditions abroad tended to become more crucial. A glut of stocks of whisky at home is now not impossible. It might occur if a major overseas market were closed to the industry. Although stocks would not come to harm by being held for a longer time, warehouse space, which is already lacking, does not permit this expedient being used.

How does the industry interpret unfavourable tariff policies? The industry complains that government interference at home has its repercussions overseas. Firms maintain that high rates of duty in the home market give a justification to some countries for placing equally high, if not higher, tariffs on imported Scotch whisky. Increases in duty abroad, which may be imposed suddenly, do create very serious trading problems for the industry. Often as one market is curtailed, another opens, but such a timely occurr-:ence does not bring immediate benefit to the industry. Supplies cannot be switched rapidly to other countries.

Firms must therefore be prepared for such eventualities, and should not concentrate too much on any one market. The industry is very aware, compared with many others, of the problems of being export-orientated.

There is keen competition overseas, both from other types of whisky and from other spirits, such as brandy and gin. In countries in which a native spirit is distilled, and where too much competition from Scotch whisky is felt, as in Canada, a policy of protection is adopted. Balance of payments problems may also compel a country to impose quotas on the amount of spirits to be imported. Such restrictions place a ceiling on the volume of Scotch whisky which can be placed on world markets at any time.

Two developments are causing the Scotch whisky industry anxiety. The industry believes that the export of immature Scotch whisky which amounts to 3% of its total sales overseas is deleterious to its trade. Although a government embargo has been sought, it has not been forthcoming. Equally, the industry is disturbed at the increasing volume of Scotch whisky exported in bulk.

With respect to the first problem, the

importation of immature whisky under three years in age is prohibited by law in several countries - such as the United States, Canada, Venezuela, Danmark, Belgium, Finland, Italy, South Africa and Australia, and many others. *1 (The degree of maturation is however only one of the matters which interest importing countries. The United States for example require a certificate stating that the whisky has been matured in oak casks. To enable this to be done, the filling record at the distillery notes the type of cask used.) At present, when traffic in immature whisky is detected and becomes known to distillers, it is probable that supplies of whisky would be cut off from the concern in question. The Distillers' Company Limited has set its face against such trade, and along with other firms, would boycott it to the best of its ability. Nevertheless, the export of immature spirits cannot be regarded as a 'sell and get out' policy, for it has persisted too long for that.

The export of bulk whisky means that blending may occur abroad in the hands of less competent persons, and that the presentation of the bottled product

*1 The Customs and Excise Commissioners will, on payment of a fee, issue to the exporter a certificate of age where this is necessary.

may thus harm the standing of all Scotch whiskies. Furthermore, if such practices were to develop unopposed, it could mean the extinction of the associated blending, bottling and packaging aspects of the industry, which are the concomitants of distilling in Scotland. Distilling alone does not employ many persons; blending and its ancillary trades do so.

As income levels and standards of living tend to rise generally throughout the world, and in so far as the Western way of life is adopted or partially copied, the Scotch whisky industry hopes to be faced with a buoyant demand for its product - in spite of tariff barriers or quota systems. Distillers believe that the question at issue is whether the world consumption of Scotch whisky will rise sufficiently each year so as to bridge the gap between current levels of production and marketable stocks in perhaps five years time.*1 They estimate that over-production can be avoided. The export figures for 1961 show a 16% increase in volume over the previous year's exports of 23.1 million proof gallons. Nevertheless, the rate of growth in total sales has not been as great as the rate of growth in production. By projecting the current rate of growth in demand, it emerges that whereas

*1 See Tables 15 and 16.

sales may reach between 40 to 45 million proof gallons by 1965, there will then be some 50 million proof gallons ready for marketing, after allowances for evaporation and other losses are deducted. Hence in some firms, the possibility of over production is being taken seriously.

Consequently, sales promotion is being intensified. Concentration in the post-war period on markets in the dollar area may have impoverished the industry in other overseas countries. Europe, rather than North America, is beginning to have prior claims on the industry's attention, and it may be the most rapidly expanding market for Scotch whisky in years to come, not-:withstanding the non-admittance of the United Kingdom into the Common Market.

Overseas the Scotch whisky industry has made an unorganised division of its markets. In certain countries, particular blends of whisky tend to predominate: for example, Ballantine's Scotch Whisky seems to have a firm position in Canada, probably because the parent company of Hiram Walker Inc., is a North American concern. Other firms find it profitable to work in small markets, such as some of the Caribbean islands, or to promote sales in Scandinavia.

There is no official cartel, as far as can be ascertained, for price fixing overseas. It might be expected with competition intensifying in foreign countries that prices would tend to do little more than cover costs of production. There is however, the overwhelming dominance of the Distillers' Company in all the major world markets for Scotch whisky. By comparison, the other exporting firms, although quite numerous, are small concerns. They follow the price leadership of the major unit in the industry. There are other strong forces in operation to discourage a price war in foreign countries. Local manufacturers of spirits abroad would take steps to protect themselves from price competition from Scotch whisky by securing government action and the enforcement of quotas, tariffs or other restrictions to achieve this end.

As in the home market price reductions would probably have to be large to be effective - assuming that no retaliatory measures were adopted by foreign spirit producers. Total world demand for Scotch whisky has a relatively low elasticity. Patterns of consumption, for whisky are dependent on habitual behaviour, often quite fortuitous and irrational. In the short run, the industry

might reap rich rewards, but inevitably it would have barriers raised against it, which could be very damaging to future growth. *1 It is also possible that 'cheapness' might be equated with 'nastiness'. Scotch whisky has been set apart as a quality drink with social distinction, and a high price.

To summarise the position, the Scotch whisky industry has standard prices for its products in the major world markets. Price competition is not common, and usually occurs as the result of a legal loop-:hole. The exportation of whisky in bulk to the United States is an example of this, and arises because of a dis-:criminatory tariff on bottled Scotch whisky. Competition is therefore directed away from price, and towards intense sales 'efforts, which vary from country to country depending on the market situation there. The platforms of the industry are twofold - the quality of their product, and its ready availability must at all times be maintained. These factors are the foundations on which the foreign trade of the industry has been built.

*1

In 1962, 'Scotch Whisky' was sold in French supermarkets at 30s. per bottle, which was substantially less than the price for standard blends in France.

I. THE UNITED STATES OF AMERICA.

Two criteria should be applied to gauge the significance of an export market for a dynamic industry. The first should measure its reliability; the market should not show great fluctuations from year to year in its import of Scotch whisky which would denote a disturbed pattern of trade. Secondly, the rate of growth of the market, rather than the total of Scotch whisky imported is a crucial factor.

The most outstanding market gauged by these standards is that of the United States of America. Since 1954, the U.S. market for Scotch whisky has grown consistently. In the year ended March 1961, it purchased 14.6 million proof gallons of Scotch whisky, or about half of the total exports. From year to year, the volume of Scotch whisky imported has risen by between 10 and 15%.

This trend has been established in the face of an active domestic whisky industry in the United States. Yet Scotch whisky in 1961 represented only 9.2% of all the whisky sold therein. This may seem a small amount and only a minor triumph, but it is in fact an achievement both to expand sales, and avoid having tariffs imposed to protect the native industry. The Scotch whisky

industry has done both.

A brief survey of the United States' market shows that up to 1958, the industry was pressed to make greater shipments both by the Government, anxious to obtain dollars, and by importers desirous of expanding their sales. The industry itself wished to widen its markets, because none of the other importing countries took more than one-ninth of the volume of United States consumption of Scotch whisky, but its stocks were inadequate. The objective of widening its markets was a security measure. North American dis-:tillers had been complaining of the severe restrictions on the import of their products into the United Kingdom, while at the same time, Scotch whisky was admitted to their countries with comparative ease. It seemed therefore that the entry of Scotch whisky would be altered. In consequence, the British government allowed the free importation of United States and Canadian whiskies in 1956. A trend was thus established whereby the United Kingdom would make concessions to safeguard her export position, without attempting to help the home market of the industry by similar favours.

In 1958, there was a minor recession in the United States: exporters of Scotch whisky found competition intensifying, and gradually stocks began to accumulate for

the first time since 1939. (Although total demand for Scotch whisky has a relatively low elasticity, when trade is reduced as in a depression, whisky, being a luxury, experiences a lower demand.)

Tax regulations exist in the United States whereby imports of Scotch whisky at the marketing strength of 86° U.S. proof (or 75° proof in the U.K.) are taxed on the assumed strength of 100° U.S. proof. This provision in the Revenue Laws does not apply to spirits produced in the United States, and is used as a protective element, because it is a surcharge on imported spirits, brought into operation by whiskey producers in the United States. It is in fact a tax on 14% of water, which is treated as spirit. Some exporters in Britain, and U.S. importers, try to solve this problem by shipping Scotch whisky in bulk - in casks at 100° proof, and thereafter reduce and bottle it in the United States. The result is a lower retail price than the general one of $6.75 per bottle. (From time to time the industry has been pressed to raise the price of Scotch whisky in the U.S.A. It objects strongly to this on the grounds that in a sensitive and highly competitive market interfering with a delicate price structure might have a harmful effect on trade.)

Bulk imports to the United States have risen at a greater rate than bottled imports in recent years, and the trend is viewed with alarm. If it were to spread, blending and its associated bottling and packaging trades in Scotland could be seriously curtailed. Furthermore, the quality of the blended Scotch whisky might be impaired. Bottled and packaged Scotch whisky has always had a better standing in foreign markets, than locally blended 'Scotch' imported in bulk.

These matters cannot dim the attainments of the Scotch whisky industry in the United States. They keep it alert, where it might become complacent. Not-:withstanding the increasing share of U.S. demand absorbed by Scotch whisky imports, the tariff on Scotch whisky was reduced early in 1962. A second reduction will operate in 1963, and retail prices may fall a little - this concession is of great publicity value to an industry which is so accustomed to seeing protective barriers raised in its face.

On its past record in the United States, and with the immediate prospect of reduced tariffs, the industry seems secure in an expanding market; it is probable that its earnings of over £30. millions will grow

still further. Nevertheless, it is likely that the rate of growth of sales in Europe and elsewhere will surpass that of the United States, although the total consumption of Scotch whisky there will long remain the greatest in the world.

II CANADA.

Canada is not as promising a market for Scotch whisky as might be expected of a country many of whose people are of Scottish descent. There is a vigorous Canadian whiskey industry which is protected by the state. The result is that Canadian imports of Scotch whisky have never shown that consistency in growth from year to year which distinguishes the American market, and their total volume has been erratic. Canada took about 1 million proof gallons of Scotch whisky in 1961 - a small volume which is less than one-fourteenth of that purchased by the United States; yet Canada alternates with Australia in being the second largest overseas market for Scotch whisky. The total volume of imports has remained practically unchanged since 1949 when it stood at 0.90 million proof gallons. From 1953 to 1955 it did not reach this amount. The experience of firms therefore shows that

while their trade is fair, it is not expanding, despite their competitive efforts. Ballantine's Scotch Whisky, which has the major share of the Canadian market, is in fact a product of a Canadian company, operating in Scotland.

The principal reason for this lack of growth is the absence of uniform prices for both Scotch whisky and Canadian whiskey. The retail price of spirits is determined by provincial Liquor Commissions, known as Liquor Boards. These bodies, which favour Canadian distillers, place a higher percentage 'mark up' on Scotch whisky, thus raising its selling price as compared with those prices which they also fix for Canadian Rye and Bourbon whiskeys.

In 1957, under pressure from the U.K. government and the Scotch whisky industry, the Canadian provinces were persuaded to review their policy. There was subsequently a narrowing of the differences between the prices of Canadian and Scotch whisky. Unfortunately this concession only applied in some of the provinces. In the same year, however, exports to Canada reached their highest total of 1.04 million proof gallons, but this achievement was not sustained. Shipments declined in the following year to 0.906 million proof gallons. The

stocks of Scotch whisky held by the Liquor Commissions were run down. Trade suffered a further set back in 1959 when a Budget increased both duty and sales tax on all spirits. The effect of this taxation was to lower sales further.

The discriminatory provisions of the Canadian Customs' Act and the pricing policies of the Provincial Governments are therefore a serious break on the growth of the potential market for Scotch whisky - a market which is latent, but artificially held in check. Nevertheless, Scotch whisky earns some £3. million in the Canadian market.

III OTHER COMMONWEALTH COUNTRIES.

As might be expected, those Commonwealth countries which have been settled by British immigrants are promising markets for Scotch whisky.

In the post-war period, the industry has been concentrating to such an extent on developing its export trade to earn hard currencies, that markets outside North America have tended to be neglected. When firms were able to improve their stock position in the 1950's,

they soon discovered that nations like Australia were faced with economic problems of their own, which did not allow of the free admittance of Scotch whisky.

a. Australia.

Events which had occurred in 1951 - 52 had subsequently a considerable influence on the pattern of trade of the industry in Australasia. Firstly, in 1952, Australia had been obliged to impose a reduction of 80% on her imports of Scotch whisky. New Zealand followed her example, with a cut of 20%. Exports to Australia consequently fell in 1953 from 414,000 proof gallons to 375,000 proof gallons. Although trade began to recover in 1955, there was further instability. Since 1956, however, imports of Scotch whisky have doubled, and now stand at over 1 million proof gallons. The rate of growth has not been constant, the major phase of expansion took place between 1958 and 1959 when there was a 45% rise in the volume of imported Scotch whisky.

Import restrictions to Australia were most unfavourable to imports of bottled Scotch whisky. Demand for Scotch whisky was known to be very considerable. To obviate these controls, the Distillers' Company Limited

investigated the setting up of a bottling plant in Sydney, which was opened in 1956. By this means, the prohib-:itive duty was avoided. This was a remarkable venture for such a company to embark upon. It has long been the expressed policy of the Distillers' Company to export only bottled Scotch whisky, thereby ensuring its high quality and careful presentation to the consumer. (The company along with other blenders are presently condemning the export of bulk whisky to the United States). Yet the creation of bottling facilities in Australia was rewarding; the market expanded. The 45% increase of whisky imports in 1958 - 59 affords substantial proof of this. The increase consisted of bulk, rather than bottled, Scotch whisky of the major blends. Thereafter the Distillers' Company set up plant for the production of Australian whisky and gin.

By 1960, trade was firmly established, and the intensification of restrictions which then took place did not adversely curtail sales. In 1961, the limit on imports of Scotch whisky was removed.

Australia is thus a progressive market, showing earnings of over £2½. million for the Scotch whisky

industry. Bulk shipments continue, but whether other firms have followed D.C.L.'s precedent in establishing their own bottling plant has not been discovered.

b. New Zealand.

New Zealand is traditionally more Scottish in outlook than its larger neighbour. Its trade in Scotch whisky showed continuous growth from 1949 to 1956, when its imports stood at 718,000 proof gallons. Restrictions were then imposed in the form of quotas, together with increased duties on imported spirits. The result was a dramatic fall of more than ⅓ in the volume of Scotch whisky exported to New Zealand between 1956 and 1958, although it was believed by the industry that, had controls been less complete, demand would have been steady.

Early in 1958, further controls were created. Whisky imports were curtailed by 40% of their 1956 level, and duty was doubled. The industry saw that its hopes of expanding in New Zealand were remote. New Zealand's trade problems were obdurate. Nevertheless, the quota system was less enduring than had seemed, for in 1959, allowances for Scotch whisky rose. This trend has not been maintained; there have been further fluctuations

in spirits import licences, and although duties have been reduced, there has been no relief for Scotch whisky.

New Zealand is thus a disappointing market for the Scotch whisky industry. The value of her imports of Scotch whisky only amounted to some £1¼ millions in 1961. There is no locally distilled spirit for which the government must raise protective barriers. It is basically a persistent maladjustment in her balance of payments - made more persistent by the fact that New Zealand is a primary producer.

c. <u>South Africa.</u>

Exports of Scotch whisky to South Africa are currently greater in volume than those to New Zealand. While the market is not a dynamic one, imports have remained steady at about ½ million proof gallons since 1955.

In 1948, a prohibition on imported luxuries was applied. Trading in Scotch whisky was only to be resumed if money earned from it was invested in government securities or South African investments for a certain period. There then followed a phase of contraction, exports amounting to as little as 151,000 proof gallons in 1950.

(At this time, extra Scotch whisky could easily be disposed of in other foreign markets). There was a progressive relaxation until 1954, when sufficient import licences were issued to admit over 500,000 proof gallons. The South African market, in view of the restrictions on imported Scotch whisky, and of the political situation there, may be one of long term contraction.

SUMMARY.

Commonwealth countries currently purchase about one quarter of the total volume of Scotch whisky which is exported to other foreign countries. The changeover from an Empire ruled by British persons, to a Commonwealth of independent nations, has altered the pattern of trade of this industry, as with many others. For example, the emergence of an independent India in 1947 brought the establishment of prohibition. Exports to India declined from over 300,000 proof gallons in 1946 to less than 85,000 proof gallons two years later. The market in Pakistan was similarly affected. In contrast, colonies which are either accessible from the United States by holidaymakers, or are naval bases, tend to be areas of buoyant demand. Thus exports are increasing to Gibraltar,

Trinidad, the Bahamas, and Malta.

IV. SOUTH AND CENTRAL AMERICA.

Exports of Scotch whisky to South and Central America currently amount to over 1 million proof gallons per annum. No group of countries illustrates more clearly the hazards of exporting, for markets in these areas tend to show an erratic pattern of demand, which cannot lead to satisfactory trading conditions. Essen-:tially, this world region consists of countries which are economically underdeveloped. Their trading position does not permit them to import many luxuries such as Scotch whisky. Many have native spirits industries, which supply the majority of the people, while it is only an élite which can afford to purchase imported spirits. The Central American countries show a more reliable pattern of growth, however, than those in South America.

Even in 1954 when consignments of Scotch whisky were still limited by inadequate stocks, importers and distributors in South America were frequently unable to take delivery of whisky allocated to them. They could not obtain the necessary currency. Thus from the

time when the industry was hopeful of reconstructing its markets in South and Central America, it was impeded, and it claimed that its pattern of trade was being distorted by the enforced redistribution. No sphere of influence for Scotch whisky could be created, although firms believed there was a potentially rewarding market beyond the restrictions.

In illustration of these circumstances, Argentina, which was the sixth largest overseas market for Scotch whisky in 1939, was practically closed to the industry by the 1950's. Its imports of Scotch whisky did not reach 10,000 gallons in 1950. Brazil was similarly, but less severely, affected. By 1955, in Argentina,there was no normal importation whatever, supplies having to be consigned either for the use of Embassies, or for the use of 'returning travellers'. Gradually Venezuela emerged as the principal market in South and Central America, exports of Scotch whisky rising from 286,000 proof gallons in 1955 to almost twice that amount in 1958. In the following year, as almost inevitably happens, a severe setback occurred. Duties were raised by five times their previous level; there was an immediate decrease of 40% in imports of Scotch whisky to Venezuela.

Although duties were reduced in 1961, import licences have been difficult to obtain. Figures for the industry show that the decline in trade in Scotch whisky has been progressive. On the other hand, Brazil and some of the Central American countries (e.g. Panama and Mexico) have been growing markets. Brazil in particu-:lar has more than trebled its imports of Scotch whisky over a five year period - imports rising from 50,000 proof gallons in 1955 to over 190,000 in 1960. In addition, there has been a modest revival of business in Argentina.

Such developments seem to point to the considerable potential of the South American market in the future. Nevertheless, these are undeveloped countries, enmeshed in problems of industrialisation and social and economic improvement. Statistics of exports to individ-:ual countries tend to show wide fluctuations from year to year. Political instability is a concomitant of economic instability, and both South and Central American countries are unfortunately prone to such disturbances.

V. ASIA AND AFRICA.

In Asia and Africa, nations whose economic

circumstances resemble those of South and Central America also import relatively small amounts of Scotch whisky. Prohibition in India and Pakistan has been mentioned; Egypt also excluded Scotch whisky for some years. In Asian and African countries, Scotch whisky is mainly sold to Europeans. Japan, in spite of its efforts to create 'Scotch', is the largest Asiatic importer of Scotch whisky at the present time. Ghana is perhaps unexpectedly the third largest importing country in Africa, after South Africa and Rhodesia and Nyasaland. Japan and Ghana take about 200,000 and 70,000 proof gallons respectively.

It is unfortunate that some countries do not have the discerning and knowledgeable consumer which the Scotch whisky industry generally tries to cultivate. In consequence, local products consisting of a combination of domestic spirits and (often inferior) imported Scotch whisky are sold. Such practices ultimately bring the whole industry into disrepute, although large profits may be earned in the short run. The extent of this trade is difficult to estimate, but it must be flourishing, because reference was made to its damaging effects in the Annual Report of the Distillers' Company Limited in September 1962.

VI. EUROPE.

The Scotch whisky industry has had perennial recourse to the U.K. government regarding the fact that certain countries are permitted to ship very large quantities of wines to the United Kingdom while, simultaneously, import licences for Scotch whisky are unobtainable in some of these countries. In others, the quantities admitted in the past have been trifling. Through the S.W.A., the industry has frequently besought the authorities to bargain for the admission of Scotch whisky when negotiating trade agreements. It is in Europe that the industry is desirous that such pressure be applied, because it is from Europe that the bulk of imported wines and spirits comes.

The Northern European peoples have been beer and spirits drinkers by tradition, while the Southern Europeans are drinkers of wines. Brandy has been the only spirit widely consumed in Europe. Gradually, patterns of consumption among upper income groups in Europe have been changing. In France and West Germany, it is fashionable to drink Scotch whisky. The French consump-:tion of Scotch whisky has risen twentyfold in the past ten years.

The creation of the European Economic Community has focused interest on European markets in general. The six Common Market nations have all shown notable increases in their imports of Scotch whisky. In 1956 the volume of imports to the 'Six' amounted to 759,000 proof gallons, but by 1961, the volume had swollen to over 2.5 million proof gallons. The countries of the European Free Trade Association are also growing points for the industry's export trade.

The European countries are notable for recent growth, but not for past reliability in the import-:ation of Scotch whisky. France is currently the leading importing country, having purchased 701,000 proof gallons of Scotch whisky in 1961. Belgium and Luxemburg are in second place, together taking 697,000 proof gallons, while West Germany is a close third, with a volume of 674,000 proof gallons in 1961. Outside E.E.C., Sweden, Denmark, Switzerland, and the Irish Republic have been markets which have expanded continuously, while Finland and Norway have tended to be more unstable markets.

The European countries had to apply restrictions on the purchase of Scotch whisky and other

spirits in the post-war period. These restrictions have taken forms already encountered in other world regions. An exception to this statement is France. Exporters of Scotch whisky were here confronted by a sit-:uation which was unique in their experience. The French government in the post-war period allocated only modest amounts of currency for the purchase of Scotch whisky (as compared with the sum spent by Britain on French wines and spirits). Such action was not only intended to safeguard the French economy, but was also basically pro-:tective. In 1957, for example, the French government permitted 20% only of the sum set aside for the import of Scotch whisky to be used for the same purpose in 1958. Conse-:quently, the value of Scotch whisky exports to France in 1958 did not exceed £¼. million, whereas the value of imports of French alcoholic beverages to the U.K. then amounted to almost £10. million.

The allowance of currency to purchase Scotch whisky was subsequently raised in 1959 from £140,000 to £300,000 - an amount totally inadequate in relation to the demand in France as gauged by Scotch whisky exporters. The process of relaxation fortunately continued, until in 1960, Scotch whisky could be imported with some degree of

freedom. Nevertheless, an anomalous restriction remained. As a form of protection, no advertising of Scotch whisky is permitted in France, although there is a large volume of advertising for brandy and wines of domestic manufacture. In no other market is such a curious protective device employed against the industry.

There is another unique aspect in the French market for Scotch whisky. There has been some retail price competition in certain discount stores in Paris. Price cutting has not appeared in the home market, and there is little evidence of it in any other overseas markets. Although it has been a very limited outbreak of price competition, it may yet spread. The attitude of the industry to such an occurrence is one of disapproval. Price cutting is an 'indignity' which Scotch whisky has hitherto escaped.

Unlike France and its fellow members of E.E.C., the Eastern European or 'Iron Curtain' countries are most unpromising markets, importing only trifling amounts of Scotch whisky. The Distillers' Company Limited attempted to draw attention to the existence of Scotch whisky at the British Trade Fair in Moscow in 1961. It succeeded in arousing much interest, but increased trade

has not yet ensued.

SUMMARY.

The recent performance of the Scotch whisky industry in European markets has been remarkable. There has been an upwelling of demand, which was for many years only latent. Between August 1961 and August 1962, the Common Market countries alone increased their importation of Scotch whisky by over 20%. Unlike the home market, 'saturation point' in Europe is not in sight. The average European only consumes one-sixth of the Scotch whisky per annum which is bought by his American counterpart. Rising standards of living in Europe should further stimulate the growth in demand. Although Western European countries may contain economically underdeveloped areas (such as Southern Italy), they are certainly not underdeveloped in the sense that Brazil or Ghana are underdeveloped. Their economic problems are meantime more amenable, and their trade is consequently more stable. Furthermore, inter-European travel which yearly increases, should also help to create new wants, and to break down reluctance to test new foods or drinks.

This optimistic conclusion requires to be

tempered. The European market is a highly discriminating one. The Scotch whisky industry will have to maintain its standards of quality in production and sales promotion to hold its place in Europe. In these respects, the industry is already well equipped.

The Scotch Whisky Industry and the Common Market.

The economic consequences of the Common Market on British industry have taken a new meaning since January 1963. Sir Graham Hayman, the past chairman of the Distillers' Company Limited, who has acted as a spokesman for the whole industry on many occasions, noted that whereas the total exports of the Scotch whisky industry from 1956 to 1961 had risen by some 60% (from 16.4 million proof gallons to 26.8 million proof gallons), the percentage increase in shipments to the Common Market over the same period was almost 250%(from 0.75 million to 2.5 million proof gallons). Taken together, the Common Market countries stand next to the United States as a world market for Scotch whisky.

The first concern of the industry is the impact of tariffs or other protective devices upon its

export trade. At present the S.W.A. believes that the ultimate Common Market duty on Scotch whisky will not adversely impair its exports. This duty is fixed at 18s.4d. per proof gallon for bulk imports and 22s.6d. per proof gallon for bottled spirits. It is known that if therefore Britain remains outside E.E.C., the common customs duty on British made spirits will amount at the most to 2s.10d. per bottle. This amount is a relatively minor element in the retail price of blended Scotch whisky selling at 43s.5d. per bottle in Europe. It is internal Excise and other duties which contribute about 15s. to each bottle's price. The final Common Market tariff against Scotch whisky would cause a rise in the present low Benelux and Italian Customs duties, and a reduction in duty in West Germany. The ultimate Common Market tariff has already been applied in France.

In the member countries of E.E.C., customs duty is already only a small item in the final price of a bottle of Scotch whisky to the consumer. Sales and internal revenue taxes are a more significant element. The most conspicuous instance of a high revenue duty occurs in the United Kingdom - a rate which is 27s.1d. per bottle. This duty is levied on imported spirits in Britain, together

with a low customs duty, amounting to a few pence per bottle.

The S.W.A. estimates that the current British Excise duty on spirits is about twice that of the average internal revenue duties and taxes in the Common Market countries. It is therefore hypocritical, the industry argues, to press for reductions in such levies abroad, when an exorbitant duty is applied in the U.K. If Britain had entered the Common Market, it is probable that internal revenue duties would have tended to decrease. If E.E.C. countries, however, brought their internal duties on spirits up to the level of the British Excise duty, there would certainly follow a contraction in the demand for Scotch whisky in Europe. (It is more likely that internal tariffs would tend to move downwards, for the end point of E.E.C. is the harmonisation of the internal economies of the individual member states, towards which some progress has already been made.)

In conclusion, Europe provides a stimulating picture of an expanding market, to which exports have been steadily increasing in the post-war years. Nevertheless, the Scotch whisky industry appreciates that the potential tariffs which would operate if the United Kingdom were a

member of E.E.C., are only moderately favourable to its trade. While the impact of the Common Market has had a psychological effect on many British industries, this effect may be less marked on the Scotch whisky industry, which is already 'export-minded'.

One beneficial outcome of U.K. membership of E.E.C., as far as the industry is concerned, would have been the freedom from the creation of import quotas, and arbitrary tariffs. These restrictions have bedevilled its export markets and overseas marketing arrangements as the foregoing investigation has endeavoured to show. The Scotch whisky industry would have welcomed the oppor-:tunity to participate in a major market without such handicaps.

SUMMARY.

The Scotch whisky industry meantime earns no less than £75. million by its current export trade. Year by year the value of its exports increases, and their volume rises. The industry contributes about a quarter of all Scotland's exports and 2% of the United Kingdom's exports by value. A national drink has thus become

international, as one country after another acknowledges the unique attributes of Scotch whisky. Scotch whisky is thus a classic example of an industry geared to export markets. Its stocks and productive capacity are now more than sufficient to meet the growing demand from E.E.C. or elsewhere. The only drawback is the overdependence of the Scottish economy on this one export - an export which has been shown to be peculiarly vulnerable to discrimination overseas.

C O N C L U S I O N S.

1. Scotch whisky takes its origin in two products - malt and grain whisky, distilled by different processes in Scotland, and subsequently unified by blending. The Scotch whisky industry is therefore composed of two major types of firm - distillers and blenders - each requiring a different form of expertise and organisation. There are distinct gains to be had from combining production in one distilling and blending firm thus securing control over the product from its inception to its disposal. The Distillers' Company which dominates the industry, in terms of output and of financial strength, has arisen through mergers and consol-:idation to achieve this type of control.

Beneath it are several vigorous competitors which are ahead of the combine as far as marketing tech-:niques are concerned, and which have surpassed it in some export markets, such as the United States. Yet there are also small firms surviving in comparatively old fashioned premises, without research, automation or high powered sales efforts. They concentrate on what they know, and keep down their overhead costs. They shelter behind the tacit agreements fixing prices, and tailor their whiskies to meet a specialised demand in small markets -

a demand which is attached to them by acquired tastes.

2. The firms in the Scotch whisky industry are bound by physical links of inter-trade dealings. Joint production is widespread through the usuage of various whiskies to produce blended Scotch whisky. The Distillers' Company itself purchases whiskies from indepen-:dent distilleries, and vice versa. Furthermore, the industry has connections forged by common experience, for example, of government taxation. Although there is much inter-trade rivalry, the competition has been described as good natured. In spite of the preponderance of D.C.L., it is obvious that competition does exist. Indeed, the autonomy of the individual concerns within the combine is considerable; while distilling is rationalised, blending and distribution are very largely left to each blending company, who 'compete' against each other to a remarkable extent. This may be a legacy of the pre-consolidation warfare of such firms as Dewars' and Walkers'.

3. Competition is confined to quality, presentation, advertising, salesmanship and service rather than price. Price cutting might be followed by a downward

spiral, but would probably be pointless because duty, both in the U.K. and overseas, is a major element in the price of a bottle of Scotch whisky to the consumer. In addition, there has hitherto been an insatiable demand for Scotch whisky which might have been expected to result in large price increases, but this measure was not adopted.

Price cuts might have to be large to have much impact on a market, because demand for Scotch whisky shows a relatively low elasticity in the short run. If initial sales resistance was overcome, it is possible that lower income groups might be tapped. There are dangers in this procedure; cheapness in export markets, such as the United States, might be equated with nastiness, for a high price has given Scotch whisky added social status in affluent societies as an internationally accepted drink for the connoisseur.

4, There is a widespread tendency for Scotch whisky to be sold at a younger age, for lighter whiskies are in growing demand. These incorporate relatively more grain whisky and less malt whisky. Grain whiskies have an advantage in that they mature more quickly. Blends are tending to be composed of 60% grain to 40% malt whisky. This development is hazardous, because the

resulting whisky has less distinction, and is less uniquely Scottish, tending to be just another whisky.

The malt whiskies are the key constituents, giving character to the final blend. The traditional methods of pot still distillation remain sacrosanct. Although such distilleries are now modernised and overhauled, some are as yet unchanged, for fear the whisky should be impaired. Output is more readily expanded from patent stills. As a result in 1961, 66% of the stocks of whisky over 3 years in age was grain whisky, and the remainder malt whisky. In grain whisky distillation, the processes will probably be unchanged, but they will be refined to make every possible use of by-products, a trend which D.C.L. have pioneered, and which the other distillers may be expected to follow.

5. The Scotch whisky industry has expanded its capacity very greatly since 1945. In future, increasing volumes of whisky will be available from distilleries. With allowances for evaporation, output has been rising in recent years by 10% to 15% per annum. While demand for matured stocks is still unabated, the astronomical prices, ruling on the open market, have become more realistic. In spite of warnings of over-production

since 1958, the expansion and modernisation of premises continues, although only 3 new distilleries and 4 new blending establishments have been opened since 1945.

For the industry the problem of demand estimation is a crucial one. Output is made now for consumption four to ten years ahead. Yet, firms believe that they can foresee demand fairly accurately using their accumulated experience to guide them. The length of the maturation period is known. Rising incomes and rising world consumption have given the industry a bias towards optimism. (See Table 15).

Nevertheless, decisions to produce are decentralised, outwith the D.C.L. There is thus a lack of cohesion on the supply side, for in terms of rate of growth in output the 'combine' is not the pace setter, the 'independents' often showing more vitality and agress-:ion. There is however a strong inter-trade unofficial news system, so that there is no blind working of competition Demand prediction in the industry, as in so many others, is based upon intelligent guess work rather than mathematical probabilities. The industry, by allowing its stocks to rise to over 330 million proof gallons, has placed its faith in a secular growth in demand.

Because of the inflexible nature of supply in the short run, blenders have no consolation when demand outpaces capacity. They thus take much interest in the creation of sufficient plant to provide them with future stocks of the right kind for their blended whiskies. Hitherto, if their estimates have been too generous, they have readjusted their inventories by disposing of some whisky on the open market, on which, until lately, they were assured of a good price.

Production of Scotch whisky, which is expected to amount to over 72 million proof gallons in 1962, is coming from plant working a little below full capacity. There is a margin to spare. As far as grain whisky is concerned, the Distillers' Company has a great responsibility to the whole industry, because six out of the eleven existing patent still distilleries are in its ownership. It thus controls the supply of an essential commodity. Self supply of grain whisky would give a firm much greater control over production. Ballantines and Long John Distillers own patent stills, while many blenders are part owners in the North British distillery in Edinburgh, and for them, this problem is solved.

6. There are two aspects to sales in the Scotch whisky industry. Sales, of whisky fillings by distillers are for stockholding. They experience second-hand demand, for regular purchases are made in substantial quantities from distillers by blending firms. The blending companies are well informed buyers compared with the public. They compare prices and test for quality by careful sampling, so that in conditions of over-production, hard bargaining may be anticipated. The blender can be fastidious in his choice of whiskies. Yet long term trading by old associates tends to dull the edge of competition. (This was clearly demonstrated in times of scarcity when loyalty to traditional suppliers was essential in order to receive whisky fillings).

The other aspect to sales of Scotch whisky concerns its disposal after blending and bottling. The rate of increase in sales must be closely related to the rate in increase of supplies, and projections of these growth rates as early as 1958 showed that supply was then in excess of current demand. The question was whether demand would rise sufficiently to absorb the increase in stocks when they came to be released. (See Table 14). In the British market since 1959, all branded whiskies have

been freely available. Competition has been intensifying. 'Export only' blends have appeared in the U.K., notwithstand-:ing the present level of duty, and the tardiness of growth in consumption.

Excise duty is a many edged weapon; it raises revenue, has an anti-inflationary effect in the home market, and tends to encourage the export orientation of the industry, thus raising earnings of foreign currency. In so far as the industry enjoys continued prosperity, it is unlikely that taxation on a semi-luxury product such as Scotch whisky will be reduced in Britain by any large amount.

While home sales are almost stationary, exports of Scotch whisky have been expanding by some 10% per annum. (See Table 15). Probably, production of Scotch whisky is overshooting the mark, because there are no new world markets into which Scotch whisky can break. There is little prospect of expanding sales in underdeveloped countries even in the long-term. Europe is the best possibility for immediate growth. There are many imponder-:ables involved in building up markets; the long-term policy of a firm is most significant in establishing a sound distribution system, and a reputation for Scotch whisky.

With growing competition abroad, no firm can expect to remain an exporter on a large scale unless its marketing efficiency overseas is very high, as the D.C.L. have found to its cost in North America.

7. If a 10% growth in demand per annum is assumed, together with the 12% average annual increase in stocks which occurred between 1960 - 62, (even with allowances for evaporation) there may be a surplus of Scotch whisky stocks amounting to 5 million proof gallons by 1966. (See Table 16). In the eventuality of a glut of Scotch whisky occurring, various alternatives are open to the industry.

Firstly, stocks could be warehoused for longer periods, although this practice would increase costs. There would tend to be a falling off in filling orders placed at distilleries, which would not necessarily lead to closures, but would lead to reduced output. A large maladjustment in stocks could cause unemployment, which would be serious in areas such as Banffshire and Islay where distillation is a major element of non-agricultural employment in economically marginal areas.

In the short run, more intensive salesmanship

would be attempted, with firms bringing to Europe and the Commonwealth techniques which have succeeded in the U.S.A. If stocks should outrun sales by a large margin, market prices might tend to collapse, with demand being maintained for first class malt whiskies only. Retail price cutting might develop, in an effort to expand sales among lower income groups. The more popular blended whiskies would probably survive such a debacle, because demand for them has a certain stability. Moreover, the proprietors of such blends have greater financial resources. The Distillers' Company for example has a wide diversification of interests outside Scotch whisky. The combine would probably increase in size, but, for the rest, the future would be obscure. There is a danger that North American interests might increase their hold on the Scotch whisky industry. Before matters had reached this point, there would be a strong case for firms in the industry accepting a self-imposed limitation of output for the benefit of all. The Customs and Excise authorities and the S.W.A. are well placed to assist in this kind of restraint. From past experiences, glut is the last thing that the Scotch whisky industry should wish to see, for an equilibrium in demand and supply is most desirable in giving some stability to the industry's trade. Thus by having a quota system for

distilleries, and an agreed percentage increase in releases by blending firms, the industry might then settle down to a more restrained pattern of trade, without a prolonged and painful contraction in activity.

8. The problems of inferior copying of Scotch whisky, of bulk shipments, and of the export of immature whisky continue to disturb the industry. With regard to the latter, spirits under three years of age may only be exported from the U.K. under licence from the Customs and Excise authorities. Legislation is long overdue to forbid this activity in its entirety, because it is doing irreparable harm to the image of quality which firms assiduously project for their Scotch whisky overseas. Legislation would not require more vigilance than that which occurs at present.

Secondly, no bulk shipments of Scotch whisky should be permitted. It is pointless for certain firms in the industry to protest about bulk shipments of Scotch whisky to the United States, when they themselves export in bulk to Europe. Indeed, it is known that malt whiskies are being despatched to Europe for subsequent blending with locally produced grain spirits. The resulting alcohol has a con-:siderable price advantage. Even where blended whisky is

consigned abroad for dilution and bottling, there are great dangers of an impairment in quality. If the industry wishes to maintain its reputation of being the 'Rolls Royce' of whiskies, then quality must be the objective of all firms in the industry, and quality has to be paid for by the consumer.

There is thus much to be said for Scotch whisky not only being distilled, but also blended and bottled in Scotland. This aim should be implemented as soon as possible, although costs might be raised, and profit margins pruned back in the initial stages of relocation. *1 There is a strong incentive for the Scotch whisky industry to be as Scottish as possible in every aspect of its being, from the barley for its dis-:tillation, to the bottles which it fills. Blending and bottling establishments should be located in Scotland. These plants are the largest employers of labour in the Scotch whisky industry. New establishments would be very desirable in bringing additional light industry to Scotland, giving employment to either men or women, without

*1 Post war developments by the industry in Scotland, in preference to the London area for example, show that firms are aware of this aim.

requiring special skills. Offsetting the relocation of blending and bottling houses would be the higher costs incurred by being away from leading centres of consumption such as S.E. England. (Yet it is not necessarily firms which bottle Scotch whisky in a particular region who have the strongest foothold in its local market. Dewars' of Perth for example are reputed to dominate the London market). Nevertheless higher costs of blending and bottling would be compensated by a greater control over quality in Scotland, and by the advantage of Scotch whisky being a Scottish product from inception until marketing.

When an industry has been enjoying unprecedented prosperity for more than a decade, such recommendations may be unpalatable. They may yet be necessary, if the Scotch whisky industry is to have stable growth in the future while at the same time it maintains the unvarying excellence of its blends as a true and universally recognised hall mark for Scotch whisky throughout the world.

TABLE 1.

Number of Scotch Whisky Distilleries In Production: 1961.

H.M. = Highland Malt. Source: H.M. Customs &
L.M. = Lowland Malt. Excise.

Excise District.	H.M.	L.M.	Grain	Total
Caithness, Inverness and Nairn.	16		1	17
Elgin, Banff and Moray.	46			46
Aberdeen.	4			4
Montrose.	5		2	7
Perth.	5			5
Stirling and Fife.	2		3	5
Islay and Campbeltown.	10			10
Rest of Argyll.	2			2
Orkney.	2			2
West Lowlands.		6	3	9
East Lowlands.		3	2	5
TOTAL:	92	9	11	112

TABLE 2.

Malt Distilleries at Work in Scotland

Year ended Sept. 30th	Number	Year ended Sept. 30th	Number
1939	92	1948	88
1941	72	1950	95
1942	44	1951	97
1943	33	1954	96
1944	1	1957	97
1945	57	1958	100
1946	80	1960	100
		1962	101

Source: The Scotch Whisky Association.

TABLE 3.

Production of Scotch Whisky: Original Proof Gallons.

Year ended Sept. 30th	Distilleries Using Malt Only	Distilleries Using Malt and Other Materials.	Total
1939	10.7	18.5	29.2
1940	7.2	6.2	13.4
1941	3.2	Nil	3.2
1942	3.2	Nil	3.2
1943	Nil	Nil	Nil
1944	Nil	Nil	Nil
1945	3.7	5.0	8.7
1946	5.8	8.5	14.3
1947	3.5	5.6	9.1
1948	8.3	12.5	20.8
1949	11.3	16.3	27.6
1950	12.7	16.4	29.1
1951	12.2	14.8	27.0
1952	12.6	17.4	30.0
1954	13.6	19.1	32.8
1956	n.a.	n.a.	41.0
1958	n.a.	n.a.	52.0
1960	n.a.	n.a.	66.8
1961	n.a.	n.a.	70.2
1962	n.a.	n.a.	72.0

Customs and Excise Reports. Figures adjusted by Scotch Whisky Association.

TABLE 4.

Barley Allowances for Distilling in U.K.

Year	Tons ('000's)	Year	Tons ('000's)
Av.1935 - 38.	300 approx.	1945 - 46	122
1939 - 40.	100	1946 - 47	100
1940 - 41.	35	1947 - 48	150
1941 - 42.	35	1948 - 49	250
1942 - 43.	Nil	1949 - 50	300
1943 - 44.	Nil		
1944 - 45.	100		

Source: Sources and Nature of the Statistics of the U.K.: ed. by M. G. Kendall.
Ministry of Food Allocations.

TABLE 5.

Stocks of Scotch Whisky in U.K.

Year ended 31st March	Million Proof Gallons	Year ended 31st March	Million Proof Gallons
Av.1935 - 38.	127.0	1949	98.9
1939	144.25	1950	111.7
1940	142.63	1951	124.0
1941	129.64	1952	137.8
1942	113.98	1953	145.5
1943	103.68	1954	152.9
1944	92.04	1956	180.7
1945	84.79	1958	219.0
1946	86.0	1959	242.6
1947	79.8	1960	267.0
1948	86.8	1961	296.9
		1962	325.0

Source: Figures supplied by Scotch Whisky Association based upon Customs and Excise Returns.

TABLE 6.

1. Stocks of Scotch Whisky over 3 years old.
2. Life of Stocks of Scotch Whisky in Years based on Annual Consumption.

Year	% of Stocks Over 3 Years Old.	Life of Stocks in Years, based on Annual Consumption
1939	51.0%	$7\frac{3}{4}$
1947	60.5%	6
1948	53.0%	$6\frac{1}{2}$
1949	47.5%	$7\frac{3}{4}$
1950	35.5%	$7\frac{1}{2}$
1951	37.5%	7
1952	41.7%	8
1953	44.5%	$7\frac{3}{4}$
1954	43.0%	7
1955	41.5%	7
1956	39.0%	7
1957	36.0%	$7\frac{1}{2}$
1958	35.7%	$7\frac{1}{2}$
1959	36.0%	$7\frac{3}{4}$
1960	35.0%	$7\frac{3}{4}$
1961	34.0%	8
1962	36.0%	8

Source: Statistics relating to British Made Potable Spirit: per Wm. Birnie, C.A., Inverness.

TABLE 7.

U.K. Consumption of Scotch Whisky as Compared With Total Consumption of Scotch Whisky.

Year ended	Regauge proof gallons:millions	Percentage of World	Regauge Proof gallons:millions
	U. K.	Total	World Total
1939	6.9	47.2%	14.6
1940	n.a.	n.a.	n.a.
1941	5.2	38. %	16.1
1942	5.4	39.5%	13.6
1943	6.1	55. %	11.1
1944	5.8	52.3%	11.0
1945	4.6	50.9%	9.0
1948	3.2	30.1%	10.6
1949	2.5	23.6%	10.6
1950	3.0	25.9%	11.6
1951	3.8	27.6%	13.7
1952	3.5	23.8%	14.7
1953	3.9	24.9%	15.8
1955	4.9	26.5%	18.6
1957	5.7	26. %	22.2
1959	6.2	24.5%	25.8
1960	6.6	22.9%	28.9
1961	7.6	24.1%	31.8

Source: Customs and Excise Reports.

TABLE 8.

The Rate of Distribution of Scotch Whisky to the Home Trade (Wholesale and Retail)

From	To	Percentage
March 1939	Feb. 1940	100%
March 1940	Feb. 1941	80%
March 1941	July 1941	65%
Aug. 1941	Dec. 1946	50%
Jan. 1947	April 1947	45%
May 1947	April 1948	25%
May 1948	April 1950	20%
May 1950	Dec. 1953	25%
Jan. 1954	System was	abolished.

Source: Sources and Nature of Statistics in U.K.: ed. M. G. Kendall.

TABLE 9.

Changes in the Rate of Excise Duty on British Spirits.

Date of Change	Basic Duty per Proof Gallon.	Equivalent per bottle of whisky (30^{o}).	Retail price of bottle of standard whisky.	Duty as % Retail Price per bottle of standard whisky.
	£ S. D.	£ S. D.	£ S. D.	%
April 1920	3 12 6	- 8 6	- 12 6	68.0
Sept. 1939	4 2 6	- 9 8	- 14 3	67.8
April 1940	4 17 6	- 11 5	- 16 -	71.4
April 1942	6 17 6	- 16 1	1 3 -	69.8
April 1943	7 17 6	- 18 5	1 5 9	71.7
Nov. 1947	9 10 10	1 2 3	1 11 -	71.8
April 1948	10 10 10	1 4 7	1 13 4	73.7
Feb. 1951	10 10 10	1 4 7	1 15 -	70.3
April 1961	11 11 11	1 7 1	2 1 6	65.2
	1	2	3	4

Source: Column 1 - Customs and Excise Reports.

2 and 3 - Sources and Nature of the Statistics of the United Kingdom: ed. by M. G. Kendall, P. 268.

TABLE 10.

Estimated Receipts of Revenue from Scotch Whisky released for consumption: Based on Selected Full Years.

Year	£ millions.
1939	29
1942	37
1943	47
1947	28
1948	32
1951	42
1955	53
1961	81

Writer's estimate based on Customs and Excise Reports.

TABLE 11.

Exports of Scotch Whisky.

Year ended 31 Mar	Exports as % of Total Sales.	Total Exports Millions:proof Gallons.	Value of Total Exports: £.	Exports to U.S.A. Millions: proof gallons	Value of Exports to U.S.A. £
1939	52.0	7.7	£12.7	4.7	£ 6.9
1940	n.a.	10.6	£16.2	6.9	£10.4
1941	62.0	9.9	£13.5	4.9	£ 8.1
1942	60.5	8.3	£ 9.7	3.5	£ 6.2
1943	45.0	5.0	£ 9.3	3.4	£ 6.1
1944	47.7	5.3	£ 8.1	2.5	£ 4.7
1945	49.1	4.4	£ 8.6	2.1	£ 3.9
1946	59.2	5.0	£10.8	2.8	£ 5.2
1947	54.7	5.7	£13.5	3.9	£ 8.0
1948	69.9	7.4	£16.1	4.6	£ 9.5
1949	76.4	8.1	£18.7	5.0	£11.0
1950	74.1	8.6	£26.2	5.8	£17.0
1952	76.2	11.2	£33.0	6.3	£18.6
1954	75.6	13.3	£39.0	7.1	£20.8
1956	74.0	15.3	£47.6	8.6	£23.4
1958	74.8	18.1	£56.0	10.8	£31.5
1959	75.9	19.5	£61.8	12.1	£34.8
1960	77.2	22.2	£65.5	14.7	£35.9
1961	76.1	24.2	£74.4	14.7	£40.8

Source: Columns 1, 2, 3 and 4 based on Trade and Navigation Accounts of U.K.: these include a small amount of Northern Irish Whisky.

TABLE 12.

Exports of Scotch Whisky. Volume. 000's proof gallons.

	1938	1946	1950	1955	1960
Commonwealth & Irish Rep.					
Canada		480	939	855	824
Australia		192	348	600	1,104
New Zealand		129	172	692	607
South Africa		198	151	576	514
Total Commonwealth		1,906	2,358	4,126	4,755
U. S. A.	4,784	2,896	5,738	7,992	12,510
Common Market.					
West Germany		170	51	188	553
France		2	29	166	398
Belgium		70	72	158	476
Netherlands		4	11	64	201
Italy		39	14	74	214
E. F. T. A.					
Sweden		17	92	111	298
Denmark		29	38	76	153
Norway		48	32	41	80
Switzerland		8	22	74	154
Portugal		7	9	23	35
Austria		n.a.	n.a.	n.a.	29
South & Central America.					
Colombia.		52	121	100	80
Panama		50	71	141	270
Venezuela		30	112	285	87
Brazil		44	119	50	190
Argentine Republic		161	9	69	212
Total Foreign Countries.		4,061	7,349	11,232	18,390
Total Exports.	9,367	5,967	9,707	15,359	23,145

Source: Trade & Navigation Accounts of U.K.

TABLE 13.

Export of Scotch Whisky by Value. £. 000's

	1938	1946	1950	1955	1960
Commonwealth & Irish Rep.					
Canada		871	2,623	2,553	2,384
Australia		290	586	1,264	2,495
New Zealand		228	338	1,854	1,767
South Africa		356	302	1,514	1,434
Total Commonwealth.		3,455	5,403	10,966	13,064
U. S. A.	6,985	5,352	16,573	23,412	35,914
Common Market.					
West Germany		330	120	538	1,485
France		5	71	449	1,132
Belgium		136	179	378	1,180
Netherlands		7	24	156	565
Italy		74	36	196	589
E. F. T..A.					
Sweden		30	182	303	762
Denmark		53	75	197	436
Switzerland		15	57	139	369
Norway		88	66	114	229
Portugal		14	25	63	104
Austria		-	-	-	81
South & Central America.					
Colombia		102	382	302	234
Panama		89	203	416	813
Venezuela		60	352	900	271
Brazil		92	401	175	536
Argentine Republic		303	28	218	633
Total Foreign Countries.		7,559	20,922	32,669	52,502
Total Exports.	12,719	11,015	26,325	43,636	65,567

Source: Trade & Navigation Accounts of U.K.

TABLE 14.

Estimate of Stocks of Scotch Whisky Reaching Maturity.

Year of Production	Production: Original Proof Galls: Millions	Evaporation Loss 15%: * Proof Galls: Millions	Marketable Stocks Regauge Proof Galls: Millions	Year of Marketing
1957	47.4	7.1	40.3	1962
1958	52.0	7.8	44.2	1963
1959	56.8	8.5	48.3	1964
1960	66.9	10.0	56.9	1965
1961	70.2	10.5	59.7	1966
1962	72.0	10.8	61.2	1967

Source: Based on Scotch Whisky Association figures.

* Note: Firms consider 15% too high a loss: 12% is preferred.

TABLE 15.

Estimate of Demand for Scotch Whisky.

Region	Av. Annual % Increase 1955 - 60.	Proof Gallons: Millions		
		Actual Consumption	Potential Consumption	
		1960*	1965*	1967*
U.K.	6%	7.1	9.4	10.0
Commonwealth	3%	4.7	5.4	5.6
U. S. A.	11%	12.5	19.3	23.5
Common Market	36%	1.8	5.2	8.9
E. F. T. A.	25%	0.7	1.6	2.4
Total)) Consumption)	10%	32.0	48.0	54.4

* All Calendar Years.

Source: Based on Trade and Navigation Accounts of U. K.

TABLE 16.

Potential Growth Rates for Demand and Supply of Scotch Whisky.

Growth Rate	Years to March 31st: Regauge Proof Gallons						
	1961	1962	1963	1964	1965	1966	1967
Demand							
7%	32	34.2	36.5	39.0	41.7	44.6	47.7
10%		35.2	38.7	42.5	46.7	51.3	56.4
Supply							
12%	32	35.8	40.1	44.9	50.3	56.3	63.0
15%		36.8	42.2	48.5	55.7	63.9	73.3
	Base Year						

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APPENDIX I.

DEFINITIONS.

1. Proof Spirit:-

'Proof spirit' is a standard of alcoholic content. It is defined as follows by the Customs and Excise Act of 1952.

'Spirits shall be deemed to be at proof if the volume of the ethyl alcohol contained therein, made up to the volume of the spirits with distilled water, has a weight equal to that of twelve-thirteenths of a volume of distilled water equal to the volume of the spirits, the volume of each liquid being computed at fifty-one degrees Fahrenheit': i.e. spirit is of proof strength when at 51°F it weighs exactly twelve-thirteenths of an equal volume of distilled water.

Scotch whisky is normally sold at 70° proof, and contains 70 percent proof spirit as defined above. At that strength, it has almost 40% of alcohol by volume, or 33.3% of alcohol by weight. The specific gravity is 0.9523.

American proof strength is calculated

differently. An alcohol at 100% U.S. proof strength contains 50% by volume of alcohol at 60°F. In many export markets, the normal strength of Scotch whisky is 75° proof or 86.6% U.S. proof.

2. Proof Gallon:-

The proof gallon of a volume of whisky is the product of its proof strength times its liquid gallonage. It is a standard unit of measurement, which varies according to the alcoholic content of whisky. The term 'original proof gallon' refers to the measurement of the spirit before evaporation: 'regauge proof gallon' is the quantity after evaporation losses have been deducted.

3. Full Bottle:-

The average liquid content of a standard bottle of Scotch whisky is 26⅔ oz., or 1/6 of a gallon.

4. Licences to Distil:-

The Scales of Payment for licences to distil are as follows:-

(1) To distil a volume not exceeding
50,000 proof gallons of spirit per annum. £10. 0. 0d.

(2) To distil a volume exceeding

50,000 proof gallons per annum.

For first 50,000	£10. 0. 0d.
For each additional 25,000 or portion, an additional	£10. 0. 0d.

5. The Capacity of Casks.

Type of Cask	Capacity in Gallons
Hogshead	50 - 65
Butt	110

6. The Scotch Whisky Association.

The Scotch Whisky Association is a trade association of all the principal firms of distillers and blenders engaged in the Scotch whisky industry. In 1960 it had about 145 member firms. It was originally constituted to represent the industry to the Government. There is also the Pot Still Malt Distillers' Association of Scotland to represent the interests of malt whisky distillers. The Scotch Whisky Association is referred to in the text as the S.W.A.

7. The Distillers' Company Limited.

The Distillers' Company Limited is referred to in the text as the Distillers' Company, the

Distillers' Group, or the D.C.L.

APPENDIX II.

WATER SUPPLIES.

Raw Materials and other Requirements.

A major consideration in the siting of malt whisky distilleries is the availability of a reliable water supply of a suitable character. The volume and type of water depends upon the rainfall of the area, and upon its country rock or overlying deposit. Distillers are known to prefer water flowing off granite, and contrary to popular belief, they dislike excessively peaty water. There is an old saying current in the industry that the water should be 'granite through peat, not peat through granite.' Peaty water is acidic and may contain impurities.

Many malt whisky distilleries have their own supplies from private reservoirs, as at Tormore on Speyside, whereas others use local piped sources. The chemical composition of the water does not matter for cooling - only the reliability of the supply is significant. An average malt whisky distillery may use from 700,000 to 1,000,000 gallons of water per week of which about 70% will be used for cooling, and will be derived from local streams.

Production may be curtailed for lack of

water as in the 1956 season, when there was an abnormally low rainfall in the Eastern Highlands.

In grain whisky distillation, water supplies need not have special attributes, and are mainly drawn from local water boards. As the production from a single grain distillery in a week may exceed the season's output from a malt distillery, the adequacy of the water supply is of more importance than its quality. The weekly consumption of water by a grain whisky distillery may exceed 3 million gallons. Such a requirement results in the distilleries being located on or near rivers; the Strathclyde Distillery in Glasgow draws its cooling water from the River Clyde.

Blending demands a pure water supply. Glasgow has an especially pure supply flowing from granite, and prior to the Second War, Glasgow water was transported by rail to London for the purpose of diluting Scotch whisky. The establishment of blending houses in other Scottish towns, such as Perth, also suggests that the water supply is particularly suited to the blending of whiskies.

APPENDIX III.

BARLEY AND OTHER GRAINS.

Until the mid-19th century, each malt whisky distillery was dependent upon a local supply of grain; by 1860 c., these supplies became insufficient and some foreign grain began to be imported. This trend has continued, until in 1960, only 250,000 quarters of barley or some 40% of the distillers' purchases were estimated to come from Scottish farms. The rest of the grain comes from the barley harvests of Eastern England, Denmark, Australia, Canada and the United States.

Malting barley is still grown specifically for certain distilleries in some areas of Scotland (e.g. Strathspey). Farmers are encouraged to remove the spent grain of 'draff' for animal fodder. In a good year, it is known that between 25% and 30% of the barley crop of Banffshire is utilised in local stills. The Western Highlands, having a cooler and cloudier summer compared with the east, are more dependent upon supplies which are imported by sea to such regions as Islay.

Only a small proportion of malted barley is required in the making of grain whisky. Grain

distilleries use large quantities of imported cereals such as maize, rye and even rice. Only rye is grown on a commercial scale in Britain, but of the other grains, maize is mainly purchased from the U.S.A.

In the pre-war period, the Distillers' Company introduced a policy of price stabilisation for Scottish grown barley, which is reputed to have cost them more than £100,000 per annum. Individuals in the Scotch whisky industry maintain that the D.C.L's. grain policy was one of insurance rather than stabilisation. It would have involved a loss of prestige if malt whisky distillers had to rely wholly on imported barley instead of using as much of the native Scottish barley harvest as possible. If any overseas disturbance endangered supplies of barley, malt whisky distillers would suffer.

Details of a Government scheme to encourage barley production, especially in Scotland, are to be found in the Agricultural Development Bill of 1938. The scheme is outlined in a White Paper (Cmd. 6077) describing the 'Assistance to Barley Growers', Memorandum on the Proposed Scheme for Barley Harvested in the Year 1939.

A barley subsidy fund was to be created to which contributions were to be made by importers of

barley and by distillers as users of such grain. The Exchequeur was to augment the fund, which would be distri-:buted among barley growers in the U.K.

A levy was to be placed on distillers of pot still (malt) whisky: the levy would be on a sliding scale in accordance with the weighted average price of barley in a 6 months' period. Exemption could be claimed if the distiller showed that he had purchased home grown barley prior to July 1940, or malt from such barley (the malt thus obtained had to represent not less than 50% by weight of the whole ingredients used in distilling the whisky). The grower of the barley was to receive not less than eight shillings per cwt., a price which had been determined by studying market conditions in an earlier period. The Second War prevented this scheme from being implemented.

APPENDIX IV.

FUELS - PEAT AND COAL.

Coal and peat are the principal fuels used in the manufacture of Scotch whisky.

Peat was formerly cut locally by distillery employees during the silent period in malt whisky production in July and August. Access to suitable moorland for peat cutting is relatively easy in the Highlands (e.g. round Glenlivet). As peat consists largely of humus or decayed vegetable matter, with a high content of soil water, its bulk and weight are greatly reduced by drying in situ. Even so, it is not a paying proposition to carry peat great distances, because its heat production is low - very large amounts would have to be burned to equal the calorific output of say, one ton of coal. Peat does not therefore provide power, but is used for drying the malted grain in kilns. A moderately warm constant temperature is needed to toast the grain, and kill its germ. The peat reek rising through the kiln impregnates the barley with a smoky aroma, which helps to identify malt whiskies from grain whiskies. Contractors have been undertaking to supply peat for distilleries in recent years. Unlike Eire, where peat

is now 'excavated' mechanically to provide fuel for power stations, peat cutting is still done by hand in the Scottish Highlands. An average sized malting attached to a malt whisky distillery may require from 120 to 140 tons of peat per season.

With rising costs of fuel and transport, distillers have been showing interest in measures of fuel economy. Coal has to be imported into the Highlands of Scotland for distilling or any other industrial purpose. Coal is used for heating many pot stills, but steam heating for stills has also been tried. Some distillers believe that steam does not cause a sufficient cooking of the contents of a still, a process which appears to concentrate the flavour of malt whisky. Oil firing for steam heated stills has been introduced at several distilleries. The control of the distillations is reputed to be effective and certainly cleaner using oil for fuel.

The main fuel used in grain distilleries is coal for raising steam. As ten out of the eleven grain distilleries in operation are on or near coal fields, the provision of this fuel is facilitated compared with its supply to the Highland region. Fuel is also used more economically in the patent-still process, because it is continuous. The furnace fire is not drawn at the

conclusion of each distillation. The patent stills are steam heated from boilers; so long as fermented liquor or wash is fed into the still and steam is passed through it, alcohol will be produced. Oil firing for boilers is a probable trend in grain whisky production.

APPENDIX V.

TRANSPORT.

Costs of transport are a significant factor for all industries, but for industries operating in such regions as the Scottish Highlands these costs are of vital importance. Raw materials must of necessity be imported to Highland malt distilleries for demand for them has far outrun supply.

The coming of the railway to the North East coastlands of Scotland, and subsequently to Strathspey coincided with a remarkable growth in the number and size of distilleries in the area. Blending houses in the Lowlands were requiring ever more malt whisky to give their grain whisky base a fullness and bouquet: demand thus spiralled upwards.

Prior to the 'Railway Age', supplies were taken to the Eastern Highlands by sea, and thence transported by pack ponies to the distilleries. In 1862, Keith and Dufftown were linked by rail to provide an outlet for the produce of Strathspey distilleries which could not be reached from the main Aberdeen - Inverness line opened in 1858.

A further line from Dufftown to Boat of Garten was opened in 1863. Along Speyside, distilleries were sited on or near the railway line, each with its halt bearing the distillery name - such as Carron, Dailuaine and Spey Royal. Others were connected by branch lines to the main system.

Rail transport has had a prerogative as far as heavy loads for distilleries have been concerned. Long distance road transport has been gaining steadily on rail haulage, although 'whisky trains' of full casks still go southwards. To the distiller road transport has several advantages. The door-to-door delivery of raw materials is welcomed; in the Glenlivet area, some seven miles separates the nearest railhead and the distilleries. Road haulage is less liable to pilfering, and avoids damage caused by rough shunting, both of which occasioned considerable losses on rail movement of whisky. The carriage of Scotch whisky by road is normally by casks, but W. & A. Gilbey operate two road tanker vehicles, the 'Whisky Galore' and the 'Whisky Galore II', which may presage bulk transport in the future.

Sea transport has been essential to develop distilleries on the west coast of Scotland. At present there is one distillery vessel employed by the Distillers' Company Limited mainly between Glasgow and Islay. Puffers

and regular coastal services also serve the distilleries. They carry the whisky in casks, and transport grain and fuels to the distilleries as return cargoes.

The existing transport system in Lowland Scotland antedates the establishment of grain distilleries which were set up in increasing numbers from the 1860's onwards. Port Dundas, a canal terminus in Glasgow, was one of the first locations chosen for a large grain distillery. Elsewhere, branch lines were constructed to serve the distilleries as at Menstrie, Dumbarton, and Alloa. Road transport is now superceding rail for the movement of both grain and blended whisky. It has been estimated that between 60% and 70% of all Scotch whisky moved in the United Kingdom each year is now transported by road.

APPENDIX VI.

EFFLUENT DISPOSAL.

One factor of distillery location which is often overlooked is the possibility of disposing of effluent. Many distilleries are located in the 'golden triangle' of Strathspey, where rivers such as the Spey and the Avon, celebrated for their fine fishing, take their course. These rivers have a great economic and aesthetic value to the community.

At one time the means of disposing of effluent from stills was to run it to waste in the nearest burn - the milky liquid produced by contact with the burn water being the tell-tale sign which pinpointed the occurrence of illicit stills. When legal distilling was established, ditches carried the waste to rivers.

As distilleries increased both in number and in output, angling objections were made to this pollution, and consequently a method of purification was devised. A wooden tower structure was erected, its interior being filled with coke and charcoal. The effluent was allowed to percolate through this media. The air evuporated much of the volatile residue and the resultant liquid was less harmful. In recent years, existing biological treatment

plants have been enlarged and improved by the addition of humus tanks; much investigation has been carried out as to their efficacy. Island or coastal distilleries have not required to make such expenditure for their waste liquids are disposed of at sea.

The principal residual fluid is pot ale. The Distillers' Company Limited, along with other distilling interests, have erected plant at Carron on Speyside which evaporates the liquid, dries the residue, and converts it to a high protein animal food known as Malt Distillers Dried Solubles, which is marketed in Britain and overseas. The condensate from such plant however requires further treatment through biological filters, into which the spent lees, steep water and washings are also run.

The Carron unit is able to treat the pot ale from seven distilleries amounting to approximately 400,000 gallons per week. Other plants of a similar kind are already in operation or are at the planning stage. The dried soluble feeding products sell at approximately £34. per ton. The distillers claim that these concen-:trating plants for effluent do not operate at a profit, but have been forced upon them by river pollution legislation.