

The present **Yonge** Street front of the **Eaton-Woolworth** block was in 1834 occupied by two tavern keepers; three carpenters, one **general** store-keeper, one butcher, two blacksmiths, a turner, a person without occupation, a house in similar condition.

Across **Yonge** Street from here were a few places north of Lot Street, ten houses in all, which, according to the Directory, terminated **Yonge** Street proper and commenced **Yonge** Street Road. The enumeration of names, as far as what is now **Bloor** Street, may be reproduced: Jas. **Newbigging**, Esq., Dr. Robinson, **Prop.** Steam Saw Mills, near Windmill; The Hon. John **Elmsley**, Henderson & Sons, (tailors) **W.** Adams and **W.** Franks, nursery, **seeds-**men and market gardeners. **Bloor's** Brewery, J. Price, Red Lion Inn; and York General Burying Ground.

Having arrived at a stage which seems appropriate for the termination of this instalment of random and very disconnected notes, the writer lays down his pen and begs the indulgence of the unwary reader who may have been beguiled into the multifarious confused and confusing details with which he has had to struggle.

CHAPTER IV.

In the Days of the Distillery

It is impossible to say when and how the idea originated of **combining** a distillery with the mill. **Similar** arrangements were, however, at that time common enough in Upper Canada. Every miller had occasionally on his hands **quantities** of offal, consisting of waste grain, sweepings, etc., which he could not readily dispose of for feed, and there was seldom much market for the middlings separated in the making of flow. The conversion of the starch of this **unsaleable** waste material into alcohol, for which there was **always** a demand, was resorted to by many millers who thus turned a loss into a **profit**, and helped out the latter by utilizing, for swine and cattle feed, the residue of distillation.

The proprietors of the **Windmill** had only to look around them for precedent for such an undertaking. William **Arthur**, who had a distillery across the Don, seven or eight hundred feet north of Gerrard Street, just about where the old Small-pox Hospital sheds used to stand, had a **good** deal of his **grinding** done at the Windmill, and bought largely of middlings. John Maitland, who conducted the City Distillery, located on **the** wharf,

at the foot of Church Street, had transactions with the Windmill, as also had Charles and Alexander Maitland, possibly his brothers. Edward **Lefroy** Cull, at the foot of Frederick Street, possessed facilities for malting, and also had a copper still, though there is no evidence of its use at this time; and this is also true of Joseph Bloor, who afterwards sold his still, at the Brewery, to interests **connected** with Mr. Gooderham. Jones & Son, of the Ontario Brewery, are said to have operated a still, as also did Richard L. **Denison**, whose house or distillery was on Dundas Street, north of the first toll gate. John Ward, who afterwards kept the Don Vale House, at the intersection of Winchester Street and the river, had a distillery in the **Rosedale** Ravine, not far distant from this point, and some of his grinding was done at the Windmill.

There is plenty of evidence that, even in the days of Muddy York, distilleries were quite common. Several of them were located in the outskirts of the town, or within a few miles. **Scadding**, in describing a boating trip, commencing at the Don Bridge, **speaks** of passing certain potasheries and distilleries before reaching the meadows above, and there is a tradition of a distillery being in operation near the intersection of the **Rosedale** ravine with the Don, immediately north of the Necropolis. This is asserted by Mr. D. Lamb who says that he remembers the **gradual** carrying away of the ruins for firewood.

In **MacKenzie's** "Sketches of Canada," published in 1827, it is stated that "About three miles out of town, in the bottom of a deep ravine, watered by the river Don, and bounded also by beautiful and verdant flats, are situated the York Paper Mills and Distillery of Messrs. **Eastwood & Co.** * * * * and Messrs. **Helliwell's** large and extensive Brewery." The locality described is that of the present **Taylor's** Mills. Both concerns mentioned were erected about 1820, and to that of the Helliwells was afterwards attached a distillery said to have been capable of operating on fifteen to twenty bushels of grain per **day**. This was burnt down in 1837.

Another old distillery, referred to in an advertisement in the U.C. Gazette of **August 18, 1831**, was situated on the Don, "having easy **access** to the town from which it is a mile distant." This consisted of a distillery and potashery, with about nine acres of land, and was offered for sale or exchange **by** Messrs. Wood and Anderson. There is a possibility that this was the Castle Frank Distillery previously referred to. The distillery at York Mills may be included in this enumeration. It was owned by Andrew Mercer, whose name lives in connection with the Reformatory. He was one of the earliest settlers, arriving in 1802. He shortly afterwards acquired 200 acres of land, but was really occupied as a merchant on **King** Street, and was connected with various interests, including the distillery on Yonge Street.

A more extended and careful search would doubtless result in an enlargement of the above list, but enough has been given to show that the manufacturer of alcohol was not an untried field of enterprise, but one which had been well trodden, from the earliest settlement of the country, and had proved the most ready way for the disposal of grain—which was then *unexportable*—and also for the production of spirit, at that time considered by almost everyone as an absolute necessity of life.

Another cause of the popularity of this branch of industry was the *light* requirements of the law as compared with those of after years. During the early part of those *good* old days when George the Third was King anyone could set up a still, without tax on the vessel, or the *spirit produced*. This was the case in Canada, and also in *Great* Britain, where in 1788, the still tax was first imposed. In Governor Simcoe's third session of Parliament a similar measure was introduced and passed on the second of June, 1794 (34 Geo. III, Cap IX. This required every person using a still or stills, for making spirituous liquors for sale, to pay, annually, to the Provincial Secretary, for the uses of the Province, the sum of one shilling and three pence, of lawful money, for every gallon which the body of such still was capable of containing. It might be as large as desired, but vessels of less than ten gallons were forbidden and a penalty fixed for their possession or use. Infringements were subject to a *fine* of ten pounds—half to the informer—and the

offender might have his license suspended for three years. The gauger did not, thank goodness, then exist, but a magistrate might issue a search warrant, though happily its operation was confined to the time between sunrise and sunset, so that during the absence of the orb of *day* the rest or labor of the distiller might be undisturbed by the *official* eye.

A little trouble arose as to whether the one and three pence per *gallon* applied to sterling or currency (Halifax) but this was settled by an old Act of *Lower* Canada, which declared that shillings and pence referred to the sterling money of Great Britain. The gallon specified was that of wine measure, which was then recognized in Canada, and continued to be so until shortly after Confederation. If these restrictions are observed and applied to the License Fee demanded it will be seen that a still of 500 *gallons* would cost about \$150.00 per *annum*. It is difficult to say just what the import duty on spirit was at this particular time, but, by the old Lower Canada Statutes of 1774, it was *fixed* at three pence per gallon for British Spirit, and one shilling for that from "American plantations." The protection thus afforded was, therefore, of a very generous kind, amounting practically to about 25 per cent, ad valorem.

After the continuance of this comfortable state of things, for about nine years, the authorities claimed that the working of the law proved "dilatatory and circuitous," and provision was made for the

appointment of inspectors to look after the measurement and regulation of stills, or to prosecute if necessary. This was really the beginning of the Excise, though, so far, the remuneration of the Inspectors was arranged by specified fees for individual services. Several unimportant additions to the law were made in the following year or two, but a very pronounced change came in 1819 by which wooden stills were made subject to an additional tax of one and three pence per gallon.

The inclusion of wooden stills marks the change from the pot still, which was emptied after every charge, to the more or less continuous process, which ultimately culminated in the column. It appears, however, that after the experience of five years the doubling of the tax on the body of the still was not considered commensurate with the output, so that, in 1823, the capacity of the still itself, and also of the cap or head, whether in divisions or not, were fully measured and charged for tax at half the volume, the remainder being deducted as steam allowance, but, in addition, every heater for beer, or other appliance before charging, was taxed to its full capacity at the rate of two and six pence per gallon.

This was the state of things when the project of adding a distillery to the Windmill was carried out, and though the tax on wooden stills had been increased there remained a large margin in favor of the distiller over the importer of spirits.

Another favoring consideration **was** that arising from the relatively low cost of a plant constructed largely or entirely of wood, put together in the country, over that made of copper, with metallic connections, which had to be imported, almost in its entirety, from abroad. The increase in the duty on spirits to one shilling, sterling, per gallon, as **prescribed** by the British Act of 6 Geo. IV., while Canadian Whiskey was sold for the same amount, **confined** competition wholly to home manufacturers, though it must be acknowledged that rivalry **in** the trade was remarkably keen.

The writer of these reminiscences will perhaps be forgiven this long and somewhat discursive digression as to the causes which led to the addition of a distillery to the Windmill. This has not been introduced merely for this purpose but, incidentally, for **placing** on record certain facts which are now difficult of access, and which throw some light on the early history of distillation in Canada, and the laws relating to it.

There is no definite or detailed account of how the distillery addition was built. It was, however, a frame structure, to the south and west of the tower of the Windmill, and was **probably** put up by **George** Robinson, a carpenter, frequently employed by the *firm*. It will be remembered that a large chimney had been erected in 1832, on the west side of the mill, and about a year afterwards a **boiler** and engine had been installed, followed by

other improvements in this line, so that the introduction of steam for distillation was already provided for.

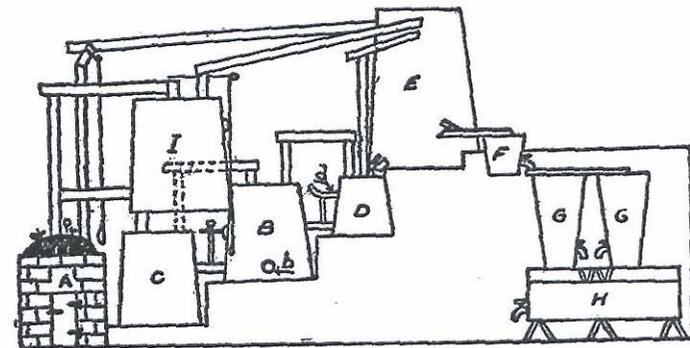
No one living seems to have any definite recollection of the style of the still. As seventy-nine years have elapsed this is not to be wondered at. Had this investigation been made a generation earlier the task would have been easy, but, as it is, one has to be content with the few words spoken, and such evidence as may be inferred from records of business transactions; or from records applying to stills in use in Canada at that time.

All that could be definitely learned with regard to the still was that it was constructed mostly of wood, and the wood still was packed with round stones. This gives a clew, particularly when taken with the legislation of 1819 and 1823, when the Acts respecting the gauging of wooden stills were introduced. Moreover there fortunately comes in some evidence from the now antiquated "Muspratt's Chemistry," a copy of which is in the possession of the writer, and from which the following quotation is taken:

"Numbers of distilleries are now at work in Canada; like those of their neighbors, they are mostly of wood, and worked by steam. In Pittsburg, and other parts of the United States, the whiskey is purified by filtering it through charcoal, coarsely ground. Seven miles from the City of Toronto is

a large distillery the annexed drawing, and description of which are taken from Morewood. All the vessels and pipes, as well as the stills, are made of pine; the pipes are nine inches square, with a boring two and a half inches diameter."

The illustration is reproduced with the addition of the names and dimensions of the various vessels.



- A. Horizontal Boiler with central flue for burning wood.
 - B. No. 1 Still or preheater 4 ft. 7 in. x 6 ft. (b) pipe for charging from fermenters.
 - C. No. 2 Still 4 ft. 7 in. x 6 ft.
 - D. Doubler 2 ft. 7 in. x 3 ft. 8 in. (d) Low wines and Faints pipe.
 - E. Worm Tub 5 ft. 6 in. x 9 ft.
 - F. Spirit Receiver 2 ft. 2 in. x 2 ft.
 - G. G. Percolators filled with charcoal 2 ft. 6 in. x 5 ft.
 - H. Receiver for purified Spirit.
 - I. Warm Water Tank for mashing—water, etc., connected by wooden pipes with steam boiler and top of worm tub.
- Diameters stated at a half depth.
All Pipes of wood.

The distance of this distillery from **Toronto**—seven miles—at once negatives the idea that reference was to that at the Windmill, or any other located in the city, or its immediate suburbs, and this also holds good with regard to Eastwood's and **Helliwell's** establishments up the Don, which were not more than three miles away. It might have applied to the Mercer distillery at York Mills, or possibly to that carried on near the old Mills, on the Humber, though it is quite unlikely that a small **plant**, such as this, would have been selected as representative of Canada.

In any case the illustration serves to show that wooden apparatus was used; and what it looked like. As the Windmill still was packed with stones it is likely that this was a primitive device to accomplish continuous distillation, as carried out in the **Coffey** apparatus, which had only been patented in England about five years previous to this time. One can easily conceive that an **uprushing** current of steam, meeting with "beer" in its descending passage over and between the cobble stones, **would quickly** be deprived of its alcoholic contents, though certainly in a rather crude manner.

The only way in which the **capacity** of the still can be estimated, and then **only** approximately, is by the license fee. This amounted to **£42.3.0** currency, which was handed to the Hon. John H. Dunn, then Receiver-General of the Province. It will be remembered that this tax was at the rate

of two shillings and six pence, sterling, per wine gallon, on the full capacity of the **still** and head, as well as on beer heaters, or like contrivances having entry to the still, but the tax on the main vessel itself might be reduced to the extent of 50 per cent. as an allowance for steam space. Assuming the still to have been without head or heater, and thus subject to this deduction, its total capacity would have been **555 wine gallons**; but it is likely that some sort of head and heater was employed, with contents possibly amounting to, at least, one-fifth of the whole volume, which would be chargeable with the full tax, thus indicating the still capacity to be only **444 gallons**. For the purposes of this paper it will be near enough to say that the still held about **500 wine gallons** which could be represented by a tub of four feet diameter and say five feet three inches deep.

"Distillery Commencing 3rd Nov. **1837**." There is no uncertain ring about these words which form the heading of a day book devoted to a record of the daily output of the still house. Mill deliveries for Oct. **30th** and **31st**, of 18 bushels of middlings on each day to "the Distillery" afford the first surviving mention that such a place was in existence at all, but it is very sure that, on Hallowe'en night—a very appropriate occasion for the liberation of spirit—several tubs of mash must have been bubbling merrily in the fermenting room. The still was actually in operation, and some spirit was produced, as **slop**, or "wash," as it is called, was said

to be ready for disposal. Next day, Alexander **Maitland** received a **gallon** of whiskey, for which no charge appears to have been made. Alexander has been mentioned before as being a distiller, probably connected with his relative John's establishment, but not adverse to helping out a competitor when making a start. He is credited with remuneration for occasional services rendered during **the** succeeding year or two. According to one entry he received a lump sum covering ninety-six days, computed at the rate of six shillings and three pence per day. It seems therefore very likely that Alexander **Maitland** assisted early **efforts** in distillation, if he was not the chief advisor or director.

On Nov. **7th**, probably at the completion of the first run, Joseph Lee, still a **general** storekeeper on King Street East, near Frederick, purchased 128 gallons of the new spirit and, next day, **156½** gallons more. Indeed for the whole of the month he took the greater part of the entire output.

The **grain** mashed consisted of 304 bushels of middlings, with 36 bushels of ground wheat, or wheaten meal, making 18,690 pounds, charged to the distillery, at the rate of 5 shillings per bushel of 60 pounds. No mention whatever is made of any malt being used in this operation, but as such must have been employed, the quantity may be taken at that subsequently stated—say 60 pounds—to 27 bushels, or 3.56 per cent. This addition would **bring** the total grain to 18,253 **pounds**.

Where this malt was made can only be assumed, but there were facilities for malting at the Windmill, as proved by the sale of a quantity at the beginning of the year. However, many purchases were afterwards made from others, particularly from Edward Cull, as well as Jones & Co., and several brewers in the vicinity. **The** supply of malt was evidently governed by convenience, as has often since been the case. Of diastasic value, or indeed of even the existence of a ferment of this kind, neither the distillers of the Windmill, or elsewhere, knew anything at all, as the new enzyme had only just received its name. However, in the light of future knowledge it is certain that the malt must have been of most remarkable potency, or else it was used in very **insufficient** proportion. The latter is the more **likely** when reference is made to the yield of spirit.

The grain bill, including the conjectural proportion of malt, amounted to 18,253 pounds, and the spirit produced measured 1,066 wine **gallons**. The yield per 100 pounds would be a very simple problem, but, unfortunately, in the absence of a statement of the strength of the spirit it can only be guessed at. Although the definition of proof spirit had been legalized in Great Britain **since** 1816 and the hydrometer of Sikes was well-known, neither the law nor its standard was recognized to any great extent in Canada in 1837. **People** bought their whiskey very much as they now purchase their wine. If it pleased the palate and possessed that

titillating quality in the mouth, which is the precursor of a genial **glow** which shall presently pervade the whole system, they cared little for its degree Sikes, but were content with the less scientific but **vastly** more interesting organoleptic test. Nor was it otherwise in the Windmill distillery, for there is not the slightest reference to strength, or any instrument to estimate it, until long afterwards, while it was not until 1846 that Canadian law made any demands in this respect.

If one were allowed to speculate on the yield and compute the number of wine proof gallons equivalent to the 1,066 **gallons** of whiskey obtained, he would most likely take the spirit of the period as averaging about 35 under proof. This would show 692.9 proof **gallons** and indicate a yield of 3.68 wine gallons for each hundred pounds of grain, including malt—not so very bad for a beginning, more especially when the reduced starch value of middlings is taken into consideration.

Fermentation was doubtless started by the use of brewer's yeast, as was the practice in those days, and as is sometimes the case even now. That such was so is proved by an entry of a purchase of yeast for which a small **sum** was paid. The distiller sometimes propagated his own stock, but often obtained his daily **supply** from the brewer, and always resorted to him for new leaven when that in use had deteriorated.

Of the nature of fermentation almost the whole

world was **entirely** ignorant. The first public announcement on this subject was that which followed the experiments of **Schwann** and **Latour**, and was brought up in the French Academy—only four months before the time of the distillery, when the following startling point was raised:

“Beer yeast instead of being an inanimate chemical substance, as previously supposed, actually consists of small globules which possess reproductive power, and are therefore **living** organisms.”

Then followed, or rather recommenced, the long **and** hard fought battle on spontaneous generation which was finally decided about 1870, under **Liebig** on the chemical side, and Pasteur for those who held to the biological theory. It is no wonder that this question was until very late years regarded as strictly academic, with little practical bearing on the art of the distiller, who may certainly be forgiven for taking advantage of the assistance of the brewer.

Now as to the disposal of the whiskey of the first month's run it has already been stated that the greater part was taken at is. 9d. by Joseph Lee. The 49 **gallons** remaining went into the hands of five other customers who paid a slightly **higher** price—1s. 10½d. per gallon.

The slop was sold to those who came for it, and in quantities as varied as the receptacles which **they** brought, realizing, in all, £5.9.8, from which it may **be** inferred that a good deal went to waste, thus

bringing the lesson home that provision must be made for the immediate utilization of this **by-product**. In less than a week afterwards 25 pigs were bought from G. Silverthorn, for 20 shillings, **cy.**, each, which served for the beginning of this branch of the industry, though, shortly afterwards, the ownership of the animals was to some extent placed in outside hands.

In December the grain used was mostly middlings, with a little bran, making altogether, without malt, 15,780 pounds—a slight reduction on the mashing of the initial month. This may have been due to the holiday season, or more likely to the deficient or irregular supply from the mill. It is significant that of the twenty transfers of grain from Mill to Distillery, sixteen were in quantities of $12\frac{1}{2}$ bushels. From this it may be inferred that such was the usual mashing, independent of the malt, which would be, say, 30 pounds, making altogether 780 pounds. If this supposition is correct it affords a means of getting an idea of the working capacity of the fermenting tubs, which, at $1\frac{1}{4}$ pounds of grain in a **gallon** of mash would require a space of at least 624 wine gallons, and this would be approximately the daily output of slop at this time.

In January, 1838, the Distillery worked for 24 days, exclusively on middlings, but with an increase to $15\frac{1}{2}$ instead of $12\frac{1}{2}$ bushels per day. This rate was **fairly** maintained throughout the season which was unmarked by any summer holiday, or

stoppage for repairs. Even in **August** the grain used was but slightly diminished in amount, and with the warm water of the Don for **mashing**, and condensing, the distillers **lot** was, doubtless, not a happy one.

A noticeable change was made in the **grain** bill on October 13th when, for the first time, the words "rye" and "chop" were mentioned. That the former was no mere accident, or arose from some of that grain having to be disposed of, is proved by its frequent and afterwards regular use, while the introduction of chop—meaning **roughly** ground grain of any kind—shows that the supply of middlings was **insufficient**. In a month or so a regular **column** was ruled off for chop, in the grain book, and though rye was not so honored, it came in often for special mention.

An attempt to ascertain the amount of grain used, during the year 1838, is not justified by the long search which is **implied**, but it may be estimated, approximately, by **doubling** the totals of alternate months which gives 4,356 bushels, **equalling** 261,360 pounds independent of malt, or an average of 363 bushels a month, against 282 for the two months of 1837.

No record was made of the spirit produced, nor of its strength, so the output can only be **judged** by collecting and **totalling** the sales made throughout the year, **less** a small reduction for spirit received from Cull and Maitland. This gives 15,638 wine gallons, which at the former assumption of a

strength of 35 U.P equals 10,165 proof wine gallons. This figure works out a yield of 3.88 P. Gals. for 100 pounds of grain, exclusive of malt, which is remarkably close to 3.83, the result of the first run.

Joseph Lee still continued to be the principal buyer, taking 4,682 gallons out of 15,638—nearly 30 per cent. Joseph Cawthra, who had his store at the corner of Frederick and Palace Streets, was also a large purchaser, and John Tilt, at the corner of Lot & Sayer Streets bought very considerable quantities. F. Mullin, who took at one time a purchase of 850 gallons, paying therefor \$82.50, can not be traced out in Toronto, and probably refers to a merchant in some other city or town. Other large customers were Alexander Badenach, storekeeper, of 117 King Street, at the south-east corner of Church; James Leslie & Sons, stationers and druggists, 112 King Street, on the north side, near Toronto Street; Thomas Clarkson & Co., general storekeeper, 55 Yonge Street, on ground now occupied by the R. Simpson Co., W. C. Cook, storekeeper and probably innkeeper, on the Kingston Road near the Don Bridge, William Heather, who in Walton's Directory for 1833 is described as a "bricklayer and surveyor," afterwards commenced an inn, named after the Windmill, and situate on that street, near Park Street, (now Eastern Ave.) purchased a good deal of whiskey direct from the distillery, as did many others in the same line of business.

In the accounts of 1838 a few words appear which have a particular value, especially in the absence of definite records of occurrences or changes such as could not be expected in the work of a mere book-keeper, but might be looked for in a diary. The books of the firm, except the old Waste Book of 1831, are singularly free from any marginal notes or references to any matters except those that relate to financial transactions or obligations of others. A good example is afforded by the distillery itself which appeared as if made in a night. A diligent search might reveal the fact that the carpenter's bill was large, or that a good deal of money had been paid to so and so, who sold lumber, but it is not until one meets with such an item as a considerable payment to the Receiver General, for a license, that the idea of a distillery is revealed. So is it with many matters for which inference is the only elucidation.

It thus becomes an interesting question whether after fourteen months' experience there had been any effort made to improve the quality of the first vintage. It is folly to look for any direct answer to this, but some light is thrown on the subject by the record of the purchase of charcoal. It is not too much to infer that this was employed for the removal of fusel oil, and it is possible that it was used from the outset, and that its purchase had not been entered, or, if entered, had been done without reference to what the money had been paid for; or possibly the first charcoal had been home

made. Anyway, on Nov. 20th, is an item in which Clarke, of New Street (**Jarvis**) is charged with 42 gallons of best whiskey at 2s. 6d. per gallon. and Hill bought a keg of 5 gallons, at the same price, and, two days later, a barrel was acquired by Dewdney—doubtless he of the Royal Oak, at the corner of King and Berkeley Streets—at the same price. Ordinary whiskey was selling at this time at 2s. so it is evident that a new kind had been made which, judging from the price, was twenty-five per cent. better in flavor, or strength, than the former. It is to be regretted that connoisseurs did not appreciate this change, or perhaps the high price operated as a deterrent, but, in any case, there were not any further sales, at this figure, for the balance of the year.

The prices of ordinary whiskey during 1838 may be here noted. It started at 2s. for **large purchases**, with an advance of 2d. for keg quantities, for it must be remembered that the law then permitted sales by distillers to be as low as three **gallons**. In February, Joseph Lee and Joseph Cawthra **only** paid 1s. 9d. but for the balance of the year they paid 1s. 10d. except on one special occasion when there was a **drop** to 1s. 8d. To **purchasers** of barrel lots the price almost throughout, was as at the opening.

It is not the intention to follow out in detail, year by year, the operations of the distillery, as has been done for the initiatory period, but only to

note any occurrences of interest; the introduction of new features; or the general progress of the business. The year 1839 was, however, unmarked by anything very remarkable, but gave evidence of considerable prosperity as far as output was concerned.

In January 1840, an effort was made, for the first time, to record the quantities of malt used, and a column was ruled off and continued for this purpose. The proportion of chop, which **likely** included some rye, was also increased, and the middlings correspondingly **diminished**. A favorite mixture consisted of 9 bushels of middlings, 18 of chop, and 42 pounds of malt. A good deal of experimenting followed, and, by the end of March, very little middlings was **mashed—perhaps** because there was none in stock—and 28 3/4 bushels of chop, with 60 pounds of malt, were substituted. The chop was subsequently increased to 31 **bushels**, and, by the middle of the year, the grain **bill** was regularly composed of 30 bushels of chop, 1 of middlings, and 60 pounds of malt—the **latter** therefore amounting to 3.01 per cent. of the entire mixture. The value of this was usually set down at \$7.83. Wheat at this time, say November, was worth 3s. 9d. to 6s. 3d.; barley 2s. 8d. to 2s. 10d.; and rye 4s. 6d. a bushel. Some malt was bought from Edward **Cull**, at 4s., when at a parallel date, barley cost from 3s. to 4s. Malt entered from mill to distillery was priced at 2d. per pound.

The license paid for this year amounted to

S45.9.3 against £43.3.0 for the preceding period, and might imply a remeasurement, but in any case would not mean a material increase in the capacity of the mill.

The whiskey produced was for the first time regularly entered up, weekly, for up to this date the only record was that of individual sales, from day to day. The quantities on hand at the beginning and close of the year were not recorded, and that these would balance one another had to be assumed. This was apparently the case in 1839, the difference being only 23 gallons, showing a production of 28,863 gallons. January and December, were the heavy months, while in August, September, and October the run was only about one-third the average of 2,405 gallons.

The leading purchaser was "Browne," whose only distinction from this great family consisted in the final letter, while the christian name was altogether omitted. There was likely therefore only one Browne, and this is borne out by the Directory, which supplies the name James and describes him as a wharfinger. He owned the most westerly wharf of the three at the foot of Church Street, the others, at this time, being known as Ewart's and Maitland's. Confirmatory evidence is afforded by Browne's first purchase being on March 15th, and the last on April 3rd, comprising 95 barrels, holding nearly 4,000 gallons. What more likely than the accumulation of a shipment in time for the

breaking up of the ice? "Fra" Mullins followed with a purchase of 2,180 gallons which seems as if it were intended for a similar purpose as that of Browne. Thomas Clarkson & Co., previously mentioned, bought 1,960 gallons, while Joseph Lee's purchases were only 1,309 gallons—not a third of the quantity of the previous year.

The price realized did not differ much from those of 1838. The general figure for barrel lots continued at 2s., which, on larger purchases, was sometimes shaded to 1s. 10½d. Kegs were priced at 2s. 2d. to 2s. 4d. "Best" whiskey brought 2s. 6d. by the barrel, and was in better demand—the sales amounting to nearly 1,300 gallons, of which Thomas Clarkson & Co. took nearly 850. It will be remembered that this shop was at the Yonge Street corner of Macaulay Town and the demand for a better quality here possibly indicated an improvement in the residential character of the western and northern districts.

The revenue from slop was insignificant, though some of the old customers were accommodated; among them Dan Riordan, who, like a great many other citizens, grew his own pork. Dan had been a regular employee of the firm since the opening of the distillery, and held a position for many years afterwards. At the time of writing he was receiving £48 per annum and appears to have been considered a valued servant. He is of especial interest on account of a subsequent connection with a rival

distillery to which reference will be made in the proper place.

As has been said the direct revenue from slop was inconsiderable which is accounted for by its diversion into another channel now manifesting itself through the medium of pork. On September 1st, 1839, the number of animals fed is set down at 224, with a value of £307.10.0. Pork was then sold at \$6.50 to \$7.00 per 100. but by the end of the year it had declined to \$5.00.

The prices paid for grain during the year varied, as usual, with the season. Wheat in the earlier part, cost 5s. to 7s., with 4s. 6d. to 6s. for the new crop. Barley ranged between 3s. 10 d. and 3s. 2d. and rye from 6s. 3d. to 5s. Oats were scarcely purchased at all, until the autumn, when 1s. 1d. was paid for small quantities. Some malt, costing 4s. a bushel, was obtained from Edward Cull. Corn, which could only mean maize, was for the first time mentioned, and a few bushels were taken in, possibly only to be used as horse feed; the price was 4s. 6d.

The mill and distillery seasons, as recorded with reference to grain, terminated on August 31st and for the year preceding this date, in 1839, there had been purchased 16,138 bushels of wheat—an increase of 2,322 bushels on 1838. The sales of flour were not proportionate to this as more grain was used in the distillery. As a matter of fact, the

number of barrels of flour sold in 1839 showed a decrease of 262 on the previous year when 2,649 were disposed of.

In turning over the pages of one of the old account books, leaf by leaf, there was recently found an enclosed slip on which was recorded the average monthly prices paid for wheat from the commencement of the Windmill to 1837. This is too valuable and interesting to be neglected, and, though a little out of chronological order, is herewith reproduced. The values are, of course, expressed in Halifax currency.

Month	1832	1833	1834	1835	1836	1837
	s. d.					
January	4 0	4 0	2 9	4 1	6 11	6 11
February	4 2	4 0	3 0	4 1	8 0	8 0
March	4 2	3 10	3 0	4 4	7 8	7 8
April	4 1	3 8½	3 0	4 1½	7 6	7 6
May	3 8	3 8	3 8	4 3	5 7	5 7
June	3 7	3 8	4 0	4 3½	8 3	8 3
July	4 4	3 6¾	4 1½	4 0	8 0	8 0
August	4 6	3 7¼	4 1	4 3	5 0	5 0
September	4 4½	3 7	4 7	5 9	5 3	5 3
October	4 9	4 4½	3 5½	4 8	6 5	5 4%
November	4 2	4 0¾	2 11½	3 11%	6 1½	6 0
December	4 4	4 0	2 8	3 11	6 4	6 9
Ave'ge in pence..	53 0	49 4	42 6	44 7	58 0	80 2

The heading of a page in the ledger of 1839 is followed up by a series of entries, in this and succeeding volumes, introducing an incident which led to what may be considered an episode to this story, if, indeed, it is not part of the main narrative. It is connected with the name of John Dew, who appears to have been employed as the successor of Charles Perry who installed a boiler and engine in

the windmill, as early as 1833. In June, of the next year, John Dew was paid £28.10.7 for "altering" this engine, and, in 1835, received various sums, totalling about £200, for "exchange of boiler;" and "putting down new stones and engine to drive them," etc., so that at this time he was evidently acting as machinist to the **firm**.

He appears to have had several **relatives**—probably brothers—Martin and William, both of whom figure on the books as purchasers of flour, etc. The Directory of 1833 does not include the name of Dew, but, in that of 1837 the information is afforded that John was an engineer on Lot Street west, but as few of the **places** of business were then numbered it is impossible to say where. The next Directory, nine years later, contains no reference to the name.

In the index of **Ledger** No. 3 there appears the name "John Dew, 94, "through which a line had been ruled, but, by turning up the page, the name is reproduced with the addition "per **Kirtley** Mill." The entries comprise some articles for household use, as flour, **pork**, and **similar** things, which **would** not have been supplied in the course of trade with ordinary customers, thus showing Dew to belong to a **more** favored class. Thus, on October 19th. 1839, a cart, costing £7.10., was **charged** to Dew and at the same time he received a loan of £20, which was the precursor of many other sums, which he did not at once acknowledge,

but only after long intervals when he recovered **such** amounts, with other indebtedness, in notes signed by "Kirtley Mill." Flour **bags** were also lent by Mr. Gooderham, and purchases of wheat were paid for from the same source, but there is no direct evidence of flour production at this time, though **such** need not have **necessarily** been recorded.

In the early part of 1840 a **little** rye, with middlings, and some malt, were charged against Kirtly Mill, and it looked as if the example of the Windmill in 1837 were being followed. This conjecture is confirmed by the payment on March 31st. of £32.8.9 for a still license, on which there was later a rebate of £3.9.0. The sum paid for the original windmill license was £42.3.0, and this was taken as equivalent to say 500 gallons. If the same estimate is applied to the **Kirtley** still its capacity may be assumed at about 380 gallons. Some time after this a small copper still was bought for £25, from Joseph **Bloor**, who at one time had it in use in his brewery on the south side of the **Rosedale** Creek, a little east of the line of the present **Huntley** Street. There is no evidence that this pot-still was ever put in operation at the Kirtley distillery.

It was otherwise with the wooden still which for a short time was apparently kept busy. By May 14th, 35 barrels of whiskey—1472 gallons—had accumulated, and were handed over to Mr. Gooderham, who consigned them to a **firm** in Montreal. This spurt of energy on the part of the

Kirtley owner was not maintained for long. There are credit references to a few hundred gallons of whiskey, but things appear to have gone along in a half-hearted way in this department, as well as in that of milling. The record of the year gives no indication of prosperity, and the same may be said of 1841, though transactions were on a somewhat larger scale—not excepting those in commercial paper.

The end came towards the close of 1842, and was precipitated by a fire, which appears to have occurred in Tamlyn's Brewery, which adjoined, or was in the vicinity of Kirtley Mill, if indeed it did not form a part of the same range of buildings. A share of the insurance was paid to Mr. Gooderham and this helped to reduce his loss, though the account of the mill transaction is wound up by a pencil note of a deficiency of nearly £800.

It seems most likely that the concern was at first in connection with John Dew's machine shop, where the necessary power for a mill was probably available, but where this shop was located, or where Tamlyn's Brewery was at this period, cannot be decided by means of present sources of information. The change of names from Dew's to Kirtley Mill, or Distillery, which took place at the opening of the new year, is possibly significant as indicating the introduction of interests in some way concerning Mr. Worts, Junior, whose father owned Kirtley Mill, near Lowestoft, Suffolk, and conducted busi-

ness there from 1813 to 1819, prior to his removal to Bungay. Mr. Worts, Junior, attained his majority on June 4th, 1837, only a few months before the change of name, and it is possible that these facts may be in this way connected rather than resulting from mere coincidence. It is otherwise difficult to account for the assistance and support given by Mr. W. Gooderham to a rival business and his assumption of the final loss. If, however, he wished to provide a branch under the direction of his nephew, just arrived at manhood, the matter would be intelligible, and the revival of the old name reasonably accounted for.

After this long digression, which, somehow, the writer could not avoid, though fully conscious of the charge of irrelevance, which might be brought against him by those of a more matter of fact turn of mind, the story goes back to doings at the Windmill and Distillery during 1840.

The price of grain, as largely affecting milling and distilling interests, demands prior attention. Wheat suffered a very considerable decline, starting in January from 5s., for best quality, to 3s. 7d. in December. Rye was steadier at 4s. to 4s. 3d. and barley about 2s. In January, some 28 bushels of corn were purchased at 5s. 4d. from J. D. Sadd, an old personal friend of the Norfolk families. This may be regarded as the first maize used for distilling at the Windmill. Malt was often procured from one or other of the brothers Cull, and sometimes

barley was sent for malting, as in the case of John Cull, who charged 9d. per bushel for performing this service.

As the book of mill receipts and deliveries ends on March 7th, 1840, and its successors cannot be found, it is impossible to find out the precise Purchases of grain for the official year ending August 31st. The recorded period practically covers six months, so by doubling this figure the following approximate annual totals are obtained. Wheat bought, 22,018 bushels; barley, 9,650; rye, 1,632. Flour sold, 2,030 barrels. This shows a decrease of 357 barrels on the previous year, and accounts for the efforts made to extend trade in the direction of Lower Canada.

The prices of flour are estimated on bakers' lots of say 5 to 10 barrels, starting in January at 27s. 6d., with a gradual decline to 22s. in September, and a further drop to 18s. 9d. at the close.

Some changes worthy of note took place in the working of the distillery. The strength of whiskey had been previously estimated by rough tests, but up till now there had been no reference whatever to the use of the hydrometer. The first mention of such an instrument was on May 1st, when a certain bill of grain yielded so many gallons of spirit of "22 under proof," and a week after, of "20 under proof." A hydrometer, costing £3.10.0, was also bought for Kirtley Distillery, and particular customers were sometimes furnished with the strength of their purchases according to Sikes' scale. The

value of the term "strong," as heretofore used, is now for the first time defined, though not between very narrow limits. A consignment of such whisky, amounting to 655 gallons, was separately estimated, package by package, and ranged from 3.1 to 10.2 under proof. A number of puncheons containing ordinary whisky showed strengths of 18.5 to 33.1 u.p., but, another lot of barrels—which by the way was from the Kirtley Distillery—was averaged up at 32. u.p., which degree may, consequently, be taken as the recognized strength of ordinary spirits, though lots of 35 and 40 were frequently sold to smaller buyers who demanded a weaker article at a proportionately lower price.

Another change, from the technical side, was made in the bill of grain which, up to the present, had not included corn, and only occasionally rye. On January 13th, the mash contained 3 bushels of corn, 3 of rye and 28 of chop and 60 pounds of malt. A week later the rye was diminished to 1 bushel, (56 pounds) and middlings took the place of chop, as occasion required. In June the corn was discontinued and the mixture to the end of the year consisted of 20 to 28 bushels of chop, 1 of rye flour and 60 pounds of malt. Although corn was ultimately destined to play the most important part in the grain-bill its use was doubtless at this time restricted by the fact that its production in Canada was limited to mere experiments, and the facilities for importation were such as to make the price prohibitory.

The results of attempts to ascertain the **yield** were sometimes set down; happily in one or **two** cases when the hydrometer strength of the spirit was recorded. Thus on May **1st**, 174 bushels gave at the rate of **3 $\frac{1}{4}$** gals. of **22 u.p.** per bushel, and on May **8th**, 176 bushels produced the same yield, though the spirit was of **20 u.p.** Neither of these could have been considered good, and were recognized as being "short." In later years, but still in more or less primitive times, it was considered **by** still-men that under the most favorable conditions a bushel of grain, taken at **60** pounds, should produce **3 $\frac{1}{2}$** proof gallons.

The records of **whiskey** made and sold in 1840 are quite complete up to the first half of the year but after this the figures relating to spirit **produced** are often omitted, though the sales are set **down** regularly. The only ready way of getting an idea of the spirit made is that of doubling the record **of** the first half of the year. This gives 28,324 gallons, of which 22,616 are shown to have been sold. This would leave 5,708 on hand.

Attempts were again made to extend trade outside the province and a very **respectable** shipment was sent on May **13th**, by schooner Fly, James **Gooden**, master, to Montreal, **consigned** for sale to Murray and Sanderson. This comprised 53 barrels or **puncheons**, 2,803 gallons, of ordinary whiskey **and** 15 barrels, 655 gallons of "strong." To this was added 46 barrels of pork, and 25 bar-

rels of flour. The prices realized cannot be readily traced out. Ordinary customers, as **Clarkson & Co.**, Tilt, and Lee, who bought in lots of several barrels, paid **1s. 9ds.** to 2s. at the beginning of the year, with a drop to **1s. 3d.** in July. and so on till the close. Lee, who bought in all 550 gallons throughout the year, paid **2s. 9d.** in March, for a strength of **10 u.p.**, **and** 1s. 3d. in **September** for **40 u.p.** and even one penny lower, in November, for the same strength. Pork, which in 1839 sometimes brought \$7.00 per **100**, and generally about \$6.50, had declined to as low as \$4.00 by May, when the piggery account ends. The entire year may be characterized as **being** one of low prices and must have been discouraging to farmer and manufacturer alike.

As the book is missing in which were recorded the purchases and disposal of grain it is now impossible to say, except in very general terms, how things went on at the Mill, during **1841**. The city bakers, comprising **Rennie**, Ferrier, **Cleal**, Baker, Burk. **Carnell**, Reeves, and the Maitlands still continued steady customers for from four to six barrels of **flour**, weekly, and the general storekeepers regularly supplied their wants from the same source, but there is no evidence of **larger** transactions, or attempts to urge business beyond local requirements.

The prices paid for wheat varied considerably. starting from 3s. 4d. **to 4s.**, and increasing steadily. until September, when 5s. 4d. **to 5s. 6d.** were

reached, with **slightly** lower values as the year drew to a close. There was little change in barley, though some was **bought** for **1s. 10½d.** Rye ranged from **3s. 6d.** to **3s. 7½d.** with only one large transaction. A **good** deal of grain was at this time **bought** through William Hacking, **who** lived in the vicinity of Newmarket. He **bought** considerable whiskey, and possibly kept a **general** store, though his dealings need not necessarily have extended beyond the articles mentioned.

Flour followed the general advance in wheat, commencing at **20s.**, per barrel, and rising in July to **30** and even **35s.**, but dropping to **27s. 6d.** at the close. Wheaten meal was still **produced**, but the making of oatmeal remained unattempted.

The quietness of the times had its effect on the distillery, but the practice was apparently discontinued of giving a **summary** of results as to grain used and spirit produced, and it is difficult to make any comparison with former years, though some idea may be formed by reference to the value of the whiskey made, which only reached to about **60** per cent of the previous annual period, ending August **31st, 1840**, but this did not **include** the revenue from **pork**, which would doubtless have increased it considerably.

Prices of whiskey were very low, some lots changing hands at a shilling a wine gallon, for say **40 u.p.**, the equivalent of two shillings—**40 cents**—per imperial **proof** gallon. Joseph Lee, who this

year purchased 1,473 gallons, and always succeeded in getting the lowest figures, **bought** from **1s.** to **1s. 4½d.**—the former **probably** applying to **40 u.p.** and the latter to **35**. J.F. Davis, of Bradford, who was a valued customer, **bought** 1,818 gallons, mostly **25 u.p.**, for which he paid **1s. 7d.**, up to October, with an advance to **1s. 10½d.** for this strength, while **25 u.p.** brought **1s. 4½d.**

Peter Perry, of **Whitby**, does not often figure in the books of the firm, but there is one very respectable transaction, noted in September, by which 1,427 gallons of whiskey at **1s. 3d.** were practically exchanged for 463 bushels of rye at **3s. 7½d.** which only **left** a balance of a few pounds in favor of the firm. Mr. Perry, formerly a member of the Legislature, had been one of those most prominent in the rebellion, and as far back as 1827, had been named as Chancellor of the Exchequer and Receiver General, in the burlesque nominations of a Mackenzie cabinet, in which the appointments were for life, with unlimited emoluments and privileges entirely eclipsing those enjoyed by the most favored of the Family Compact.

Hydrometrical references were not commonly appended to small commercial transactions as the ordinary purchaser was usually satisfied with the designation "whiskey," even irrespective of the appellation "strong." It is, however, gratifying to notice that the use of the **hydrometer** was much more frequent than in the preceding year, and it is

also to be remarked that the range of a **strength** was approximating to that of commercial grades as now in demand.

Changes in the working of the distillery principally related to modifications of the grain-bill, which, as before explained, were often governed by the materials at hand rather than a desire for **ex**-perimentation. During the first month the old mixture of 25 to 30 bushels of chop, or **middlings**, 56 pounds of rye flour, and 60 pounds of malt were used. This was followed by a **successful** attempt to work a **larger** mash, in which the proportions were similar, but the quantities were increased to 30 to 35, 80, and 70, and this was fairly well kept up afterwards, though the rye failed to materialize after the autumn months. About the middle of the year the value of chop was stated as being 3s.; middlings **5s.**, and malt 3s. Malt was then taken as weighing 30 pounds to the bushel, rye 56, and flour 60.

The license paid in 1841 was B4.17.9, against **£33.10.0** in the preceding year—a negligible difference—but otherwise when applied to the initial fee of **£42.3.0**. This would indicate a reduction of about 20 per cent in still capacity, which is not likely to have taken place. It is, however, possible that the inspector had by this time become more familiar with his work and was thus enabled to discover the faultiness of his first mode of measurement, or calculation, though, as a matter of fact

such officials are not over anxious to acknowledge or correct their errors.

The absence of the usual connected records of the purchase and disposal of grain, either for flour or spirit **production**, is even more marked in 1842 than in the preceding year, and it is quite difficult to make a definite statement as to progress, or institute comparisons between the figures of various annual periods. Sales of flour might be totalled from the ledger, which fortunately survives, but the search would scarcely be justified, and in any case production would still remain unknown. **A general** impression, formed by a hasty survey of the individual accounts in the ledger, leads to the conclusion that times were hard and money difficult to collect. Flour had to be purchased, but the payment was mostly **by** notes, which too often remained promissory, and accounts had to be closed in a very unsatisfactory way.

Grain prices can be learned from the sums paid to purchasing agents, such as Hacking of Newmarket, or large concerns in the city. Wheat was relatively high, at about 5s. **6d.**, from January, until the new crop came in by September, when it dropped to 3s. **9d.**, and by the end of the year had reached 3s. Barley at first brought as much as **2s. 9d.**, with a decline to **1s. 10½ d.** for new crop. Rye ranged from 3s. to 3s. **9d.**, with a purchase of a lot—probably inferior—at 2s. 4d. at the close. A little corn—44 bushels—was bought at New-

market for 3s. 3d. This must certainly have been of home growth and thus demonstrates the possibilities of culture at this time.

Flour, as estimated from bakers accounts, was at first sold as high as 28s. 9d. with one sale of "super-fine" to Cleal for 30s., but for the greater part of the year the ordinary run of the mill brought 27s. 6d., with a sharp drop to 18s. 9d. when the new crop came in.

Amongst the best customers for whiskey this year — 842 — were Clarkson & Brunskill of Thornhill, who only opened an account in August, but in three months had purchased 2,082 gals., and all at the same price — 1s. 3d. The first two out of fifteen lots were noted as having been of strength of 35 u.p. There is no statement as to the balance but it may be assumed that it was of the same degree. Lee still managed to secure 310 gallons, but seems to have at last fallen from his former position as a favored customer. John C. Bettridge, who kept a stock of drugs and groceries, at 110 Yonge Street, which was at the south-east corner of Richmond Street, had always dealt with the Distillery, and this year bought over 1,000 gallons, at prices varying from 1s. 3d. to 1s. 6d. according to strength.

The number of gallons of whiskey sold, during the official year, ending August 31st, 1842, may be taken as about 31,175. The weekly record is sometimes incomplete but the omissions have been filled up by fairly estimated averages and the result

may be accepted as being as near the truth as possible. The production would exceed this figure but cannot be ascertained. The whiskey in stock would be about 5,000 gallons.

The only data available in regard to the composition of the grain bill are furnished by the distillery records for the first three weeks of January which fail to show a revival of the use of rye, which had been discontinued at the close of 1841. The mixture now used consisted of about 33 bushels of chop, middlings, or shorts, with $2 \frac{1}{3}$ bushels (70 pounds) of malt. The word "shorts" come into use in the account books at this time and may indicate some change in the process of flour production. Once, during the three weeks referred to, a few bushels of corn were added to the mash but as there was no repetition of the act it may have been purely incidental.

On July 18, 1842, there appears an entry which evidently opens up a new subject: "To Rectifying House 199 gals." Five days later there is a similar entry, which, by interpolation, would read — 48 gals. 25 u.p.; 35 21 u.p.; 35 21 u.p.; 50 19 u.p. During August six similar lots of spirits were sent to the rectifying house, thus establishing the fact of the existence of a plant for rectification, and that the process had been for the first time carried into effect. The second lot taken in hand shows the limit of strength — 16 u.p. — usually reached by the beer still, but afterwards it was thought unnecessary

to use such strong spirit, and the last lot redistilled was only 40 u.p.

The question arises whether rectification had been adopted for the production of a purer or merely a stronger spirit. Both purposes were probably kept in view. There is direct evidence that the firm intended to manufacture spirits other than whiskey, and really carried this into effect. **Gin**, and other spirits were made and sold during the next year, as will appear in due course. That the main object was the production of a purer and stronger spirit is proved by the sale, on October 8th, to John C. Bettridge, the Yonge Street Druggist, of 30 gallons of "pure spirits" at 3s. 6d. a gallon. Whisky, at this time, was bringing 1s. 3d. for 35 u.p. If sixpence is deducted from the larger sum as the equivalent for the expense of more purification, and the other figures are applied for calculating strength from value, as in the equation—15:36::65:156; the strength of 56 o.p. is indicated, which—not perhaps from mere coincidence—is the exact degree of *Spiritus Vini Rectificatus*, as required by the Pharmacopoeia Londonensis, by which affairs pharmaceutical were then governed in Canada. Mr. Bettridge got precisely what he required, and, more than likely, what he himself suggested. Incidentally, it may be related that immediately following this entry is one relating to the sale of a gallon of "Coloring—for 7s. 6d.," which shows that caramel was then made at the Windmill, and, by

the way, realized a very good price, but at this time, it must be remembered that sugar was a much more expensive commodity than it is—even in these war times.

The introduction of a **rectificatory plant** capable of furnishing spirit of 56 o.p. or 89 per cent of alcohol, by volume, not only afforded means of supplying the needs of pharmacy and medicine but opened up the way to other industries, as the manufacture of varnishes, hat making, and such like. Of much greater importance was its **promised** effect on the purity of spirits used for drinking, whereby the injurious **end-products** could be almost entirely removed and a product secured of a much more wholesome character.

That the spirit sent to the **rectifying** house was so disposed of is pretty well substantiated by the fact that the only recorded sale of so-called "pure spirit," in 1842, is that to Mr. Bettridge, **though** very considerable quantities of high wines, amounting to between 400 and 500 gallons per month, had passed through the still. This supposition is to some extent confirmed by the fact that, toward the end of the year, there were two kinds of whiskey one at 1s. 3d. and the other at 1s. 6d., and the evidence that this difference was due to **strength** is often lacking. That it was on account of **quality** is reasonable and **probable**, besides **being** consistent with what was becoming a recognized practice in preparing spirituous beverages.

Thus ended **the** tenth year of the Windmill and the fifth of the Distillery. The birth of the latter was in the most troublous time through which the new Province had passed. It was on the eve of the rebellion, which, a month later, burst into open flame. Business of all kinds was completely paralyzed; distrust and discontent reigned supreme; and even the domestic hearth was often divided by the bitterness of political strife. The darkest hour is said to precede the dawn, which was this time long delayed, and the little city suffered a tedious waiting for a resumption of even the hope of the prosperous and ambitious days when it became the capital of Upper Canada.

Now fell a serious **blow** in the passing of the Union Act, and the decision to remove the seat of Government to Kingston. This took place in 1841, and as can be readily imagined had a very depressing influence on the minds and hopes of the citizens, as well as on business generally.

Despite these drawbacks the **population** of the city had increased **by nearly** 10,000 since the commencement of this story, and the sturdy enterprise of its people gave promise of progress which politics might check but could not hold.

During these years the business of the Windmill had been firmly established and become one of the leading concerns in the city while the distillery had surmounted the difficulties of its inception and was gradually freeing itself from the rule-of-thumb

methods which up to this time characterized the manufacture of spirits in all parts of the world, and which to a certain extent still **survive**.

The extent of flour production, in 1843, cannot be learned, but the accounts of certain classes of old customers—such as the bakers—cover more ground than formerly, and a much larger business was done, though there is no record of shipments beyond the limits of the Province.

Prices of flour advanced from 18s. 9d. to **23s. 9d.**, in September, closing at 23s. Wheat **was** steady throughout the year at about 3s. **9d.**, for the best, with 2s. **6d.**, for that for distilling purposes. Barley was worth 2s. at the beginning and end of the year, falling to **1s. 4d.** between times. Corn cost 2s. 3d. The quantities of these grains, bought for distilling purposes, between September, 1842 and 1843, **were**—Corn 2,129 bushels, barley 378: wheat and rye—of which the cost was **practically** alike—are enumerated together, the sum amounting to 5,665 bushels.

Business at the distillery was **good** throughout the official year, amounting to sales of 33,914 gallons of all strengths. Prices were very uniform for ordinary whiskey, which seemed to have settled down to a recognized strength of **35 u.p.**, though the degree did not cut a prominent **figure** in everyday trade. Such spirit commanded 15d. until the last three months, when it sold **1d.** higher. **A** better

grad—probably that which had been **redistilled**—brought **18d.**

"Alcohol," as such, appears for the first time on the books. Its strength is several times definitely stated at **50 o.p.**, and the prices realized ranged from 4s. 3d. to 5s. The year's sales amounted to 324 gallons, of which 197 were **purchased by Lyman, Farr & Co.**, who, in 1842, commenced business as wholesale and retail druggists on King Street, east, a few doors west of the market. The senior member was **W. Lyman**, the **oldtime** druggist of Montreal, while the junior member of the **Toronto** branch was successively represented by **Messrs. Farr, Kneeshaw**, and Elliot.

Langlois & Bates, Grocers, 103 King Street east, which would have been on the north side, took 77 gallons, and Francis Richardson, who kept a **drug** store on the south side of King Street, east, the fourth house from Yonge, bought 32 gallons. Charles H. Sabine, druggist, of 106 **Yonge** Street, east side, next door but one north of John C. **Bett-ridge**, took a few gallons, and the balance was disposed of among half a dozen purchasers. This matter has been treated in more detail as probably representing the first transactions in Canadian alcohol. A later shipment to Montreal supports the assumption that it was not then manufactured in that city.

The most prominent **purchasers** of whiskey, in 1843, were **Clarkson & Brunskill**, of **Thornhill**,

who acquired about 2,000 gallons. Other outside good customers were J. Wright, also of **Thornhill**, and H. D. Wilson of Sharon, a grandson of the celebrated David, prophet of the Children of Peace, who as early as 1801 came from the state of New York and settled where Sharon now is; **T. Edman-sou**, druggist and **general** storekeeper, Bradford, and Mr. Chadwick of Richmond Hill. Most of these also **sold** grain to the **firm**, for nearly all trade partook of the nature of barter.

A great deal of spirit was consumed in the city by the soldiers. There had been parts of three **regi-ments** stationed here about this time. The **32nd**, the 34th Foot and **93rd**. Highlanders. **Two** out of these three were in the city in 1843, but which two is hard to discover now. In any case they were good **sturdy** drinkers and steady patrons of McDonald's, Brown's Old Garrison, or Reeve's Canteens, and showed their preference of the vintage of the Windmill by consuming between four and five thousand gallons throughout the year.

The oft repeated name of **Joseph** Lee no longer appears as a **purchaser** of spirit and it looks as if the business relations of the **parties** were not as cordial as in the old days.

During 1842 there appeared a few references to spirits other than whiskey having been made at the distillery, and in 1843 there was **quite** a little trade in such compounds. Brandy, which in one instance is stated to have been obtained from the Rectifying

House, was sold at 4s. per gallon; gin 3s.; peppermint brought from 1s. 10½d. to 2s. 6d., while noyveau, the most expensive, was worth 6s. per gallon. This beverage has been so long out of date that it is necessary to explain that it was a cordial consisting of sweetened spirit, flavored with bitter almonds, peach kernels or the oils of that class of substances.

A rather curious item appears in the ledger in which there is a charge of four pounds "for distilling 80 gallons of whiskey" for an eminent legal functionary who lived not far from the distillery. It was made from rye, possibly grown on one of his own farms, and distilled according to directions, so that like the wine of **Jotham** it was capable of making glad the hearts of god and man.

So universal was the use of whiskey in Canada, and so regarded as an article of daily consumption, of which no one need be ashamed, that the writer would scarcely deem it a breach of confidence if the name of this legal connoisseur were revealed. A list of the citizens who purchased whiskey would be like that of a census, and, at the time, its publication would have invoked no more remark than if they had been buying tea. However, there were some who thought differently, as evidenced by the Upper Canada Temperance Society, of Provincial scope, which was founded in 1833, with the Hon. John H. Dunn as president, supported by Jesse Ketchum, Rev. James Harris, Thomas Vaux, and

P. Patrick. These good and worthy pioneers, whose memory is held in veneration by all, were not of the stiff-necked and fanatical kind who try to dominate everybody, now-a-days, but of kinder and more reasonable natures, as well shown by the pledge to which they subscribed, and which read as follows: "I hereby pledge myself to abstain from using Ardent Spirits and from giving them to others except they be required for some bodily injury, or severe indisposition, and I do also pledge myself to avoid excess in the use of every other liquor." Some objection might be taken at the drawing of the line at Ardent Spirits, and a rather hostile feeling is aroused by the capitalization of the words, but the qualifying clause as to severe indisposition introduces possibilities which render the situation somewhat hopeful, and, in any sense, if denied the Ardent, a man could fall back on his beer, which, by the way was bountifully provided by such really good men as John Doel, Joseph Bloor, Enoch Turner, George Rowell and others, whose reputation for piety, charity, and general good citizenship endures even to the present day.

Another ledger entry—this time for gas pipes—calls up memories of the old days. Citizens of 1839 were tired of candles and lamps—oil at that—for there was no kerosene for many subsequent years, and after much agitation, one of the brothers Cull went to Montreal to interview Mr. Albert Fumiss who was then engaged in introducing gas in that city. He became interested in the Toronto

project, which took the shape of a joint stock organization called the City of Toronto Gas, Light and Water Co., the shareholders holding privileges as to price of gas.

This resulted in the introduction of this mode of **lighting** in 1841, which included the city contract for twelve lamps, the usual cost being \$5.00 per thousand. The works were at the foot of Princes Street, late Dalton's Soap factory, and now a lumber yard. Furniss afterwards acquired the stock, which he disposed of in 1847 for \$88,000, to **the Consumers Gas Co.**, which had been formed in anticipation of this event. The new company promised a reduction of \$2.00 per thousand, but this did not materialize until a long time afterwards, and even in 1853 it had only been reduced to \$4.00. The new gas works, on the site of the old Parliament Buildings, burnt down in 1824, were not erected until 1855.

The disposal of unsold slop was still carried on through the medium of a piggery, and a few **cows** had all along been kept for the production of milk for the families at the Windmill, and some of their friends. **During** the **official** year, ending August **31st**, 1843, it had evidently been decided to extend this side-line by establishing a **regular** dairy. In the annual period mentioned there were purchased 22 cows, costing about two to four pounds a piece; 4 heifers at from 19s. to 22s. 6d.; and some calves which had accompanied their **mothers**. Provision

for butchers' meat was shown by the buying of several steers, and a yoke of oxen was added to the stable. The price of these cattle. **£16.17.6**, seems relatively very high when the fact is brought to mind that a good cow could be had for two or three pounds. The value of the cows and pigs, at the end of the official year, is set down at **£277.1.3**.

The necessity for an **oulet** for the output of flour was **exemplified**, in 1844, by shipments in September, and October, to Geo. Borthwick & Co., Commission Merchants, Montreal, of 1,043 barrels, of which the values **ranged** from 20s. **01¼d.** to **21s. 6¾d.**, the whole venture totalling nearly **£500**. Three shipments were made in successive trips of the Traveller,—a 350 ton steamboat, built in 1835, at **Niagara**,—and 100 barrels were also sent by the **Adventure**—a vessel whose antecedents are unknown. Accompanying the above was a lot of 5 barrels of flour which Mr. Borthwick was requested to ship to London, England, in care of Mr. Thorne, who was to deliver them to Thomas **Muns** (this is as near the surname as **the chirography** admits of) of **Scole**, Norfolk, the birthplace of the owner of the **Windmill**. This may have been a gift designed for the poor of the village; or to show the Norfolk people what Canada could do in the way of flour. The absence of any stated value bears out the former supposition.

The price of flour, as shown by bakers' purchases, was about 25s. at the beginning of the year,

rising a **shilling** about the middle, and bringing even as low as 21s. 6d. at the close. Wheat was at first worth about 4s. 4d., stiffening to 5s., and falling to 3s. 6d. when the new crop was **ground**. Rye was pretty steady throughout the year, at 3s. 9d., and **barley** at 2s. 9d. Oats brought about 1s., and a little **corn** was **purchased** at 3s.

Survival of part of the old distillery records for this time fortunately affords **material** which throws a little **light** on the composition of the grain **bill** for the first few months of the official year. Rye was not used in September, possibly because there was none in stock, but, next month, it formed a constituent in proportions varying from 65 to 89 pounds to 35 bushels of chop or middlings. The proportion of malt was increased from 80 to sometimes 88 pounds, which could not have failed to have been an improvement. On Nov. 23rd, 1843, there is a significant record of a mash consisting of 20 bushels of **chop**, 17½ of corn, 82 pounds of rye, and 80 pounds of malt. This was followed on December 2nd, with 18 **chop**, 18 **corn**, 86 pounds of rye and 99 **pounds** of malt. Unfortunately the book ends here, and it has no immediate successor. However, one must be thankful that even so much is left as serves to announce the use of **corn** in anything like an important proportion. It is true that in January, 1840, a few bushels were used, but this was only for a short time and is likely to be accounted for by the fact that some of this grain happened to be on hand and was thus utilized.

Whether this will prove to be the case in the present instance depends on a closer search for missing records, which it is hoped will not prove unfruitful.

Something interfered with the making of malt at the distillery at this time, as its preparation appears to have been largely in the hands of two brewers, James Jones & Son, whose establishment was east of **Trinity** Street and south of **King**, and Robert Jewell who did business on Caroline Street, in the original brewery of York, built in 1815 by a man named Henderson. The stone malt house still survives, and as the writer passed it this morning, the blacksmith by whom it is occupied was busily hammering away at his horse shoes. This building shares with another at the north-west corner of Church and Lombard Streets, the distinction of being the first stone erections in York. On Henderson's death the property passed to William **Allan**, from whom it was acquired by an American, Dr. **Stoyell**, about 1822, and was successively occupied by Joseph Shaw, John Scott and John Lynch, the latter being there in 1836. Robert Jewell's name occurs in connection with this **brewery** in the directory of 1846. Walz's was occupant in the early sixties, and **Kormann** now does business where the frame part extends along Duchess Street. The stone malt house has of late years been used as a blacksmith's shop.

In the calendar year 1844, **Jewell** supplied the distillery with 31,569 pounds of malt of all **kinds**,

either purchased directly, as such, or made from grain furnished for malting, the charge being 9d. per bushel. Part of this was barley malt, but the major portion, amounting to 21,789 pounds, was made from oats. This is the first mention in the records of this grain being so used, and a reason can be found for its introduction by the relatively low price of this grain—usually about 1s. a bushel. The weight of oat malt, per bushel, varied between 23 to 25 pounds, while barley malt ran from 33 to 35. Jones & Son supplied 28,575 pounds of barley malt, and 17,856 of that made from oats, and both **malsters** more or less balanced their accounts by purchases of whiskey.

The annual output of whiskey is unrecorded but a good business was done though no spirit was exported. The firm of **Goesmann & Henderson**, Queen Street, head the list with 3,620 gallons, for which they paid 18d. to 16d. presumably for 35 u.p. The senior partner was of Hanoverian descent and he, or his father, had for a long time been prominent in provincial politics. The junior member was not William Henderson, father of John B., so well known by those who enjoyed the privilege of sailing on the Gooderham yachts, though at the time the old gentleman was in business at the corner of King Street and Market Square, and was on the books of the firm. Tilt's Town Line Store, which appears to have been managed by a Mr. Hunter, bought 1550 gals. Tilt's city store was at the corner of Queen and Sayer Streets, but where the

other was cannot be easily determined. H. D. Wilson, of Sharon, was still a steady customer, taking 1353 gallons at the prices above stated—18d. for the first part of the year, with a decline to 16d.

During 1844 there were sold 1186 gallons of alcohol, often stated as being 50 o.p. Prices ranged from 4s. to 5s. for barrel quantities, and as high as 6s. 3d. for small lots. Sines & Brown, probably a Montreal firm, bought 576 gallons, K. M. Sutherland & Co., wholesale grocers, doing business at the corner of King & Yonge Streets, are charged with 395 gallons, and Hamilton, Hales & Chettle, of Wellington Buildings, on the north side of King Street, near Church, are set down for 215 gallons. The druggists, Lyman, Farr & Co., and F. Richardson, of King Street, East, took respectively 111 and 84 gallons, while two hatters, who must have done some manufacturing, bought 30 and 22 gallons, doubtless for dissolving shellac for stiffening silk hats. One of these hatters was E. H. McSherry, whose shop was on the south side of King Street, east, next to Betley & Browns, at the corner; the other was Thomas Glassco, nearly opposite, but a little further east.

The successor to John Dew, as foundryman and machinist, appears to have been the firm of Christopher Elliott & Co., who kept the Phoenix foundry, in rear of 58 Yonge Street, near the site of the present Strand Theatre. The ledger account con-

tains some references to promissory notes of Dew, and it is not unlikely that this was the identical place in which he carried on operations. Credits to the Elliott firm amount to fairly large sums, and it is evident that the Mill machinery was being repaired or extended. T. H. Metcalf, of Metcalf and Cheney, stove founders, etc., on the north side of King Street east also did some work of this kind in this and the next year.

Samuel Faulkner was the regular engineer of the Mill, and received 5 shillings a day for his services, but, about the middle of 1844, was succeeded by Edward Broughton, at the same wages. Alex. Maitland, who had been chief distiller from the first, was still so engaged at the old remuneration of 6s. 3d. a day. It is said by Mr. E. Copping whose father came from Norfolk and helped to build the Windmill, that Sam Clarke, who had been employed at the Windmill, almost from the first, left his situation with a view of conducting a small distillery at the Howland Mills, on the Humber, but in this was unsuccessful. Geo. Robinson, who for now nearly twelve years had done carpenter's work, as occasion required, still continued to give apparent satisfaction.

The making of barrels for flour was mainly carried out at the cooperage of Robert Hogg, at Hogg's Hollow, on Yonge Street Road, as the thoroughfare was then styled. The cost of such barrels, at this time was 1s. 8d. each. The cooper

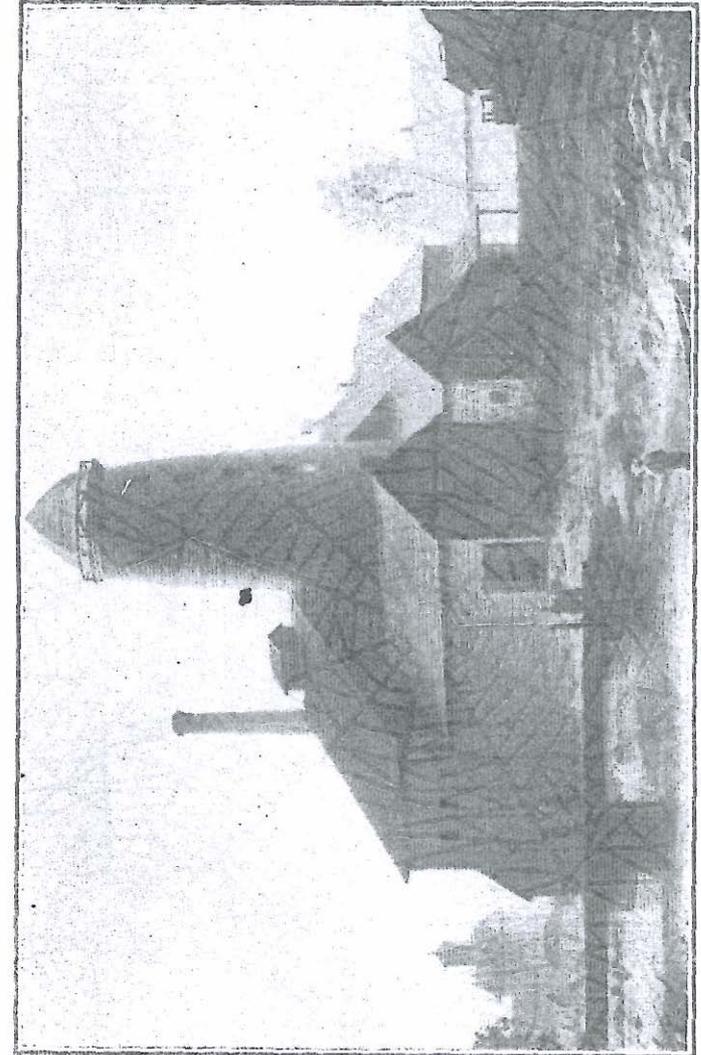
was a descendant—probably son—of James Hogg who lives in local history as having challenged Mr. G. Gurnett, editor of the Courier, for a somewhat pointed but uncomplimentary reference which appeared in that paper in 1832. It was claimed that a large number of farmers from surrounding townships came down to crowd a local meeting at York—"hulking fellows" as they were styled, and "Hogg the miller headed a herd of swine from Yonge Street who made just as good votes at the Meeting as the best shop-keepers of York." The editor preferred the pen to the sword and the duel did not come off.

John W. Bevan also made flour barrels for Gooderham's mill. His cooperage was at the south west corner of King and Princes' streets, where his father conducted business many years before. Whiskey barrels were also largely made by Bevan, and in 1844, when iron-bound, were worth about 6s. 3d. each, while "half bound" barrels were valued at 2s. 8d.

Between the leaves of one of the old books was a loose copy of an account, addressed to John C. Bettridge, bearing date January 1845, and headed "Tordnto City Steam Mills & Distillery." The Windmill, as such, was no more, nor had it been much of a feature for a considerable time. There is a tradition that, not many years after starting, the vanes were seriously injured by a heavy gale, and by the evidence brought forward in the narrative it

is undoubtedly shown that attempts were made to provide assistance by the employment of steam. References to "replacing boilers" indicate the existence of, at **least**, two, and mention of "new engine" involves a similar interpretation. It may be safely inferred that, long ere the time under review, the replacement of wind by steam had been complete, and the new name was not misapplied.

The removal of the vanes put an end to the career of the Windmill, but the dismantlement was to be made even more complete by an accident that occurred about this time, or perhaps shortly afterwards, by which the entire cap, or roof of the tower was blown *off*. This is still talked about, but no one can say when it took place. Mr. Henry Gooderham, at that time, who might have been about ten or twelve years of age, well remembers the carrying away of the vanes, and the blowing off of the cap, but has no recollection of the time when either took place. Such must have been during storms, such as occurred on **August 1837**, or September **1839**, which would have suited the first event, while the memorable blow in the early autumn of **1846** would have accounted for the more difficult removal of heavier and more solid **structures**. This storm was the worst in many years and was felt severally at Baltimore, Philadelphia, Washington, and north as far as St. John's, **Nfld.** Several cargoes were lost at Montreal, and the steamship Great Britain, from Liverpool, never arrived at port. On our own lake the schooner Joe



Mills was driven ashore at Niagara, and an immense deal of **damage** was done to buildings in Toronto, amongst others, **probably** the Windmill. A new conical roof was substituted, and is **represented** in Forbes' **oil** painting in the present office of the **firm**.

The shipment of flour to Montreal, last year, appears to have proved satisfactory as a similar venture was made in May 1845, and also in July, to the same consignee, G. **Borthwick & Co.** The first lot, consisting of 137 barrels of "superfine," at **20s. 7½d.** was sent by the schooner Olive **Branch**, Captain **McCarb**, as he is styled. The second, which numbered 500 barrels, went **by** the propeller Beagle'. The prices ranged from 24s. **3½d.** to 20s. **10¾d.** This lot was sent through Robert Maitland, to **McPherson & Couen**, of Kingston, but was ultimately intended for the **Messrs. Borthwick**. In addition to these **there** were two other consignments--one of 484 barrels shipped by *Princess Royal* and 516 sent in the *Sovereign*. These total up to the very respectable figure of 1637 barrels exported from the province for the year 1845.

Some idea of the prices of flour will have been **gained** from the preceding, but for ordinary baker's lots the **range was** from 20s. to 22s. **6d.**, with a rise in September which was not maintained. Wheat, for the official annual **period**, averaged from 3s. 9d. to **5s.** at the close; rye **3s.** to 3s. **10d.**; barley

about 2s. 7d.; oats 1s. to 1s. 10d.; corn was not purchased.

The output of whiskey for 1845 cannot be stated, but sales amounting to 14,517 gallons are recorded from September 23rd. to the end of the year. An estimate on this basis would show annual sales of about 53,000 gallons, which might be considered an advance on previous figures. H. D. Wilson, of Sharon, still remained a good customer, buying 1488 gallons, Coessmann & Henderson took 1331; Ridout & Phillips, 1007; and Romain & Brothers, 844 gallons. McDonald's Canteen consumed no less than 2482 gallons, and Delamore, of the Kingston Road, 726; Heather's account disappears altogether about this time, being probably terminated by death, which thus also puts an end to the Windmill Inn. The prices realized for ordinary whiskey varied from 15d. to 18d.

There was an increasing demand for alcohol 50 o.p., as over 900 gallons were disposed of during twelve months. Sines and Brown previously mentioned, were the largest buyers, and the druggists and hatters continued to obtain their supplies from the same source. The last named tradesmen were joined by Joseph Rogers, the pioneer hatter and furrier of York, who since 1817 had done business on King Street, east. The price of alcohol, for barrel quantities was 4s. but in several cases higher figures were obtained—two of these from hatters to whom a high strength was indispensable.

Nothing can be said of the composition of the grain bill except that corn had not yet become a permanent constituent, as had been anticipated at an earlier date, and wheat malt was being to some extent substituted for that of barley or oats. Jones and Son supplied 2094 pounds of this product, in addition to 2481 pounds of barley malt, but the latter was more largely obtained from Jewell, who furnished 23,625 pounds.

The dairy proposition, carried out to a certain extent, in 1843, by the purchase of 22 cows, afforded a means of utilizing a by-product, but doubtless involved work of a character which did not harmonize with that of the mill, and would have been better conducted under separate management. A realization of these matters brought about negotiations with Archibald Cameron, dairyman, who, towards the end of 1844, assumed the management of the dairy and the ownership of the cows—29 in all, which were valued at 80 shillings each. He was also charged with the cost of wagons, sleigh, and dairy utensils, and also of a boat for ready communication with the Island where much grass was available. On the whole sum of £142, he agreed to pay interest regularly, together with the rent of a house, which he presumably occupied, while the slop was accounted for by the payment of 18 pence per week for each cow fed therewith. The vesting of the ownership in Cameron was practically a loan, secured by an assignment back to the firm. The plan appears to have worked suc-

cessfully, as evidenced by its continuance. Records of purchases of milk sometimes appear on the books of the firm in connection with other business, as was the case with the Lunatic Asylum, which was supplied by Cameron. This institution was then located in the old Jail building of 1824, a little back from King Street, near the corner of Toronto Street, while the Court House, a similar building, stood in the same relative position near the corner of King and Church Streets, on part of the site of the Imperial Oil Company's building now in course of construction. The erection of the Asylum on Queen Street West, was at this time in contemplation. The Jail was then at the foot of Berkeley Street, in the old building vacated in 1860 in favor of the new structure across the Don.

The most important event of the year 1845 was the admission of Mr. J. G. Worts as a partner in the firm of Gooderham & Worts. The terms of this union need not be here recorded but may be consulted in detail, in an old day book commencing shortly before the above mentioned date and ending in January 1846. The statement is in the best style of the elegant handwriting of Benjamin Jackson, whose addition to the counting house staff appears to have been made about this time.

Coincident with the above was the general assumption of the title "City of Toronto Steam Mills and Distillery" by which the concern was afterwards known. The name "Steam Mills" had been



J. G. WORTS. 1818-1882

occasionally used prior to this date and at almost any time would have been applicable. It has been shown that an engine of some capacity was installed a year after the Windmill was built, and a replacement of this **by** something better occurred shortly afterwards, while alterations and additions in this line were often made. These were to become even more radical and extensive, but how and when this took place must form another chapter of this story to be told by another historian.

The following article, reproduced from the Toronto Globe of February 7th, 1862, will serve to trace the progress of the **Distillery** from the point at which it was left in previous **chapter** up to the date given below:—

**ANNUAL REVIEW OF THE TRADE
OF TORONTO FOR 1861**

DISTILLERY OF MESSRS. GOODERHAM AND WORTS.

The most **important** contribution to **the manufacturing** interests of Toronto during the year, has been made by the above well-known firm. Their distillery, at the eastern end of the city, has been completed and in successful operation for almost twelve months. It is the largest in Canada, and in point of completeness and **general** arrangement, is equalled by few on the continent.

The building is situated close by the track of the Grand Trunk Railway, from which a private switch

is built large enough for fourteen cars; the wharf, upon which are ample storehouses, elevator, &c., of dimensions sufficient to contain 80,000 bushels of grain, is on the other side of the track. The distillery is three hundred feet long, eighty feet wide, and five stories high. The material of this immense structure is the finest quality of Kingston lime-stone. It was commenced on the 1st of April, 1859, and was finished last January, a large number of men having been constantly employed for nearly two years in its erection.

The design and execution of the entire edifice are of the most massive character. The walls are of unusual thickness, and the timber, supports, and pillars are equally substantial. As an instance of the care taken in the erection, we may state that the entire number of beams, which form the foundation for each story, are all double, so that not only is additional strength secured, but in the event of the wood becoming diseased, the faulty stick of timber can be removed and by an easy contrivance replaced by one more reliable. In order, however, to guard against the probability of the timbers becoming rotten, not a single beam is inserted into the walls. Instead of this they rest upon what are termed "corbel stones," or projections from the inside of the wall. The air is thus allowed to circulate around the ends of the timber, the point at which decay is first observed—and thus the beam will be made to last much longer. These beams are supported in the centre of the building by iron pillars, those on the

first four stories being fully a foot in diameter, and those in the fifth story somewhat less. The number of these supports is immense, and the iron work of the edifice must have formed a considerable item of the entire cost. The building, for strength and durability, is as complete as well directed labour and liberal expenditure can make it. The stone work was contracted for by Messrs. Godson & Kestevin, the woodwork was executed by Messrs. Smith and Burke, who, as usual, made a good job of it.

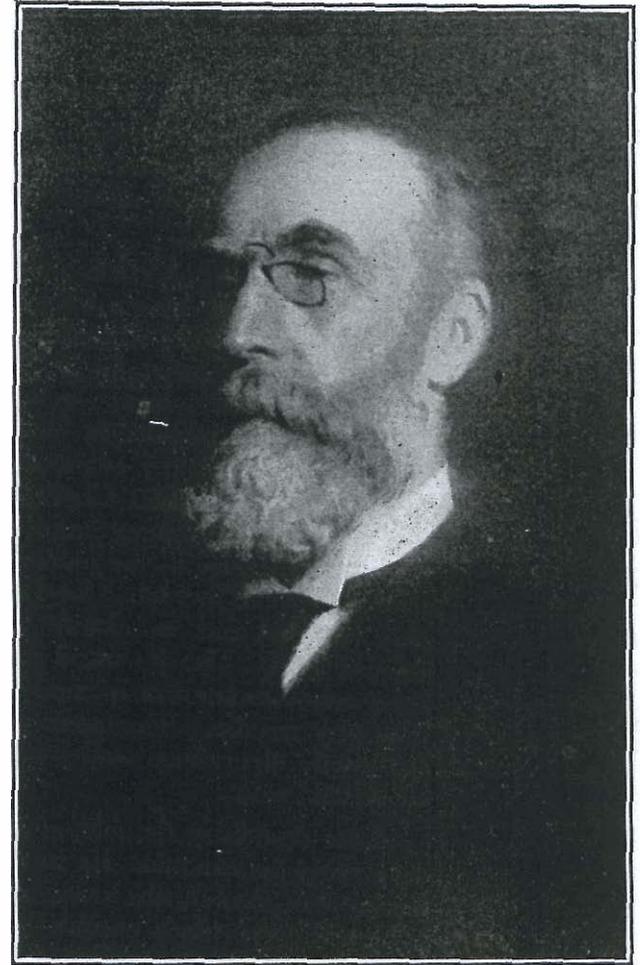
The copper and brass work, including stills, coolers, taps, etc., were from the establishment of Booth & Son, of this city, whose reputation for this class of work is second to none in the Province. The architectural superintendence of the building, as well as the complete machinery contained within its walls, was entrusted to Mr. David Roberts, who during a period of nearly three years, from the first conception of the enterprise to its successful completion, gave the work a most assiduous and intelligent oversight. The establishment reflects the greatest credit upon his engineering abilities, and our city is fortunate in possessing among its professional men, a gentleman competent for such an undertaking.

The visitor to the interior of the distillery cannot fail to be interested, for in scarcely any other establishment in Canada there is so much accomplished without the aid of manual labour. From the time the corn is received at the door until it is "racked" or drawn off in barrels, as whiskey or spirits, it is not handled by human hands! To this fact add

the immense capacity of the establishment. Fifteen hundred bushels of grain can be consumed in one day, producing about seven thousand five hundred gallons of whiskey or spirits—a yearly consumption of grain **amounting to** nearly half a million of bushels, and a production of **nearly** two and a half million of gallons.

The engine which keeps in motion all the multi-form inventions of human skill to accomplish so much work, is a model of beauty and strength. It is the **largest** land engine in the Province, being of one hundred horse power. It was furnished complete by Messrs. **Baillet & Gilbert** of Montreal. The proprietors of the establishment, as also the intelligent engineer, Mr. Charles Hood, speak of the engine in the warmest terms, and strongly recommend its makers to the public. It is most elaborately finished, and Mr. **Hood's** room so comfortably carpeted and so cleanly kept, is a most attractive spot. The fly-wheel is of immense size, being some seventy feet in circumference and revolving very rapidly. The **engine** room is completely fire proof—the ceiling, walls and foundation consist of dressed stone.

After describing the milling of the grain and its subsequent fermentation, by which its starch is converted into alcohol, the writer explains the process of purification which consists in passing the spirit through a series of rectifiers, forty-two in number, each **being** of a capacity of eight hundred gallons. These say the writer, are filled with powdered char-



GEORGE GOODERHAM, 1830 - 1905

coal (which has to be renewed every six or eight months), through which the liquid is slowly filtered.. This process partially separates the essential oils from **which** a portion of it is drawn off as "Common **Whiskey.**" Here it is barrelled and rolled into a large store room, where **it** ripens, and is ready for the market in from two to twelve months. This is the article that enters most largely into **consumption** in Canada West, and it is to be regretted that ^{NOT.} if people will have whiskey they **should/have that of** an improved taste, and drink an article least **likely** to produce deleterious effects. The higher grades of the article are manufactured in this establishment, and we will proceed to show how. In the meantime, however, we may remark that although common whiskey can now be had at twenty cents per gallon, wholesale, there is no market found for it in Lower Canada, while for the "Toddy" and "Old Rye,"—the higher **grades,—there** is a large and increasing demand. The quantity of essential oil—the most deleterious element of common whiskey,—which is drawn off during the progress of distillation of the better **qualities, is large enough** to convince the most casual observer of the superiority of the latter over the former in point of wholesomeness. The process is simply that of putting the liquid through copper **stills** and worms. For this purpose it is drawn from the rectifiers, and **runs** down through a pipe **underground** to the old windmill just adjacent to the distillery.

The "Old Windmill" is among the historical

relics of Toronto, having been erected some **thirty-**one years ago, since which time it has been a land mark of the most useful kind; and the "Windmill Line" has been a limit of frequent use during the building of the esplanade and the litigation resulting therefrom.

Into this ancient, yet substantial structure, have been introduced some of the most modern and complete descriptions of machinery, including two immense copper stills, with a capacity of 1,500 gallons each. Here steam is applied, and the liquid is brought up to the highest point of strength, separating as before, but in greater quantity, all deleterious matter in the shape of oils, while the spirit goes off in vapour, is again condensed **by the worm**, and thence emanates as "silent spirits" of the purest kind.

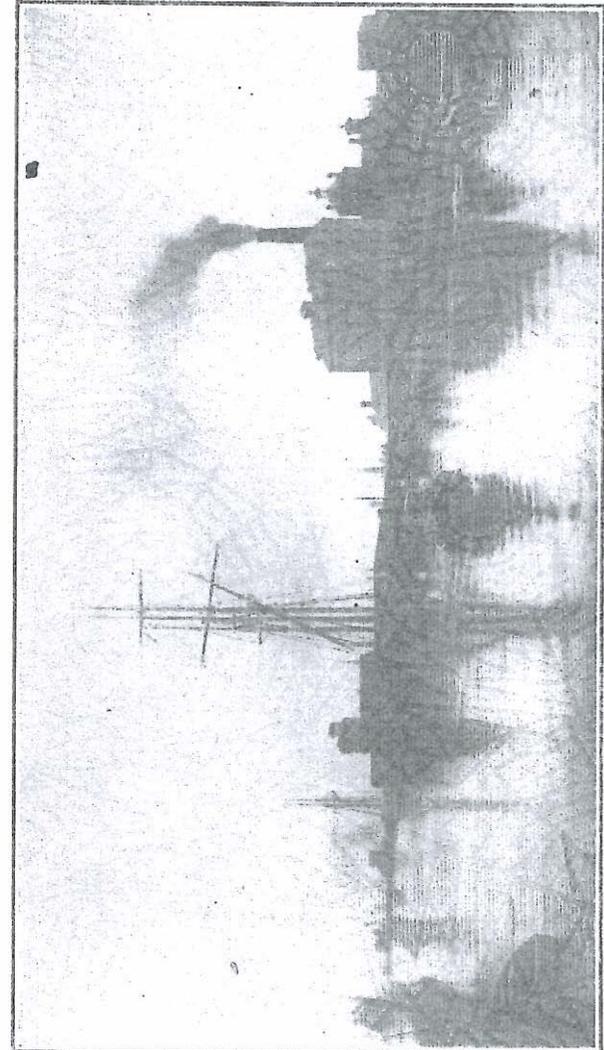
The highest strength is now reached, being 65 over proof by Sikes' hydrometer, or what is usually called 95 per cent. This is then reduced to 50 o.p., and in this state it is shipped to Lower Canada where it finds a ready market, and where it is a favourite beverage. Large quantities have also been exported in this state to London and Liverpool markets, where its quality has been highly approved of. For the purpose of still further reducing its strength, distilled **water**,—i.e. water generated from steam perfectly pure and soft—is **ap-**plied, and thus with some other harmless adjuncts, the famous "Toddy" and "Old Rye Whiskey" are produced. These articles are unquestionably the best and purest that can be manufactured from

grain, and it would be an improvement if they could take the place of all the common whiskey which is consumed throughout Upper Canada.

The "wash" or what outsiders choose to denominate "swill" or "slops,"—is conveyed, as we have seen, from the still by pipes under the ground, across Trinity st., where force elevates it to a receptacle provided for it. This "wash" after it leaves the distillery is no **longer** the property of Messrs. Gooderham & Worts; it now belongs to Mr. **William** Lumbers, who contracts for the whole quantity. The demands from the city takes only a small **por-**tion of the supply, and Mr. Lumbers in addition carries on an enterprise, the extent and **importance** of which few of our readers apprehend. Adjacent to the distillery are four long stables, in each of which are one hundred cows,—in all four hundred. These cows, while yielding a large amount of milk which is sold to the city, are at the same time gradually being fed, and in short time are **with-**drawn from the stables and sold for beef. In this way over 1,000 head of cattle, producing at least \$40,000 per annum are fattened and sent to the market.

We have already occupied a large space in noticing this manufactory, and need not further particularize as to cooper shop, etc. **We** may state in conclusion that nearly one hundred and fifty men and their families are dependent upon this establishment in one way or another, and that the cost of the building and its contents amounts now to over

\$160,000, and when finished will foot up to \$200,000. The taxes paid by the proprietors last year were over \$2,400, and the excise duty to the **Government** is over \$100 per day. These figures show the extent of the establishment and afford an idea of the amount of means and ability required for the successful prosecution of so immense a business. We need hardly say that Messrs. Gooderham & Worts possess an abundance of both.



GOODERHAM & WORTS. 1870