

ON THE ANTIQUITY OF BREWING AND DISTILLATION IN IRELAND.

TO THE EDITOR OF THE ULSTER JOURNAL OF ARCHÆOLOGY.

SIR,—I have read in the last number of the Journal, [vol. 6, p. 283,] with much interest an article on *The Early Use of Aqua Vitæ in Ireland*; and, under the guidance of the author's references, I have looked into Morewood's *History of Inebriating Liquors*, and a few other works. The result is by no means satisfactory to my mind; and, with your permission, I would make an attempt to grope my way through the apparent or real contradictions which seem to beset the subject on all sides.

To begin with the receipt given at page 285: this, though said to be a process for making *Aqua-Vitæ* (Whiskey), is really for making *Aqua-Vini*, or, as we should now call it, *Spirits of Wine*, or alcohol. The names *Aqua-Vini* and *Aqua-Vitæ* are clearly misnomers, and quite inapplicable to a volatile extract, prepared from the juice of the grape after fermentation. Before reading the article in this *Journal*, I was under the impression that *Aqua-Vitæ* was a very old term, used by the ancient Romans; but it is not found in any Latin dictionary, nor yet in Du Cange's *Glossary of Middle-age Latinity*. It would hence appear that the evidence in favour of the use of *Aqua-Vitæ* in Ireland must be restricted within very narrow chronological limits, indeed possibly within the limit of A.D. 1405, the date of the death of Mac Ranall [see *Journal*, vol. 6, p. 284], who "died of a surfeit in drinking." It may be here asked—a surfeit in drinking what? Macgeoghegan says it was *Aqua-Vitæ*; but he does not specify whether it was the simple liquor called *Spirits of Wine*, or that compound decoction of alcohol, saffron, cloves, nutmegs, cinnamon, anise, coriander, angelica, &c., &c. (be the same more or less), which constituted the cordial known as *Usquebaugh*. Indeed it is not likely that Macgeoghegan supposed the chieftain had lost his life by excessive potations of spirit of wine, either in its simple or compound state; but that he had indulged too freely in a home-made spirit, derived from worts, produced by the brewing of malted oats or barley. It is quite possible, nevertheless, that Mac Ranall, as he is said to have died of a *surfeit*, may have brought on the catastrophe by drinking grain worts undistilled, in the form of heath-beer, or some other equally unwholesome beverage made from bread or malted grain.

Our inquiry regarding the use of *Aqua-Vitæ*, however, relates to the well-known spirituous liquor procured by distillation from grain, which, whether taken in a pure or mixed state, has become, in this country, a common substitute for wine, as a means of producing exhilaration or intoxication. The facts contained in the paper referred to would carry me a long way in the belief that the distillation of spirits from worts obtained from malted or fermented grain was really an Irish invention: but the native name *Usquebaugh*, (though explained by Gaelic scholars to be

merely the Irish *uisge-beatha*, or “water of life”), must lead to some doubts on the subject. The analogy of other names of drink, such as Cognac, Holland, Schiedam, Port, Sherry, Burgundy, Madeira, Rhenish, &c., &c., points distinctly to the names of the *places* from whence they originally came. May not the same have been the case, originally, with Usquebaugh—in vulgar parlance, Whiskey? Now, it is by no means improbable that, in the 14th century, a kind of brandy may have come to Ireland from the North of Spain—the *Basque* provinces—and that the name of the country may have been applied to the liquid. We know that many foreign words have been adopted in the Irish language, changing slightly their pronounciation, and this may be one of them. It is worthy of note that a native Gael, in speaking Irish, hardly ever uses the word *uisge-beatha*, but *whiskey*. If my conjecture be well-founded, the former of these words would not be a translation of the term Aqua-Vitæ, but a corruption of the original term. The lower classes in every country generally retain the oldest form of words, and it is therefore probable that the name *whiskey*, now universally applied to the national beverage, both in English and Irish, is very nearly the original one by which it was known. *Biscay* and *Whiskey* differ but little in sound; and even that difference is one precisely in accordance with the grammatical usage of the Gaelic language.

That the people of Biscay manufactured both brandy, properly so called, and spirits distilled from grain, in the 14th century, as well as their French neighbours, is, I think, abundantly probable; and the well-known existence formerly of a trade between Spain and Ireland would account for its introduction here. At first it may have been a compound preparation such as the Usquebaugh described in Morewood’s book—a potent cordial like those we at present import from various foreign countries. Now, it is worthy of remark, that of all the materials said to have been used for flavouring this compound liquor, not one is an Irish production. We might imagine almost that the recipe given by Morewood for making Usquebaugh had been stolen from the *pharmacopœia* of some Arabian physician. Everything savours of the South or East, not of the North or West. The very absence from Ireland of the vine, the original parent of all alcoholic drink, is a powerful evidence against the native origin of the liquor called Aqua-Vitæ, or, Aqua-*Vitis*. The people who could export the compound and more costly beverage were, of course, acquainted with the simpler one, whiskey; and there can be little doubt that it also was introduced into Ireland at an early period from the same quarter. As an article of trade, it was known to the Genoese in the 13th century. The climate of the Basque provinces resembles that of the South of Ireland more than any part of Spain, and the country is more a grain-producing than a vine-producing one. It is, therefore, very likely that the art of distilling spirits from grain may have been practised there very early. From the importation of the liquor to its manufacture at home out of the same materials is a natural step; and, whether a Northern Spaniard settled in Ireland for this purpose, or a native Irishman went to Spain to learn the art, it is pretty certain that in those days of frequent intercourse the process would soon be introduced here.

Our inquiry now leads us directly to a previous question—how far were the Irish advanced in the art of malting or brewing beer before the 15th century? Connected with this is the inquiry as to the early use and manufacture of *mead*. This is usually supposed to be of very ancient date; but I have heard an eminent Irish scholar state it as his opinion that the introduction of the honey-bee was rather recent in Ireland. If this can be established, it is clear that the honey for making mead must have been imported in exchange for native productions; as the chances of obtaining honey from the wild bee must have been very limited indeed. The great number of bottles known by the name of “grey-beards,” which are found in Ireland, would seem to prove that honey was an imported article, probably from Spain. The general impression, that mead was a *common beverage* in this country in ancient times, would therefore have to be qualified, or even abandoned.

So far as my inquiries extend, the vestiges of ancient brewing and distilling apparatus found in our bogs, &c., are very scanty. Morewood notices, at page 668 of his work, a supposed *Danish* brewery in the County of Limerick. No remains of malt were there detected, but something supposed to be *bread* was found; and hence he infers that the liquor manufactured may have been analogous to the *Bouza* of the Egyptians and Abyssinians. If this statement be correct, it would lead to the inference that the art of malting grain, as we now practise it, was formerly unknown in Ireland; and that the intoxicating drink used by our ancestors ought to be called by a name analogous to this Oriental word, and not by that of *Aqua-Vitæ*, beer, or ale, which imply malt and hops.

Ancient wooden troughs, of different shapes, have been found, from time to time in Ireland, which may have been used for steeping grain preparatory to the germinating or malting process; and the “curbed” or pot-shaped quern-stones frequently found both in Ireland and Scotland, which appear to be of some antiquity, may have been employed for grinding or mashing the grain so germinated. From this wet mash the early Irish distillers may have obtained their spirit, without having recourse to the kiln-drying process of modern brewers. We are without facts to assist us in tracing the discovery of a development of saccharine element in this imperfectly malted grain, and its subsequent fermentation; but we can readily imagine that the accidental circumstance of a heap of wetted grain lying in a warm close place, may, by the spontaneous chemical changes in its substance, have led to the manufacture of a sweet intoxicating liquor—a beer, or wine of grain.

The opinion which I have hazarded as to the use of the “curbed” or pot-shaped querns is corroborated by the fact which has been stated to me, that similar stones, with high sides, and one hole at the side, are still used among the Arab tribes for converting boiled grain into a pulp. From actual experiments, I have likewise found that these querns will not crush raw grain at all. In fact, in order to make them grind corn in the dry state, it requires to be roasted almost as much as the berry of coffee, and the grinding operation to be performed while the grain is hot. I am informed that similar querns or hand-mills are even now employed in the Canary Islands for grind-

ing parched wheat, which is there used as an article of diet, as we know from Scripture it was among the Jews.

The use of this form of querns for grinding torrefied corn would be no objection to its having been also used for bruising or mashing germinated corn, in a wet state. It is said that the Irish agriculturists in former times separated their corn from the chaff by the very primitive but wasteful mode of burning it in the straw;^a but it is not likely that grain intended for malting or distillation was treated in this manner, as the germ of the corn would have been killed by the flame, and so the malting principle destroyed. If the pulped grain from the quern was then boiled and kept well stirred in the cauldron or pot for some hours, a sweet wort would be obtained; and this, after fermentation, would become a liquor very capable of producing intoxication, being in this stage very heady, like freshly-made beer. Any one drinking much of it would, no doubt, experience a "surfeit," and perhaps die of the same disease as attacks dogs which drink of the imperfectly fermented worts in our breweries. Beer made from such worts—boiled, perhaps, with herbs or heath-blossoms, to give it flavour—would not keep drinkable very long, but would run rapidly into the acetous fermentation, so that it is likely that it was used almost as soon as it was manufactured.

In the modern process of brewing from kiln-dried malt, the malt has to be mixed or "mashed" with hot water, by means of tools called "mashing oars or rakes;" or, on a larger scale, by means of a very beautiful form of machinery, invented, I believe, in Ireland, but now adopted very generally everywhere. This process of mashing is one of curious interest, whether the grain employed be perfectly or imperfectly malted; whether it has been sun dried or torrefied; and again, whether the "steep" (as it is called) be composed entirely of malt or partly of raw corn, and whether the corn used is all of one kind or of different kinds. These are the points to be attended to by the modern brewer on the large scale, according to the kind of liquor he wishes to produce. His great object is to convert all the starch or gum of the grain into saccharine matter, and to obtain the greatest quantity of wort from the smallest quantity of grain. Not so with the old brewer; his attention was confined to his "peek of malt," from which he was to procure an intoxicating liquor to be drunk in the place where it was made. The selling of this liquor was a secondary stage of the brewer's business, to which our present remarks do not extend.

In the Museums of Dublin and Belfast may be seen specimens of wooden implements, like three-pronged forks, made apparently of bog-deal, which, in our opinion, were used by brewers as mashing-oars. Unfortunately for our ease in favour of the antiquity of the malting process and its *modus operandi*, these tools, when found, had generally some evidences about them, such as scraps of linen rags and iron nails, which indicated that, if ancient, they had been broken and mended at a comparatively recent period. I have said that these implements appear to be made of bog-deal, (that is, fir-timber, altered considerably by the long action of the moist bog in which it was imbedded,) and there has been found along with two of them a utensil shaped very like the

^a See the article on Ancient Water Mills, in this Journal, vol. 4, p. 13,

ace of spades, and made of bog oak. At first sight one might be inclined to infer that the wood they are composed of had been changed to its present colour and toughness by the chemical action of the bog *after they were made*; but further examination will convince us that they were made of wood already in that state found in the bog. Their material is, no doubt, very old, but their form is modern, and specially adapted to the common process of mashing malt. In Mr. Wilde's catalogue of the Museum of the Royal Irish Academy (pp. 205, 266), I find a description and representation of one of these forks (Fig. 139) and of the spade (Fig. 141), copies of which are given here. Mr. Wilde supposes them both to have been employed in field agriculture; but a moment's consideration will convince any one that the soil of Ireland is far too stiff, stony, and stubborn to be conquered by either utensil in the way he indicates. Indeed, the curiously bent form in which one of these wooden forks was found proved, almost to demonstration, that it had been steeped (by accident or design) in hot water, to bring it into that fantastic shape.

As I have this catalogue of the Dublin Museum before me, I may refer to page 108, where we find a representation (Fig. 86) of one of the curbed millstones or pot-shaped querns, already alluded to.

The implements we have described are those used by brewers, not distillers, according to the modern acceptance of the term; though distillers require to perform the previous process of brewing and fermenting the extract from their grain in order to prepare it for the further operation of extracting a spirit from it. This latter process is performed by a final boiling of the fermented matter, and a cooling of the steam which arises from it in an alembic-head, globe, worm, or other contrivance, which directs the condensed liquid into a separate vessel. The old alembic, probably an Arabian invention, was the kind of still anciently used; but in modern times, a long convoluted tube called a worm (or in middle-age Latin, *serpentum*) from its shape, and immersed in a tub of cold water, has superseded the alembic. From the directions given in the article on Aqua-Vitæ (vol. vi. p. 285), it would appear that the alembic-head is there called a *clepsydra* (more usually denoting a vessel from which water fell in drops, and employed to measure time, on the principle of an hour-glass). This part of the apparatus is directed to be made of wood (perhaps for economy); and, therefore, as wood is a non-conductor of heat, the condensation of the vapour would not take place until

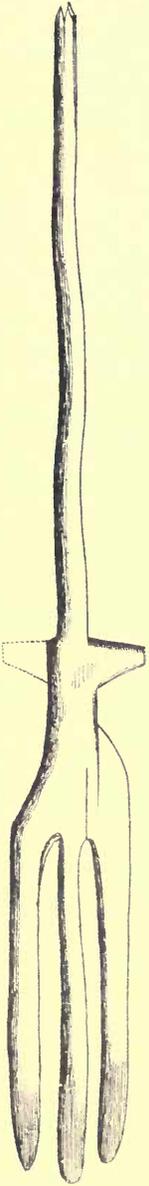


Fig 139.



Fig 141.

it passed beyond the *cavalis*, as it is called, which appears to have been the upper end of the *serpentum*. No specimens that I know of, exist in any of our Irish museums of the *clepsydra* or *cavalis*. In the Museum of the Royal Irish Academy are three examples of the *serpentum* or worm, found in different parts of Ireland. The accompanying plate represents the essential parts of one of these, the most perfect of the three:—

FIG. 1. consists of a short conical tube of copper, ABC, open at AB, closed at B, with a flat cover. DE represents the section of a square plate of copper soldered to the short tube, and acting as a stop to prevent the tube from going too far into an opening probably made on the wooden cover of a boiler, or in a wooden vessel used as an alembic-head. FG is a small tube inserted into ABC, and stiffened at the back by a flat piece of copper, ornamented with three apertures, and soldered on firmly to the two tubes. H is an ornamental fillet used for strengthening the end of FG, and for receiving the short conical tube I, evidently intended for insertion into another tube or vessel. b. c. d. indicate impressions taken from the ends of the original tubes I, J, and AC.

FIG. 2. consists of the tube JK, retained in eight parallel lines by means of the braces L and M, and by bent slips of copper rivetted to them firmly. The end J, of the tube JK, is broken, and it may originally have been about 25 inches longer, as two separate pieces of similar tube were found at the same time, the end of one of them corresponding in form with the end of the tube I, as if the two were to be connected by a bent piece. The portion consisting of the eight parallel lines of tube was probably immersed in a vessel of cold water. The arrangement of the whole would cause the pipe from the boiler and that to the serpentum to be in the same plane, and the latter to pass over the cover of the boiler: the 25 inches of additional tube would have permitted this arrangement. The end K, of the serpentine tube, is shaped something like the head and open mouth of a serpent, and is bent slightly, indicating that the parallel pipes had been elevated at the side N J, to cause the liquid, as condensed, to flow gradually from one end, J, of the tube to the other, K. This apparatus must have produced a very small quantity of alcohol, unless the cooling process adopted was very rapid. We might, indeed, imagine snow or ice to have been used for cooling the pipes. The great strength of the cross-stays by which the tubes are held in their places would seem to indicate precautions against fracture, which would hardly be requisite if the cooling was merely accomplished by immersion in water. In the other two specimens of similar apparatus in the Irish Academy's Museum, the tubes are even more strongly supported, though the mode adopted is different. One of these was found amongst the ruins of O'Dowd's Castle, in the County of Sligo, and seems more ancient than that here described, which was discovered in the Queen's County. The third is imperfect, but made of a larger and stronger pipe; it was found in the King's County, and has a still more antique appearance. In the Sligo apparatus the tubes are arranged in ten lines, while the others have only eight.

Fragments of soldered leaden tubes, about an inch-and-a-half in diameter, were found some

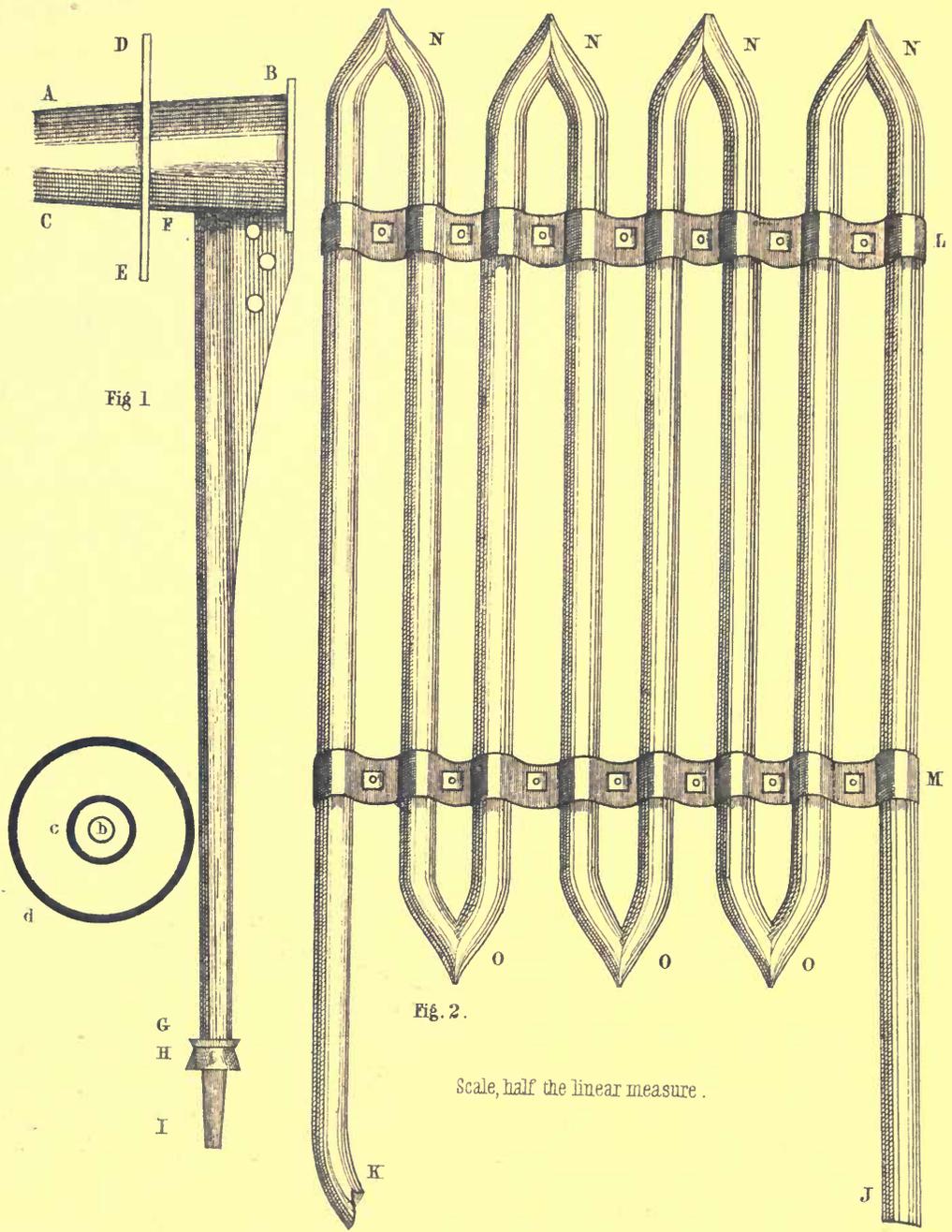


Fig 1

Fig. 2.

Scale, half the linear measure .

time since near Cashel. If these, as I think likely, formed part of a similar apparatus, they would indicate the manufacture of spirits on a much larger scale. I do not think that any of these pipes that I saw were bent; and I doubt whether the hard solder would have permitted any bending. They may have been differently arranged, as, for instance, by having the extremities of straight pipes inserted into two bars of wood hollowed at intervals, so as to form a continuous passage for the vapour and condensed fluid.

In conclusion, I have merely to notice the different kinds of brass and bronze vessels found in Irish bogs, which may have been used as stills. They vary in size, from half-a-gallon to 100 gallons. The larger ones seem to be comparatively modern, being made of pot brass, and one specimen actually bears the date A.D. 1640. But the smaller ones are made of the ancient bronze, and may really be of great antiquity.

It is unfortunate for an argument in favour of the antiquity of distilling apparatus in Ireland that the material of which our only specimens of the serpentum is composed, the use of solder, and the condition of the metal itself as regards oxidation, do not permit us to infer a date for their construction earlier than the 14th century. This would, therefore, correspond with the view taken by the writer of the article on Aqua-Vitæ.

E. C.

BRUCE AT CONNOR.

CONNOR, from its antiquity and ecclesiastical character—but still more from its association with the name of Edward Bruce—is, perhaps, one of the most interesting spots in the County of Antrim. Our present inquiry refers only to the last topic—being to ascertain how far the tradition of the neighbourhood has preserved the memory of that disastrous event in our annals—the invasion of Ireland in 1315, by Edward Bruce. With this portion of our history Connor is so far identified as having been the very battle-field of one of the greatest contests during that turbulent period. A recent inquiry on the spot enabled us to ascertain that local tradition is still perfectly clear and strong on the subject; and, as it is always interesting to compare such oral testimony with written history, we have thought it worth while to note down as much as we could learn from the people of the neighbourhood, in order to preserve it in a permanent form before all memory of the event has disappeared. Our readers will judge for themselves how far the details given by local tradition