Introduction

Charles Maitland was a successful brewer from Alloa, Scotland, who, in 1856 took ownership of the Robert Meiklejohn and Son brewery with partners Gorrie and Moyes. He renamed the brewery as the Bass Crest Brewery and was senior partner and Managing Director. It was here that he invented a revolutionary new way of mashing, by using a device that saturated the malt on its way to the mash tun, so that internal stirring of the malt in the tun was not necessary. The apparatus that enabled this superior mashing technique was patented in 1863.

Charles Maitland

Charles Maitland was born c.1819 in Haddington, Lothian, Scotland. He was part of the old respected Scottish family of Maitland, and his father Dr Alexander Maitland (1759 - 1826), owned Gimmers Mills, a large 13th century monastic Flour mill. The Mills had originally been gifted to the Forrest family by the Bishop of St Andrews and had remained in their ownership for many years. Upon the death of Dr. George Forrest in 1795, they passed to his nearest relative, Dr Alexander Maitland, who was from a branch of the Lauderdale family, and who became the Provost of Haddington in 1797. William Aitchison of Haddington, a Baker, purchased the mills in 1830 following Alexander Maitland's death in 1826.

In the 1851 census, Charles Maitland was living in Carsebridge Road, Alloa, Scotland, where he was listed as a 'Brewer and Manager Distelry'. He was manager of the Carsebridge distillery of John Bald & Co. (at that time a malt distillery) which was founded about 1799 and closed in 1983. He left the Distillery in 1856 when he purchased the Grange Brewery of Meiklejohn & Son from John Kidd, who was now the sole representative of the firm Kidd & Blair, and wanted to leave Alloa. Charles Maitland had already commenced brewing operations at the Grange by the time he purchased it in the October.
Charles’ elder sister Elizabeth Maitland, was born at Gimmers Mills in 1816. She had married Charles’ future business partner William Gorrie (born 1812 at Kilspendie, Perthshire), who was a Factor for landed property belonging to a Wm Burn Callander Eng. In 1851 the couple were living at Rosemains in Midlothian, but on 19th January 1863, Elizabeth died at Bangholm House in Edinburgh.

The Census of 1861 records Charles as living in Ball Crest House, Alloa with his wife Mary and seven children. His occupation is given as an Ale Brewer Master, employing nine men and two boys, but by 1881 he is employing 16 men, five boys and three women and lives at the Grange. He is living at Pass Crest House in 1891, where he dies in 1898 aged 80 years.

**Bass Crest Brewery (Robert Meikeljohn & Son)**

Maitland, Gorrie and Moyes took over the Grange brewery (Alloa) of Robert Meikeljohn & Son in 1856 and named it the Bass Crest Brewery, after Charles Maitlands family crest of the Bass Rock. The brewery had originally been founded by Robert Meikeljohn in 1774 at Auld Brig, Alloa.

Robert Meikeljohn moved the business to Candleriggs in 1787, and then around 1800 it was renamed Connel, Meikeljohn & Co. When Robert’s son James joined the company, it was renamed again, this time to Robert Meikeljohn & Son. Robert died c1828 and when James died c.1837, ownership passed to Hugh Kennedy (born 1801).

According to Charles McMaster, in his *Alloa Ale, A history of the brewing industry in Alloa*;

Hugh Kennedy, after a few years, finding the Candleriggs site unable to keep up with the demand for Meikeljohn’s beer, made the
move to the Grange brewery on the western outskirts of Alloa. This had started life in about 1795 as the lowland malt whisky distillery of Alexander Glen. It later passed into the hands of the Stein and Philp families respectively, and in 1834 became the first distillery in Scotland to be fitted with a coffey still, enabling grain whisky to be produced. This was not a success however, and by 1837 the distillery had been converted into a brewery under the proprietorship of Towers & Co. Therafter it was both a brewery and distillery again before being acquired by Meiklejohn’s in about 1852. After a short time at the Grange brewery Hugh Kennedy retired from the firm due to ill health. Thereafter the brewery still trading as Robert Meiklejohn & Son, was successively under ownership of Morrison & Co. and Kidd and Blair, before passing in 1856 to the partnership of Maitland, Gorrie & Boyes.³

In 1841 Hugh was living at Millbank, a large house to the north east of Alloa on Whins Road, about half a mile from Candleriggs. On the 18th May 1846, this advert for the disposal of the business appears in the Glasgow Herald, because he was ‘feeling disposed to retire.’

The firm is one of the oldest in Scotland, and has long been celebrated for the character of its Ales. The Brewery, which is in full operation, is situated to the west of the town of Alloa, and is occupied at a moderate rent ... as regards Cellarage and Malting Premises, there are few in Scotland equal to it. It commands an abundant supply of Spring Water of the best quality. Close to the Brewery is an excellent Dwelling House with Grass Parks sufficient for two Cows ... The Steam Engine is in excellent order, and the Tuns and Coppers, which are all in good condition, are let with the work.

This advert does not fit the timeline suggested by Charles McMaster, but it could be that Meiklejohn’s were renting the Grange before purchasing it in 1852, or maybe Hugh had been unable to retire in 1846 and had continued to run the business for another six years. The description would tend to suggest that this is the Grange brewery, as it is to the west of Alloa, whereas the Candleriggs brewery is in the southern part of the town (see the sketch plan of Alloa below).

Another advert to appear in the Glasgow Herald, this time from 7th May 1849, and was probably the end for whoever owned the brewery at the time (it is most likely the end of Morrison & Co. although no corroborating evidence could be found).

By Virtue of a Warrant issued by the Collector of Inland Revenu for Stirling Collection. To be sold by Auction on Tuesday the 15th May, 1849, at the Malt Houses and Brewery of Meiklejohn Connal, & Company, Maltsters and Common Brewers at Alloa.

About one hundred and fifty bushels of malt. One pair of Fanners, three Coppers, one Wort pump, three Mash Tuns, one Hop Back (cast iron). Ten fermenting Tuns, one steam engine and boiler (six horse power), two excellent draught Horses, and two carts ... for ready money only.
Figure 2. Sketch map of the Alloa breweries, 1861.
Kidd and Blair are next to own the Brewery, and it appears that when the Grange Distillery closed in 1851, they were able to purchase it and the Brewery in 1852. The Census of March 1851 shows John Kidd and wife Elizabeth as living in Grange house.

Following the move to the Grange, the Candleriggs Brewery was then leased to George Younger & Son of the Meadow Brewery, Alloa (in 1852) and sold to them in 1871. The Candleriggs brewery was closed in 1963 by Northern Breweries of Great Britain.

The partnership of Charles Maitland (Managing Director), William Gorrie of Leith and Robert Moyes of Edinburgh took over the brewery from Kidd & Blair in 1856, but Robert Moyes was replaced by James Peebles of Alloa shortly afterwards. They used the Maitland family crest and motto non fluctuo fluctu on their labels.4

The family crest of Charles Maitland, must have dated from the 17th century, as it was the Bass Rock (the Bass is a small island just off the Eastern Scottish coast on the Firth of Forth). The crest must have been derived from the actions of an ancestor, another Charles Maitland, who held the only remaining Jacobite stronghold of the Bass Rock, for James II, for two years against William of Orange. The garrison was finally starved out in 1690 (Scottish Preachers Hall of Fame). Apart from a brewery bottle label, the only official Maitland crests I have found so far show a Red Scottish Lion and a different motto, and not the Bass Rock.

It was this crest that led to the Grange Brewery being renamed the Bass Crest Brewery, and it was the use of the Bass Label that caused objections from those Burton on Trent brewers Bass, Ratcliffe and Gretton, who took them to court several times because the crest was similar to their own labels. Eventually, in 1876 Maitland was able to register the Bass Rock Trademark and the Bass Crest Brewery Label (see Fig.3).

Under the new ownership the company prospered greatly and agencies were established in all leading towns in Scotland.

Figure 3. This pale ale label of the Bass Crest Brewery dates from after 12th March 1890, when Meiklejohn's became a limited company, and before 1900 when the limited company was wound up, and trading continued as Bass Crest Brewery.
as well as in London, Newcastle, Middlesborough and Hull, England; Dublin and Cork, Ireland; and Belfast and Londonderry, Northern Ireland. The brewery produced Pale Ale and Scottish Ales.

In January 1871, Maitland and Peebles are the sole partners (Charles' brother-in-law William Gorrie having left the Business) and are trying to persuade the meeting of the Alloa Commissioners, to adopt their Drainage proposal for Western Alloa, because it is £700 cheaper than the original proposal, and it isn't going to contaminate the Well they depend upon for brewing water, with sewage leakage.

The Glasgow Herald (4th December 1874) reported the company's hundredth anniversary celebrations as thus.

CENTENARY REJOICINGS AT BASS CREST BREWERY, ALLOA.

On the 20th ult., Messrs R Meiklejohn & Son, of Bass Crest Brewery, Alloa, celebrated the anniversary of the establishment of their business by giving a banquet in the spacious barley loft connected with their Brewery, which was decorated in a style suitable to the auspicious occasion. The duties of the chair were discharged by Mr Charles Maitland, and those of the croupiers by Messrs James Peebles and William Gorrie. The company included, in addition to the elite of the neighbourhood of both sexes, the greater number of Messrs Meiklejohn & Son's employees. After dinner, a number of toasts were proposed and responded to, and the entertainment wound up with an assembly which extended to next morning.

Meiklejohns Brewery Limited is formed on 1st February 1890, and the Glasgow Herald carried the notice of the opening of the subscription list for shares on 15th March 1890, of which the following information has been extracted.

James Peebles died in November 1889, and had been with the Brewery since 1864. In order to re arrange the Business (and settle James Peebles's Estate), it is decided to hand the business over to a Limited Liability Company valued at £35,000. Charles Maitland is Managing Director and his son, William Gorrie Maitland, who has had charge of the brewing department for several years past, remains as practical manager.

From the excellency of its water, Alloa is widely known as one of the best Brewing centres in the United Kingdom, and the Bass Crest Ales bear a high repute in the trade. The water supply, which is derived from three deep wells on the premises, is abundant, and especially suited for brewing purposes. The brewery, which is connected with the Caledonian Railway by two side lines belonging to the property, is on the gravitation principle, and admirably constructed and arranged for carrying on the brewing trade with efficiency and economy.

In 1898 Charles Maitland dies, and in June 1899, the Bass Crest Brewery was sold to a consortium of Newcastle-based hotel owners and publicans.
The firm of Meiklejohn's Brewery Ltd was voluntarily wound up in April 1900. However, a new company was formed that continued to trade under the name of the Bass Crest Brewery Co, which never became a registered limited company. In 1918 Bass, Ratcliff & Gretton Ltd purchased the Bass Crest Brewery Co with its trademarks and the brewery building was sold in 1919 to Alloa brewer George Younger & Sons Ltd, who re-christened the brewery Grange Brewery and made non-alcoholic drinks there. The Grange Brewery was closed in 1941, and the buildings demolished 1960s.

The Maitland Patent Mash Tun

Charles Maitland was awarded his first patent (Apparatus for Heating Water) in 1853 when he worked at the Carsebridge Distillery. His future business partner, William Gorrie is also awarded. This is how the London Daily News (19th October 1853) reported it.

New Patents (from the London Gazette)

To Charles Maitland, of Alloa, in the county of Clackmannan, North Britain, Brewer, and William Gorrie of Rosemains, Cranston, in the county of Midlothian, North Britain, factor, for the invention of 'Improvements in apparatus for heating water, or other liquids.'

Within three weeks of taking over the Grange Brewery, this Patent is declared Void, as reported in the London Morning Chronicle (27th October 1856).

It is not known when Charles Maitland developed the idea of pre wetting the Malt before it went into the Mash Tun, but the Patent was granted on the 22nd September 1863 for his 'Improved Mashing Apparatus'. This device was to revolutionise mashing within the brewing industry, as it speeded up the time taken to mash-in, prevented the malt from forming clumps of un-wetted grain and removed the need for heavy mechanical stirring to mix the malt and liquor together.

The device is often referred to as the 'Maitland Patent Mash Tun', and diagrams of it often show a cut away mash tun, however, the innovative part is not the mash tun, but the wetting device between the grist hopper and the tun. It is this apparatus that was registered with the Patent Office as it hydrates the malt with liquor, prior to it entering the mash tun, rather than previously when the mixing would take place in the tun (which would then require a lot more vigorous mechanical mixing to evenly wet the grist). In the original patent the grist passed through a tube, and was sprayed, jetted and blasted with jets of liquor (of various pressure and direction) from an encircling copper jacket. The
jets were designed to break up any grist clumps and pre-wet the grain before it tumbled into the mash tun. The patent also describes how the wet grist could be directed against a paddle (set inside the Mash Tun) to turn it and stir the mash.

The original Apparatus was patented on 22nd September 1863 by Charles Maitland of Alloa, county of Clackmannanshire, Scotland. Patent No.2336, and this design offered brewers an alternative to Steele’s Patent of 1853. The Maitland Apparatus was registered in the US on 6th December 1864. Patent No.45369.

The principle of the Apparatus is still in use today, although several modifications have been made by different breweries over the years, and Chris J. Marchbanks worked with a modified Maitland masher when it was put into the new brewhouse at Ansell’s Birmingham Centenary brewhouse in 1957 and said, ‘This masher has no moving parts and tends to give a gentler mix / does not knock the inclusive
C. MAITLAND.

Mashing Apparatus.

No. 45,369. Patented Dec. 6, 1864.
IMPROVED MASHING APPARATUS.

To all whom it may concern:

It is known that I, CHARLES MATTLAND, of Abo, in Clackmannanshire, Scotland, have invented a new and useful improvement in Mashing Apparatus; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a vertical central section of my invention. Fig. 2 is a horizontal section of the same.

Similar letters of reference indicate like parts.

This invention consists of an apparatus for mashing whereby the mash, grain, or gist, is descending to the mashing, and is met by a series of transverse and of vertical jets of water or sparge forced in by liquid pressure or by any other competent power, and by these means the agglomeration of the mash, grain, or gist is efficiently prevented, and the mash-water or sparge is caused to penetrate each single grain.

My apparatus consists of a simple pipe or passage, A B C D, formed of copper or other suitable material, into the top part, A B, of which the tail, grain, or gist is admitted from the hopper, drum, or stone, a slide valve, E, being applied to shut off or regulate the feed as required. The middle portion, B C, is by preference cylindrical, and there is formed round it an external annular chamber, E F, which receives the mash-water or sparge by the inlet-pipe H, and from which the water enters the middle space, B C, by a number of jets. The jet-surfaces may be arranged in a variety of ways; but in the examples shown in the drawings they are disposed regularly in spiral lines round the passage.

Those of the jet-surfaces marked I are made larger than those marked j, and the former are fitted with directing tubes, as shown at K, to impart more solidity or concentration to these jets, with the view of giving them power to penetrate agglomeration among the descending malt, grain, or gist. And with the view of breaking up any larger masses or agglomerations, and so as to insure the mash-water or sparge penetrating to every single grain, a large jet is thrown from the central space, l, directly upward, so as to meet the descending matters. This jet ought to be made in such a shape that it will not impede the descending matters. The larger jets I use by preference made with a slight upward inclination and with more or less of a tangential direction, and the smaller jet or jets may also be similarly disposed. There may be two or more internal jets, similar to the jet K, and in some cases one or more internal jets directed downward may be introduced at the upper part.

The mash, grain, or gist, in passing down through the middle space, B C, becomes effectively saturated by and mixed with the mash-water or sparge, and the mixture or mash passes on by the central part D of the passage into the mash-tun, the result of the pipe being inserted through the side of the tun or otherwise connected therewith being most convenient.

I prefer to place this apparatus in a vertical position, as shown in the drawings, but it might work in a more or less inclined position, the jets being modified as regards their positions and directions, if necessary.

I find it sufficient for the mash-water or sparge to have a head of about six feet, but a greater head is not disadvantageous. The apparatus may be made in various sizes.

In another modification a nipple or screw is fitted in the mash-vessel so as to rotate freely on a vertical axis, and the mash-water or sparge is made to enter the vessel by a single spout, which directs it against the nipple or screw, and the latter is thereby made to rotate and mix the malt, grain, or gist and water together. In other modifications there may be two or more sets of the appliances, which may be arranged to give rotation in opposite directions, and, while a vertical axis is preferred, it may be inclined or even horizontal. The arrangements are self-acting, but driving power may be applied if found desirable.
air entrapped during mashing. The difference here, is that the grist flows around the liquor spray, and is less likely to block the spray jets with a build up of layers of sticky malt dust.

Colin Oke informs me that Greene King, Bury St. Edmunds are still using these Maitland mashers today.
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