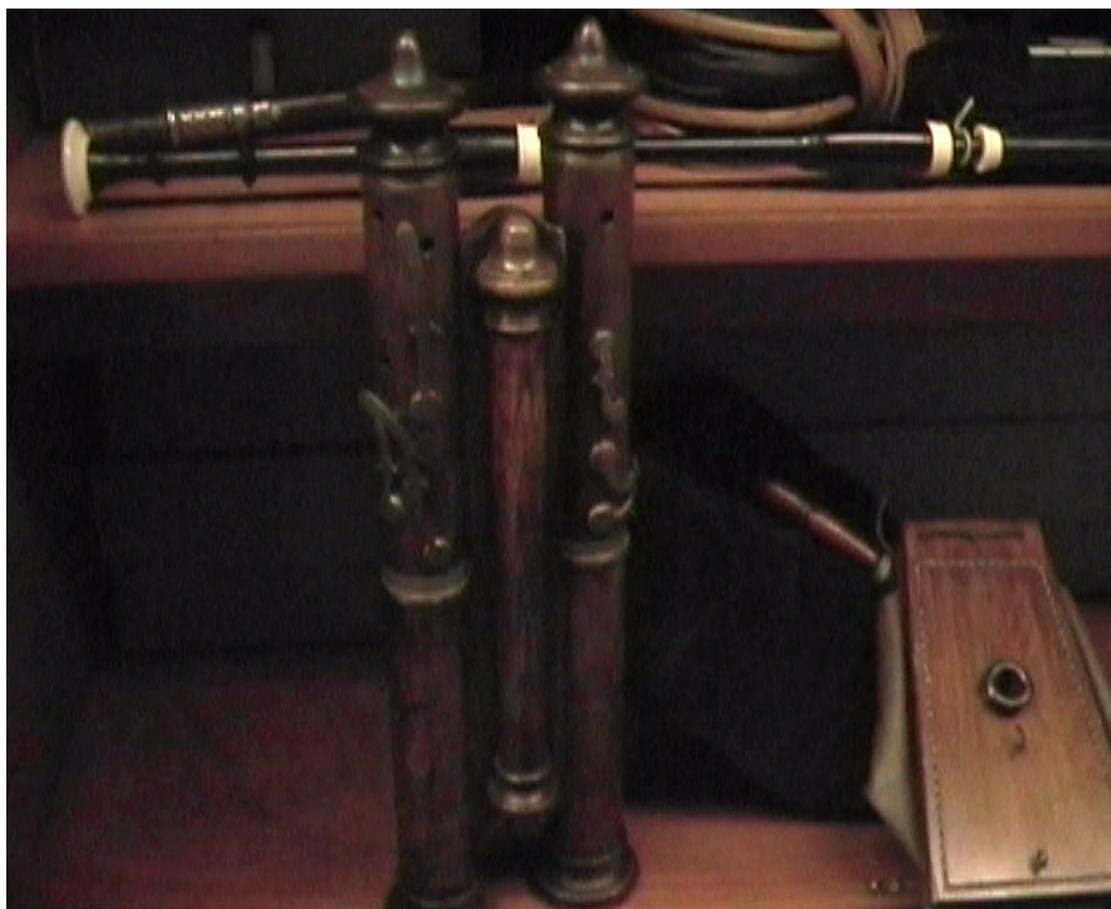


1.06 From Hotteterre to the Union pipes.

Ken McLeod

It would seem that the Musette, the French bagpipe now known as the *Musette de Cour*, may well have been the first bellows-blown bagpipe with a chanter, drones and something like a regulator. The first bellows blown bagpipe was probably the Phagotus or Phagotum of Afranio degli Albonesi of Pavia, which was developed in the first quarter of the 16th century but never became popular. It is well described in Groves¹ and a replica made by the famous bagpipe collector W.A. Cocks² is in the Morpeth museum. It is of little real interest except as a curiosity and of course as possibly the first bellows-blown bagpipe. The Surdolina³ is another Italian designed bellows-blown bagpipe of early 17th century design, but there is no proof that it pre-dates the Musette. Like the Phagotus, the Surdolina did not become popular to any degree either. The Hydralus or water powered organ, which scholars tell us was devised by Ctesibius of Alexandria around 250 BC, was possibly the first means of supplying air to a wind instrument which was not the human breath. Bellows would appear to go back to at least Nero's organ and probably beyond.

The Phagotus at Morpeth.



¹ *The New Grove Dictionary of Music and Musicians*. Edited by Stanley Sadie. MacMillan Publishers, London 1980.

² The Phagotum : An Attempt at Reconstruction : W. A. Cocks, *The Galpin Society Journal*, Vol. XII May 1959.

³ The Surdolina : W. Garvin, *An Píobaire*, vol. 3, No. 20, Sept. 1994.

The Musette traces its origins back to 13th century France and was originally a mouth blown bagpipe but from existing evidence we can assume that the bellows were added circa 1600.



The Cabrette, another French bellows pipe, would seem to have developed from the Musette. It is a much-simplified pipe which replaced the musette's complex second small chanter with a drone of either conical or parallel bore.⁴ (Therefore either a single or double reed drone). Being mainly used for folk dance music, the Cabrette utilises a wide tapered bore chanter and is limited to one octave.

A Cabrette chanter and drone by Amadieu of Paris c 1860.



Why use a bellows? We notice the drones tuning shifting with the Union pipes or I should say we blame the drones but, in fact both chanter and drones are moving to suit the relative temperature, humidity and pressure of that environment. The tuning shift is minor on the Union pipe as compared with the Highland pipes. When wet blown, the reeds shift in tuning and lose the upper partials much more dramatically than with dry

⁴ Per: the distinguished French piper Eric Montbel.

blown reeds. Unfortunately with remote reed instruments the player can do little about this and so we have all learned to look for the sound that comes 'a little later on' and not the immediate tone, although we do still learn to judge reed quality from the initial tone produced.

Although a mouth blown Musette was acceptable as a pastoral instrument, it was obviously not acceptable to the great finesse of the chamber orchestra of the Baroque period for whatever reason. Becoming a bellows blown instrument enabled the tuning and tone to remain much closer to the strings, and the instrument suffered little in terms of loss of upper partials. From modern recordings of antique Musettes we can see that the carrying power of the sound blended and balanced with other instruments of the period. There is also the cosmetic reason of course. Puffed up cheeks would hardly be seen as 'becoming' to the upper classes of the 17th century, particularly the ladies, and so perhaps this really was the more important reason for moving to a bellows.



Martin Hotteterre, (c1640-1712) son of the great woodwind maker and developer Jean Hotteterre, (c1605-c1691) added the *petit chalumeau* (little chanter) to the Musette sometime around the middle of the 17th century. This additional chanter called for an even smaller reed than the '*grand chalumeau*' and higher notes, which again would have the brightest tone when kept dry.

For those unfamiliar with this instrument, the *Musette petit chalumeau* is operated by the free little finger of the left hand and the right hand thumb. It is positioned alongside the *grand chalumeau* or main chanter.

The Musette became very popular with the French aristocracy and was popular for over 100 years. Martin's son Jacques,

(1674-1763), followed Martin Hotteterre into the family business. Jacques is generally credited with introducing the transverse flute to the orchestra in the 1690s. He wrote tutors for both Musette and Flute. This astounding family is also credited with major developments to the Oboe, the Recorder, the Bassoon and the Flute. Conical tuned bores and jointed instruments, other than bagpipes, all seem to have appeared around the time of Jean Hotteterre.

Anthony Baines, after giving great credit to the Hotteterre's wondrous developments concludes that the Hotteterre bores were primitive.⁵ He makes this assumption because of the changes in angle along the bore of Hotteterre instruments. This is very peculiar when we now know that the best Union pipe chanters made by the master makers between c1775 and c1865 generally do not have purely conical bores. In fact the greatest Union pipe-makers seemed to have gone to great lengths to made special tools to tune both chanter and regulator bores. This makes one wonder if the modern Oboe has a

⁵ *Woodwind Instruments and their History*. Anthony Baines. Dover Publications New York, 1967.

closer relationship with the modern wide-bore Uilleann pipe chanter than we had previously imagined. It also makes me wonder if the Oboe owes more to the bagpipe than vice versa for as Anthony Baines said, in discussing Hotteterre's bores:

'They are, rather, distinctly primitive, and it is likely that the Hotteterre's fell naturally into this way of construction because Jean Hotteterre was above all a bagpiper and bagpipe-maker.'⁶

Experts today believe that there were a number of craftsmen developing woodwind in France during the middle of the 17th century. It is of course possible that the Hotteterre family is credited with somewhat more than they should be. However their praises are sung highly by their contemporaries and so it seems reasonable to suggest that they were of prime importance to the development of harmony and two chromatic octaves on a bagpipe, as well as the rest already mentioned.

The Northumbrian small pipe is very similar to the musette in basic design and many players accept that it most probably developed from the Musette. Shuttle drones, which are standard on the Musette, were and are still occasionally, found on the Northumbrian small pipe (NSP). According to W.A. Cocks,⁷ the NSP had numerous keys added by Dunn and Peacock around 1800, to extend the chanter range to two octaves. This instead of adding a second pipe, obviously. The NSP, we are told, again by Cocks, was changed from being an open pipe to a closed pipe around the middle of the eighteenth century and this is relevant as the Pastoral pipe was by then quite popular and the regulator was about to appear.

Both the NSP and the Musette have, more or less, parallel bores (the Musette flares out for the final couple of inches but this conical section is beyond the lowest note hole and was, it would seem, added to help increase volume). As we know, a closed end parallel

bore instrument (e.g. Clarinet) cannot over-blow to play a second octave as a conical (e.g. the pipes), or open ended parallel bore (e.g. the Flute) can. The first harmonic produced by a closed end parallel bore is the second - a fifth, where a closed end conical bore over-blows the first - its octave.



The predecessor of the Irish instrument is undoubtedly the Pastoral pipe popular across the British Isles from at least the 1740s and perhaps earlier. John Geoghegan first published 'The Compleat Tutor for the Pastoral or New Bagpipe' in London in 1746. This described a bellows blown pipe where the drones sat over the arm or across the thigh. It is more than likely that the drones were only moved down to rest across the thigh permanently with the advent of the regulator which made the pipes impossible to play while standing.

Geoghegan tells us that the 'New' bagpipe he describes now has a range similar to the Flute and Hautboy. It may therefore be suggested that the earlier bellows pipes in use in

⁶ *Woodwind Instruments and their History*. Anthony Baines.

⁷ *Bagpipes*, Anthony Baines. Pitt Rivers Museum. University of Oxford 1960.

England and Scotland, before 1700,⁸ were only capable of playing one octave and most probably had the drones resting over the arm. There is no evidence of these late 17th century pipes in Ireland as far as I am aware, but there is evidence of Irish people playing 'a dainty little set of pipes' in America in the 1720s.⁹ Whatever they were these are undoubtedly important in the early history of the development of the Union pipes and very possibly came originally from the Musette. There is scant evidence of Pastoral pipes in Ireland either but note that some of piper Walter Jackson's tunes have a low C,¹⁰ so he very possibly played the Pastoral instrument.

An interesting thought is that Geoghegan's period is contemporary with Culloden,¹¹ after which, I believe, the Highland pipes were to all intents and purposes banned. The Highland pipes have a conical bore of course, but I suggest that this is in order to take advantage of the other attribute of the conical bore over the parallel bore – greater loudness.

The Pastoral bagpipe which because of its narrow tapered bore can easily be overblown to produce a second octave, continued to be developed alongside the Irish pipe, both having regulators - as we know them - added possibly as early as the 1760s. It is not known which instrument was first to have the regulator. The Pastoral pipe could not play staccato and I suggest that this is why the Union pipes evolved. Perhaps some genius, after seeing the NSP with the closed chanter and being familiar with the Pastoral instrument created something which could do both. The only negative was the loss of the low C. The technical advantages however, greatly outnumbered the technical disadvantages. The only names we have to possibly credit this invention to are James Kenna, Doogan or John Egan. Kenna we know, per Seán Donnelly, was working in the 1760s and Egan from the designs we know, more than likely in that same period. There is a Doogan set in the National Museum, Dublin. Like the majority of their pipes collection it cannot be seen presently.

The Union pipe can play two chromatic octaves on one pipe with five keys either staccato or legato. This then, together with the bass regulator, would seem to be the distinctly Irish features of the instrument, although the bass regulator of course came much later. The Musette needed two pipes to play two octaves and could not play staccato – although a very similar effect is obtained in the same way as on other open-ended bagpipes by gracing with the bell or other note. The Union pipe appears therefore to be in line with natural development of the species. The Northumbrian pipers chose to play staccato all the time and closing off the chanter enabled this to be done while standing. All of the other sub-species of bagpipes fall into one or other of these 'camps.'

When we consider the *petit chalumeau*, or little chanter of the Musette we find, I believe, and until shown otherwise, the origins of the regulator. The first regulator used on both the Pastoral and the Irish pipes was what we call a tenor and this appeared more than 100 years after the *petit chalumeau*. This addition to the Musette by Martin Hotteterre not only extended the range of the instrument to two octaves but also gave it the ability to

⁸ The James Talbot Manuscript. W.A. Cocks. *The Galpin Society Journal*. No. 5. March 1952.

⁹ See Barry O'Neill's article 'Runaway Pipers' in this issue.

¹⁰ Per Seán Donnelly

¹¹ Since first drafting this article it has been gratifying to find that others have drawn on the influences of Culloden on the warpipe. Alan Jones writing in The Armagh Piper's Club's 5th *William Kennedy Piping Festival Programme* under the title *The History of Bagpipes*. 1998. Roderick D. Cannon in *A Bibliography of Bagpipe Music*, John Donald Publishers Ltd, Edinburgh 1980.

play harmony. The Irish pipes did not need to extend their range and so the regulators in our sense were used for simple and interrupted harmony. I believe that there is little doubt that the Irish pipes and the Northumbrian Small Pipes owe much to the Musette. There is nothing in the design of the Irish pipes which was not invented, at least in some form, or improved upon, by the Hotteterre family. They left the Musette as a bellows-blown bagpipe capable of playing two chromatic octaves and its own harmonic accompaniment. The drones most often employed were tonic - octaves apart - and a fifth, as was common in both Pastoral and earlier Irish Union pipes up to at least the time of Timothy Kenna.

John Geoghegan although possibly not the inventor of the Pastoral pipe, almost certainly would have noted the distaste held in England for any sort of war-pipe in the 1740s and no doubt would also have noticed the popularity of the Musette among the French aristocracy of the day. The Musette finally died out by about 1780. In Ireland the Union pipes were still developing and gaining popularity. The Pastoral pipes and the Northumbrian pipes declined through the first half of the 19th century. The Pastoral, it can be said, reached extinction by about 1900. Thankfully they have their supporters these days and we may yet see a minor comeback. The Northumbrian and Union pipes after also coming close to extinction are both stronger today than they ever have been.

There are a few fine Musette players around and it has been taught in recent years by Jean-Christophe Maillard, a leading exponent of the instrument.

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