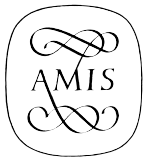
Journal of the American Musical Instrument Society

VOLUME IX • 1983



George Catlin, Hartford Musical Instrument Maker

Part 2

ROBERT E. ELIASON

GEORGE CATLIN was the first important American maker of woodwind musical instruments. Born in 1778, he worked in Hartford, Connecticut, from 1799 to about 1815 and in Philadelphia from about 1816 until his death in 1852.[1]

Unfortunately only a few examples of Catlin's work have survived. Known woodwinds signed by him during his years in Hartford include four bassoons (one of which has now disappeared), two bass clarinets, and two flutes. In addition, there are also several instruments by his apprentices and associates which reflect his style and suggest some details of his designs. Oboes by John Meacham and Uzal Miner are the only oboes to survive from the Hartford period and are probably similar to those made by Catlin. A bassoon by Meacham is very much like those by Catlin and has the only original bocal from this period. There are also seven other bass clarinets, three undoubtedly made in Hartford and four made elsewhere, that show further development of Catlin's design, as well as its use by other craftsmen.

One of the earliest surviving Hartford instruments is a bassoon by Catlin from about 1805 in the collection of the Henry Ford Museum, Dearborn, Michigan (fig. 1). It has only four keys and is signed simply "Geo. Catlin / Hartford" (fig. 2). It is not in any way a beginner's attempt, for it is of proper dimensions and design, nicely finished, and has the distinctive spade-shaped key flaps peculiar to most of the Hartford bassoons and bass clarinets. Moreover, it evidently was a successful

Part 1 of this article, appearing in this *Journal* 8 (1982): 16–37, presents biographical information about Catlin and discusses his activities in Hartford and Philadelphia. References to the Edison Institute (in part 1) and the Henry Ford Museum (in part 2) cite the same collection, now officially known under the latter, traditional name.

1. New information reported by Mrs. Betty Payne, a descendant of the Catlin family, indicates that George Catlin was related to the Philadephia painter of the same name (see part 1 of this article, p. 17). They were third cousins once removed: the instrument maker's great-grandfather, Benjamin Catlin of Harwinton, Conn., was a brother of Samuel Catlin of Hartford, the painter's great-great-grandfather.

FIGURE 1. Bassoon, four keys, ca. 1805, by George Catlin. Front and back views. Photographs courtesy of the Henry Ford Museum, Dearborn, Mich.

playing instrument, for it shows signs of long use. It is made of maple with brass ferrules and keys, and displays a number of features of English design, as well as a few unique to Catlin. The wide, sharp-cornered épaule or bulge for the upper fingerholes (see fig. 1, front view) is typical of English bassoons, while the spade-shaped key flaps with open (sometimes closed) holes in the corners are a Catlin feature. A deep bocal socket (7.2 cm.) and rather narrow brass ferrules or rings at each joint are also English characteristics. Catlin has given the bell section his own distinctive baluster shape with a graceful central bulge and a sharp-cornered shoulder matching the sharp corners of the épaule.

A bassoon of about the same date as the one described above is found in the collection of Mr. Richard Lottridge of Madison, Wisconsin (fig. 3). It is signed "J. Meacham Jr. / Hartford" and must have been made between 1804 and 1808, when Meacham was working with Catlin in Hartford. It is in excellent condition and, fortunately, is complete with what may be its original bocal. The bocal is of heavy brass, about 30 cm. in length, with a long staple end wound with string to fit snugly

into the bassoon socket. Its bore ranges from 4.5 mm. to 10.2 mm.

Another bassoon, signed "Catlin / Hartford" and probably dating from about 1810, is in the collections of the Smithsonian Institution, Washington, D.C. (fig. 4). It is very similar to the Henry Ford Museum instrument, except that it has F-sharp and E-flat keys, making six keys in all. The E-flat key is positioned for the left thumb in the English manner. This instrument does not have the unique Hartford key flaps.

A bassoon signed "Catlin & Bacon / Hartford / Con" with six keys is documented by the Smithsonian Institution. Unfortunately its present location is not known. It also is made of maple with brass fittings and probably dates from about 1812.

A bassoon signed "Catlin, Bliss & Co. / Hartford / Con." is also in the collection of the Henry Ford Museum (fig. 5). It has six keys and probably dates from about 1813. It does not have the unique spade-shaped key flaps. Its bell is shaped differently, but since this part is

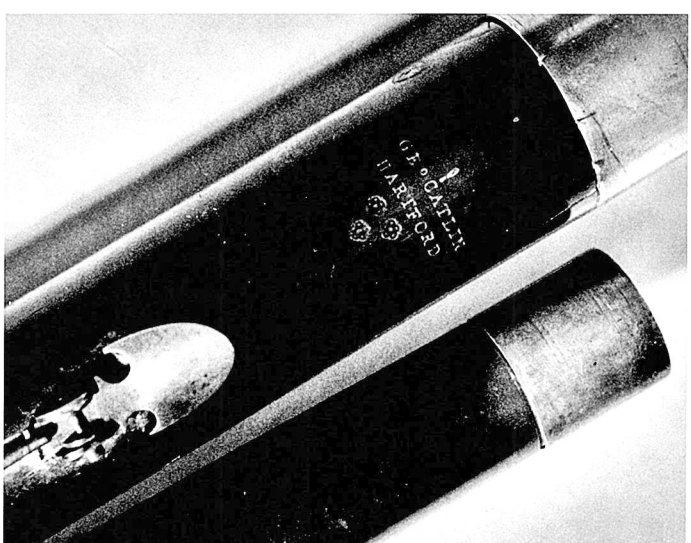


FIGURE 2. Bassoon, four keys, ca. 1805, by George Catlin. Detailed view of back, showing inscription. Photograph courtesy of the Henry Ford Museum, Dearborn, Mich.

FIGURE 3. Bassoon, four keys, 1804–1808, by John Meacham, Jr. Front and back views. Photographs courtesy of Richard Lottridge, Madison, Wis.

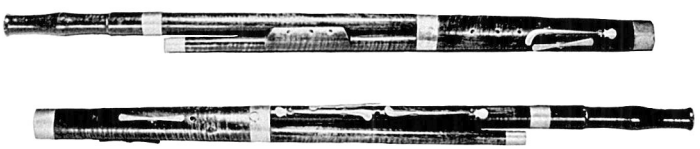


FIGURE 4. Bassoon, six keys, ca. 1810, by George Catlin. Front and back views. Photographs courtesy of the Smithsonian Institution, Washington, D.C.

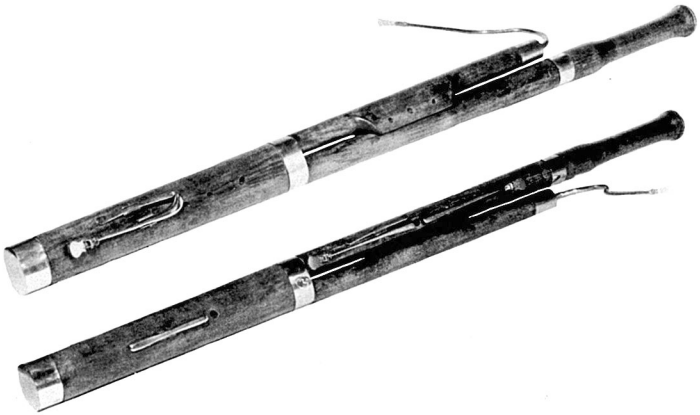


FIGURE 5. Bassoon, six keys, ca. 1813, by Catlin, Bliss & Co. Front and back views. Photographs courtesy of the Henry Ford Museum, Dearborn, Mich.

made of a different wood, it may be a replacement.

Although bassoons may have been made earlier in the United States, these are the earliest surviving examples known at present. Their existence is evidence of musical activity and demand for some of the more unusual instruments sufficient to support a shop that is unique in early American history. Very few other bassoons by American makers before the twentieth century are known to this writer.

Some bassoons may have been used in New England churches, but most of Catlin's business was probably with military and town bands. Until about 1835 these bands used mostly woodwind instruments—oboes and clarinets on the upper parts, French horns in the middle, and bassoons on the bass.

When compared to early English bassoons as described by Eric Halfpenny,[2] the Hartford bassoons show an independence that is quite

2. Eric Halfpenny, "The Evolution of the Bassoon in England, 1750–1800, *Galpin Society Journal* 10 (1957): 31, 32. List of characteristics of English bassoons:

Characteristics ca. 1750

1) Long wing joint with the upper end level, or nearly so, with the shoulder of the upper tenon of the bass joint. The wing is grooved for the bass joint only to just above the épaule carrying the fingerholes, so that the upper round portion of the joint stands clear. The épaule is rounded in contour. The fingerholes are fairly large and there

unexpected. The wing joints (or sections) of Hartford instruments are similar in length to contemporary English bassoons, but stand apart from the bass joint like wing joints on English bassoons of much earlier date. The size of the wing fingerholes of the Hartford instruments is fairly uniform, showing neither the smaller lower hole of the early English models nor the smaller upper hole of the contemporary ones. The enlarged wing or épaule portion of this section is large and angular, as on English bassoons of the same period.

The Hartford butt joints are very similar to those of contemporary English makers—small and rounded, with the A-flat key placed lower down than on earlier English models. Thumbholes are of moderate size, unlike the small ones on earlier English instruments or the larger ones on instruments contemporary with the Hartford makers.

Hartford bell sections resemble those of earlier English bassoons in outward appearance and in their small bores (24 to 27 mm.); however, all have a pronounced flare like their English contemporaries.

The design of Catlin's bassoons seems to indicate that he either worked from an English model halfway between the early and later styles described by Halfpenny, or applied his own improvements to the earlier English style.

---

is a tendency for the lowest to be the smallest of the three. Despite their depth, the wing fingerholes are sometimes undercut. . . .

2) Butt joints are broad and flat by reason of the wide spacing of the two channels. The fingerholes are only slightly larger than those on the wing. The thumb hole is comparatively small. The A-flat hole under the small key is high up on the joint and diminutive in size.
3) The most noticeable detail of the bass joint is the extremely small thumb hole.
4) The bell has a baluster contour, concealing a plain negative cone taper (i.e. a contraction, in opposition to the general expansion of the bore).
5) The number of keys is four, and the brass ferrules are very narrow.

Characteristics ca. 1800

1) The wing joint is shortened by varying degrees, and is grooved for the bass joint almost to the top ferrule, so that it fits snugly against it all the way up. The épaule becomes progressively angular in contour and is carried round to the back of the joint. The wing holes are reduced in size, with the highest markedly the smallest of the three.
2) Butt joints become narrower and more rounded as the two channels are brought closer together. The fingerholes are decidely larger than those on the wing. The thumb hole increases in size and the A-flat hole tends to be placed lower down.
3) The thumb hole on the bass joint becomes much larger.
4) The bell is given a pronounced internal and external flare in the upper half of its length, but is "choked" very slightly at the waist.
5) The number of keys is six and upwards, and the ferrules increase in depth.

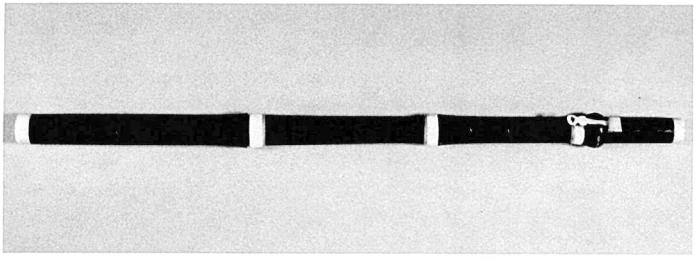


FIGURE 6. Flute, one ivory key, ca. 1803, by George Catlin. Photograph courtesy of the Connecticut Historical Society, Hartford, Conn.

Two flutes from this period have recently been found. The earliest, signed "Made by Geo. Catlin / Hartford," is now in the collections of the Connecticut Historical Society (fig. 6). It is made of a dark, close-grained wood with ivory ferrules and one ivory key. Unlike the almost straight-sided flutes by later American makers, this instrument has a slight thickening of the turnings toward each socket, suggesting but not copying English practice of that period. The key-mount turning is rounded and symmetrical, unlike Catlin's later flutes, where it is cut short on the lower side. The total length is 63.5 cm., making it slightly longer than most American flutes of ten or twenty years later. The head is extra long from cap to embouchure hole, accounting for most of the difference, but the flute may also be slightly low in pitch.

A later example, signed "Catlin & Bacon / Hartford / Con.," is in the collection of the Henry Ford Museum (formerly owned by John Krell, Philadelphia) (figs. 7 and 8). It was made about 1812 and is of boxwood with ivory ferrules and one silver key. Flutes by Richard Potter illustrated by Phillip Bate in *The Flute*[3] and by Anthony Baines in *European and American Musical Instruments*[4] are very similar to it. The overall length is 60.2 cm., some 3.3 cm. shorter than the Connecticut Historical Society example, but the difference is found mainly in a shorter dimension from cap to embouchure hole. It is playable and is pitched

3. Philip Bate, *The Flute* (London: Ernest Benn Limited; New York: W. W. Norton & Company, Inc., 1969), plate 5, G.

4. Anthony Baines, *European and American Musical Instruments* (New York: The Viking Press, 1966), no. 475.

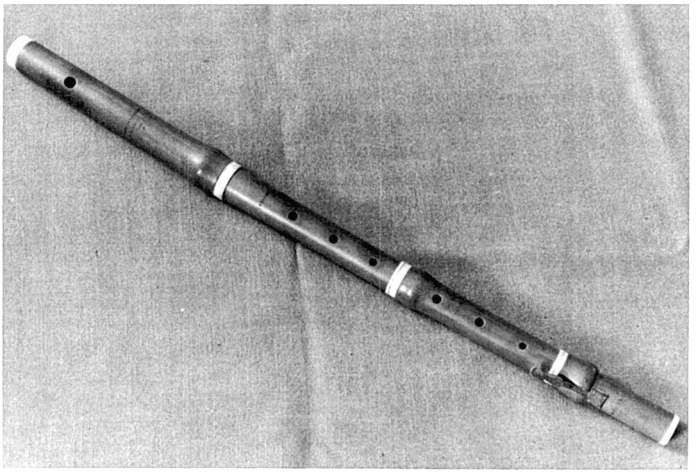


FIGURE 7. Flute, one silver key, ca. 1812, by Catlin & Bacon. Photograph courtesy of John Krell, Philadelphia, Pa.

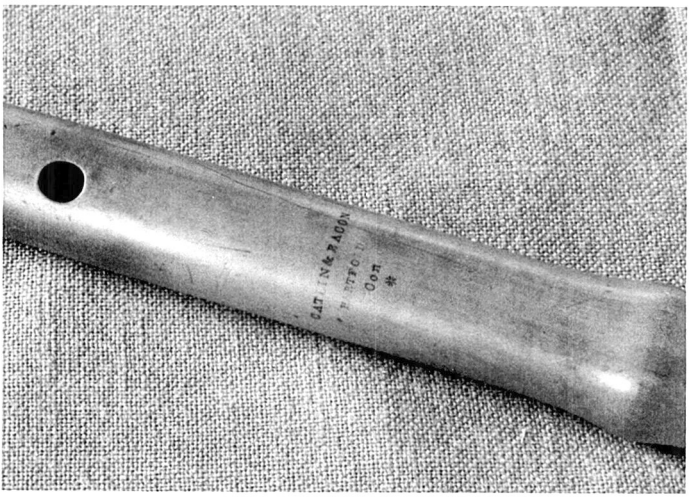


FIGURE 8. Flute, one silver key, ca. 1812, by Catlin & Bacon. Detailed view showing inscription. Photograph courtesy of John Krell, Philadelphia, Pa.

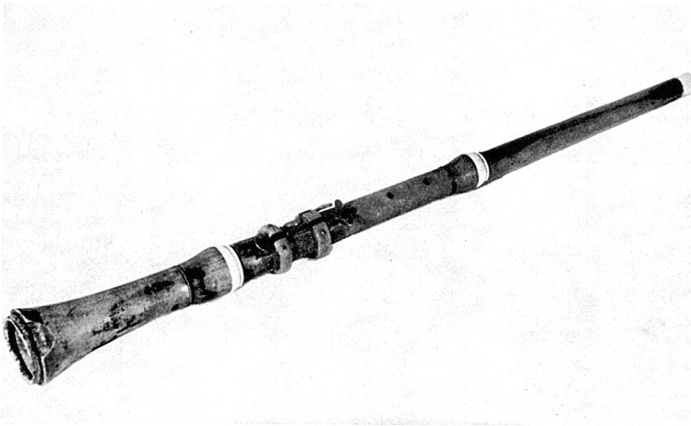


FIGURE 9. Oboe, two brass keys, 1804–1808, by John Meacham, Jr. Photograph courtesy of the New York State Park and Recreation Commission.

at about A–430. If a Potter flute served as Catlin's model, he could hardly have chosen a more graceful and yet practical design. The thicker turnings reinforcing all of the sockets make this flute a very sturdy instrument and give it a very pleasing outline.

Unfortunately there are no examples of Catlin oboes or clarinets of this period. There is, however, a two-keyed boxwood oboe signed "John Meacham, Jr. / Hartford" at the Letchworth State Park Museum, near Castile, New York (fig. 9). It was made between 1804 and 1808, while Meacham worked with Catlin, and, as in the case of the Meacham bassoon, it may be very similar to the oboes Catlin made. This is the earliest American-made oboe found so far, and, like other Hartford instruments, it clearly shows its English ancestry. An oboe by Kusder, London, at the Horniman Museum[5] is almost identical to it. Very similar in design and probably made about 1812 is a two-keyed oboe of stained boxwood signed "Miner" in the Henry Ford Museum (fig. 10).

Although Hartford oboes and bassoons of this period are significant in American woodwind making history, they are not as surprising to historians as are the bassoon-shaped bass clarinets which were also made in Hartford from about 1810 to 1815.

5. Illustrated ibid., no. 552.

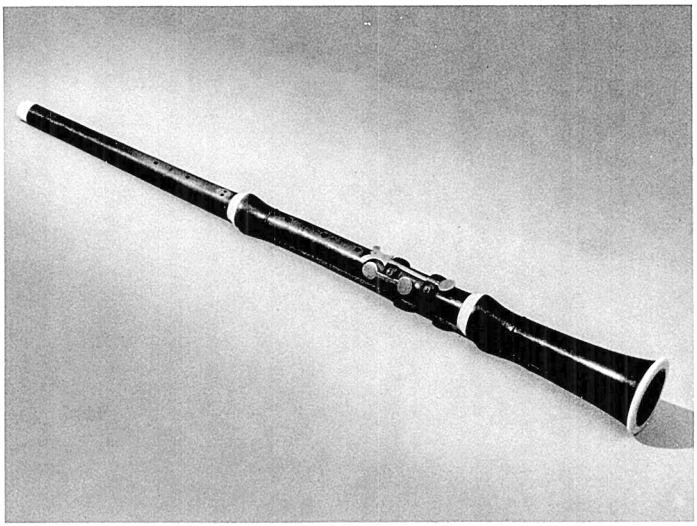


FIGURE 10. Oboe, two brass keys, ca. 1812, probably by Uzal Miner. Photograph courtesy of the Henry Ford Museum, Dearborn, Mich.

The history of the bass clarinet begins about 1750 with instruments shaped like a long, pointed **S** made by scattered European makers. Only four of these early instruments are known from various sources, and three of them survive in collections today (one is shown in fig. 11).[6] The next significant development was the invention of the bassoon-shaped bass clarinet by Heinrich Grenser of Dresden in 1793. Three Grenser instruments are known, and two of them survive, one made by Heinrich (fig. 12), and the other made by his uncle, August Grenser. There followed only a few more isolated attempts by other European makers before 1810. Contemporary with and continuing after the Hartford instruments are the fanciful bass clarinets of the Italian maker Nicola Papalini, seven of which are known, with five surviving (one is shown in fig. 13).[7] It is apparent from this that the nine known Amer-

6. Another bass clarinet with a different shape is described by Phillip T. Young in "A Bass Clarinet by the Mayrhofers of Passau," this *Journal* 7 (1981): 36–46.

7. David L. Kalina, "The Structural Development of the Bass Clarinet" (Ed.D. diss., Columbia University, 1972), pp. 1–48.

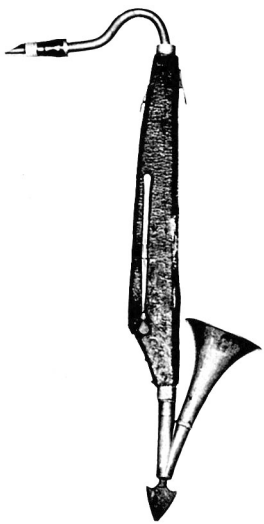


FIGURE 11. Bass clarinet, three keys, ca. 1750. Photograph courtesy of the Royal Conservatory of Music, Brussels.

FIGURE 12. Bass clarinet, eight keys, 1793, by Heinrich Grenser. Photograph courtesy of the Music History Museum, Stockholm.

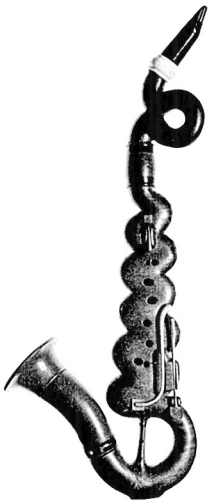


FIGURE 13. Bass clarinet, five keys, 1810–20, probably by Nicola Papalini of Chiaravalle, Italy. Photograph courtesy of the Museum of Fine Arts, Boston.

FIGURE 14. Bass clarinet, six keys, ca. 1810, by George Catlin. Front and back views. Photographs courtesy of the Henry Ford Museum, Dearborn, Mich.

ican bass clarinets are a surprisingly large and important addition to the early history of this instrument.

The earliest of the American bass clarinets is now at the Henry Ford Museum and is signed "Invented and / made by / George Catlin / Hartford / Con." (figs. 14 and 15). Another at the Letchworth State Park Museum is signed "Patent / Catlin & Bacon / Hartford / Con."

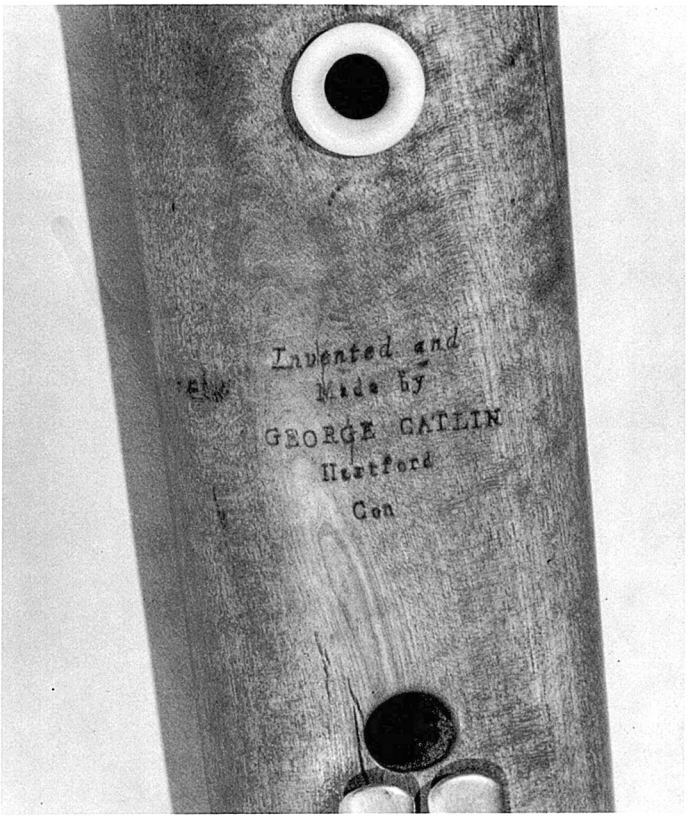


FIGURE 15. Bass clarinet, six keys, ca. 1810, by George Catlin. Detailed view of back, showing inscription. Photograph courtesy of the Henry Ford Museum, Dearborn, Mich.

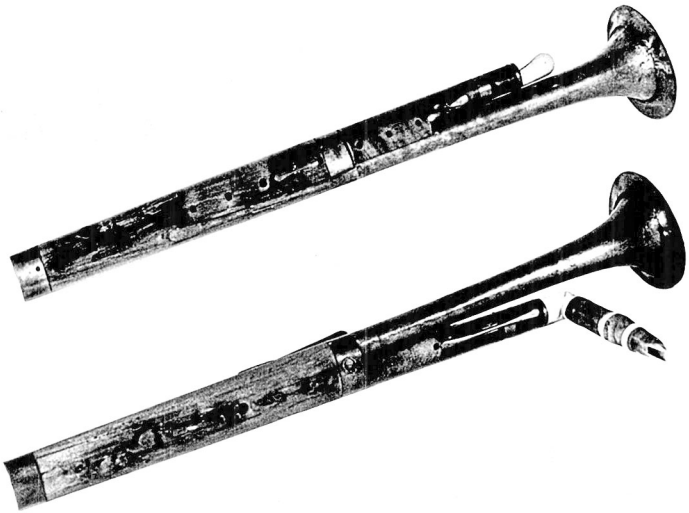


FIGURE 16. Bass clarinet, nine keys, ca. 1812, by Catlin & Bacon. Front and back views. Photographs courtesy of the New York State Park and Recreation Commission.

(figs. 16 and 17). Catlin was probably unaware of similar bassoon-shaped bass clarinets made by the Grensers beginning about 1793 and an experiment along the same lines by Dumas in Paris in 1807. He could not have known about other contemporary experiments by Sautermeister and Stengel.[8] Part 1 of this article has shown that Catlin used the term "clarion" to refer to his bass clarinets. Although the second instrument mentioned above is inscribed "patent," and Uzal Miner advertised "Catlin's patent clarions," no evidence exists that any patent was ever granted to Catlin either in England or in the United States.

The Henry Ford Museum bass clarinet (figs. 14 and 15) is made of maple with brass keys and has fittings of brass and ivory. It has six keys: speaker, A, long closed G sharp/D sharp for the left little finger, open low F/C for the right little finger, and open low E/B and open low D for the right thumb. Curiously, there is an ivory-bushed hole through which low C would sound with all other holes closed and which could

8. Ibid., pp. 14–16, 21, 25, 27.

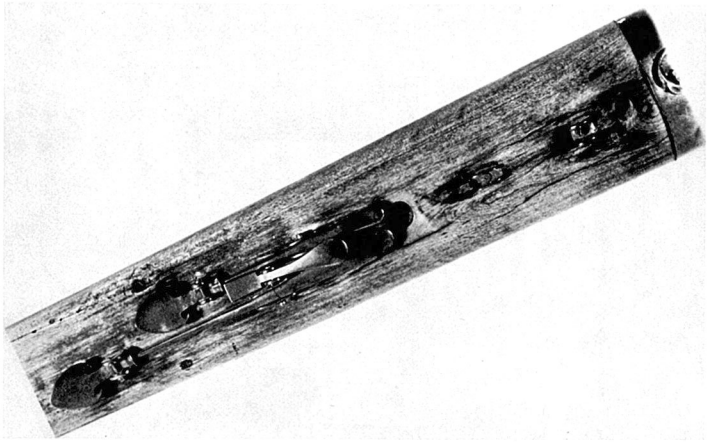


FIGURE 17. Bass clarinet, nine keys, ca. 1812, by Catlin & Bacon. Detailed view of back. Photograph courtesy of the New York State Park and Recreation Commission.

be closed to produce low B flat, but there is no evidence that a key for this purpose was ever installed. All of the other American instruments have a key to cover this hole, operated by the right thumb. Key flaps are in the distinctive Hartford spade shape. The neck of this example appears to have been shortened by about 4 cm.

The bass clarinet in the Letchworth State Park Museum (figs. 16 and 17) is thought to date from about 1812 because of the known activity of the partnership of Catlin and Bacon in that year. It is made of maple, except for a brass bell section. The keys and most of the fittings are brass, but the elbow and neck ferrules are of ivory. The mouthpiece is of boxwood. There are nine keys on this instrument, the additions being a closed C-sharp/G-sharp key (right forefinger), a closed E-flat key (right thumb) which closes the low E/B and D keys when opened, and the low B-flat key (also for the right thumb). The idea for these right-thumb keys comes directly from the arrangement of keys for the left thumb on the six-key bassoon. They control exactly the same notes in the same way, except that on the bass clarinet a key for E/B is added. Again, several of the keys are in the unique spade shape.

What Catlin did to create his "clarion" was to design a bass clarinet

TABLE 1

A Listing and Comparison of American Bassoon-shaped Bass Clarinets with One by Heinrich Grenser, Dresden

Illustration(s) in present article	*Inscription (or probable maker)*	*Location*	*Date*	*Materials*	*Position of bell*	*Keys*	*Height*	*Length of air column*	*Bore*
Fig. 12	H. Grenser Dresden 1793	Musikmuseet, Stockholm	1793	Boxwood; brass bell, keys, and fittings; curved brass neck	Player's right	8 in blocks (6 square, 2 round): speaker, A, G Sharp, F, E, E flat?, D, B flat	80 cm.	168.2 cm.	14.5 mm.
Figs. 14, 15	Invented and / made by / George Catlin / Hartford / Con.	Henry Ford Museum, Dearborn, Mich.	ca. 1810	Maple; brass keys; brass and ivory fittings	Player's left	6 in saddles (6 Hartford spades): speaker, A, G sharp, F, E, D	80.3 cm.	164.3 cm. (neck has been shortened)	17.3 mm.
Figs. 16, 17	Patent / Catlin & Bacon / Hartford / Con.	Letchworth State Park, Castile, N.Y.	ca. 1812	Maple; brass bell and keys: ivory and brass fittings	Player's left	9 in saddles (4 spatula, 1 square, 4 Hartford spades): speaker, A, C sharp, G sharp, F, E, D sharp, D, B flat	84 cm.	165 cm. (neck has been shortened)	17.3 mm.
Figs. 18–21	Uzal Miner /Hartford /Con.	Farmington Museum, Farmington, Conn.	ca. 1812	Maple; brass keys; brass and ivory fittings; silver-plated key guard	Player's left	9 in saddles (1 spatula, 1 square, 7 Hartford spades): speaker, A, C sharp, G sharp, F, E, D sharp, D, B flat	81 cm.	169 cm.	17.3 mm.

Fig. 22	(Uzal Miner?)	Buffalo & Erie County Historical Society, N.Y.	ca. 1813	Maple; copper bell; brass keys; ivory and brass fittings	Player's left	9 in saddles (5 spatula, 4 Hartford spades): speaker, A, C sharp, G sharp, F, E, D sharp, D, B flat	82.5 cm.	166 cm. (neck has been replaced)	17.3 mm.
Fig. 23	(Uzal Miner?)	Henry Ford Museum, Dearborn, Mich.	ca. 1814	Maple; brass keys; ivory and brass fittings	Player's left	9 in saddles (all Hartford spade): speaker, A, C sharp, G sharp, F, F sharp, E, D, B flat	80 cm.	159.5 cm. (neck has been shortened)	17.5 mm.
Figs. 24, 25	(Perry Marsh?) (Fisher & Metcalf?)	Smithsonian Institution, Washington, D.C.	1815–20	Boxwood; brass keys; ivory and brass fittings	Player's left	7 in saddles (2 spatula, 5 square): speaker, A, G sharp, F, E, D, B flat	85.7 cm.	171.9 cm.	19 mm.
Fig. 26	(unknown)	New Hampshire Historical Society, Concord	1815–20	Maple; brass keys; ivory and brass fittings	Player's left	7 in saddles (2 spatula, 5 square): speaker, A, G sharp, F, E, D, B flat	83 cm.	172 cm.	19 mm.
	(unknown)	G. Norman Eddy Collection, Cambridge, Mass.	1815–20	Maple; brass bell and keys; ivory and brass fittings	Player's left	7 in saddles (2 spatula, 5 square): speaker, A, G sharp, F, E, D, B flat	81.3 cm.	160.3 cm. (probably shortened)	16–19 mm.
Fig. 27	Marsh & Chase / Calais / Vt.	Vassar College, Poughkeepsie, N.Y.	ca. 1825	Maple; copper bell and neck; brass keys; ivory and brass fittings	Player's left	7 in saddles (2 spatula, 5 square): speaker, A, G sharp, F, E, D, B flat	82.6 cm.	ca. 176.7 cm. (copper-tube neck is questionable; connecting tenon between metal bell and butt section is missing)	18.5 mm.

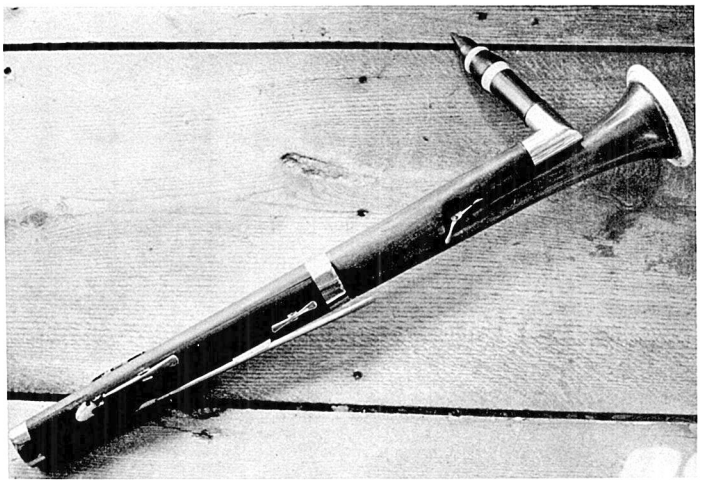


FIGURE 18. Bass clarinet, nine keys, ca. 1812, by Uzal Miner of Hartford. Front view. Photograph courtesy of the Farmington, Conn., Historical Society.

an octave lower than the C clarinet, with some added length to give it low C and B flat, matching the lowest notes of the bassoon. By means of the **U**-bend lower section copied from the bassoon, he bent the bass clarinet's five-foot length double at about the halfway point. The **U**-bend allowed the right fingers to control holes and keys on the small descending tube, while the right thumb manipulated a hole and some keys on the ajacent ascending tube. Thus, the instrument's length was made manageable, and at the same time the necessary tone holes were brought within reach of the fingers with a minimum of mechanism.

The other seven American bass clarinets follow this design very closely (see table 1 and figs. 18–27). Marsh & Chase and other makers outside Hartford made instruments much like Catlin's earliest model, adding only the low B-flat key. Hartford-made instruments followed Catlin's later nine-key version with only slight variations.

In comparing Catlin's bass clarinets to the earliest bassoon-shaped design by Heinrich Grenser (fig. 12), a number of differences can be observed (see table 1). Grenser instruments have their keys mounted in blocks, while the American makers used brass saddles screwed to the

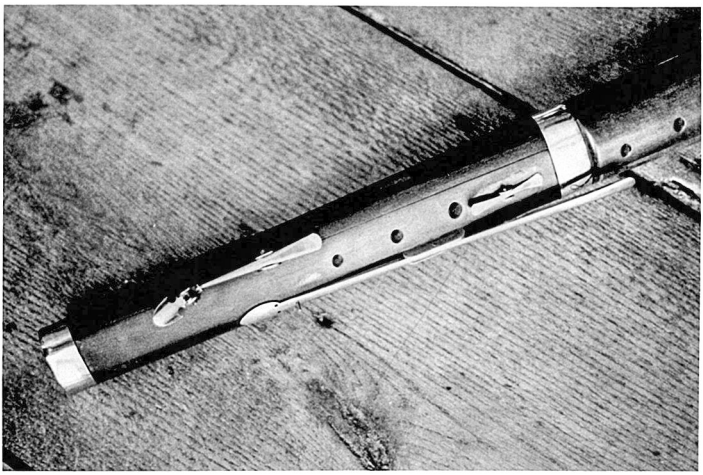


FIGURE 19. Bass clarinet, nine keys, ca. 1812, by Uzal Miner. Detailed view of front. Photograph courtesy of the Farmington, Conn., Historical Society.

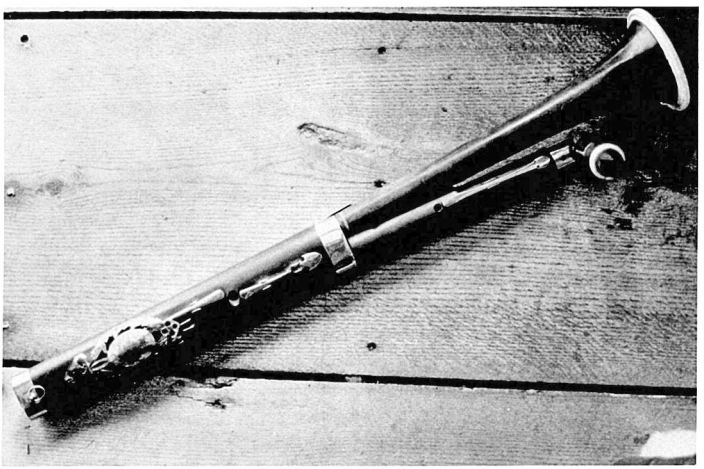


FIGURE 20. Bass clarinet, nine keys, ca. 1812, by Uzal Miner. Back view. Photograph courtesy of the Farmington, Conn., Historical Society.

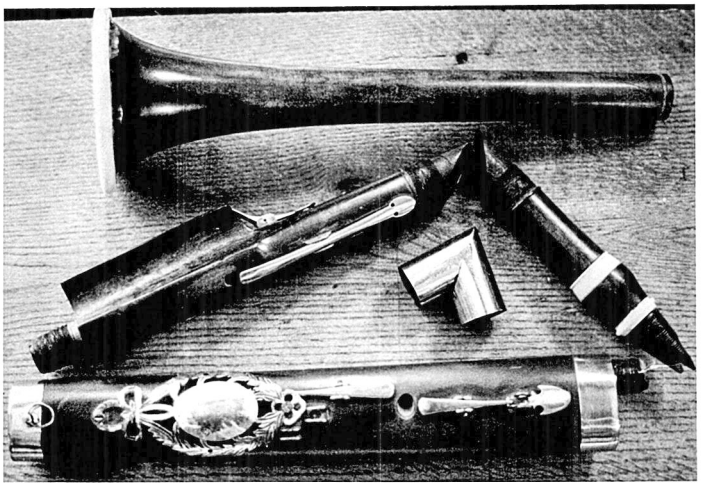


FIGURE 21. Bass clarinet, nine keys, ca. 1812, by Uzal Miner. View of the instrument taken apart. Photograph courtesy of the Farmington, Conn., Historical Society.

body of the instrument. The Grensers placed the bell on the player's right, while Catlin anticipated later makers by putting it on the left. With the bell on the left the player's visibility is improved, for the natural playing angle of the instrument places the bell further left, out from in front of his face. Most of the American instruments have a neck with a square corner, constructed with the resources of the wood worker and similar to smaller clarinets, even to the decorative ivory rings. The Grensers used additional skills in metal working to fabricate and bend a graceful brass goose neck. The Grenser bass clarinet appears longer in profile because it is slimmer than the typical Hartford instrument. In fact, its bore, about 14.5 mm., is only slightly larger than that of a common B-flat clarinet of the period. American instruments measured have bores of from 17.3 to 19 mm.—an acoustical improvement at least closer to the modern dimension of about 25 mm. Neither Catlin nor the Grensers were able to maintain fingerings completely matching the smaller clarinets, but the Grenser instruments come very close. In the usual clarinet range, only the low F-sharp/C-sharp key is

FIGURE 22. Bass clarinet, nine keys, ca. 1813. Back and front views. Photographs courtesy of the Buffalo & Erie County Historical Society Museum, Buffalo, N.Y.

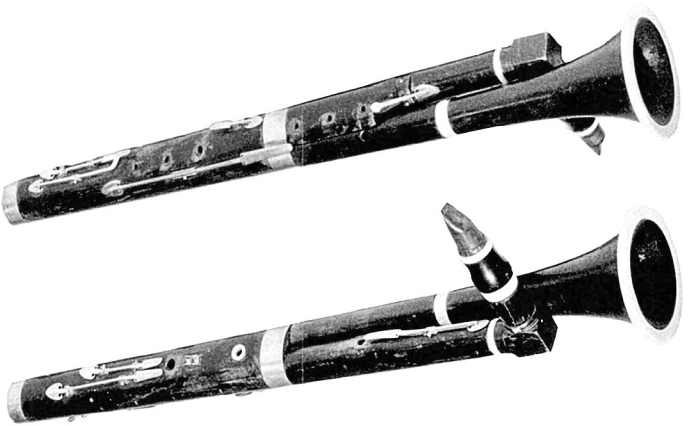


FIGURE 23. Bass clarinet, nine keys, ca. 1814. Front and back views. Photographs courtesy of the Henry Ford Museum, Dearborn, Mich.

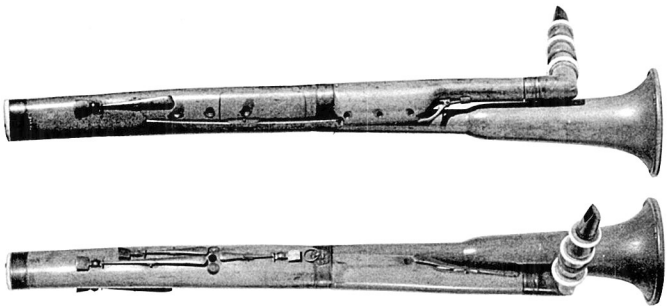


FIGURE 24. Bass clarinet, seven keys, early nineteenth century. Front and back views. Photographs courtesy of the Smithsonian Institution, Washington, D.C.

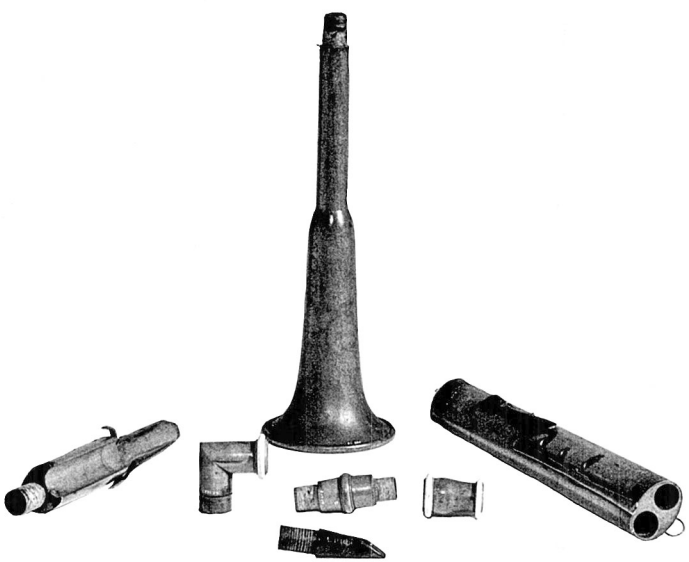


FIGURE 25. Bass clarinet, seven keys, early nineteenth century. View of the instrument taken apart. Photograph courtesy of the Smithsonian Institution, Washington, D.C.

FIGURE 26. Bass clarinet, seven keys, early nineteenth century. Front and back views. Photographs courtesy of the New Hampshire Historical Society, Concord.

moved. It is placed under the control of the right thumb instead of the left little finger. The three lowest notes, D, C, and B flat, are also controlled by the right thumb, and two keys and the hole must be covered to produce B flat.

On Catlin instruments, low G sharp/C sharp is moved from the right little finger to the left little finger; F sharp, when present, is operated by the right instead of the left little finger; and the keys for low E/B, E flat, D, and B flat are all given to the right thumb. Three keys and the thumbhole are required to produce the lowest note on these instruments. (When an American bass clarinetist closed down on low B flat, it was undoubtedly musical heaven, but to match his loose lip he needed a fat right thumb!)

Advertisements placed in periodicals suggest wide acceptance of the clarion and its use at least through the 1820s. The Franklin Music

FIGURE 27. Bass clarinet, seven keys, ca. 1825, by Marsh & Chase of Callais, Vt. Front and back views. Photographs courtesy of Vassar College, Poughkeepsie, N.Y.

Warehouse advertised on April 1, 1820, in Boston's *Euterpiad or Musical Intelligencer:*

> An extensive collection of the most fashionable music, consisting of instructions for piano forte, violin, clarionet, oboe, flute, fife, flageolet, guitar, lyre, bassoon, clarion, horn, trumpet, bugle, trombone, violencello [*sic*], serpent and drum.

On April 15 of that year the same firm placed the following ad in the same publication (the editor must have been sick that day):

> Elegant pedal, aeolian and plain harps, harp lutes, clarionets, oboes, flutes, fifes, flagenlets [*sic*], picolais [*sic*], and pitch pipes.
>
> Bassoons, horns, clarions or tenoroons, military B. & C. bugles, with crooks, cymbols [*sic*], English and Spanish guitars, violins, violas, and violencellos [*sic*].

Alfred E. Bunge, Jr., of Hebron, Maine, noticed the following ad in

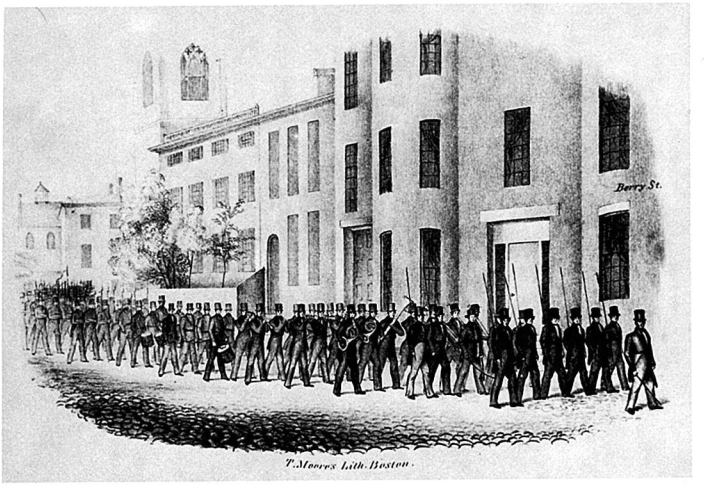


FIGURE 28. Illustration from the cover of "The Berry Street Rangers Quick Step" (Boston: Henry Prentiss, 1837). Photograph courtesy of Frederick R. Selch, New York, N.Y.

the Woodstock, Vermont, *Observer* of December 7, 1824:

New Establishment

Musical instrument manufactory, one door east of D. Watson's printing office. Fisher & Metcalf, Manufacture and keep on hand a variety of articles in their line: such as bass viols, violincellos [*sic*], violins and symbols [*sic*] of a superior quality—bassoons, bass clarions; C and E flat clarionetts, common and octave flutes—4 and 6 keyed do.—B and C fifes, hautboys, flageolets, & c. & c.

Bassoon, bass clarion, clarionett and hautboy reeds—viol bows—bridges—pins, & c. and a variety of other articles in their line, which they will sell on reasonable terms, and warrant of the first quality.

Musical instruments repaired—and all kinds of fancy turning executed with neatness, in ivory, brass, wood, & c.

Another advertisement from the 1825–26 *New York City Directory* is evidence of the availability of the clarion in that city.

E. Riley

Music seller, publisher and musical instrument maker No. 29 Chatham Street, New York. . . . Trumpets, do. with slides. French horns, with or without slides. Key'd bugles, plain do., brass and copper small horns, pocket hunt horns, post horns.

Piano fortes, guitars, harps. Violins from 2 dollars to 100 dollars. Tenors, violoncellos, bassoons, serpents, clarions, clarionets, flageolets, flutes with one, four, six and eight keys; fifes, B's, C's, and D's; drums & c.

The only other documentation of the use of bass clarinets in American bands found so far is a couple of illustrations of the Boston Brigade Band from sheet-music covers of 1837 (figs. 28–30). In both pictures one or two players in the center of the front rank are playing what could be Catlin's clarions. The bells are a bit too large, but no other instrument available at that time fits these illustrations so well. They are obviously not serpents or bassoons, and the bass horn, serpent

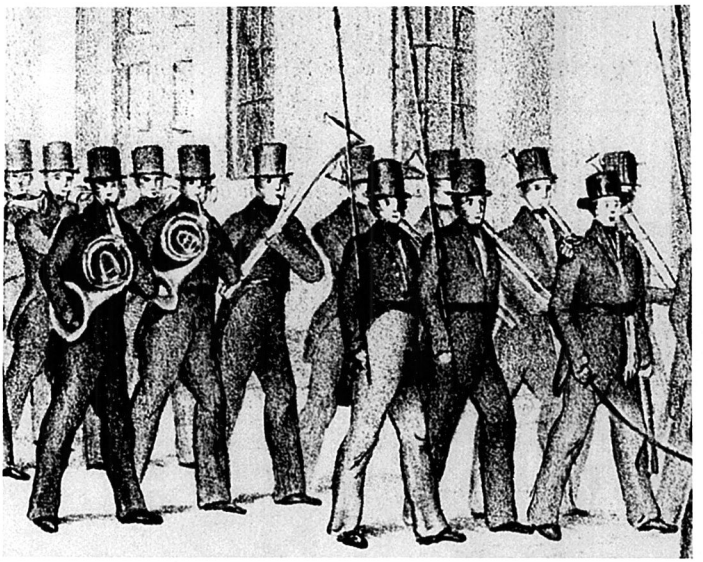


FIGURE 29. Detail of the "Berry Street Rangers" cover illustration. Photograph courtesy of Frederick R. Selch, New York, N.Y.

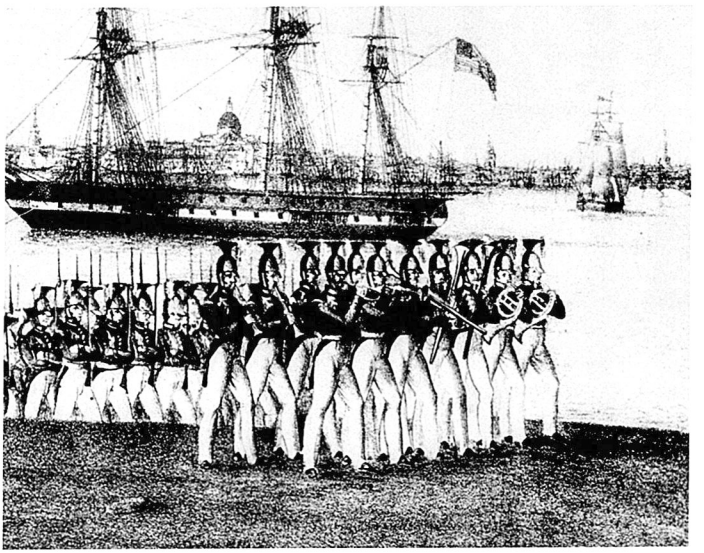


FIGURE 30. Illustration from the cover of "Captn. E. G. Austin's Quick Step" (Boston: Parker & Ditson, 1837). Photograph courtesy of the American Antiquarian Society, Worcester, Mass.

Forveille, ophicleide, and other similar instruments such as the Russian bassoon and ophimonokleide are fatter in profile and have characteristic mouthpipe crooks which the careful illustrator would probably have drawn. Only the bass clarinet is so narrow in profile and completely free of any mouthpipe protrusions. The length of the instrument, from the player's hips to a little above his head, is also approximately correct.

The accuracy of the artist in both cases is affirmed by his portrayal of the remaining instruments. French horns with central tuning slides are carefully drawn in the usual playing position. Overshoulder trombones can easily be identified by their characteristic shape and playing position. Trumpets or bugles can also be recognized. Interestingly, the first player in the second rank of the "Berry Street Rangers Quick Step" cover (fig. 28) holds his instrument in the upside-down position which was fairly common at that time for natural bugles and for American cornets or trumpets with Sattler twin-piston valves. Clarinets with ivory

rings common at that date are also accurately drawn. The same cover also shows fifers and drummers marching in front of the soldiers and playing alternately with the band (the band is playing and they are not). Both drawings are accurate enough in concept and detail to rule out an imaginary or fanciful instrument in the front and center of the band.

George Catlin's clarions were a unique invention for the time and especially the place where they appeared. In spite of their similarity in concept to the earlier Grenser model, they were in no way copied from that design. Catlin, independently, invented the clarion, probably in response to military-band needs for a more robust instrument that was easier to play and maintain than the bassoon. The clarion was a workable bass clarinet developed from eighteenth-century technology. It was probably capable of a range of more than two octaves, and with nine keys it had mechanism comparable to a five- or six-key soprano clarinet, the clarinet in widest use at that time.

The nine American bass clarinets that have survived are by far the largest and most important group of these instruments to appear anywhere before 1825. The clarion was the most successful and most widely used bass clarinet of its time. Even though this success can be explained somewhat by its appearance in New England's rather unsophisticated musical environment, the Catlin clarion deserves a prominent position in the history of the bass clarinet.

As part 1 of this article has shown, Catlin moved from Hartford to Philadelphia about 1815 or 1816, but little documentary evidence exists of his work there until 1824, when he began to show his instruments—predominantly flutes—at the Franklin Institute Exhibits. The only known instruments that survive from his years in Philadelphia are three flutes. One of them, in the Dayton C. Miller Collection at the Library of Congress (no. 1182), is of rosewood with four silver keys (figs. 31 and 32). It is made in five sections with ivory ferrules, a brass-lined head, tuning slide, and adjustable stopper. The keys are round and cupped and are

FIGURE 31. Flute, four keys, ca. 1825, by George Catlin. Photograph courtesy of the Library of Congress, Washington, D.C.

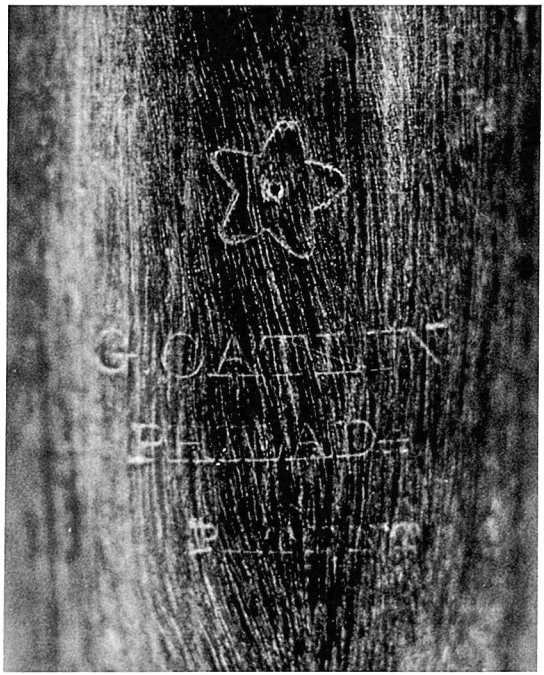


FIGURE 32. Flute, four keys, ca. 1825, by George Catlin. Detailed view showing inscription. Photograph courtesy of the Library of Congress, Washington, D.C.

mounted in blocks. Unfortunately, the ivory ferrules appear to be replacements. Another flute by Catlin is on display in George Washington's home, Mount Vernon (fig. 33). This instrument is made of stained boxwood with an ivory head and six silver keys mounted in blocks. It is also in five sections with ivory ferrules, brass-lined head, tuning slide, adjustable stopper, and foot to C. Interestingly, all of the keys are of the metal-plug type, seating in conical silver bushings in each hole. The barrel joint seems to be a replacement, for it bears the inscription of "G. Astor & Co., London," a firm active during the years 1798–1800 and 1808–26. There is also a handsome rectangular wooden case for the instrument.

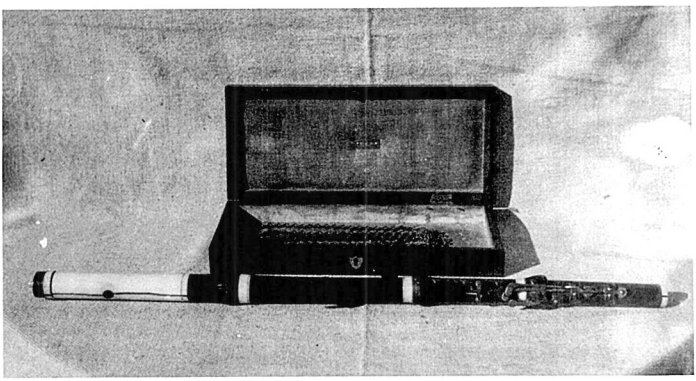


FIGURE 33. Flute, six keys, ca. 1825, by George Catlin. Photograph courtesy of the Mount Vernon Ladies' Association, Mount Vernon, Va.

A third flute from the Philadelphia period was recently found in California (fig. 34). It is more advanced in design than the Library of Congress instrument, but has no experimental features such as the bushed tone holes and plug keys of the Mount Vernon flute. The body is thought to be of rosewood, and there are five sections set off by six decorative silver ferrules. Eight round, cupped keys of silver are mounted in blocks. The head is lined with metal, and a tuning slide and adjustable stopper are provided. Representing the state of the art before the revolutionary Boehm flutes appeared, this flute is probably of later date, ca. 1835.

On all three flutes Catlin cut the foot-section bulge or knob short on the lower side, leaving the so-called "chair leg" shape occasionally used by London makers. This detail also appears on most flutes by John Meacham.

* * *

George Catlin's production of a complete line of woodwind instruments during the first decade of the nineteenth century was without parallel even in the larger American cities. The fact that he also built keyboard and string instruments as well as measuring and mathematical devices is even more remarkable. His production during his years in Hartford is assumed to have been substantial, judging from his advertisements and the instruments which have survived.

Catlin was also important because of his influence on other makers.

Uzal Miner continued the Hartford shop, John Meacham established a large business in Albany, Allyn Bacon became a well-known dealer and publisher in Philadephia, and the Catlin bass clarinet was copied by Marsh & Chase, Fisher & Metcalf, and other makers as yet unidentified. It is also possible that William Whiteley and Asa Hopkins learned from him.

The nine bass clarinets of Catlin's make or influence are of significance beyond American woodwind history. Only about twenty-one other bass clarinets are known which could have been made before 1825, and of these, thirteen survive. Considering only bassoon-shaped instruments, eight are known, and four survive other than the nine mentioned here. Catlin, evidently unaware of the work of the Grensers about seventeen years earlier, attempted a similar solution to the problems of the bass clarinet. His attempt was fairly successful, for if surviving examples are an accurate gauge, the Hartford shop produced more of these instruments than any European firm.

The later years in Philadelphia were of less importance, although

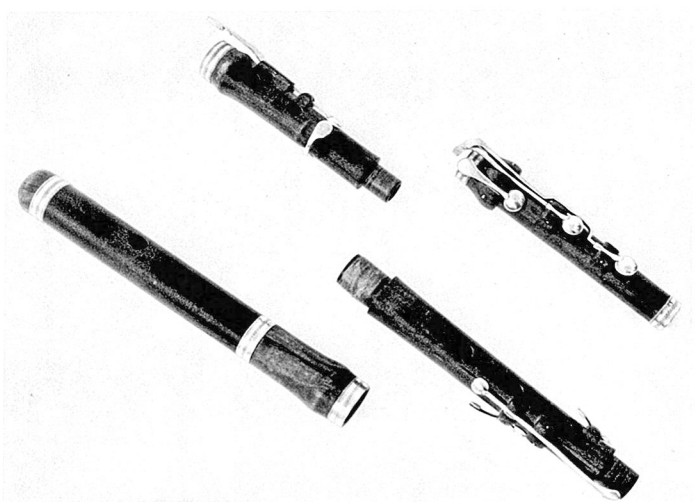


FIGURE 34. Flute, eight keys, ca. 1835, by George Catlin. View of the instrument taken apart. Photograph courtesy of Donald L. Parker, San Leandro, Calif.

glimpses of the same fine workmanship and ingenuity appear in the records of the Franklin Institute. One wonders if Catlin was a victim of isolation in Hartford due to the trade embargoes from 1807 to 1814, allowing the state of the art to pass him by. Certainly the immigrants who passed through Philadelphia, including the very musical Moravians, would have known the kinds of improvements available in Europe and would have critically compared any instruments produced over here.

The accomplishments of George Catlin are outstanding in American woodwind history, for his work preceded any other serious oboe and bassoon making by almost a century. Beyond this, his bass clarinets add a new chapter to the history of this instrument. Although a few scholars (notably Phillip T. Young) have known of Catlin's work for some time, the extent and importance of the Hartford contribution has not been widely recognized. It is hoped that this article will stimulate further study and the discovery of many more instruments by this important American maker.

The Henry Ford Museum
Dearborn, Michigan