

A HISTORY OF THE CLARINET AND ITS MUSIC
FROM 1600 TO 1800

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A HISTORY OF THE CLARINET AND ITS MUSIC
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PREFACE

It is the purpose of this thesis to present a study of music written for the clarinet during the period from 1600 to 1800. The first part is a history of the clarinet showing the stages of development of the instrument from its early predecessors to its present form. Part one also explains the acoustics of the clarinet and its actual invention. The second part deals with composers and their music for the clarinet. No attempt is made to include all music written for the instrument during the prescribed period; rather, the writer's intention is to include chiefly those works by composers whose music has proven to be outstanding in clarinet literature or interesting historically.

The order in which the works themselves are taken up is chronological, by composers, with comment on their styles as to form, harmonic content, melodic content, rhythmic content, problems in phrasing, or any other general technical problem. All of these elements are illustrated with examples taken from the music.

TABLE OF CONTENTS

	Page
LIST OF ILLUSTRATIONS	v
Chapter	
I. HISTORY OF THE CLARINET.	1
Acoustics	
Instruments Before the <u>Chalumeau</u>	
The <u>Chalumeau</u>	
Johann Christoph Denner and His Clarinet	
II. COMPOSERS AND THEIR MUSIC.	24
Before Mozart	
Mozart	
BIBLIOGRAPHY.	54

LIST OF ILLUSTRATIONS

Figure	Page
1. Modern Clarinet Mouthpiece and Primitive <u>Chalumeau</u> Mouthpiece	5
2. <u>Clarino</u> Writing in Keiser's <u>Croesus</u>	8
3. <u>Chalumeau</u> , C. 1690.	11
4. How Denner Solved the <u>Chalumeau</u> Scale	13
5. Denner's Two-Keyed Clarinet	16
6. The Scale of Denner's Two-Keyed Clarinet Made by the Successive Opening of the Finger Holes and Keys	17
7. Two-Keyed Clarinet with B Natural	20
8. Five-Keyed Clarinet	23
9. Faber's "Qui tollis".	25
10. Canon in Vivaldi's <u>Concerto in C Major</u>	28
11. Oboes and Clarinets without Strings	29
12. Question and Answer	30
13. Handel's <u>Overture in D Major</u>	31
14. Scale-Wise Runs	36
15. Wide Skips in a Fast Movement with Phrasing . . .	36
16. Crescendo in a Held Note.	37
17. Karl Stamitz's <u>Cadenza</u>	38
18. J. C. Bach's <u>Orione</u>	39
19. Theme with Accompaniment.	42
20. Mozart's <u>Concerto, K. 622</u>	43

Figure	Page
21. "Adagio," Mozart's <u>Quintet</u> , <u>K. 581</u>	44
22. "Adagio," Mozart's <u>Concerto</u> , <u>K. 622</u>	45
23. Register Skip to Chalumeau Register in a Slow Movement.	46
24. Skips to and from the Chalumeau Register "Allegretto con variazioni," <u>Quintet</u> , <u>K. 581</u>	47
25. Florid Passage in Theme, <u>Quintet</u> , <u>K. 581</u>	47
26. Development Passage, <u>Quintet</u> , <u>K. 581</u>	48
27. Linear Melody	49
28. Absence of Dynamic Marks.	49
29. Intended Dynamics	50
30. Use of the F Clef	50

CHAPTER I

HISTORY OF THE CLARINET

A brief explanation concerning the acoustics of the clarinet is necessary in order to better understand the instrument's historical development and its relationship to other woodwind instruments.

The clarinet, alone among the orchestral instruments, represents the combination of a single reed with a cylindrical tube. It acts as a stopped pipe because the reed is used to close, or almost close, the opening at the end of the mouthpiece. The result of this construction is that the clarinet produces the evenly-numbered harmonics in its fundamental (chalumeau) register sparsely, and the presence of mainly the odd partials in the tone gives it a most individual coloring. Inequality of tone and irregularity of fingerings are caused by the absence of the second partial tone which gives the oboe and flute their second octave. Thus, from these harmonics, the clarinet overblows not in octaves but in twelfths. This creates a break extending from the overblown twelfth down to the note an octave above the lowest note.

A tube pierced with six holes that can be closed by the six larger fingers, when held in both hands, is the most

primitive form of tube from which all the woodwind instruments are directly derived. By lifting the fingers from the six holes one by one, starting with the hole farthest from the player's mouth, seven notes can be produced using only the fundamental sounds. The sounds will correspond to the seven notes of the diatonic scale, and it is from this that the primary scale is produced in the clarinet. Unfortunately, merely lifting the six fingers will not produce notes other than those of the primary scale and their own harmonics. Without mechanical assistance, it is not always possible to produce more than two harmonics (if that many) in addition to any one fundamental. This mechanical assistance is also needed to produce notes within the compass of the clarinet but extraneous to the diatonic primary scale. Without this help the chromatic notes can only be produced by either fork-fingering or half-fingering.¹ These processes are extremely difficult to execute and they are apt to produce weak-sounding or out-of-tune notes. This lack of efficiency prompted development of the key-system which is the mechanical assistance needed to produce notes other than those of the primary scale.²

¹Fork-fingering is a process of flattening in which the tone-hole immediately below that speaking the note is stopped with the finger. Half-fingering is partly closing a tone hole by the finger.

²E. A. K. Ridley, The Ridley Collection of Musical Wind Instruments in Luton Museum (Letchworth, 1957), pp. 3-5.

The single-reeded instrument is of later origin than the double-reeded oboe type, and its use was comparatively rare among ancient cultures. Although no single-reeded instruments have been found in Egyptian sculpture, cylindrical pipes fitted with single reeds have been found in Greece, Persia, India, China, Turkey, and Europe,³ and Rendall states that such instruments may have had their origin in Egypt.⁴ Then, too, Gustave Reese believes that, during the fourth dynasty (3rd millenium B.C.), instruments developed or adopted by the Egyptians included prototypes of the clarinet.⁵ Instruments in which the reed was found in the substance of the tube were known as idioglot. Later, the reed was formed from a separate piece of cane and placed into a longer body. Examples of these are still common in the Near East. They include the arghul and zummarah. The pipes of these instruments were usually double, but the Sardinian launedda used three pipes of unequal length. The next stage in the development of the clarinet is found in the Basque alboquea and the Slav brelka. These instruments used a capsule of horn

³Ulric Daubeny, Orchestral Wind Instruments (London, 1920), p. 55.

⁴F. Geoffery Rendall, The Clarinet (London, 1957), p. 62.

⁵Gustave Reese, Music in the Middle Ages (New York, 1940), p. 7.

or wood to enclose the reed.⁶ The hornpipe or pibgorn takes us a step closer to the modern clarinet. Basically, the pibgorn (sometimes called pibcorn or horn-pipe) was a single-reeded instrument with a detachable resonator with seven holes, including a thumb hole and a definite bell. It was usually made of animal bone. The instrument was found mainly in Wales, Ireland, Cornwall, and the Scottish lowlands.⁷ However, in Scotland it was known as the stock-and-horn,⁸ the main difference being that the air-reservoir was made of wood instead of horn.

The forerunner proper of today's clarinet is the chalumeau, a small keyless cylindrical pipe. Chalumeaux were found in Europe from the thirteenth century on, but they never did enjoy popularity until the sixteenth century. Even then it was under the shadow of the flute and double-reeded shawm. The late discovery of the single-reed and its slow development into a great instrument were due to two main reasons, the first being that the making of the chalumeau mouthpiece is much more complicated than the making of the double-reed or flute blowhole, and second being the difference

⁶Rendall, op. cit., p. 62.

⁷Daubeny, op. cit., p. 55.

⁸The stock-and-horn is not the same as the stockhorn, a forester's horn.

in acoustical principles which are in contrast to those pertaining to all other instruments.⁹

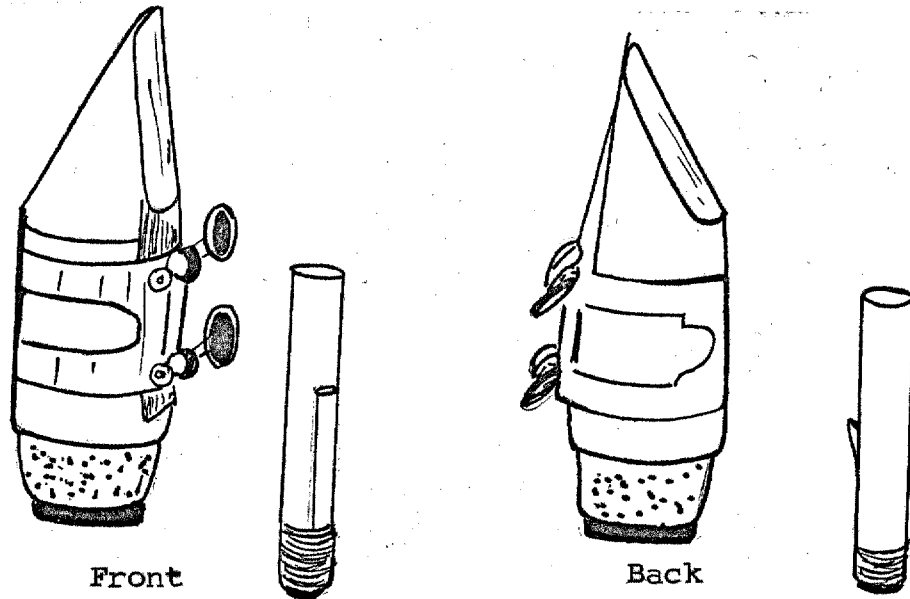


Fig. 1--Modern clarinet mouthpiece and primitive chalumeau mouthpiece.

In Fig. 1 both mouthpieces have the single-beating reed. Today's clarinet reed is still made of cane, as it has been for centuries.

Although chalumeau, derived from the Latin calamus or calamellus, is merely the French form of shawm or schalmey and a generic name for any small reed-blown pipe, the title chalumeau has been customarily reserved to single-reeded instruments and schalmey to double.

In past history, however, chalumeau was meant to be a conoidal-tubed instrument with either a single or double

⁹H. W. Schwartz, The Story of Musical Instruments (Elkhart, 1938), pp. 111-115.

reed. During the eighteenth century the word "chalumeau" designated an instrument with a cylindrical tube and a single reed.

Praetorius gives no illustration of the chalumeau in his Syntagma Musicum (1618) and M. Mersenne fails to mention it in his Harmonie Universelle (1636-37), however there is a specimen extant dating from the end of the sixteenth century.¹⁰ This means that the instrument must have been known some appreciable time before Praetorius and Mersenne wrote, but how could such a distinctive instrument fail to receive the attention of these two ardent observers? To Mersenne chalumeau was the chanter of a bagpipe, using a double-reed. Edgerly, too, when describing France during the days of the troubadors and trouvères, speaks of a chalumeau as a shepherd's pipe, used at peasant dances and festivals, and adds that, besides having ten holes, it was inflated with a small bag and had a chanter-pipe and two drones at times.¹¹

In 1706 Estienne Roger, an Amsterdam publisher, advertised chalumeaux for sale at three florins apiece and, in a catalogue, "Fanfares et autres airs de chalumeau a 2 dessus" by J. P. Dreux.¹²

¹⁰Daubeny, op. cit., p. 56

¹¹Beatrice Edgerly, From the Hunter's Bow (New York, 1942), p. 391.

¹²Rendall, op. cit., p. 65

Previous to this, parts for the instrument began to appear. These include: M. A. Ziani's Caio Pompilo (1704), A. M. Bononcini's Conquista Delle Spagne (1707), and A. Ariosti's Marte Placato (1707).

Rendall states that Reinhard Keiser included chalumeaux in his operas Croesus (1711) and Serenata (1716). It seems probable, however, that Keiser did not have the chalumeau in mind when he wrote Croesus. In the Breitkopf and Härtel publication of Croesus, in 1912, edited by Max Schneider, no mention of chalumeaux or clarinets can be found.¹³ Keiser does make use of the tromba, cornetti da caccia, and clarino. For over a century and perhaps ever since the disappearance of the baroque clarino, the Italians have identified the title clarino with the clarinet families. In fact, the name clarionet was given to the chalumeau when it began taking the place of the clarion. The new clarionet resembled the clarion's tone in the upper register. Thus, Johann Walther states in his Lexicon of 1732 that from a distance it sounds rather like a trumpet. From this information one would assume it is the clarino Keiser intended to be used in his opera Croesus.

¹³Reinhard Keiser, Croesus, Leipzig, Breitkopf and Härtel, 1912.

[beider Armeen]

The image shows a musical score for three parts. The top staff is labeled 'Clarino, Ob., Viol. I', the middle staff 'Clarino, Ob., Viol. II', and the bottom staff 'Clarino III, Viola'. The music is in a key with one sharp (F#) and a common time signature (C). The notation consists of rapid, repeated eighth-note patterns that trace the notes of a tonic triad (F#, A, C) across the three staves. The title '[beider Armeen]' is written above the first staff.

Fig. 2-- Clarino writing in Keiser's Croesus

Rapid articulation of arpeggios tracing the tonic triad give further indication that the parts were intended for the Baroque clarino.

Other composers supposedly writing for the chalumeau included Bonno, Hasse, Telemann, Fux, Zelenka, Harrer, Dittersdorf, Molter, Graupner, and Gluck with his Paris and Vienna editions of Orfeo (1764) and Alceste (1769).¹⁴

At this stage one is tempted to hazard the statement that not a few of the supposed references to the chalumeau by late Baroque composers actually named the clarino and have been mistakenly labeled as chalumeau parts as a result of the confusion between clarino and clarinet.

¹⁴ Rendall, op. cit., p. 65.

Most Italian opera composers did not write for the chalumeau, although they used many instruments of all kinds and descriptions. Monteverdi, for example, composed his opera Orfeo in 1608 and continued writing up to the middle of the century. He also experimented with many types of instruments, presenting them in manners that were new and fresh, but never used chalumeaux.

Lully is another composer who tried many innovations but never used the chalumeau. In the pastoral play Acante et Cephise, staged in Paris in 1751, Rameau is said to have used chalumeaux; however, Schwartz says that as there is not one note that cannot be played on the clarion at the time, there is doubt raised as to the validity of the chalumeau parts. He states further that neither the Zoroastre score of 1749 nor the 1756 score contain any chalumeau parts by Rameau.¹⁵

Regardless of the lack of chalumeau parts, historical data confirm the existence of the instrument from the first decade of the eighteenth century. Roger's previously mentioned advertisement of 1706 (see p. 6) was followed in 1716 by another offering. "Airs a deux clarinettes ou deux chalumeaux."¹⁶ Then, too, an illustration of a chalumeau occurred in the Encyclopédie by Diderot and d'Alembert in 1767. This illustration depicts the instrument in two pieces: a cylindrical body, without a bell, pierced with eight

¹⁵Schwartz, op. cit., p. 116.

¹⁶Rendall, op. cit., p. 66.

finger-holes; and a detachable mouthpiece with a single reed. Rendall says that the first noticeable occurrence of the "clarinette" is in that of Roger's 1716 advertisement. He goes on to add that further confirmation is offered in J. G. Dopplemayr's Historische Nachricht der Nurnbergischen Mathematics and Kustlern, when in speaking of Johann Christoph Denner, he says, "At the beginning of the present century (Zur Anfaq des Lauffenden Seculi) he invented a new sort of pipe, the so-called clarinette, to the great satisfaction of music-lovers . . . and finally produced chalumeaux in an improved form."¹⁷ This date coincides with Roger's first advertisement and the first appearance of chalumeau parts. Some historians, however, have put the date of Denner's invention back to 1690.¹⁸

In his Turkish Instruments of Music in the Seventeenth Century, Farmer states that the English are given credit for the invention of the clarinet. The instrument named here is the gurnaita, made of horn. It is said to have been played by monks at the Holy Sepulchre. The term gurnaita is given to all instruments of the reed-pipe family in Syria.¹⁹

¹⁷F. G. Rendall, op. cit., p. 66.

¹⁸F. J. Lipowsky in his Ubersicht der deutschen Geschichte, 1794, is one of the earliest.

¹⁹Henry George Farmer, Turkish Instruments of Music in the Seventeenth Century (Glasgow, 1937), pp. 26-27.



Fig. 3--Chalumeau, c. 1690

The reconstruction pictured and described by Nicholas Bessaraboff in his Ancient European Musical Instruments follows the description of the chalumeau illustrated in Diderot and D'alembert's Encyclopédie (1767).

This chalumeau is numbered "107" and is described by Bessaraboff as:

Primitive form used in Europe. Walnut stained brown, cylindrical bore without bell. Eight finger-holes in the front, one of which is stopped with wax; a thumb-hole in the rear. Single reed attached to the mouthpiece by a thread. Length, 25 cm. Diameter, max., 29 cm. Bore, 13mm.²⁰

Johann Denner was born in Leipzig in 1655, the son of Heinrich Denner, a horn tuner. After his family moved to Nuremberg, he began apprenticing for his father, becoming very capable in improving woodwinds, especially in intonation. He gained fame for the manufacture of flûtes-à-bec or recorders and he and his sons travelled all over Europe with these instruments. He died in 1707, but around fifty of his instruments are extant today, including five or six 2-keyed clarinets. The instruments made by this family are branded with one of two stamps: I. C. Denner or I. Denner, the latter with a fir tree.²¹

Denner bored a speaker hole up toward the mouthpiece which doubled the register of the original chalumeau,

²⁰Nicholas Bessaraboff, Ancient European Musical Instruments (Boston, 1941), p. 97.

²¹Rendall, op. cit., p. 68.

leaving a gap between the already existing scale and the new top series of notes. Denner's solution for bridging this gap was in a chalumeau which gave the octave G to G by uncovering eight holes just as a flute or oboe, the bell note F being played with all the fingers down. Above the top G he added two keys which were closed over two holes drilled directly opposite each other. By opening one key A was given, and by opening both together B was obtained. B^b was supposedly sounded by stopping the tone holes of the upper joint and relaxing the embouchure. This procedure gave Denner eleven notes, but when the top key, B, was opened, all others being closed, C and a new scale could be played with many of the same fingerings as those used on the bottom scale. Thus, B acted as a speaker key enabling one to bridge the gap between the lower and upper notes. A scale could now be produced from F below the treble clef to C in the treble clef and several notes higher, completing at least two octaves.

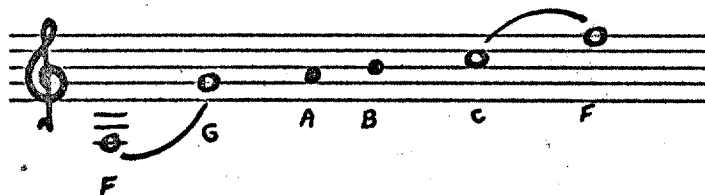


Fig. 4--How Denner solved the chalumeau scale.

The nine notes from F below the staff to G in the staff are played by the eight finger holes and the "bell"

note F. Starting with C in the staff and going up the scale is based on the overblown twelfth, or C, the individual notes being played by the finger holes. By opening one of the two keys bored directly opposite each other, it will sound A, and by opening both keys, B is produced. The B key is the speaker key used to help in overblowing the twelfth.²²

It is the opinion of Schwartz that Denner merely improved the already existing chalumeau, by adding two keys to it, giving it a separate mouthpiece, developing the bell, and making available the third and fifth harmonics. Schwartz believes that he merely added the clarinet register to the chalumeau, but concedes that Denner could have invented the keyless chalumeau and then, before his death in 1707, added these improvements.²³

The original two-keyed clarinet is in the Bavarian National Museum in Munich, of which the clarinet numbered 911 in the Brussels collections at the Musee Instrumental der Conservatoire Royal is a facsimile. It looks like a treble fipple flute or recorder. The body is in three pieces: the mouthpiece, with a small foot joint; the body joint, with six equally spaced holes in front and one behind; and a barrel with two small holes drilled side by side. When one of the two holes is uncovered, F# is

²²Schwartz, op. cit., p. 119.

produced, and the foot joint could be moved around to suit either a right-handed or left-handed player. The bore is about 13 mm. and instead of a widening at the lower end, there is a small contraction. The mouthpiece is extremely large and the player must take a large portion in his mouth to get any favorable results. They are probably intended for 15 mm. reed, while the facing is long and wide with little curve. The opening of the shallow tone-chamber is larger than at the lower end and the bore is cylindrical. The reed is still placed on the top lip, surviving from the days of idioglot instruments. Six instruments of this type are extant today: two in the Berlin collection, No. 2870 by J. W. Oberlender and 223 by I. Denner; and four in the History of Music Museum in Stockholm, Numbers 141, 142, 143, and 139. Two are by Denig and two by Liebov.²⁴ A two-keyed clarinet described by Bessaraboff as illustrated in his Ancient European Musical Instruments reads:

In C. two keys. The earliest form with b natural key. Tube of maple, stained brown. Cylindrical bore without bell. Made in three parts: Long mouthpiece, body, and bell joint. . . The reed is tied by a piece of string. Length, 13 mm.²⁵

There was still a need for more mechanical assistance as players had much difficulty playing in keys having many

²⁴Rendall, op. cit., pp. 68-69.

²⁵Bessaraboff, op. cit., Plate 1.



Fig. 5--Denner's two-keyed clarinet

sharps or flats. As it was, they had to carry around many extra joints which they could use to change keys. Later the instruments came in different keys. In today's orchestra, the clarinetist still must have two instruments, one in B flat and the other in A. The pitch of these early clarinets could not be found by measuring the length. This was because the bores varied in diameter. With the small difference of

2mm., the pitch of one of these instruments could change up to two semitones. The most popular pitches during the time of their manufacture were D and C.

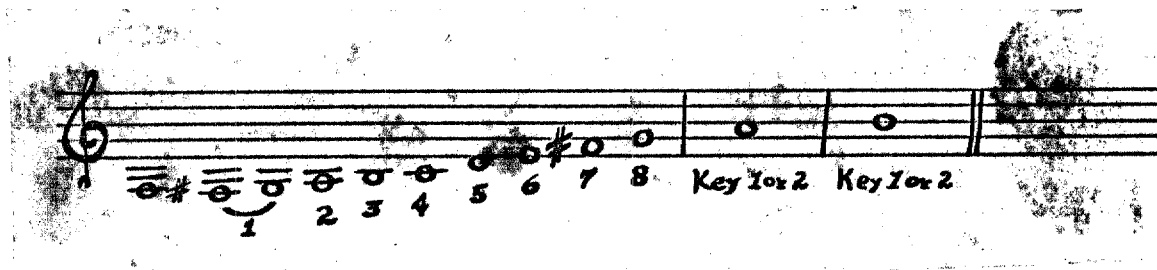


Fig. 6--The scale of Denner's two-keyed clarinet by successive opening of the finger holes and keys.²⁶

The application of keys to make the chromatic scale render itself more playable was very slow indeed, and the date of the next addition is unknown. The addition consists of lengthening the tube and moving the thumb-key nearer the mouthpiece, and, at the same time, making the holes smaller. This enables B^b in the staff to be sounded by opening both keys at the same time. By making the bell flare at the end and by reducing the proportions of the mouthpiece, a better sound, harmonically speaking, could be obtained with this new development. Since "I. Denner" is stamped on the clarinet numbered 912, in the Brussels collection at the Musee Instrumental der Conservatoire Royal, which features these innovations, Jacob Denner, Johann's son, is often accredited with the improvements.²⁷ This instrument was satisfactory

²⁶ Ibid., p. 97.

²⁷ Rendall, op. cit., p. 68.

except that B natural in the staff was now missing. However, this was soon remedied by lengthening the bell and having a hole on the top side of it. This hole was controlled by a new key, which at first was played by the thumb, enabling the player to still use either the right or left hand for the bottom joint. The key was soon moved to the left side of the joint, however, and from then on the hand position was fixed. The main advantage of this key was to extend the compass down to E below the staff, and, thus, give one B natural in the staff as the overblown twelfth. This B natural key appeared either in the first quarter of the eighteenth century or soon afterwards. The Brussels 912 is the only clarinet illustrated in Diderot and D'Alembert's Encyclopédie of 1767, and it is the first clarinet pitched in A.²⁸

Following is a summary of the mechanical development covered thus far:

- 1) Prototype. A primitive folk instrument, the chalumeau. The compass extending from F below the staff, and having no overblown tones.
- 2) First Step. Two keys are added above the finger-holes. They are of equal diameter, normal size, and are drilled opposite one another. The compass extends from F

²⁸Rendall, op. cit., p. 72.

below the staff to C above the staff. By partially opening one of the two keys, the tones from C in the staff can be overblown. The tone B^b in the staff is cross-fingered.

3) Second Step. The thumb hole is made smaller and it is brought closer to the mouthpiece, becoming (a) the speaker hole and (b) the tone hole for producing B^b in the staff. The B natural in the staff now has to be cross-fingered. The compass remains the same as in step two.

4) Third Step. The instrument is lengthened and the low E key is added; the tone B natural in the staff is overblown from the low E. The compass remains the same as in steps two and three. The evolution of the fundamental clarinet was completed and further development consisted of improving the key mechanism. The only departure was made when basset horns and a few soprano clarinets extended their compass to nominal low C. Basset horns still offer this feature, but soprano clarinets with the extra notes remained only as an experiment.²⁹

Levin Wilson Foster in his Directory of Clarinet Music states that by 1750 the number of keys had increased to four and the total volume had improved considerably.³⁰

²⁹Bessarboff, op. cit., p. 98.

³⁰Levin Wilson Foster, A Directory of Clarinet Music (Pittsfield, 1940), p. 1.

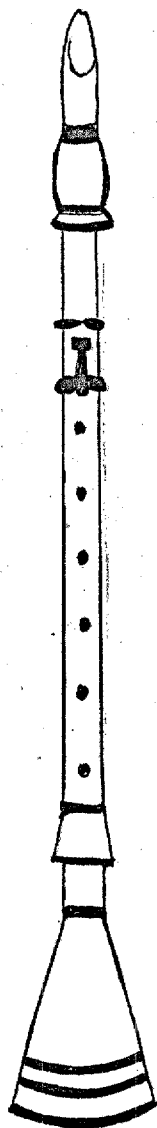


Fig. 7--Two-keyed clarinet with B natural key

In C. Two keys. J. C. Denner type with a b-flat speaker key. Walnut, oil finish . . . The reed is tied with a string. Length, 59 cm. Diameter, max. (bell), 6.8 cm. Bore, 14 mm. Length of cylindrical part, 48 cm.³¹

³¹ Bessaraboff, op. cit., p. 98.

Improvement of the key mechanism is all that remained in the development of the clarinet and Barthold Fritz was the next person to add more keys. These keys were for the low F[#] and G[#]. They must have been in existence before 1766 since Fritz died during that year. This was the famous five-keyed clarinet that Haydn, Mozart, and Beethoven knew. Carse says that the old composers were accustomed to the poor intonation of the instrument, and that Burney states that it was natural for those instruments to be out of tune.³²

Evidence by the large number of works still surviving indicates that the five-keyed clarinet must have been very popular. Bauman, an instrument maker from Paris, added the sixth key. This key was for the middle C[#]. In the Supplement (1776) to Diderot and D'Alembert's Encyclopédie the statement is made that a player with a six-keyed instrument had just passed through Berlin. The approximate date given for Bauman's sixth key is 1790.³³

Development from this point belongs to the nineteenth century. A summary of this later development should be in order. By 1810, the famous thriteen-keyed clarinet was being made by Muller, a great player of Paris. His playing as well as his instrument, brought much popularity to the

³²Adam Carse, Musical Wind Instruments (London, 1939), pp. 149-157.

³³Schwartz, op. cit., p. 119.

clarinet. Notable advancements of this instrument included the key for covering the F-C hole, and several trill keys. The tone holes were relocated, and they increased to twenty-two. This harmed the tone quality.³⁴

Using Muller's principle, other makers came out with improved models having fewer keys. Some of these clarinets were the Gassner five-keyed model of 1849, the Kastner six-keyed model of 1855. This clarinet made its last stand in the Albert system clarinet, but it has long since been dominated by today's Boehm system, invented by Hyacinth Elenore Klose in 1843.³⁵

³⁴Schwartz, op. cit., p. 119.

³⁵Ibid., p. 119

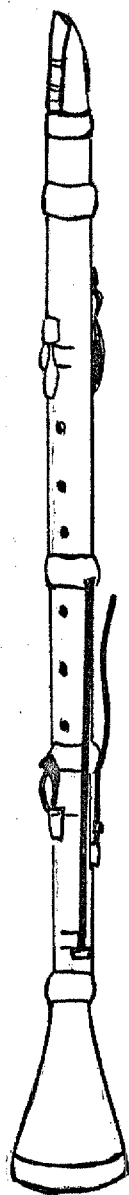


Fig. 8--Five-keyed clarinet

This five-keyed clarinet is listed as C12 in Luton's The Ridley Collection of Musical Wind Instruments in the Ridley Museum. It is described as:

Clarinet (in B flat), Cramer, London, (successor to G. Miller) (Unicorn Mark). Socket bears the name Key, London, and Unicorn mark, mouthpiece the name Beckett, London. Five Brass Keys, flat, square, mounted in blocks. Boxwood, ivory mounts. Length 26-1/8 inches. Circa 1805.³⁶

³⁶Luton, op. cit., p. 28.

CHAPTER II

COMPOSERS AND THEIR MUSIC FOR CLARINET

During the first half of the eighteenth century, the clarinet was used rather sporadically. Because of its inferior tone, agility, and intonation, as compared with the flute and oboe, the clarinet's acceptance by musicians and composers was viewed with askance.

One of the earliest usages of the clarinet in the orchestra takes place in the Netherlands. It seems strange that this instrument should find its way into the orchestras of Belgium long before it was known in French orchestras or German bands. The Archives of Antwerp Cathedral contained a mass written in 1720 by the organist and choirmaster, John Adam Joseph Faber, in which he included a part for a C clarinet. The work is now lost, but F. A. Gevaert has reproduced twenty-one measures from the "Qui tollis peccata mundi" in his New Treatise on Instrumentation of 1885. Gevaert is indebted to the well-known musicologist, M. le Chevalier Leon de Burbure for his information.¹ The contralto solo is accompanied by two flutes, clarinet, and cembalo or organ.

¹F. G. Rendall, The Clarinet (London, 1957), p. 75.

Flauti
Transversi

Clarinetto
in C

Cembalo
senza organo

The image displays two systems of musical notation for Faber's "Qui tollis". Each system consists of three staves: a treble clef staff at the top, a middle staff (likely for a clarinet), and a bass clef staff at the bottom. The first system shows the initial measures with various rhythmic patterns and accidentals. The second system includes the instruction "alto solo" above the middle staff and the word "Qui" below it, indicating the start of a solo section. The notation includes notes, rests, and accidentals (sharps and naturals) across all staves.

Fig. 9--Faber's "Qui tollis"

It is surprising to find the clarinet treated as a concerted instrument. In measures nine and eleven the use of arpeggios in the chalumeau register descending to F, at that time the lowest note, is quite unexpected. Particular notice should be made as to the absence of tones between the break. The tone A in measure four is the only visible example of such a tone used by Faber.

One would assume that the clarinet used to perform this work would be that modeled after J. C. Denner's "1690" clarinet. Jacob Denner apparently did not move the thumb-key until 1721 or just before. F. Bonanni in his Gabinetto Armonico, licensed for printing in 1721, describes Jacob Denner's clarinet, inferring that it could have been

developed before 1721;² nonetheless, it would have had to have been developed quite a while earlier to have still reached the Netherlands in time for Faber to have known of its existence.

In 1885 Gevaert stated that, except for Faber's "Qui Tollis," we know of no example of the use of the clarinet before 1751 except for Rameau's Acante et Cephise, a heroic pastoral.³ But Gevaert was apparently unaware of works including parts for chalumeaux written before 1751 by Vivaldi, Handel, and others.

Vivaldi's works include three concertos, two of which are in C major and one in D major. The first two include two clarinets, two oboes, strings, and cembalo. The third makes use of the same instrumentation as the first two, except that it adds two flutes and a bassoon. No date is given for these recently discovered works, but it may be noted that Vivaldi died in 1741. His treatment of the clarinet in the Concerto in C major (F. xii, no. 2) can be seen in the following excerpts.

²Rendall, op. cit., p. 70

³F. A. Gevaert, A New Treatise on Instrumentation (Paris, 1910), p. 178.

(Allegro) 28

Oboe I
Oboe II
Clar. I
Clar. II

This musical score is for four woodwind instruments: Oboe I, Oboe II, Clarinet I, and Clarinet II. It is written in treble clef with a common time signature (C). The tempo is marked as (Allegro). The score consists of four staves. The Oboe I part begins with a melodic line in the first measure, while the other instruments have rests. In the second measure, the Oboe II part enters with a similar melodic line, and the Clarinet I and II parts also have rests. The third and fourth measures continue the melodic development for the Oboe I and Oboe II parts, with the Clarinet parts remaining at rest.

This musical score consists of four staves, each with a treble clef. The first two staves show a melodic line starting in the first measure and continuing through the second measure. The third and fourth staves show a melodic line starting in the third measure and continuing through the fourth measure. The notation includes eighth and sixteenth notes, rests, and bar lines.

Fig. 10--Canon in Vivaldi's Concerto in C Major.

It is interesting to note that the clarinet is still being treated in the clarino style. The writing is mainly diatonic, making use of arpeggios and rapid scale passages. Canon is made use of here, first with the two oboes and then with the two clarinets.

The image shows a musical score for four instruments: Oboe I, Oboe II, Clarinet I, and Clarinet II. The tempo is marked 'Largo'. The music is in C major and common time. The oboes play a unison background of eighth notes, while the clarinets play a melodic line in thirds behind them. The score includes markings for articulation (accents), dynamics (p), and trills.

Fig. 11--Oboes and clarinets without strings

In the Largo oboes and clarinets play together without the aid of strings. The melody is given to the clarinets in the opening measures where they play in thirds behind the unison background of the oboes. The editor, A. Ephrikian, has added markings for tempo, articulations, and dynamics, since Vivaldi, following customary Baroque practice, made no indications of these.

The image shows a musical score for two staves: Oboe (top) and Clarinet (bottom). The Oboe part consists of four measures. Measures 2 and 4 contain a series of sixteenth notes with slurs and accents, marked with a piano dynamic (p). The Clarinet part also consists of four measures. Measures 1 and 3 contain a series of sixteenth notes with slurs and accents, marked with a mezzo-forte dynamic (mf). Measures 2 and 4 are rests. The overall structure is a call-and-response pattern between the two instruments.

Fig. 12--Question and answer

The clarinets seemingly ask a question in measures one and three while the oboes, in measures two and four, answer them. Vivaldi had assumedly made a careful study of the two-keyed clarinet. The clarinets have been used so as to carefully avoid the missing b' natural and doubtful accidentals. Vivaldi employs the clarinets within the range of g in the chalumeau to c above the treble clef.

Handel's use of the clarinet has been rather dubious in past history. We know that his music was full of clarion parts, since the latter instrument was at its peak during the Baroque period. Mozart, who was unable to endure the shrill voice of the clarion, is known to have changed many of these parts for the clarinet. Rendall, in summarizing R. B. Chatwin's article "Handel and the Clarinet," says:

In the undated Granville M. L. of Tamerlano (1724) the original two cornetti which accompany the singer in the pensive "Par che mi nasca" are replaced by Clar. 1 and 2. The plaintive character of the song rules clarini out of court; it is just

the sort of music that calls for woodwind tone. Again in Riccardo Primo (1727) Chaloumeaux are introduced to accompany "Quell' innocente afflitto." The parts extend from d' to c''' .⁴

The original manuscript of Handel's Overture in D major is preserved in the Fitzwilliam Museum at Cambridge. Although the score is in Handel's own handwriting, the marking of parts for clarinets and corno di caccia is in the hand of his secretary. Parts of the manuscript are indistinct and there are no expression markings of any kind.

andante allegro ($\text{♩} = 120$) III

The musical score consists of three staves. The top staff is labeled 'Clav. I' and the middle staff is labeled 'Clav. II'. Both are in treble clef with a key signature of two sharps (D major). The bottom staff is labeled 'Horn' and is also in treble clef with a key signature of two sharps. The tempo is marked 'andante allegro' with a metronome marking of 120. The music is divided into three measures. The Clarinet I and II parts play a melodic line with eighth and sixteenth notes, while the Horn part is mostly silent with a few notes in the final measure.

Fig. 13--Handel's Overture in D major

⁴Rendall, op. cit., p. 77.

The clarinets during Handel's time were being used in unison with oboes in military bands in France and Germany. It might be that Handel had heard one of these bands when he wrote this suite. It seems as though he experiments with the idea of using more than one player to each part, as in the military bands. This, however, was not the first time clarinets were used on separate parts (Vivaldi's Concertos). To avoid the nonexistent c sharp in the treble clef the clarinet parts were played on the D clarinet, a popular pitch for the clarinets of this time. The suite seems to be more of a duet than a trio, as the horn acts as an accompaniment to the clarinets throughout most of the work. This technique does not pervade throughout the entire piece, however.

Karl Haas says that the first dated scores containing clarinet parts were those of six concertos by Johann Melchior Molter (1734).⁵ Rendall, on the other hand, suggests the date 1740 for two of these concertos preserved in the Sandesbibliothek at Karlsruhe.⁶ These are written in D major for clarinet with string and harpsichord accompaniment. The lowest note being c', the clarinet stays mainly in the clarion and acute registers, frequently ascending as high as g'''.

⁵G. F. Handel, Overture (Suite), Karl Haas, editor (London, 1952), p. i.

⁶Rendall, op. cit., p. 76.

These registers would be much easier to play in than the chalumeau and lower middle because one could use much more force for intonation purposes. Rendall goes on to explain that the music is perfectly playable for the clarinet and unexpectedly brilliant for that period, in which, as before, accidentals impossible on a two-keyed instrument are carefully avoided.⁷ It seems odd that Rendall would ascribe these works for a two-keyed clarinet, when the three-keyed instrument had been developed by the first quarter of the eighteenth century, and more so, in the same country as that in which the composer was living. This three-keyed clarinet is the same instrument described in Diderot and D'Alembert's Encyclopédie of 1767.

Jean-Phillippe Rameau was apparently the first composer to introduce clarinets into the orchestra of the Paris Opera, when, in 1751, his pastoral play, Acante et Cephise, was performed.⁸ The orchestration is very fresh and original. Two interesting points are brought to mind here. First, in regard to orchestration, Mozart is often given credit for establishing the pair of clarinets as

⁷Ibid., p. 76.

⁸Donald Jay Grout, A History of Western Music (New York, 1960), p. 381

found in every normally-sized orchestra after his Symphony in E^b (K. 543);⁹ however, Paul Henry Lang points out that they were already in general use by the middle of the eighteenth century, and that Rameau was the first to use them. Secondly, Rameau made use of modern-day signs and marks calling for the swelling and decreasing of tone volume. This, Lang Points out, refutes Burney's assertion that Johann Stamitz and the Mannheimers were the inventors of crescendo dynamics.¹⁰ Rameau made use of the four-keyed clarinet in Acante et Cephise.¹¹ Until Rameau's Zoroastre in 1749, the clarinet was considered a relative of the oboe. There is a rather interesting counterplay between the clarinets and horns which is heard often in contemporary works.¹²

Although Haydn taught Mozart many things, it was Mozart who showed Haydn how to write for the clarinet and other woodwinds. Although Haydn is believed to have used two clarinets in his first Mass written in 1751 or 1752, it was not until Mozart used the clarinet in this idiom that Haydn realized its capabilities.

⁹Willi Apel, editor, "Clarinet Family," Harvard Dictionary of Music (Cambridge, 1947), p. 153.

¹⁰Paul Henry Lang, Music in Western Civilization (New York, 1941), pp. 602-603.

¹¹L. W. Foster, A Directory of Clarinet Music (Pittsfield, 1940), p. 1.

¹²Rendall, op. cit., p. 78.

Mannheim was probably responsible for much of the clarinet's activity and advancement from 1750 to the end of the eighteenth century. There the possibilities of the clarinet as an expressive instrument were realized. The orchestra was renowned for its sensitivity and refinement and it transmitted these qualities to the clarinet. Men like Cannabich, Holzbaur, Beck, and Toeschi included clarinets in their symphonies.

Johann Stamitz was a champion of the clarinet. He not only wrote symphonies, quartets, and concertos for the clarinet, but he also had them admitted into the orchestras of Paris in the middle of the eighteenth century. Then, too, it was in Mannheim, whose orchestra was made famous by Stamitz's direction, that young Wolfgang Amadeus Mozart was first introduced to the sound of clarinets in the orchestra. Stamitz's Concerto in B^b major for clarinet and strings is one of his finest works. It is probably the first example of a solo work for the clarinet. No solo works for the instrument are known before 1757, the year of Stamitz's death. The B^b Concerto may have been the concerto played at the "concert spiritual" in 1771 by the Bohemian Joseph Beer, the first famous clarinet virtuoso in history. Many compositions like the B^b Concerto were printed in Stamitz's day. His original manuscript of the individual parts was discovered in the Thurn and Taxis Court Library in Regensburg, Germany, between other

compositions. The score had to be constructed from these individual parts. The first performance of the rediscovered work was in London 1936 by the celebrated Fredrick Thurston.¹³



Fig. 14--Scale-wise runs

Particular note should be taken of the scale-wise runs which Stamitz wrote for the clarinet. The runs in Figure 15 fully outline the C major scale and at the same time, rhythmic interest is attained.



Fig. 15--Wide skips in a fast movement with phrasing

¹³Peter Gradenwitz, editor, Concerto for Clarinet (New York, 1957), p. 1

While using register skips in the fast movement, Stamitz has the lower note tracing an ascending scale pattern, and, at the same time, applies crescendo markings in each measure, starting with "p" in the first and ending with "f" in the last.

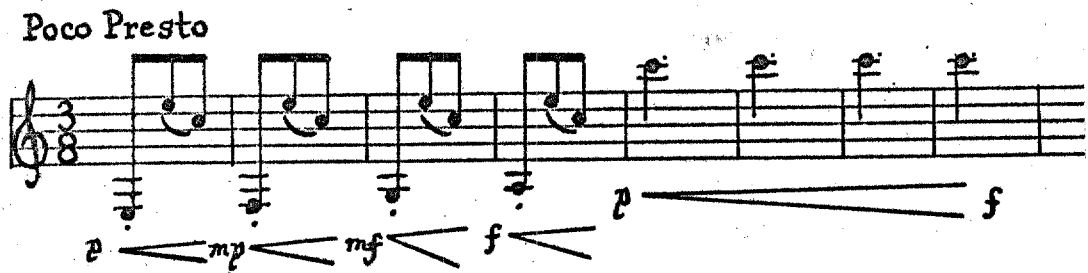


Fig. 16--Crescendo in a held note

Stamitz, unlike many Baroque writers, applied crescendo markings where he deemed necessary. Here is an example of a crescendo applied to one tone for four measures.

Works by Gaspard Procksch, a clarinetist and composer, include, in addition to symphonies, Recueils d'airs pour deux cors ou deux clarinettes (1776), Dei Terzetti per Clarinetto, Violino e'Violoncello, op. IV., Sei Sonate a Clarinetto e accompagnamento di Violoncello, op. V., and Six Quartuors Concertante à une Clarinette, Violin, Alto, and Violoncello.

Karl Stamitz was Johann's oldest son. He, too, was influential in recognizing the soloistic possibilities of

¹⁴Rendall, op. cit., p. 78.

of the clarinet. Due to the lack of technical possibilities of the clarinet of his day, Stamitz could not fully exhaust the possibilities of the orchestra. W. A. Mozart and Carl Maria von Weber received the credit for this, having perfected what Stamitz had begun. A contemporary manuscript listed as Stamitz's Third Concerto is in the National Library of Vienna. It is in Helmut Boese's "The Clarinet as a Solo Instrument in the Music of the Mannheim School," his dissertation in Berlin in 1940. It was composed during Stamitz's first few years in Paris, around 1785, for Joseph Beer, at that time a member of the Berlin Hofkapelle.¹⁵

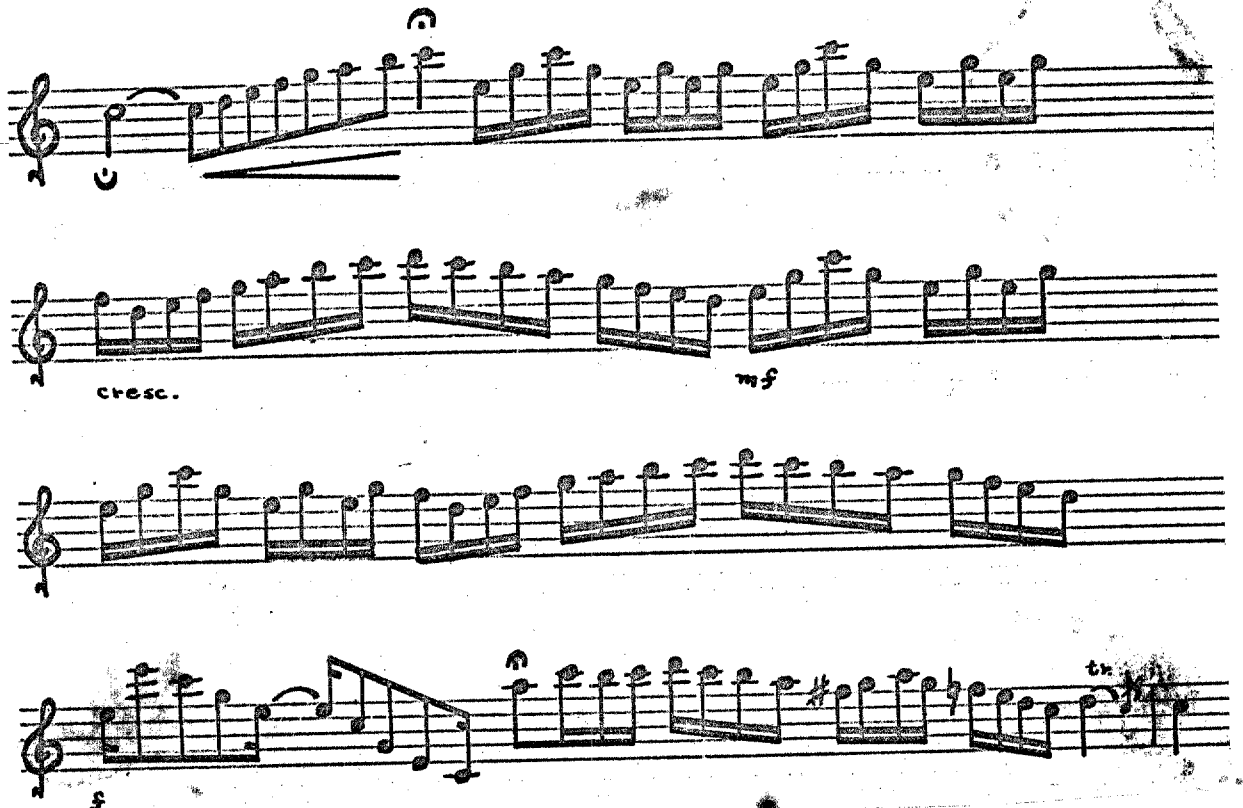


Fig. 17--Karl Stamitz's cadenza

¹⁵Johannes Wojciechowski, editor, Klarinetten Konzert No. 3 (Frankfort, 1957), p. 4.

This is one of the first examples of a cadenza in the clarinet literature. Karl Stamitz rarely found time to work out his concertos carefully and quietly. This probably explains the absence of slur and tie markings over the thirty-second note runs. The harmony lies quite clearly inside the tonic C throughout the cadenza, tracing the arpeggio and scale through small skips and runs.

Arne combined C clarinets with horns in a production of his Thomas and Sally at Covent Garden in London in 1760. Two years later he made use of C clarinets in Artaxerxes.

J. C. Bach made use of D and B^b clarinets that same year in his Orione, which according to Burney was the first occasion on which clarinets were used in an English orchestra. Johann Christian Bach (1735-1782), the youngest son of J. S. Bach, gave up his post as organist at Milan Cathedral to go to London. Orione was his first opera written in London, and it was produced on February 19, 1763. The king and queen were present for the first performances of its run, which lasted nearly three months.



Fig. 18--J. C. Bach's Orione

The arranger Guy Warrack says:

The parts published by Walsh, from which the present edition has been made, are highly inaccurate, and part of my task has been to try and sift the wheat of Bach's intentions from the chaff of Walsh's mistakes. Those parts which are written in small notes (brackets) do not appear in Walsh's parts at all, but something was clearly required there, and these small notes represent my own suggestions.¹⁶

Without the notes in brackets there would be no melody. The only harmony supplied is that of a bassoon playing quarter notes on the last three beats of every measure. This excerpt takes place in the overture where Bach sometimes uses clarinets with oboes and French horns alone for sections at a time.

By 1775 the clarinet was available in most metropolitan centers including Paris, London, Oxford, Lyons, Milan, and Munich. During this last quarter of the century virtuosi came into prominence, following Joseph Beer's example. A more important player to stem from this era was Franz Tausch. Tausch was known for his power of expression and beauty of tone. He placed beauty and gradation of tone ahead of brilliance.

It was for Beer that Karl Stamitz wrote his concertos. His concept of playing was the direct opposite of that of Franz Tausch. Whereas Tausch exemplified the German school of clarinet playing, Beer represented the French school, this being the brilliant and penetrating approach to tone.

¹⁶J. C. Bach, Orione, W. Gillies Whittaker, editor (Edinburg, 1939), p. ii.

These schools of playing still exist today. Beer made the clarinet the popular instrument in France which it has remained ever since. At this time, it may be of interest to note that the mouthpiece was still being used with the reed on the upper lip. Beer, however, was influential in establishing the reed-downwards position after hearing a German clarinetist named Schwarts. The best qualities of both schools were combined by H. J. Bärmann.

Of the works by Stamitz, Beer, Tausch, and Eichner, all but a few were written for the B^b clarinet. The A instrument does not appear until Mozart's time.¹⁷ Anton Stadler, the first Viennese clarinetist of repute, and Johann Simon Hermstedt, for whom Spohr wrote his works, are among virtuosi just before and after the turn of the century.

Although the clarinet was used in the orchestra before Mozart, effective use of the instrument in this medium started with Mozart. It is the opinion of Donington that Mozart was the first composer of genius to exploit the possibilities of the clarinet.¹⁸ Some believe that Mozart's interest in the clarinet was inspired by hearing Arne's Artaxorxes and Bach's Orione in London around 1763.

¹⁷Rendall, op. cit., pp. 84-85.

¹⁸Robert Donington, The Instruments of Music (London, 1951), p. 89.

Then, too, he visited Mannheim in 1777. His E^b Symphony, K. 543, favors the clarinet to the degree that oboes are entirely excluded; for this reason it is sometimes known as the clarinet symphony.

The image displays two systems of musical notation. The first system is labeled 'Fl.' and 'Cl.' on the left. The Flute part is in the upper staff, and the Clarinet part is in the lower staff. Both are in a key signature of two flats (B-flat and E-flat) and a common time signature. The piano accompaniment is shown in a grand staff below the instrument staves. The second system is a continuation of the first, showing the same parts across four measures. The music features a melodic line in the flute and clarinet, with the clarinet often playing in a lower register, and a piano accompaniment consisting of arpeggiated chords in the right hand and a steady bass line in the left hand.

Fig. 19--Theme with accompaniment

The delicate exploitation of the clarinets is in many parts evident, particularly in the trio of the Minuet, where the first carries the melody and the second compliments it with arpeggios in the chalumeau register.

The A clarinet appears not to have been a solo instrument until Mozart revealed its qualities in the Stadler Quintet of 1787, and later in the Concerto, K. 622, of 1791.

This concerto was sketched originally for a basset horn. It cannot qualify as the first clarinet concerto, but it is a first in musical quality and has survived for that reason.

The image displays a musical score for Clarinet in A, marked 'Allegro'. The score consists of five staves of music. The first staff is labeled 'Clarinet in A' and 'Allegro'. The music is written in treble clef with a common time signature (C). The score includes various technical passages such as diatonic and chromatic scale passages, arpeggios, shakes, and trills. The notation includes notes, rests, and dynamic markings like 'sf' (sforzando) and 'tr' (trill).

Fig. 20--Mozart's Concerto, K. 622

The clarinet in A, being a semitone lower in pitch than the B^b clarinet, is perhaps not so well adapted for the execution of florid passages. However, Mozart utilized the A instrument in the Concerto, writing many technical passages for it. In figure 20 the main elements of which virtuosi passages are typically composed are applied here to the clarinet. The example makes use of diatonic and chromatic scale passages, arpeggios, shakes, and trills. This extract is probably

from the original sketch of the concerto for basset-horn, K. 584b.¹⁹ Note in particular how Mozart uses the clarinet throughout transitions in other keys. Composers in the past had usually let the accompanying instruments make the transition while the clarinet would hold notes of longer duration. It is difficult to imagine how Anton Stadler executed these passages on the primitive five-keyed clarinet of his time, even though the actual execution is quite simple for the modern clarinet. Mozart favored the A clarinet also because of its incomparably sweet tone. The timbre seems to match the gentle, elegiac nature of this particular work.

The image displays a musical score for Mozart's Quintet, K. 581, in the Adagio movement. It consists of five staves: Clarinet (Cl.), Violin I (V. I.), Violin II (V. II.), Viola (VI.), and Violoncello (Vc.). The key signature is one sharp (F#) and the time signature is 3/4. The Clarinet part features a melodic line with slurs and ties, while the other instruments provide harmonic support with rhythmic patterns.

Fig. 21--"Adagio," Mozart's Quintet, K. 581

¹⁹Louis Biancolli, The Mozart Handbook (New York, 1954), p. 446.

This is one of the most beautiful passages in all clarinet literature. As in many of his second movements, the clarinet carries the solo throughout the piece. The second movement of the Quintet K. 581, is almost entirely a clarinet solo with muted string accompaniment.

Particular interest should be taken in the comparison of slow movements of the Quintet, K. 581, and the Concerto, K. 622.

Fig. 22--"Adagio," Mozart's Concerto, K. 622

Both slow movements begin by the clarinet stating the melody behind which the strings move in eighth notes. The first three notes of the clarinet parts are the same, as are the key signatures. These melodic movements are expressed superbly by the reticent characteristics of the A clarinet.

Mozart is credited with many "firsts" which are not justly his. Such is his use of the chalumeau register. Faber's "Qui Tollis" makes fluent use of this technique. Mozart, however, applies it in a very unique manner, that of skipping to the chalumeau register from another octave. An example of this can be found in the "Larghetto" of the Quintet, K. 581:



Fig. 23--Register skip to chalumeau register in a slow movement.

This same type of skip is found in the last movement of the same work at a faster tempo:



Fig. 24--Skips to and from the chalumeau register, "Allegretto con variazioni," Quintet, K. 581

The articulation applied to these register skips has a very pleasing effect that is welcomed for the variety it offers in displaying the contrasting colors in different registers.

Mozart's harmonic structure was admirably adapted to the clarinet as it existed in his time. He found that if the chordal background stayed within closely related keys, florid passages could be written at liberty. An example of this is found in the arpeggiated figures of the first movement of the Quintet:

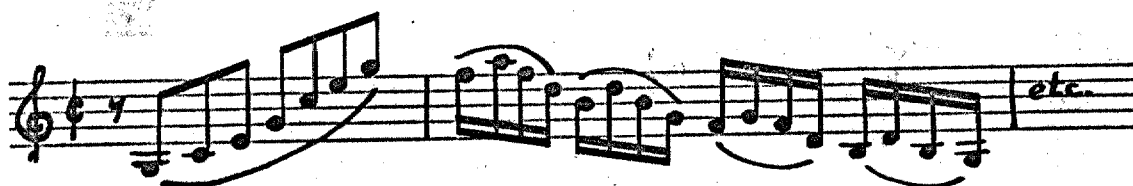


Fig. 25--Florid passage in theme, Quintet, K. 581

At times, Mozart would allow the accompanying instruments to play the underlying harmonies passing to distantly related keys during development passages, while the clarinet would merely outline the harmonies. This can be seen in the following example from the development of the first movement of the Quintet, K. 581:

The image shows a musical score for a development passage from the Quintet, K. 581. The score is written for five staves: Clarinet (Cl.), Violin I (VI), Violin II (VII), Violin III (VI), and Violoncello (Vc.). The key signature is two sharps (F# and C#). The time signature is not explicitly shown but is implied to be 4/4. The clarinet part (Cl.) features a melodic line with a series of intervals that are more linear than those of the other instruments. The other instruments (VI, VII, VI, Vc.) provide harmonic support, with some parts marked *fp* (fortissimo piano). The score is divided into three measures. The first measure shows the clarinet and other instruments playing. The second measure shows the clarinet and other instruments playing. The third measure shows the clarinet and other instruments playing. The score is annotated with Roman numerals and chord symbols: VII (Em) and VII₆ (Em).

Fig. 26--Development passage, Quintet, K. 581

The melodic contours of the clarinet parts by Mozart are more linear than anything else, with the intervals

usually found within the compass of a fourth. An example of this linearity can be found in the opening theme of the Concerto.



Fig. 27--Linear melody

Interpretation in Mozart's works for the clarinet is left largely to the performer, as, for instance, in the lack of dynamic markings for the main theme of the first movement of the Quintet.



Fig. 28--Absence of dynamic marks

At least in our time, customary interpretation of this four-bar phrase would require not only crescendo and diminuendo

over the entire phrase but expressive shading within each of its halves, somewhat as follows:

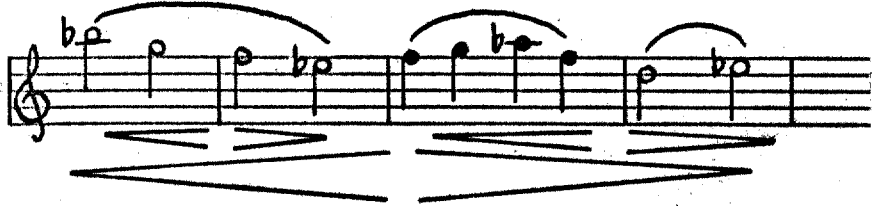


Fig. 29--Intended dynamics

Mozart sometimes wrote the deepest notes of the chalumeau register in the F clef on the fourth line, but an octave below the actual sounds.²¹



to be read as if written



Fig. 30--Use of the F clef

²¹F. A. Gevaert, op. cit., p. 178.

CONCLUSION

This study has endeavored to trace the evolution of the clarinet from the primitive idioglot to the six-keyed instrument it had become by 1800. The chalumeau, the direct predecessor of the clarinet, is shrouded by a veil of mystery. The name "chalumeau" has long been a puzzle of terminology. If the chalumeau did actually enjoy popularity in the sixteenth century, as stated by Rendall, one wonders why Praetorius failed to mention the instrument in his Syntagma Musicum (1618). Its popularity must have indeed been ephemeral, since in Mersenne's Harmonie Universelle (1636-7) of about two hundred years later, the chalumeau was identified only as the chanter (pipe) of a bagpipe! Had the chalumeau not been improved, the instrument might well have never emerged from obscurity. In fact, historians today might not have even known of its existence.

At one time the clarinet and chalumeau were one and the same instrument. There is no record of any music written for the chalumeau until the speaker-key was added and the clarion register was made obtainable. It was not until the chalumeau register and the clarion register were bridged that parts began to appear for the instrument. Johann Christoph Denner, by adding two keys to the chalumeau and bridging the two registers, is accredited with having invented the clarinet.

Historians' opinions vary as to the exact date of Denner's invention; however, one could say that the date lies between 1690 and 1707, the latter date being that of Denner's death. Technically speaking, then, this would mean that the works written as early as 1704 and 1707 by Ziani and Bononcini were actually for the clarinet and not the chalumeau, even though the previously mentioned instrument is merely an improvement of the latter. It would seem that whenever chalumeaux were called for in a score, Denner's clarinets were used, even though the clarinet was probably called a chalumeau for some time after Denner's improvements.

Many works supposedly using the chalumeau were actually intended for the clarion or clarino, the small trumpet of the Baroque. Later composers, such as Mendelssohn and Mozart, offended by the shrill sound of the clarion, replaced the latter by the mellower and darker-toned clarinet. For over a century and perhaps ever since the disappearance of the Baroque clarino, the Italians have identified the title "clarino" with the clarinet family.

In the one-hundred years that followed Denner's development of the chalumeau or clarinet with two keys, the clarinet grew into a major orchestral instrument, for which remarkably virtuosic works were written, even though its mechanism was still quite primitive as late as the beginning of the nineteenth century. For an instrument that had long been considered a poor second to the flute and oboe, the rapid development and

acceptance of the clarinet into the major orchestras of Europe is truly remarkable.

Today the clarinet is a highly-refined and precision-built instrument. While it possess a range greater than that of any other wood-wind instrument, it is also capable of sounding a wider range of dynamics. The clarinet family, including the contra-bass instruments in B^b and E^b, the bass in B^b, the alto in E^b, the basset-horn in F, the soprano instruments in A, B^b, and C, and the sopranino clarinets in E^b and D, boasts of more instruments covering a wider pitch spectrum than any other wind instrument today. Perhaps entire symphonies will one day be written for the clarinet choir alone.

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