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The E-flat Contra Alto Clarinet by Maldura (1881) and B-flat Contra Bass Clarinets by Besson (1890)

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During the early nineteenth century, as found in surviving instruments and patents, several European makers produced a contra bass clarinet, two octaves below the normal size clarinet. These include contra basses in B-flat or C and contra altos in F or E-flat by Dumas of Paris in 1808; Streitwolf of Göttingen in 1829; Wieprecht and Skorra of Berlin in 1839; Kruspe of Erfurt in 1850; Adolphe Sax of Paris in 1851, and Louis Müller of Lyon in 1855. Most instruments are in either bassoon or ophicleide shapes except Sax's saxophone-shaped contra alto clarinet developed by 1862.¹ However, very few were adopted by players or available for purchase. The impetus for the development after 1880 of these large and expensive instruments was to provide a playable, loud contra bass to balance the newest, powerful woodwinds in wind bands and to introduce a novel tone color in opera orchestras. During the late nineteenth century, two large manufacturers began to produce modern designs: Maldura in Milan with a contra alto clarinet in E-flat in 1881, and Besson in Paris and London with a contra bass clarinet in B-flat in 1890, both represented in the Metropolitan Museum of Art in New York City. Because previous published information is lacking or incomplete, this article discusses the design, construction, dissemination, and use of these late nineteenth century giants.

Alessandro Maldura's E-flat Contra Alto Clarinet (1881)

In 1850, Alessandro Maldura established his woodwind and brasswind factory in Milan. The factory made all types of woodwind instruments and received a first class medal at the 1863 Milan Exhibition, a medal for instruments at the 1868 Turin Exhibition, and at the 1881 Milan Exhibition exhibited a B-flat bass clarinet and its new E-flat contra alto clarinet called a contrabasso.²

1. See Albert R. Rice, *From the Clarinet d'Amour to the Contra Bass: A History of Large Size Clarinets, 1740-1860* (New York: Oxford University Press, 2009), 324-38.

2. "Questa fabbrica, già premiata con medaglia di prima classe a Milano nel 1863, dal Regio Istituto di scienze, lettere ed arti, con altra medaglia all' esposizione dei

In 1866, Maldura took out a six-year Italian patent for a thirteen-key bass clarinet, the clarone Maldura, or Maldura bass clarinet.³ Italian opera composers were the first to write for the bass clarinet in 1834, and by the 1870s, it was part of many civic and military bands such as the Municipal Band of Milan.⁴ During this time, Maldura was one of the few Italian makers who manufactured his own bass clarinets.⁵ The patent

saggi industriale di Torino nel 1868, Claroni, Ottavini, Terzini, Flauti, Oboe, Corno inglese e Fagotti. Alla fabbrica Maldura devesi l'invenzione del Claroni, in varie tonalità; Piccoli in *Mib.* e *Fa* grandi in *Sib* e *Mib* bassi." Giovanni Pelitti, *Relazione sugli istrumenti in legno, in ottone ed a percussione presentati dalle diverse fabbriche alla Esposizione Nazionale di Milano 1881*, Milano, 1881, quoted in a communication to the author from Francesco Carreras. See also "Esposizione Nazionale di Milano 1881, Rapporto sugli istrumenti musicali," *Gazzetta Musicale di Milano* XXXVIII, no. 96 (July 1, 1883): 241; William Waterhouse, *The New Langwill Index: A Dictionary of Wind-Instrument Makers and Inventors* (London: Tony Bingham, 1992), 251.

3. Maldura's six-year patent is entitled "Attestato di privativa industriale per anni sei a datare del 31 marzo 1866, rilasciato al Aig. Maldura Alessandro a Milano, per un trovato che ha per titolo: — Clarone Maldura" (5 Febbraio 1866 – Vol. 6.º N.º 346). He describes the Clarone as equal to the clarinet with a similar but larger proportioned mouthpiece; it has the same compass as the clarinet in B-flat but an octave lower. "The sound of the Clarone is similar to the human voice divided into four different registers. First, it has the sound of the cello and the bass in its range from e to e¹ [written pitches sound two octaves lower]. Second, from f¹ to b, a sound similar to the bassoon. Third, from c² to c³ it sounds like a true human voice between the cello and the English horn. Fourth and finally from d³ to a³ it is the flute sound of the clarinet in A."

4. In 1878, the Municipal Band of Milan consisted of forty instruments with a reed section of two E-flat soprano clarinets, seven B-flat clarinets, and alto and bass clarinets. See Temistocle Pace, *Ancie Battenti: Storia-Fisica-Letteratura* (Firenze: Carlo Cya, 1943), 157.

5. In 1870, the opera company in Brescia produced Meyerbeer's opera *Dinorah*. Alcibiade Gerardi wrote for advice concerning the bass clarinet part to Franco Faccio, assistant conductor at the La Scala Theater in Milan from 1869 to 1870 and conductor from 1871 to 1889. "As soon as I received your letter I went straight to Maldura [Alessandro Maldura, an instrument maker in Milan], who is the only one in Italy licensed to make Claroni [bass clarinets]. He explained the reasons why he couldn't and wouldn't rent out the instrument in question, and added that he would make me one specially (not having any in stock) for the reduced price of 160 Lire. You should find out whether or not the instrument, already widespread among military bands, is in the possession of the regiment in Brescia at the moment; if not, I would advise you to induce the city council to buy it. Once its job in the theatre is finished, it could be passed on to the city band and sing, with its melodious voice, the praises of the Municipality. Anyway, you will find the best way of sorting this out, also so this blessed Clarone, which is absolutely necessary for performing *Dinorah* properly, can show off its voluptuous form to our respectable lady theatre-goers." Claudio Sartori, "Franco Faccio e venti anni di spettacoli di fiera al Teatro Grande di Brescia. Carteggi e documenti inediti," *Revista musicale italiana* xlii (1938): 8–9; quoted in Fabrizio Della Seta, "From the Glicibarifono to the Bass Clarinet: A Chapter in the History of Orchestration in

drawing (fig. 1) shows a bass clarinet with a two-part body; thirteen keys as used on the common soprano clarinet; plateau or plate keys for L1, L3, R1, and R3; a prominent bell; and large swan-shaped neck. An example (fig. 2) that is very similar to the patent drawing is a bass clarinet from the Gorga collection (no. 3256) in the Museo Nazionale in Rome.⁶

Maldura's E-flat contra alto clarinet in the Metropolitan Museum (no. 89.4.2819) is the earliest surviving example and was likely exhibited in 1881 in Milan. It has an unmarked large mouthpiece and is similar to his bass clarinet (fig. 3), divided in two grenadilla sections with wide nickel-silver ferrules; thirteen pillar-mounted nickel-silver keys attached to oval-shaped plates; plateau keys for L1, L3, R1, and R3; a large prominent nickel-silver bell; and a nickel-silver swan-shaped neck. There are two register keys; a second or upper register key is located on the nickel-silver neck for playing more securely in the high register. It is stamped on the brass bell: "MibeMol" (E-flat) and on the body: "(flower) / MALDURA / MILANO / (flower) / CON BREVETTATO / (spade)," referring to the design of his 1866 bass clarinet patent. This is the only known example, although others may exist. The total length of the instrument is 1,930 mm with a bell diameter of 203 mm.⁷

During the late nineteenth century, Maldura's E-flat contra alto clarinet is in some wind band scores. For example, contra alto clarinets in F and E-flat are discussed by Alessandro Vessella in his *D'Instrumentazione per Banda (Instrumentation Studies for Band)* published in 1897 by Ricordi in Milan. Vessella (1860–1929) was the band director of the Banda Comunale in Rome from 1885 to 1924, taught at the Liceo Musicale, and was influential in improving band music in Italy.⁸ In his book, Vessella provides two examples of a quartet for B-flat clarinet, F alto, B-flat bass, and E-flat contra bass (fig. 4). A transcription of Antonio Bazzini's string

Italy," *The Opera Orchestra in 18th- and 19th-Century Europe. II. The Orchestra in the Theatre-Composers, Works, and Performances*, eds. N. M. Jensen and F. Piperno (Berlin: BMV Berliner Wissenschafts-Verlag, 2008), 345, note 42.

6. The author thanks Francesco Carreras and Renato Meucci for the photo of the Maldura bass clarinet and for help to gain access to the Museo Nazionale in Rome in 2010.

7. The author thanks Jayson Dobney and Joseph Peknik for information, a photo, and access to this instrument and the musical instrument collection at the Metropolitan Museum of Art in 2012.

8. *The New Encyclopedia of Music and Musicians*, ed. W. S. Pratt (New York: The Macmillan Co., 1929), 820; "Vessella, Alessandro," *Enciclopedia della Musica* (Milan: Ricordi, vol. 4, 1964), 494.



FIGURE 1. Alessandro Maldura, Milan, bass clarinet Italian patent illustration (1866), vol. 30, 2168.



FIGURE 2. Maldura, Milan, B-flat bass clarinet, ca. 1870, Museo Nazionale, Rome, 3256. With permission from the Museo Nazionale, Rome.



FIGURE 3. Maldura, Milan, E-flat contra alto clarinet, ca. 1881, Metropolitan Museum of Art, New York, 89.4.2819. With permission from the Metropolitan Museum of Art, New York.

quartet is for six B-flat first clarinets, six B-flat second clarinets, two F alto clarinets, two B-flat bass clarinets, and one E-flat contra bass. Finally, Verdi's *Prestissimo* from his *String Quartet in E minor* is transcribed for two E-flat clarinets, six B-flat first clarinets, six B-flat second clarinets, two F alto clarinets, two B-flat bass clarinets, and an E-flat contra bass clarinet (fig. 5).⁹ The lowest parts were for Maldura's E-flat contra alto clarinet.

9. Alessandro Vessela, *Studi D'Istrumentazione per Banda* (Milano: G. Ricordi & C., 1897), 27, 96, 103.

B

CLARINETTI

SOPRANO *in srb*

CONTRALTO *in Fa*

BASSO *in srb*

CONTRABASSO *in Mib*

C

CLARINETTI

PICCOLO *in Mib*

SOPRANO *in srb 1^{mo}*

SOPRANO *in srb 2^{do}*

CONTRALTO *in Mib*

o 100752 o

FIGURE 4. Alessandro Vessela, Two quartets from Vessela, *Studi d'Instrumentazione per Banda*, Milan, 1897.

Later Contra Alto Clarinets

Not long after Maldura's contra alto clarinet appeared, a contra alto clarinet in F was developed by Albert Frères in Brussels by 1886. This instrument had some success and was included in some clarinet choirs. From 1871, Gustave Poncelet, clarinet professor at the Brussels Conservatory, directed a twelve-member clarinet choir; in 1886, it included several soprano clarinets, a basset horn, and an F contra alto by Albert Frères.¹⁰ In 1898, Poncelet's clarinet choir consisted of thirty-five clarinets, including Albert's metal contra basset horn in F and a Besson contra bass clarinet in B-flat.¹¹ During the late 1920s, Simeon Bellison's sixteen-member clarinet choir in New York included an Albert contra alto along with two bass clarinets and two altos.¹² In Italy, Pietro Mascagni's operas *Lodoletta* (1917) and *Il Piccolo Marat* (1921) probably used an Albert Frères F or E-flat metal contra alto.¹³

Marthe Besson's Contra Bass Clarinet (1889)

In 1837, Gustave Besson established a brass instrument making company in Paris and in 1858 a factory in London. After Besson's death in 1874, his widow, Cécile, and her daughter, Marthe Josephine Besson, continued the firm. Marthe trained as a maker under her father and from 1878 was responsible for all the firm's patents. Marthe headed the firm after the death of her mother and married Adolphe Fontaine in 1880. Afterward, the company in Paris was named Fontaine-Besson; the London factory was F. Besson & Co. In 1888, Marthe became sole proprietress of the business, supervised manufacturing, and patented a number of brass instrument designs.

10. "A Concert of Clarinets," *The Musical World* 64, no. 28 (July 10, 1886): 437; see also Pamela Weston, *Clarinet Virtuosi of the Past* (London: Robert Hale, 1977), 197.

11. Wilhelm Altenburg, "Die Contrabass-Klarinette von Fontaine-Besson und Poncelet's Klarinett-Concerte," *Zeitschrift für Instrumentation* 19, no. 5 (November 11, 1898): 122. Rendall identified the F contra alto as made by Eugène Albert in Brussels, F. Geoffrey Rendall, *The Clarinet*, 3rd ed., rev. P. Bate, London: Benn, 1971, 149.

12. See Kalman Bloch, "Reminiscences on Simeon Bellison," *The Clarinet* 35, no. 3 (June 2008): 65 (photo).

13. See Pace, *Ancie Battenti*, 163. Pace also notes that Mascagni required a "Clarinetto grave o Contrabasso o Controclarone in mib" (contra bass in E-flat) in the film music "Rhapsodia Satanica: Poema cinema-musicale" (1915). See Pace, *Ancie Battenti*, 163 engraved as fig. 81; Roger Fleury, *Pietro Mascagni: a Bio-Bibliography* (Westport, CT: Greenwood Press, 2001), 133–38, 142–51, 158–59.

Besson developed a prototype contra bass clarinet in 1889 that is not extant. However, an engraving appeared in an advertisement for several new Besson instruments in the 1894 *Annuaire des Artistes de l'enseignement dramatique & Musical* (fig. 6).¹⁴ It was called a “clarinette pédale” in order to distinguish it from other bass clarinets, and Besson frequently had to explain the name since it reminded people of an organ stop or organ pedal. The instrument consists of several sections joined together, beginning with a mouthpiece on a brass crook followed by a wooden section with one or more register keys on the back. A brass U-joint is joined to a wooden left-hand section with plateau keys for L1, L2, and L3, and keys for the left-hand little finger. A U-joint placed at the top inserts in a long wooden right-hand section with plateau keys and keys for the right-hand little finger. A large metal section with a U-bend at the bottom ends with a long bell and three keys beyond low E for E-flat, D, and C. Not all the keys are visible on the upper joint, but those seen resemble the later patent illustrations and the shapes and placements on extant instruments. The extended length of this contra bass was about sixteen feet, and an English report of December 1891 described it as “a very large instrument, and the musician has to rest it on a stand while playing.”¹⁵

Marthe Besson's Patents (1890–1892)

On August 5, 1890, Marthe Besson submitted a fifteen-year French patent for a re-designed pedal clarinet or B-flat contra bass clarinet under Adolphe Fontaine-Besson's name. It was approved on November 29, 1890, and an addition with corrections was submitted on September 18, 1890 and approved on January 15, 1891.¹⁶ A second patent for fourteen years was approved in 1891 in England; the third patent was approved in 1891 in Spain for twenty years; a fourth patent was applied for in Belgium in 1891, and the fifth patent was approved in 1892 in

14. *Annuaire des artistes*, huitième année (1894): 380. Accessible from the Bibliothèque Nationale de France, <http://gallica.bnf.fr>.

15. “London Correspondence. (By Freeman Special Wire, From Our Correspondent), *Freeman's Journal and Daily Commercial Advertiser* (Dublin, Ireland), December 23, 1891.

16. “Brevet d'Invention des quinze ans, pour nouvel instrument établi à l'octave inférieure de la clarinette basse et dénommée Clarinette Contre-basse Si b” French patent, no. 207,422. The author thanks Robert Adelson for this patent. The text and the addition are reprinted in *Description des machines et procédés pour lesquels des brevets d'invention ont été pris sous le régime de la loi du 5 juillet 1844*, vol. 65, 4th part, Année 1890, (Paris: Imprimerie Nationale, 1893): 17–8.

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 et Colonne, de la Garde de Paris et de toutes les Musiques civiles et militaires en réputation.

52 MÉDAILLES et DIPLOMES D'HONNEUR, la seule MÉDAILLE D'OR décernée
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 DANS
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CORNOPHONE

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SAXOPHONES
 NOUVELLE PERCE
 et
 Clés additionnelles

LES
 "CORNOPHONES"

LA
 CLARINETTE PÉDALE

BASSES
 et
CONTREBASSES
 Nouvelles proportions



CLARINETTE PÉDALE (Brevetée)

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CLAIRONS, TROMPETTES
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FIGURE 6. Advertisement for F. Besson, B-flat clarinette pédale (contra bass clarinet), *Annuaire des Artistes de l'Enseignement Dramatique et Musical* (1894), 8th year, 380.

Germany.¹⁷ The English and German patents are for a period of fourteen years each and are translations of the French text;¹⁸ the Spanish patent includes texts from the French and slightly changed English patents. The Madrid patent office appointed Ramón Díaz, a physicist, to write a technical report and certify that the instrument could be manufactured. Díaz states that he inspected an instrument in Madrid that followed the French patent, and that the maker and musician, Enrique Marzo, had the machinery and materials necessary to manufacture the instrument in Spain.¹⁹ The pedal clarinet arrived in the United States for the 1893 Chicago International Exposition. Thus, Marthe Besson and her company were anticipating selling and marketing the contra bass clarinet in all six countries. From this point, the pedal clarinet is called the contra bass clarinet.

The clearest illustrations of the contra bass clarinet appear in the English patent (fig. 7) and in an engraving from Charles Day's report on the 1890 London International Exhibition (fig. 8).²⁰ They show an instrument built in three unequal wooden sections joined by brass U-joints. The mouthpiece on a crook is affixed to a wooden joint having two register keys; a U-joint connected to the left-hand section with plateau and other keys; and a U-joint at the top of the instrument connected to a long right-hand section with plateau and other keys, ending with a long, curved brass bell. The key mechanism is the same as a basic thirteen-key clarinet with seven plateau keys (one for the left thumb and three for the first three fingers of each hand) and five or six additional

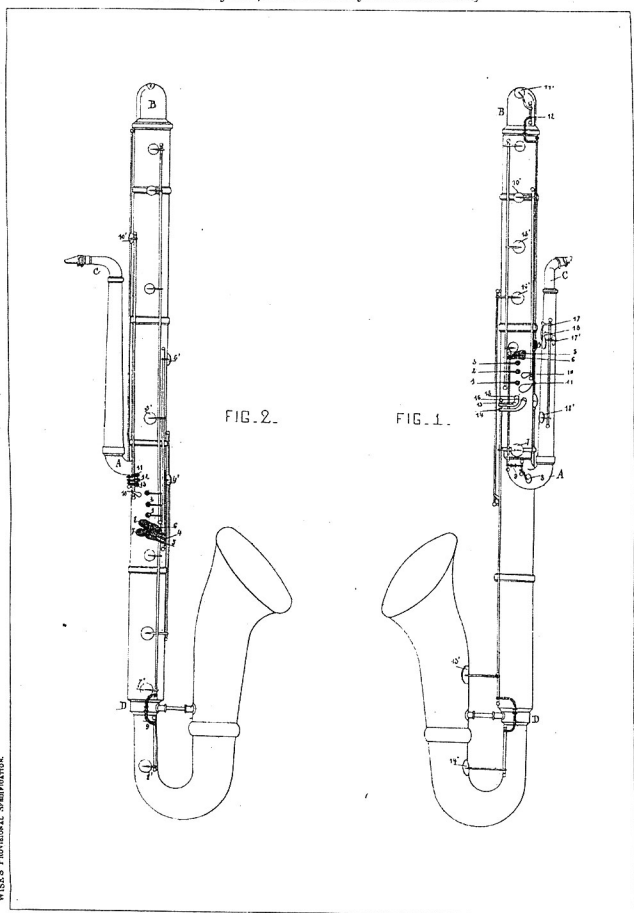
17. The author thanks Denis Watel for information on the Belgian patent.

18. Provisional Specification, "A New Wind Musical Instrument of the Clarionet Family. A communication from Adolphe Fontaine-Besson, of Paris, France, Manufacturer of Musical Instruments." English patent, no. 16,357; Patentschrift. Fontaine Besson in Paris. Contrabass-Clarinet. German patent, no. 64,576. For reproduction of German woodwind patents, see Günter Dullat, *Blasinstrumente und Deutsche Patentschriften 1877–1970 Holzblasinstrumente* (Nauheim: n.p., 1987); see also Dullat, *200 Jahre Patente, Privilegien und Gebrauschmuster in internationalen Holz- und Metallblasinstrumentenbau* (Wilhelmshaven: F. Noetzel, 2010).

19. Spanish patent, "Memoria descriptiva correspondiente à una solicitud de patente de invencion por 20 años à nombre del Sor. Fontaine Besson, vecino de Paris, (Francia), por un nuevo instrumento musico que se titula clarinete pedal, contrabajo à bajo profundo," 9 August 1893, no. 12,353; "Espediente número 12,353" and Certifico [Technical Report], 28 July, 1893. The author thanks Pedro Rubio for the Spanish patent and technical report and for the translation of the documents.

20. Charles Russell Day, *A Descriptive Catalogue of the Musical Instruments recently exhibited at the Royal Military Exhibition, London, 1890* (London: Eyre & Spottiswoode, 1891), 108.

[This Drawing is a reproduction of the Original on a reduced scale.]



Patented by Fontaine and Besson, and Co. Ltd.
for the Kingdom of Great Britain.

A.D. 1890, Oct. 14, No. 16,357
WESSB Patent Office, Birmingham.

FIGURE 7. Fontaine-Besson, B-flat contra bass clarinet, English patent illustration (1891), 16,357.



CONTRA-BASS CLARINET.

FIGURE 8. F. Besson, B-flat contra bass clarinet from C. R. Day, *A Descriptive Catalogue of the Musical Instruments Recently Exhibited at the Royal Military Exhibition, London, 1890*, London, 1891, 108.

low notes for E-flat, D, D-flat, C, B, and B-flat, twenty-six or twenty-seven keys in all. These include two register keys and a separate key for the middle register b-flat (written "B \flat ¹") on the dorsal side. The patent text states that it may be made with either fifteen keys or with a Boehm-system mechanism. The keys are mounted on long rods as seen on the

example in the Brussels Museum (fig. 9).²¹ This contra bass was considerably simplified using twenty-one keys; the key touches on the front are repositioned; seven keys are removed from the front; and the crook is cylindrical rather than conical. According to Altenburg, the Brussels Conservatory of Music acquired this contra bass in 1894.²² All the patents show only the original design of the Besson contra bass clarinet, but starting in 1892, Besson & Co. in London marketed a smaller, simpler instrument designed for military bands.

Marthe Besson's Promotions and Concerts

Besson's contra bass clarinet was not included at the Paris 1889 exhibition or at the London 1890 exhibition. The instrument was described but not listed in the Paris 1889 exhibition catalog by Constant Pierre,²³ and in the London 1890 exhibition catalog by Charles Russell Day.²⁴ In addition, both writers use similar illustrations likely supplied to them by Besson with similar descriptions, although Pierre gives a detailed account of the fingering.

Besson's promotion of the contra bass clarinet, a family of corno-phones (brass instruments with forward-pointing bells in different sizes), and various other brass instruments began in the British press by December 1891. Music recitals given at Besson's showroom on Euston Road in London featured these instruments on December 8 and 9, 1891 and December 21 and 22, for a total attendance of 1,200. Along with several demonstrations, Louis-Albert Bretonneau, bass clarinetist of the Paris Opéra Comique, began the recital by playing the contra bass clarinet in arrangements of a "Hymn" by Haydn and "Esclarmonde" by Massenet. The audience included many musicians, conductors, and heads of music

21. Color photograph in Roger Bragard and Ferdinand J. De Hen, *Les instruments de musique dans l'art et l'histoire*, Rhode-St-Genèse (Belgium: Albert De Visscher, 1967), VI-6; Roger Bragard and Ferdinand J. De Hen, *Musical Instruments in Art and History*, trans. B. Hopkins (New York: The Viking Press, 1968), VI-6.

22. Altenburg, "Die Contrabass-Klarinette von Fontaine-Besson und Poncelet's Klarinett-Concerte," 122.

23. Constant Pierre, *La Facture Instrumentale a L'Exposition Universelle de 1889: Notes d'un musicien sur les instruments à souffle humain nouveaux & perfectionnés* (Paris: Libraries de L'Art Indépendant, 1890), 19–20, 77–82. Alfred Picard does not list a Besson contra bass clarinet in *Exposition Universelle Internationale de 1889 à Paris: Rapports du jury International, Groupe II, 2^e partie – Matériel et procédés des arts liés* (Paris: Imprimerie National, 1891), 532–34.

24. Day, *A Descriptive Catalogue of the Musical Instruments Recently Exhibited at the Royal Military Exhibition, London, 1890*, 108–09.



FIGURE 9. F. Besson, Paris, B-flat contra bass clarinet, 1892–1894, Musical Instrument Museum, Brussels, JT0353. With permission from the Musical Instrument Museum, Brussels.

schools including George Grove, Lord Chelmsford, Col. Shaw-Hellier, Edmund Turpin, Luigi Arditi, Alberto Randegger, Alfred Hipkins, John Spencer Curwen, David Blaikely, and the well-known clarinetists Henry Lazarus and John Maycock.²⁵

25. The original report appeared in the *Daily Chronicle*. Shorter reports of the concert appear in: "London Correspondence," *Freeman's Journal and Daily Commercial Advertiser* (Dublin), December 23, 1891; and "Messrs. F. Besson & Co.'s new 'Pedal'

By January 1892 several descriptions of the contra bass clarinet were printed in Germany, England, and America, all extolling its virtues of clear and distinct tone throughout the registers, a rich quality with an equal facility to produce fortissimo or pianissimo tones, and its light weight with the use of a special, expensive wood.²⁶ In Paris, Besson began advertising the contra bass clarinet on October 30, 1892 in *Le Monde Musical*.²⁷ In early 1893, a recital featured the contra bass clarinet and cornophones at F. Besson's showroom in Paris, along with special tests of each instrument for a group of French composers, judged by Charles Gounod and the composer Victorin de Joncières. They concluded that both brought new tone colors to the composer and all resolved to include parts for them in future works.²⁸

At the May 1893 World's Columbian Exhibition in Chicago, a prototype of Besson's contra bass clarinet was exhibited and successfully played, probably by Brettoneau.²⁹ During the same year, Richard Kohl, professor at the New York Conservatory of Music, played the contra bass clarinet at a concert at Festival Hall "in a masterly manner," and was engaged to play with the New York Symphony Orchestra.³⁰ Kohl, who also played the basset horn, demonstrated Besson's contra bass clarinet in Germany during 1898 where it met with the warmest approval from

Clarinet," *The Orchestral Times and Bandsman* 5 (January 1892): 6–9; "Messrs. Besson's Pedal Clarinet," *Musical Opinion & Music Trade Review* 15, no. 172 (January 1892): 154; see also Rendall, *The Clarinet*, 151. The author thanks Ingrid Pearson for copies of the *Freeman's Journal and Daily Commercial Advertiser* and *The Orchestral Times and Bandsman*.

26. The wood on the extant examples is stained maple. *The Musical Times* 33 (January 1, 1892): 43; "Vermischtes. Die neue Contrabaß-Clarinetten von F. Besson in Paris," *Zeitschrift für Instrumentenbau* 27, no. 11 (January 11, 1892): 170; *Philadelphia Inquirer* (January 18, 1892); *The Musical Times* 33 (April 1, 1892): 209.

27. *Le Monde Musical* (October 30, 1892): 200; repeated throughout 1892 and into 1893.

28. See *Musical Opinion & Musical Trade Review* 16, no. 186 (March 1, 1893): 330; Altenburg, "Die Contrabaß-Klarinette von Fontaine-Besson und Poncelet's Klarinetten-Concerte," 121.

29. *Musical Instruments at the World's Columbian Exposition* (Chicago: Presto Co., 1895), 248; "The World's Fair at Chicago," *Musical Opinion & Music Trade Review* 16, no. 189 (June 1, 1893): 556; "When the band plays: its music tells of late improvements in the realm of tones. Two new instruments which have received the high approval of Gounod and his colleagues. Important European novelties shown for the first time here—a family of inventors—juror's report," *The Daily Inter Ocean* (Chicago) XXII, no. 160 (June 1893): 5. The author thanks Jane Ellsworth for this article.

30. "When the band plays," *The Daily Inter Ocean* (Chicago) XXII, no. 160: 5.

Richard Strauss, Artur Nikisch, and Felix Mottl.³¹ At the Paris International Exhibition of 1900, Besson exhibited the contra bass clarinet among a number of instruments.³² In 1902 Kohl substituted his contra bass clarinet for the contra bassoon in Richard Strauss' *Serenade*, op. 7 at a chamber music concert in New York;³³ and in 1912, Kohl joined the well-known Barrère Ensemble using a contra bass clarinet to play the contra bassoon parts in Mozart's *Serenade in B-flat* and in Strauss' *Serenade*, op. 7.³⁴ Photos of Kohl (figs. 10–11) in 1917 and about 1924 show him playing a contra bass clarinet with a long bell and one more key than appears on the Brussels instrument.³⁵ The contra bass clarinet and cornophones were awarded gold medals at the Universal Exposition in Saint Louis in 1904,³⁶ at the Universal Exposition in Liège, Belgium in 1905,³⁷ and were listed in a 1905 Besson advertisement.³⁸

Besson's Production

In Besson's London factory during January 1892, machinery was completed to construct a military band contra bass clarinet with the thirteen keys of a simple-system clarinet.³⁹ In June, a first batch was sold, and a

31. "Vermischtes. Der Gruppe der Holzblas-Instrumente," *Zeitschrift für Instrumentenbau* 18 no. 32 (August 11, 1898): 854. This description is repeated in *Musical Opinion & Music Trade Review* 21, no. 252 (Sept. 1898): 806; "A New Wind Instrument," *Musical Opinion & Music Trade Review* 21, no. 252 (Sept. 1898): 845; "Passing Notes," *The Nonconformist Musical Journal* 11, no. 129 (Sept. 1898): 139. Kohl is sometimes mentioned as the inventor of his bass clarinet, although the actual manufacturer, F. Besson, is not mentioned. It is possible, however, that Kohl modified his contra bass clarinet.

32. Advertisement placed in *Le Monde Musical* (1900–1901): 74–5; in the Collection of the Musée de La Couture Boussey, and the Combulive Collection, Ivry-La-Bataille.

33. "Chamber Music at the Aschenbroedel," *New York Times* (January 27, 1902).

34. "Music Here and There," *New York Times* (December 1, 1912). For a discussion of the Barrère Ensemble's concerts and repertoire, see Nancy Toff, *Monarch of the Flute: The Life of Georges Barrère* (New York: Oxford University Press, 2005), 111–49, especially 121.

35. Figure 12 is from Esther Singleton, *The Orchestra and Its Instruments* (New York: The Symphony Society of New York, 1917), ill. next to 102. Figure 13 is from an unknown source of photographs of New York Symphony Orchestra players, ca. 1924. The author thanks Michael Finkelman for a copy of this photo.

36. *Official Catalogue of Exhibits, Universal Exposition, St. Louis 1904* (St. Louis: The Official Catalogue Co., 1904): 66.

37. G. Dutreih, *Exposition Universelle & Internationale de Liège 1905. Section Française Classe 17 Rapport* (Paris: Comité Français des Expositions a L'étranger, 1909): 55, 58.

38. The author thanks François Camboulive for a copy of this advertisement.

39. "Messrs. F. Besson & Co.'s New "Pedal" Clarionet," *The Orchestral Times and Bandsman* (January 1892): 6–9.



CONTRA BASS CLARINET
(Mr. Richard Kohl)

FIGURE 10. Richard Kohl with F. Besson B-flat contra bass clarinet, Philharmonic Society of New York, ca. 1917.

second batch (with one exception), was ordered. Subsequently, Besson offered two B-flat contra bass clarinets: a military model with the soprano clarinet's lowest note of E (sounding D), and an orchestral model with a lowest note of B-natural (sounding A).⁴⁰ In 1892, several musical organizations purchased the military model, including Gilmore's Band

40. "A New Musical Instrument," *The Pall Mall Gazette* (January 5, 1892); "The Pedal Clarionet," *The Musical Standard* 42, no. 1432 (January 9, 1892), 31; "Mssrs. F. Besson & Co's New 'Pedal Clarionet,'" 7; and "The New Pedal Clarionet," *Magazine of Music* 9, no. 2 (February 1892): 26; the latter includes an illustration of the orchestral model.



DOUBLE-BASS CLARINET
 SYMPHONY SOCIETY OF NEW YORK
Richard Kohl

FIGURE 11. Richard Kohl with F. Besson B-flat contra bass clarinet, New York Symphony Orchestra, ca. 1924.

in New York; the Viennese Philharmonic Society;⁴¹ the 17th Lancers band; and the 1st King's Royal Rifles band.⁴² Later in London, from December 12, 1894 to January 19, 1895, the first Besson contra bass

41. "Messrs. F. Besson & Co.'s New "Pedal" Clarionet," *The Orchestral Times and Bandsman* (June 1892), in notes taken by Geoffrey Rendall.

42. Marthe Besson mentioned pedal clarinets used in these bands, see H. J. S., "Messrs. Besson & Co.'s Factory," *Magazine of Music* 12, no. 12 (December 1895): 266.

clarinet was a part of the Second Musical Exhibition at the Royal Aquarium, a building used primarily for concerts.⁴³

Marthe Besson sold the London firm to Arthur Bryans in 1895; he immediately sold it to a new company consisting of three investors. Fontaine then entered into litigation against his wife for selling the London Company, but the dispute was resolved in 1896.⁴⁴ Considering there are so few extant Besson contra bass clarinets, it is fair to ask how many were made and when were they made. Table 1 lists only six extant examples, two orchestral and four military models, dating from about 1892 to 1930. A diligent search by Arnold Myers and Jocelyn Howell through the minutes of the Directors of the London Besson Company reveals that on January 6, 1897, they discussed "The cost of reviving [the] patent [of the Pedal Clarionet] is to be ascertained & Mr. Fontaine [is] to be communicated with." None of the patents were renewed from any of the five countries which indicates a limited or low interest. On June 9, 1898, the Directors' minutes mention the Pedal Clarionet, "The difficulties attending the manufacture & sale of this Instr were discussed."⁴⁵ This suggests that the Directors decided against manufacturing a number of pedal clarinets, but they likely kept a few in stock up through the 1920s.⁴⁶ The Metropolitan Museum's contra bass arrived by 1902 since it appears in Mary Elizabeth Brown's 1902 catalog.⁴⁷

43. "The Aquarium Musical Exhibition," *The Musical Standard* 47, no. 52 (December 29, 1894): 500. See also *The London Encyclopædia*, eds. B. Weinreb and C. Hibbert (Bethesda, Maryland: Adler & Adler, 1986), 662–63; and Lewis Foreman and Susan Foreman, *London: A Musical Gazetteer* (New Haven: Yale University Press, 2005), 50–1.

44. See Pierre, *Les facteurs d'instruments de musique, les luthiers et la facture instrumentale: précis historiques* (Paris, E. Sagot, 1893), 340–43; Waterhouse, *The New Langwill Index*, 29; Arnold Myers and Niles Eldredge, "The Brasswind Production of Marthe Besson's London Factory," *The Galpin Society Journal* LIX (May 2006): 43.

45. Some of the manufacturing for Besson & Co. contra bass clarinets may have been done in the Paris Besson factory, then assembled or finished in the London Besson factory. Since Besson & Co was separated from its parent company, it would have had to establish dealers in different countries to promote the contra bass clarinets. The author thanks Arnold Myers and Jocelyn Howell for searching through the Besson & Co. Directors' Minute Book at the Horniman Museum (no. A227/179) in 2011.

46. Kathleen Schlesinger devoted Chapter XI to the Pedal Clarinet, lavish with praise in *Modern Orchestral Instruments (History, Structure, Capabilities): A Practical Illustrated Handbook* (London: William Reeves, 1910), 41–3.

47. Mary Elizabeth Brown, *Catalogue of the Crosby Brown Collection of Musical Instruments of All Nations*, vol. I Europe (New York: The Metropolitan Museum of Art, 1902), 135, no. 2639.

TABLE 1. Extant Besson Contra Bass Clarinets.

Location, No., Date	Bell Stamp	Keys	Body Wood	Length (mm)
Brussels, JT0353 1892-1894 Fig. 9	SYSTEME PROTOTYPE (in a banner) / FR (monogram) / F. BESSON / BREVETÉ / S.G.D.G. / 96. RUE D'ANGOULÈME/PARIS / (5-pointed star) / 12 5	21 Nickel-silver: 14 touches, 7 plateau	Black stained maple	1370 (height)
Oxford, Bate, 497 1892-1898 Fig. 17	50 MEDALS OF HONOUR (in a banner) / FB (monogram) / F.BESSON/LONDON / (5-pointed star) / Patented / R.M.S.M. / 1	20 Nickel-silver: 13 touches, 7 plateau	Black stained maple	1110 (height)
London, Horniman, Boosey & Hawkes, 2004.1165 1892-1898 Figs. 18-19	50 MEDALS OF HONOUR (in a banner) / FB (monogram) / F.BESSON & CO. / LONDON / Patented / FROM / Capt Moers / (star)	20 Brass: 13 touches, 7 plateau	Cocus or Blackwood	1110 (height)
New York, Metropolitan, 89.4.2859 1892-1898 Fig. 20	Patented / 50 MEDALS OF HONOUR (in a banner) / FB (monogram) / BESSON & CO. / "Prototype" (cursive) / 198 EUSTON ROAD / LONDON / (5-pointed star)	20 Nickel-silver: 13 touches, 7 plateau	Black stained maple	1110 (height), 3100 (tube length)
London, Horniman, Carse, 14.5/47/45 1892-1898 Fig. 21	FB (monogram) / BESSON & CO. / "Prototype" / 198 Euston Rd. / LONDON / Patented	20 Nickel-silver: 13 touches, 7 plateau	Maple	2865.6 (tube length)
Tokyo, Musashino Academia Musicae, A1060 1920-1930 Figs. 15-16	SYSTEME PROTOTYPE (in a banner) / FB (monogram) / F. BESSON / BREVETÉ / S.G.D.G. / 96. RUE D'ANGOULÈME / PARIS. (5-pointed star) / GRAND PRIX / PARIS 1900	23 Nickel-silver: 16 touches, 7 plateau	Maple	1370 (height), 3175 (tube length)

During the twentieth century, F. Besson in Paris continued to advertise the contra bass clarinet. A large engraving of the back of a contra bass clearly showing the two register keys and B-flat key appears in F. Besson's two full-page advertisements (1900) for its contra bass clarinet, bass cornophone in B-flat, and other brass instruments (fig. 12). Here, Besson proclaims its grand prize in Class 17 and a gold medal in Class 20 at the 1900 Paris International Exhibition.⁴⁸ In F. Besson's 1910 *Catalogue* the contra bass clarinet is prominently featured in the center engraving (fig. 13). F. Besson's 1929 Spanish *Catalogue* (fig. 14) features a large engraving of a military contra bass clarinet next to an alto clarinet, a B-flat Boehm clarinet, and an E-flat Boehm clarinet.

48. In *Le Monde Musical* (1900), 74-75 in the collection in the Musée de La Couture-Boussey, copy from the collection of François Camboulive, Ivry-la-Bataille.

F. Besson

LA CLARINETTE PÉDALE

(BREVETÉE)

« Forval » 1897-1898, PARIS, BRUXELLES, BORDEAUX



C'est avec une fierté bien légitime que nous, abondons l'étude des instruments exposés par cette maison.

Elle fut fondée à Paris, en 1831, par Gustave Besson, homme d'un génie et d'une fécondité inventive extraordinaires dont le nom peut être placé à côté de ceux qui ont le plus brillamment illustré la facture française. Son gendre, M. Fontaine-Besson, est le propriétaire et chef actuel de la maison, et, depuis les 20 années qu'il la dirige, on peut dire que tous ses efforts ont tenu à s'inspirer du génie de son prédécesseur et à, maintenir sa belle fabrication, tout en faisant les plus grands sacrifices et en dépensant son activité, sa volonté, ses convictions et une force de travail considérable pour marcher dans le voie du progrès.

On sait qu'une des gloires de M. Fontaine-Besson est d'avoir créé la clarinette pédale et la famille complète des cors tuba ou cornophones. Nous avons ici-même suffisamment dit à plusieurs reprises toute l'importance artistique de ces nouveaux instruments et les services qu'ils avaient déjà rendus et sont encore destinés à rendre dans l'orchestration moderne.

Nous nous contenterons de rappeler qu'au mois de février 1903, nos plus célèbres compositeurs français s'étant rassemblés chez M. Fontaine-Besson, Goussou qui présidait la réunion, déclara en son nom et au nom de ses confrères, qu'après avoir entendu la clarinette pédale et le cornophone, ces deux instruments étaient adoptés dans l'orchestration et qu'ils apportaient par leur sonorité spéciale « deux nouvelles couleurs à la palette du musicien. » Tous les maîtres présents se joignirent à Goussou pour adresser un vote de remerciements à la maison Besson pour toutes les innovations qu'elle n'a cessé d'apporter à la facture instrumentale.

Ainsi qu'on le voit, la création de ces deux instruments remonte déjà à plus de sept ans, et cependant ils n'ont encore paru à aucune exposition, M. Fontaine-Besson ayant voulu d'abord les présenter à une exposition française. La Clarinette pédale est à l'octave grave de la clarinette basse en si bémol, et elle peut descendre jusqu'au ré bémol; elle complète donc admirablement la famille des clarinettes dont nous voyons aussi la clarinette alto en mi bémol, celles en si bémol et en mi bémol.

Le Cornophone ayant une voix médium entre les instruments de cuivre et les instruments de bois a été créé pour :

- 1° Enrichir et varier l'instrumentation des grands orchestres en y ajoutant un timbre nouveau.
- 2° Doubler le cor dans les grands orchestres.
- 3° Le remplacer dans les musiques militaires, fanfares et harmonies où il est difficile d'avoir et de former de bons cornistes.
- 4° Remplacer aussi le cor, dans les orchestres de théâtre où il y a pénurie d'artistes de profession.
- 5° Remplacer l'alto dont le son criard domine les autres instruments.
- 6° Être joué en famille, en quatuors, quintettes, sextuors, sur la scène et dans les concerts de musique de chambre.
- 7° Être l'instrument indispensable: vu ses qualités, voix pénétrante et veloutée pour l'exécution de la musique sacrée et la conduite des chœurs et orphéons.

Dans la famille de la classe 17, nous trouvons la série complète des instruments de cette famille: soprano, alto, ténor, basse à 4 pistons et contre basse en mi bémol à 3 pistons. Avant de donner le détail des instruments en cuivre, il est bon de rappeler que tous les instruments Besson sont fabriqués sur un même système Prototypé qui est l'invention et la propriété de cette Maison.

Ce système, grâce aux maudrins spéciaux, établissant mathématiquement les proportions, assure même justice et même sonorité que celles acquises pour l'instrument après étude et qualités requises reconnues.

Au point de vue de la perce, les instruments Besson en présentent quatre différentes :

- 1° PERCE DROITE (Brevet 1854). Colonne d'air droite lorsque le 1^{er} et le 3^e pistons sont baissés.
- 2° PERCE à BOISE et baissée dans les 3 Pistons (Brevet 1855). Colonne d'air pliant l'arrangement du 2^e piston dans le Brevet 1854. Cette invention Besson a été reconnue une des plus importantes et est adoptée aujourd'hui par tous les fabricants. Le parcours de l'air étant le même dans toutes les positions donne une agilité parfaite et une belle rondeur de son. Ce système est appliqué aux Instruments réclamant un son rond et molleux, tels que Bugles et Contrebasses, etc.
- 3° PERCE ÉTOILE. Plate et Pleine, (Brevet 1867). Ouvre au 3^e piston; la prise de la colonne d'air possède l'égalité de son de la perce à boise avec plus de brillant; ce système est appliqué aux Instruments dont la voix nécessite des stridents, tels que trompettes, trombones, etc.
- 4° PERCE NOUVELLE ÉTOILE (Brevet 1874). Complétant la perce plate et pleine.

La collection des CORNETS comprend 20 types différents : Nous voyons d'abord l'application des brevets de 1854, 1855, 1872, 1874; puis le Désideratum (son très éclatant pour jouer en

FIGURE 12. Advertisement for F. Besson's clarinette pédale (contra bass clarinet), *Le Monde Musical* (1900), 74. With permission from François Camboulive, Ivry-la-Bataille, France.

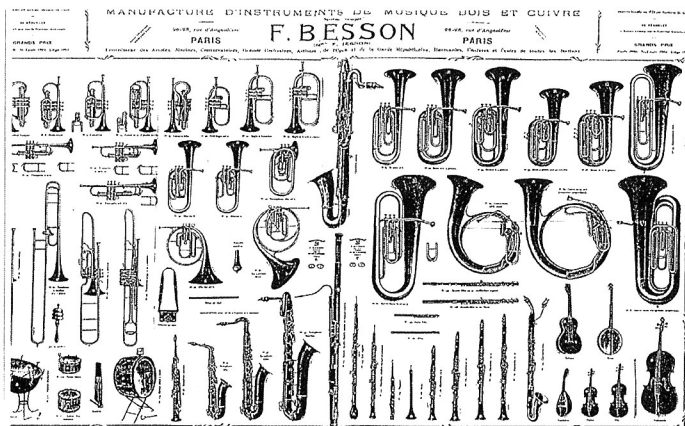


FIGURE 13. F. Besson, Paris, Catalog, ca. 1910 from *Larigot* 5 (May 1989), 20. With permission from Bruno Kampmann.

FABRICA
DE INSTRUMENTOS DE MUSICA
(COBRE Y MADERA)
"Sistema Prctctype"

F. BESSON
(M^o F. Besson)

MANUFACTURE
D'INSTRUMENTS DE MUSIQUE
BOIS ET CUIVRE
PARIS

PARIS
99-98 - Rue d'Angoulême - 99-08

San Telafufo: F0XBESSON-964RIS C64-F.0, Edici. E.B.C.

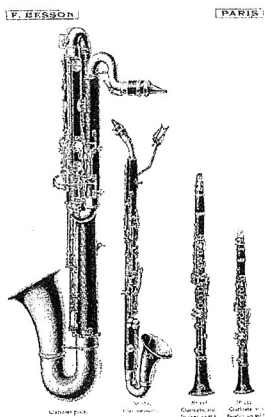


FIGURE 14. F. Besson, Paris and Madrid, Catalog, ca. 1929 from *Larigot* 43 (February 2009), 11. With permission from Bruno Kampmann.

Extant Examples of Besson Contra Bass Clarinets

The two orchestral models have long bells and four or five keys for the right-hand little finger. The earliest example in Brussels follows Boehm-system key work with a lowest note of E. The later example in Tokyo (figs. 15–16) has the longest bell and five keys for the right-hand little finger with a lowest note of E-flat. The four military models have a short bell and follow the simple-system key work with two keys for the right little finger.⁴⁹ They have a lowest note of E. The four military models are in the Bate Collection, Oxford (fig. 17); Horniman Museum, London (Boosey & Hawkes collection, figs. 18–19); the Metropolitan Museum of Art, New York (fig. 20); and the Horniman Museum, London (Carse Collection, fig. 21). All of the Besson contra bass clarinets were made in B-flat and have two register keys with a third thumb key for B-flat'.⁵⁰

Table 1 lists Besson contra bass clarinets by location, approximate date, bell stamp, keys, body wood, and height without the bell length; three include the tube or sounding length. In the stamp, the words "Système Prototype" and "Prototype" began to appear in 1885 or 1886. The word "prototype" is often engraved on brass instrument bells. It does not refer to an early design of an instrument but simply advertised Gustav Besson's 1856 method of making sections of instruments on steel mandrels. This ensured that once the instrument model's design had been determined, all subsequent production would exactly duplicate the original. Most of the contra bass clarinets include "prototype" engraved on the brass bells for publicity purposes. The Brussels contra bass stamp has an FR monogram that stands for Forentine Ridoux, the maiden name of Gustave Besson's widow. On the rest of the contra basses, the stamps have an FB monogram that stands for F. Besson.⁵¹ The height of the orchestral instruments (1370 mm) is longer than the military instruments (1110 mm) because of the length of the body and design of the bell of the orchestral model. The actual tube or air length of the military contra basses is from 2865.6 to 3100; the orchestral bass, 3175 mm, de-

49. Illustrated in Wilhelm Altenburg, "Die Contrabass-Klarinette von Fontaine-Besson und Poncelet's Klarinett-Concerte," 122.

50. Described by Adam Carse for his contra bass clarinet in Carse, *Musical Wind Instruments* [London, 1939] (reprint ed., New York: Da Capo Press, 1965), 174. The author thanks Andrew Lamb and Bradley Strauchen-Scherer for information concerning the contra bass clarinets at the Bate Collection and the Horniman Museum.

51. See Myers and Eldredge, "The Brasswind Production of Marthe Besson's London Factory," 50, 52. The author thanks G ry Dumoulin for information about this contra bass clarinet.

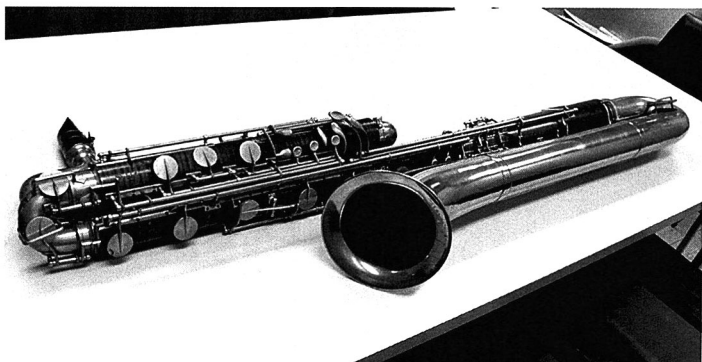


FIGURE 15. F. Besson, Paris, B-flat contra bass clarinet, ca. 1900–1930, Musachino Academia Musicae Museum, Tokyo, A1060. With permission from the Musachino Academia Musicae, Tokyo.



FIGURE 16. F. Besson, Paris, B-flat contra bass clarinet, ca. 1900–1930, Musachino Academia Musicae Museum, Tokyo, A1060, dorsal side. With permission from the Musachino Academia Musicae, Tokyo.

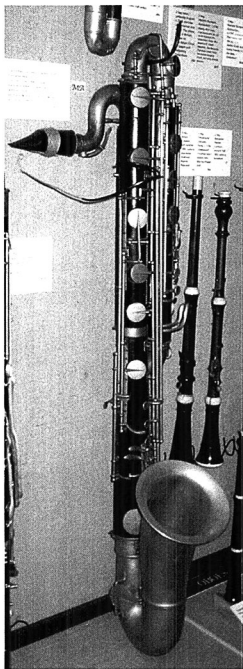


FIGURE 17. Besson & Co., London, B-flat contra bass clarinet, 1892–1898, Oxford University, Bate Collection, 497. With permission from the Bate Collection, Oxford.

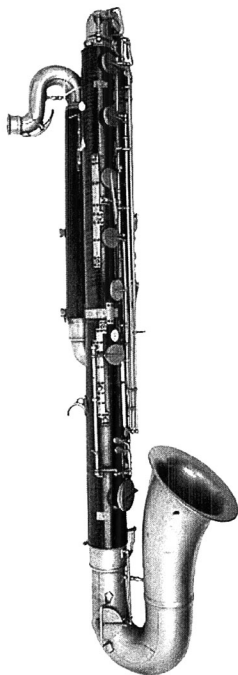


FIGURE 18. Besson & Co., London, B-flat contra bass clarinet, 1892–1898, Horniman Museum, London, Boosey & Hawkes Collection, 2004.1165, front side. With permission from the Horniman Museum, London.

pending on how it is measured. Besson contra bass clarinets were reportedly brought for demonstrations to music conservatories in New York, Chicago, London, and Brussels.⁵² Some schools purchased the instrument, such as the Brussels Conservatory, Nancy Conservatory, Liège (Belgium) Conservatory, and the Military School of Music at Kneller

52. J. L. Casembroot, trans. W. Altenburg, "Moderne Instrumentierung: Die Orchesterbesetzung in der Oper 'Fervaal' von Vincent d'Indy," *Zeitschrift für Instrumentenbau* 18, no. 32 (August 11, 1898): 852.



2004.1165

FIGURE 19. Besson & Co., London, B-flat contra bass clarinet, 1892–1898, Horniman Museum, London, Boosey & Hawkes Collection, 2004.1165, dorsal side. With permission from the Horniman Museum, London.



FIGURE 20. Besson & Co., London, B-flat contra bass clarinet, 1892–1898, Metropolitan Museum of Art, New York, 89.4.2859. With permission from the Metropolitan Museum of Art, New York.

Hall in London.⁵³ The Musashino Academia Musicae bought its contra bass from a dealer in Tokyo in 1974.⁵⁴

53. H. J. S., "Mssrs. Besson & Co.'s Factory," 266; Pierre de Breville and Henry Gauthier-Villars, *Fervaal: Étude Thématique et Analytique*, 2nd ed. (Paris: A. Durand et Fils, 1909), 52, note 2; Martial Dury, "Étude sur la Clarinette," *Musique et Concours* 34 (May 1934): 114 n. 5; Dury, "La Clarinette Contrebasse: son histoire-ses particularités-son emploi," *La Revue Musicale Belge* 10/11 (June 5, 1934): 6; *The London Encyclopaedia*, 439; Foreman, *London: A Musical Gazetteer*, 184.

54. The author thanks Dr. Noburo Morishige for information about the Tokyo contra bass, and Satoshi Kaneko for photos and measurements of this instrument.



FIGURE 21. Besson & Co., London, B-flat contra bass clarinet, 1892–1898, Horniman Museum, London, Carse Collection, 14.5/47/45. With permission from the Horniman Museum, London.

Competing firms that constructed B-flat contra bass clarinets were Evette & Schaeffer of Paris, which patented its metal fourteen-key model with a low E (sounding D) in 1891 (no. 218,375).⁵⁵ It was shown at the 1897 Brussels Exhibition.⁵⁶ A fourteen-key prototype Evette & Schaeffer

55. The patent is listed in *Description des Machines et Procédés pour lesquels des Brevets d'Invention ont été pris sous le régime de la loi du 5 juillet 1844* (1891, part LXXIX): 38. See also William Waterhouse, *The New Langwill Index* (London, T. Bingham, 1993), 110.

56. "Bericht der Jury über die Blasinstrumente auf der Weltausstellung in Brüssel," *Zeitschrift für Instrumentenbau* 18, no. 7 (December 1, 1897), 164. The author of this reported listed an Evette & Schaeffer contra bass clarinet in F, but because these instruments are not known to have been made, it was likely in B-flat.

contra bass clarinet with seven plateau keys (for a total of twenty-one keys) was made about 1891, (serial no. 5) is in the Watel collection (fig. 22). It includes a low E-flat key added during the 1930s-1940s in the Buffet-Crampon shop.⁵⁷ Wilhelm Heckel of Biebrich made a metal 13-key model with a low E in 1898 (fig. 23)⁵⁸ which began to be marketed in 1902. In Heckel's 1906 catalog, the firm offered three varieties of low clarinets: a contra basset horn in F, a contra bass clarinet in B-flat, and a "pedal clarinet" in B-flat.⁵⁹ The Buffet-Crampon Company was reorganized in 1929 and during the 1930s began producing a Boehm-system contra bass that was later redesigned with a differently shaped neck. An example by Buffet-Crampon et Cie (ca. 1935) is in the Watel Collection (fig. 24).⁶⁰

Music for the Besson Contra Bass Clarinet

Vincent d'Indy was the earliest composer to write for Besson's contra bass clarinet in his opera *Fervaal* orchestrated between 1893 and 1895,⁶¹ and first performed on March 12, 1897 at the Théâtre Royal de La Monnaie in Brussels. Bretonneau played the B-flat contra bass and, as required in the score, doubled on bass clarinet in B-flat and bass clarinet in A.⁶² Later performances were in Paris on May 10, 1898 at the Théâtre National de l'Opéra Comique and on January 3, 1913 at the Academie Nationale de Musique.⁶³ The contra bass clarinet plays only in the second and third acts but in a prominent role. D'Indy notes that "The role

57. William Rousselet & Denis Watel, *Le Livre d'Or de la Clarinette Française: Index de facteurs et des marques illustré par les instruments de l'ancienne collection Rousselet*, Paris: Association des Collectionneurs d'Instruments de Musique à Vent, 2012, 68.

58. Wilhelm Hermann Heckel, *Der Fagott* (Leipzig: Merseberger, 1931). The contra bass clarinet is in the Heckel Collection, Biebrich.

59. "Fabrik seiner Blas-Instrumente von Wilhelm Heckel, Preisliste über seine Instrumente," Ausgabe 202 [Biebrich: W. Heckel, 1906], 5. The revision of Berlioz' *Instrumentationslehre*, enlarged and revised by Richard Strauss (Leipzig: C. F. Peters, 1905) mentions both Besson and Heckel instruments; English trans. T. Front (New York, Dover, 1991), 226.

60. Rousselet and Watel, *Ibid.*, 40.

61. Vincent D'Indy, *Fervaal: Action Musicale en Trois Actes et un Prologue, Poème et Musique* (Paris: A Durand & Fils, [1899]), orchestral score.

62. D'Indy, *Fervaal* (Paris: A Durand & Fils, [1899]), piano-vocal score, "Composition de l'Orchestre."

63. Vincent d'Indy, *Fervaal: Action Musicale en Trois Actes et un Prologue* (Paris: Durand & Cie, 1895), piano-vocal score; Félix Clément and Pierre Larousse, *Dictionnaire des Opéras*, revised ed. A. Pougin, 2 vols. [Paris: Société Universelle, 1905] (reprint ed., New York: Da Capo Press, 1969), 2:1219.



FIGURE 22. Evette & Schaeffer, Paris, B-flat contra bass clarinet, ca. 1891, Watel Collection, Arnouville. With permission from Denis Watel.

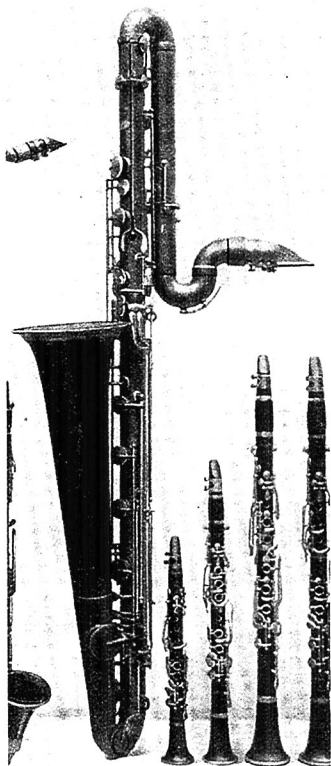


FIGURE 23. Wilhelm Heckel, Biebrich, B-flat contra bass clarinet from Heckel, *Der Fagott*, Leipzig, 1931. With permission from the Heckel Museum, Biebrich.

of the Pedal Clarinet in *Fervaal* is very important, as many passages (notably in the entr'acte of the second act), could not exist musically without this instrument."⁶⁴ An excerpt of the score from the entr'acte in act

64. "Le rôle de Clarinette Pédale dans *Fervaal* est si important, que plusieurs passages (notamment l'entr'acte du 2me acte) n'existent plus musicalement si l'instrument manque." Quoted by Casembroot, "Moderne Instrumentierung," 852.



FIGURE 24. Buffet-Crampon et Cie, Paris, B-flat contra bass clarinet, ca. 1935. Watel Collection, Arnouville. With permission from Denis Watel.

two (fig. 25) shows the contra bass doubles the bass clarinet at the octave. In the third act, the contra bass clarinet plays five measures accompanying an alto singer ending the section with a solo note (fig. 26).⁶⁵

65. One measure of the full score from the third act from *Fervaal* is reproduced in Gabriel Pierné and Henry Wollett, "Histoire de L'orchestration," in *Encyclopédie de la Musique et Dictionnaire du Conservatoire*, Deuxième partie, Technique-Esthétique-Pédagogie (Paris: Delagrave, 1929), 2684. For further observations on *Fervaal*, see Steven Huebner, *French Opera at the Fin de Siècle* (New York: Oxford University Press, 1999), 317–50, especially 323.

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FIGURE 25. Vincent D'Indy, *Fervaal* (1897), Paris, 1899, Act 2, entr'acte, 290.

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en élargissant

Cl. *p* *dim.* *pp*

Cl. C.B. en Sib. *Solo* *p* *dim.* *pp* *mais en dehors*

Corns *f* *molto dim.* *4^e Solo* *pp*

Timb. *Solo* *pp* *f* *molto dim.* *pp* *dim.* *pp*

A. *Lo* *Ch* *é - lu,* *le* *F* *ils* *des* *Nu* *é - es* *dont* *l'a - me,* *vierge* *encor,* *à* *l'A - mour* *reste ra* *fer.*

Vcllo-Cl. B. *pp*

Plus vite (modéré)

H^o *mf* *cresc.* *sp* *p*

Cl. *ppp* *perdendo*

Cl. C.B. *ppp* *perdendo* *Solo* *p*

Bass. *mf* *cresc.* *sp* *p*

C^o et 4^e Cors *ppp* *perdendo*

Timb. *ppp* *perdendo*

A. *LIBERT, sortant du groupe des chefs s'a - dressa à AHPAGARD. Pè - re, per - mets que ma bouche réponde;*

1^o Solo *pp* *perdendo*

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FIGURE 26. Vincent D'Indy, *Fervaal* (1897), Paris, 1899, Act 3, 378.

D'Indy skillfully uses the contra bass clarinet, writing in bass clef and limiting the compass in the second act from written e to d^1 and in the third from e to g^2 ; thus, the part may have been played on a military model contra bass.

Antonin Dvořák skillfully orchestrated his three act comic opera, *The Devil and Kate* (*Čert a Káča*), premiered at the Prague National Theatre on November 23, 1899. He specified a number of woodwinds including bass clarinets in B-flat and A and the contrabass clarinet in B-flat in Act 1. This part, however, is technically limited and augments the sounds of the woodwinds in the first act only in measures 1018–1042.⁶⁶ It seems likely at the premiere the part was played on a Besson contra bass clarinet.

Ernest Chausson also makes important use of the contra bass clarinet in the prelude to Act 3 of his opera, *Le Roi Arthus*, completed between 1886 and 1895. The first performance of this opera was on November 30, 1903 at the Théâtre Royal de La Monnaie in Brussels, supervised by d'Indy; it was successful with at least ten performances.⁶⁷ Subsequent performances were limited to Act 3, including one at the Paris opera in March 1916. In England, Schlesinger observed,

The tone [of Besson's contra bass clarinet] is rich and full except for the lowest notes, which are unavoidably a little rough in quality, but much more sonorous than the corresponding notes on the double bassoon. The upper register resembles the chalumeau register of the B flat clarinet, being reedy and sweet. The instrument is used as a fundamental bass for the wood wind at Kneller Hall [the Royal Military School of Music], and it has also been used at Covent Garden to accompany the music of Fafner and Hunding in the *Nibelungen Ring*.⁶⁸

In 1912, Altenburg mentions that a Besson contra bass clarinet is in daily use in the Monte Carlo orchestra.⁶⁹

Wilhelm Heckel's metal contra bass came on the market in Germany in 1902. Heckel had business contacts in Vienna and on March 5, 1902

66. Antonín Dvořák, *Complete Edition of Antonín Dvořák's works*, ed. O. Šourek (Prague: Artia, 1972), 185–94.

67. See de Breville and Gauthier-Villars, *Fervaal*, 53 note 1; Jean Gallois, "Chausson (Amédée-Ernest)," *Grove Music Online. Oxford Music Online*, www.oxfordmusiconline, accessed February 25, 2014.

68. The use in Wagner's Ring cycle was most likely a doubling of the string contra bass parts. Kathleen Schlesinger, "Pedal Clarinet," *Encyclopedia Britannica*, 11th ed., vol. 21 (Cambridge: University Press, 1910): 36.

69. Wilhelm Altenburg, "Adolphe Sax und seine Verdienste um den Instrumentenbau," *Zeitschrift für Instrumentenbau* 32, no. 27 (1912): 1020.

wrote to Gustav Mahler about his contra bass clarinet, copying a complimentary letter from composer and conductor, Felix Weingartner, who used Heckel's contra bass in his opera *Orestes* on February 23, 1902.⁷⁰

Other contemporary writers who wrote about Besson's contra bass clarinet include Koch (1912, Besson and Heckel instruments); Forsyth (1914 and 1926); Daubeny (1920); and Blaikley (1927–1928).⁷¹ By 1933, Besson's contra bass began to be overshadowed by competing instruments. For example, in his *Traité Pratique d'Instrumentation*, the French writer, Guiraud, mentions a Buffet-Crampon (Evette & Schaeffer) contra bass in B-flat with the lowest note of E-flat.⁷² Composer Charles Koechlin listed a "Clarinette Contrebasse dit Clarinette-pédale" in his 1954 instrumentation treatise, mentioning an instrument made by Leblanc in La Couture-Boussey with a chromatic extension of the range of C, C-sharp, D, and D-sharp.⁷³

70. Beatrix Darmstädter, "Die Blasinstrumente im Orchester des Wiener Hofoperntheaters zur Direktionszeit Gustav Mahlers," *Musikinstrumente und Musizierpraxis zur Zeit Gustav Mahlers*, ed. R. Kubik (Vienna: Böhlau, 2007), 62–3; Darmstädter, "Clarinets and Tárogatós used in the Viennese Court Opera under the Director Gustav Mahler" in *Proceedings of the Clarinet and Woodwind Colloquium 2007: Celebrating the Collection of Sir Nicholas Shackleton* (Edinburgh: Edinburgh University Collection of Historic Instruments, 2012), 228–31. Also Oskar Kroll, *The Clarinet*, rev. D. Riehm, trans. H. Morris, ed. A. Baines (New York: Taplinger Publishing Co., 1968), 117.

71. Markus Koch, *Abriss der Instrumentenkunde* (Kempten: Jos. Kösel'schen Buchhandlung, 1912), 166 (Besson and Heckel instruments); Cecil Forsyth, *Orchestration* (London: Macmillan and Co., 1914 and 1926), 286; Ulrich Daubeny, *Orchestral Wind Instruments Ancient and Modern* (London: Wm. Reeves, 1920), 59; and D. J. Blaikley, "Pedal Clarinet," *Grove's Dictionary of Music and Musicians*, 3rd ed., ed. H. C. Colles, 5 vols. (London: Macmillan, 1927), 1:658.

72. Ernst Guiraud, *Traité Pratique d'Instrumentation*, new ed., rev. and expanded by H. Busser (Paris: Durand & Cie, 1933), 62. Martial Dury wrote about the Besson and Evette & Schaeffer contra basses in "Étude sur la Clarinette," *Musique et Concours* 34 (May 1934): 114; and "Un instrument à soufflé peu connu, La Clarinette Contrebasse, son histoire-ses particularités-son employ," *La Revue Musical Belge* 10, no. 11 (June 5, 1934): 6–7. During the 1930s, Maino & Orsi in Milan made a prototype, brass contra bass clarinet in ophicleide-shape to low C. It is located in the Orsi factory collection in Tradate, Italy. Rampone in Quarna, Italy also made an E-flat contra alto clarinet during the 1930s in a straight shape with long curved neck and curved bell, similar to the Evette & Schaeffer B-flat contra bass. In 2010, it was displayed at the Rampone factory in Quarna; a second incomplete Rampone E-flat contra alto clarinet was on display in 2010 at the Museo etnografico e dello strumento musicale a fiato, Quarna, Italy.

73. Charles Koechlin, *Traité de l'orchestration* (Paris: M. Eschig, 1954), 35. By about 1963, Charles Houvenaghel of Leblanc designed an octo-contra bass clarinet one octave lower than the contra bass in B-flat. It is now on display at the Musée des instruments à vent in La Couture-Boussey. See Charles Houvenaghel, *Dramatic Results of Leblanc Research in Clarinet Acoustics* (Kenosha, Wisconsin: G. Leblanc Corporation, 1963).

Conclusion

The Maldura E-flat contra alto clarinet was made in limited numbers, probably because of the high cost of manufacture. Some examples were undoubtedly purchased by large military and civilian bands in Milan and other Italian cities. It is unlikely that the Maldura firm marketed these instruments outside Italy. Even though the Besson contra bass clarinet was bought by bands, music schools, and symphony orchestras, it never became a commercial success. Rendall blamed this lack of success on the design of the long conically bored metal crook paired with a mainly cylindrical bore. He described it as causing a disastrous effect on intonation. This crook, however, is only in the patent and the orchestral instrument; the military instruments had mainly cylindrical crooks. Rendall also suggested that French professional clarinetists preferred the Boehm-system fingering rather than the simpler thirteen-key design of the military contra bass clarinet.⁷⁴

A more obvious reason for the failure of the contra bass clarinet was its high cost. The Besson 1910 French *Catalogue* lists the price as an astounding 1,250 francs, more than three times the cost of almost every other brass and woodwind instrument. However, Besson's enormous publicity effort brought its contra bass clarinet to the notice of many musicians throughout Europe and America. Its use by players in Paris, London, and New York until the 1930s helped to encourage the production of the later and ultimately more successful Boehm-system contra alto and contra bass clarinets by manufacturers such as Selmer and Leblanc. These instruments have an easy playing and sturdy mechanism that was accepted by players and composers in Europe and America, made in large numbers during the twentieth century, and still played today.

74. Rendall, *The Clarinet*, 151.