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The Double-Bassoon: Its Origin and Evolution

Author(s): Lyndesay G. Langwill

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THE REV. DR. E. H. FELLOWES, M.V.O., D.Mus.,
PRESIDENT,
IN THE CHAIR.

THE DOUBLE-BASSOON: ITS ORIGIN AND
EVOLUTION.

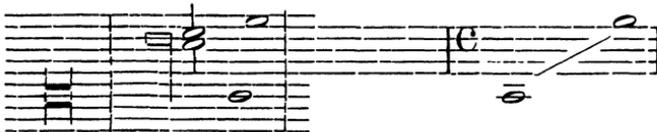
BY LYNDESAY G. LANGWILL.

READ BY MR. P. A. T. BATE

EARLIEST ALLUSION—ITALIAN.

THE earliest printed account of the Bassoon occurs in Ludovico Zacconi's *Prattica di Musica*, first published in Venice in 1592. As this book is rare and no facsimile edition or translation has appeared, the following extract¹ is of interest and contains the earliest allusion to a Bassoon of deeper pitch than the type instrument:—

The Fagotta chorista (i.e. Chorist Bassoon) goes from the octave of C fa ut of the bass to the B fa b mi above. They call it Fagotto chorista because there is of it another which is not of its pitch, but a little higher or a little deeper.²



The reference to a Bassoon "a little deeper" is to the Doppel Fagott, which was either a fourth or a fifth lower as explained later.

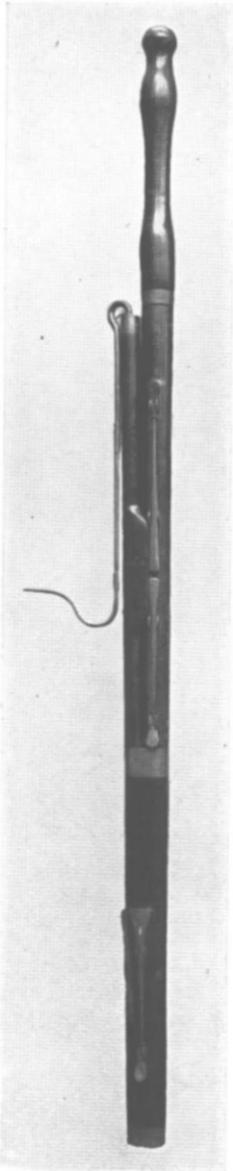
AUSTRIAN SORDUNEN.

Mention may be made here of the unique specimens of sixteenth century Sorduns,³ of which two are Basses in C with a compass B \flat ₁ to a, and two Contrabasses in F with a compass E₁ to d. Such depth of pitch is remarkable from instruments having a total tube length of only 5ft. 3ins. The bore, however, is cylindrical, doubled on itself, and the pitch is an octave lower than from a conical tube of equal

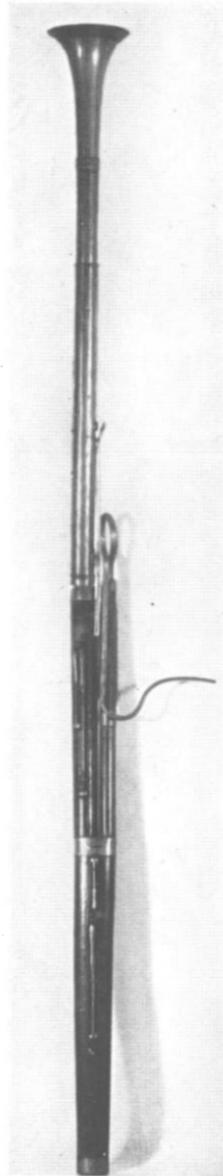
¹ *Libro Quarto*, cap. LVI, p. 218.

² Kindly communicated by the Rev. Canon F. W. Galpin, Litt.D., F.L.S.

³ Catalogue of Kunsthistorisches Museum, Vienna, No. 226-229. Copies in Brussels Conservatoire Museum, Nos. 946-949.



(1) Contra by "Stanesby Junior, London, 1739." Ht. 8' 4". Four brass keys in saddles. Brass crook. Bulbous bell. Lowest note: Sub-contra B \flat . (In National Museum of Ireland, Dublin.)



(2) Contra by "Stehle, vormals Küss, Wien," c. 1840. Ht. originally 6' 6" but now 8' 4". Originally eight brass keys and brass bell giving Contra C. The Rev. Canon Galpin owned this instrument formerly and had the bell extended and a ninth key added to give Sub-contra B \flat . (In Museum of Fine Arts, Boston, U.S.A.)

Schreiber may have succeeded, for a Contrafagott is specified in 1626 in the Inventar of the Barfüsserkirche, Frankfurt a. M.⁴ Sachs points out, however, that to bore wooden trunks of such large size is a task which can be undertaken only with difficulty and imperfectly without special machinery. Writing in 1920, he informs us that old wood-wind instrument-makers still recalled having, as apprentices, dragged the rough trunks to the well-sinker to be bored. Apart from this, however, the note-holes had to be bored through the tube wall disproportionately small and obliquely so that the fingers could reach and cover them. The result was that the instrument pleased neither the performer nor the audience, and for over two centuries the Contrabassoon was the "Schmerzenskind" (child of affliction) of instrument-makers.⁵

Two excellent specimens of Doppelfagott, considered to be of late sixteenth century Italian workmanship, are preserved with six contemporary Dulzians in the Kunsthistorisches Museum, Vienna.⁶ Both are held with right hand above left and contrary to the modern bassoon, and are pitched in A, a minor third below the contemporary Choristfagott. Schlosser remarks about them: "Eine Art Quartfagott. Ein Fagott in tief A-Stimmung ist noch in Bachs 150 Cantate verwendet. (Cf. Riemann's Musiklexikon, 8.A., p. 297)." This is not the case, however, for reasons Dr. Sanford Terry has explained.⁸ On only two occasions does Bach treat the Bassoon as a transposing instrument. In Cantata No. 131 (of date c. 1707-8) the Bassoon part sounds a tone lower, and in Cantata No. 150 (of date c. 1712), the part sounds a minor third lower. Both transpositions were to adjust the scale of the normal instrument to an organ tuned respectively to Chorton (No. 131) and to Cornett-ton (No. 150). Bach's organs were tuned to one or other of these two pitches. For example, at Weimar, the organ of the ducal chapel was tuned to Cornett-ton, i.e. a minor third above *hoher Cammerton*, the pitch in general use for concerted music. As a result,

⁴ Sachs, *Handbuch der Musikinstrumentenkunde*, p. 323.

⁵ Heckel, *Der Fagott*, p. 17.

⁶ Depicted and described in Professor Julius Schlosser's Catalogue of the Collection there (1920), Nos. 198 (H. 4ft. 5ins.) and No. 199 (H. 4ft. 4ins.). Vide *Mus. Times*, April, 1937, p. 307, article "The Curtal (1550-1750)," by Lyndesay G. Langwill.

⁷ Schlosser, *op. cit. ante*, p. 82.

⁸ Terry, *Bach's Orchestra* (1932), p. 114.

in Cantata No. 150, in which the strings and continuo are in B minor, the Bassoon is in D minor. This therefore does not signify the use of a Bassoon in low A, but merely the employment of a normal instrument in conjunction with an organ pitched a minor third higher.

A Quartfagott appears in an orchestra which performed part of a musical festival held at Nuremberg in 1643 or 1644. A song was accompanied by two orchestras: one, martial, composed of trumpets, drums, etc., the other, musical, consisting of two pommers, three fagotti, and a quartfagott.⁹

Bach's earliest use of a Doppelfagott is in Cantata No. 31 (of 1715) in which the part often descends to G₁, and a curious designation occurs in one of the versions of *St. John Passion* (of 1723) in which he prescribes "Continuo pro Bassono grosso" using a compass, however, of only C-f. The disuse of the deeper Bassoons has been attributed¹⁰ to their faulty construction and weak rattling tone, and it may be for these reasons that Bach refrained from using them in any compositions other than the two mentioned above. One must also bear in mind, however, the frequently slender instrumental resources at his disposal.

Another original sixteenth century Doppelfagott is preserved in the Heyer Collection (formerly at Cologne, now in the University of Leipzig). It is a large two-keyed Dulzian, 4ft. 5ins. high, descending to Contra F or Contra G—Dr. Kinsky is not precise on the point.¹¹ It may be assumed that it was still an instrument of this type which Bach employed in 1715 and 1723, although we have remarkable evidence of an improved type of Italian Contrafagotto of that period.¹² It is of dark-stained maple, 6ft. high, and has as a bell a dragonhead with flexible tongue. This curious Contra has a spike for support and is stamped *Joannes Maria Ancuti | Invenit et Fecit | Midiolani | MDCCXXXII*, and, above, a winged lion. Ancuti of Milan is known by other instruments bearing dates 1722-40, but clearly this Contra has been improved, as it has nine

⁹ Lavoix, *Histoire de l'Instrumentation* (Paris, 1878), pp. 258-9.

¹⁰ *Grove Dictionary of Music*, 1st and 2nd Edit., 1877-89 and 1900 s.v. Double Bassoon; art. by Dr. W. H. Stone; also *Encyclo. Brit.*, 11th Edit., s.v. Contrafagotto; art. by Miss K. Schlesinger.

¹¹ Kinsky, *Kleiner Katalog*, p. 160. No. 1361. Cp. facsimile by Heckel in his museum, illustrated in *Der Fagott*, p. 7, where it is stated that the lowest note is Contra A_b.

¹² Museum Carolino Augusteum, Salzburg, No. 209. Illust., Tafel III. The naming of the keys is open to some doubt.

keys, B \flat , C, D, E, F, F \sharp , G, G \sharp , and A, and we know of no Bassoon-type of the period with more than four keys.

EIGHTEENTH CENTURY USE IN ENGLAND.

The earliest recorded use of the Contra in England appears to have been in Handel's *Hymn for the Coronation* in 1727, and for this information we have the authority of Dr. Burney.¹³

The Double Bassoon . . . is . . . a tube of sixteen feet. It was made, with the approbation of Mr. Handel, by Stainsby (*sic*), the flute-maker for the coronation of his late majesty, George the Second (*i.e.* 1727). The late ingenious Mr. Lampe, author of the justly admired music of *The Dragon of Wantley*, was the person intended to perform on it ; but, for want of a proper reed or for some other cause, at present unknown, no use was made of it at that time ; nor, indeed, though it has been often attempted, was it ever introduced into any band in England till now, by the ingenuity and perseverance of Mr. Ashly (*i.e.* Ashley) of the Guards.

The proportions of this giant Contra were misunderstood by H. Lavoix¹⁴ who states : " Burney prétend qu'il avait seize pieds, ce qui est exagéré . . ." From the account given below it will be seen that Burney was correct in his statement that the tube-length *from reed to bell* was sixteen feet.

An announcement in the *London Daily Post* of 6th August, 1739, states :—

To the usual Evening Concert at Marylebone Gardens will be added two Grand or Double Bassoons made by Mr. Stanesby, Senior, the greatness of whose sound surpasses that of any other Bass instrument whatsoever ; never performed with before.

It has been said¹⁵ that the Contra played by Lampe is that in the National Museum of Ireland, Dublin. That instrument, however, is clearly stamped " Stanesby Junior, London, 1739," whereas the London Press advertisement refers to Stanesby Senior as the maker of Lampe's Contra.¹⁶ It may be remarked, however, that Thomas Stanesby Senior died in 1734, being succeeded by his son Thomas (born 1692, died 1754), and it seems strange that the father's Contras should be announced in 1739 as " never performed with before."

The following are the details of this single surviving

¹³ Burney, *Account of the Musical Performances in Westminster Abbey . . . in Commemoration of Handel*, London, 1785, p. 7.

¹⁴ Lavoix, *op. cit. ante*, p. 269.

¹⁵ Galpin, *Old English Instruments of Music* (1910), p. 169.

¹⁶ *Vide Musical Times*, July, 1935 : " J. F. Lampe : A Forgotten Contemporary of Handel," by L. G. Langwill.

English Contra.¹⁷ Made in normal Bassoon-shape, but 8ft. 4ins. in height, with four brass keys in saddles giving B \flat , D, F, G \sharp , the bell is of bulbous pattern expanding slightly at the top, and the long brass crook is recurved downwards parallel to the wing for nearly three-quarters of its length, before bending out and upwards to receive the reed. The fingerholes are necessarily much smaller than acoustical demands require, and, although bored obliquely in the usual manner, are so far apart as to cause discomfort and inconvenience to the player.

Handel employed the Contra in the *Firework Music* (1749), and in *L'Allegro* (1740) it is scored in two of the choruses: No. 42, "Then let the pealing organ blow," and No. 53, "Thy pleasures, Moderation, give." For the most part, the Contra, within the written compass, F-b \flat (sounding an octave lower), doubles the second Bassoon an octave below. It is significant that Handel dispenses with the notes below F, and it may be assumed that they were uncertain, weak or of bad quality.

Canon Galpin quotes¹⁸ an advertisement which appeared in the *General Advertiser* of 20th October, 1740. Intended as a skit on the large orchestras of the period, and announcing the opening of Handel's season at the Haymarket, the advertisement forecasts

a concerto of twenty-four Bassoons accompanied on the violoncello, intermixed with duets by four double Bassoons accompanied by a German flute, the whole blended with numbers of violins, hautboys, fifes, trombonys, French horns, trumpets, drums and kettledrums, &c.

No more is heard of the Contra until 1784, on the occasion of the first Commemoration of Handel held in Westminster Abbey. Reference has been made above to Dr. Burney's account of the performances in which an orchestra of 250 took part. The wood-wind section consisted of 6 flutes, 26 oboes, 26 bassoons, and a double-bassoon. A second contemporary account is afforded by W. T. Parke, principal oboist at the Theatre Royal, Covent Garden, who took part and records¹⁹ :—

At these musical performances Mr Ashley, a sub-director, and first bassoon at Covent Garden Theatre, played for the first time on a newly-invented instrument called a double bassoon, an appropriate appellation, it being double the size of the common ones. This instrument, which rested on a stand, had a sort of flue affixed to the top of it, similar (with the exception of smoke) to that of a Richmond steamboat. I am

¹⁷ Day, *Catalogue of the Royal Military Exhibition* (1891), p. 81. Fig. 1 frontispiece to these *Proceedings*.

¹⁸ *Op. cit. ante*, p. 169.

¹⁹ Parke, *Musical Memoirs* (1784-1830), Vol. I, p. 42.

ignorant, however, whether it produced any tone, or whether it was placed in the orchestra to terminate the prospect. The name of this double bass and gigantic instrument, which was only fit to be grasped by the monster Polyphemus, did not transpire, and the double bassoon, which had never been heard, was never again seen after these performances were ended.

This appears to be inaccurate, however, as the Double Bassoon was included in the Orchestra of 307 at the Fourth Handel Festival in Westminster Abbey in 1787. Crosse remarks²⁰ :—

Notwithstanding what is said in the Account of the Commemoration, we have always understood that the double bassoon was not found to be a serviceable instrument and it does not appear to have been used in 1791. (The Sixth Festival.)

Nor, indeed, is it shown as taking part at York (1823), Birmingham (1823), Liverpool (1823), or Gloucester (1825). Further references to the use of the Contra occur,²¹ e.g. at Worcester in 1788, in presence of George III and the Royal Family . . . "Ashley with the double bassoon, and his four sons . . . aided by the powerful support of his Majesty's private band," and again at Worcester, in 1803, Jenkinson played the double bassoon.²²

In the early nineteenth century the Contra appears to have gone completely out of use in England. The only English attempt to construct a practical Contra in normal bassoon-shape was that of J. Samme, a London maker, c. 1855, whose instrument was in reality an eight-keyed Quart-bassoon in low G. It is preserved in the Donaldson Collection of the R.C.M.

DEVELOPMENT IN BELGIUM.

Some unique information concerning the business of musical instrument-making in Belgium at the end of the eighteenth and in the early nineteenth centuries has been collated by R. van Aerde.²³ Four successive generations of the Tuerlinckx family exercised their craft extensively, making both wood-wind and brass instruments and keeping, from c. 1782 onwards, voluminous and careful records which have fortunately survived. At least one Contra-bassoon stamped *Tuerlinckx* (the successive generations

²⁰ John Crosse, *Account of the Grand Musical Festival held in September 1823 in York Minster*, (York, 1825), pp. 174-5.

²¹ Rev. D. Lysons, &c., *Origin and Progress of the Meeting of the Three Choirs*. (Gloucester, 1895), p. 69.

²² *Ibid.*, p. 83.

²³ Article in Tome XXIV of the *Bulletin of the Cercle archéologique de Malines*, "Les Tuerlinckx, luthiers à Malines."

unfortunately used the same maker's mark) is preserved.²⁴ Made of maple, 5ft. 8ins. high, with five brass keys for D₁, E_b₁, F₁, F_♯₁, G_♯₁, it is of bassoon-shape with a long coiled brass crook and descends to C₁. Between the two groups of three finger-holes for the left and right hands respectively, a curious loop of brass tubing has been interposed—Mahillon asserts—to bring the hands nearer each other. M. van Aerde remarks²⁵ upon Tuerlinckx's opportunities for examining Contras of other countries :—

A l'époque où les armées autrichiennes sillonnaient notre pays (1785), le luthier malinois eut maintes occasions pour se familiariser avec les nouveaux types d'instruments. Il est à supposer que c'est à la faveur de ces circonstances qu'il étudia la perce des contre-bassons, utilisés dans la musique de l'infanterie Hanovrienne. Plus tard, lorsque les armées alliées défilèrent en Belgique, il s'inspira des modèles allemands, suisses, français, anglais, autrichiens et autres, qui servirent dans les corps de musique des régiments.

It would also seem that to Tuerlinckx is due the credit of certain improvements in compass and tone of the Contra. Van Aerde continues²⁶ :—

Il fabriqua aussi des contrebassons dont, au dire du chanoine De Smet,²⁷ il augmenta les ressources, en y ajoutant deux tons et en diminuant le volume de l'instrument. Ces deux notes additionnelles auront été obtenues dans le registre des notes graves par le moyen de clefs.

It is possible that the extra two notes were C₁ (left thumb-hole) and D₁ (left thumb-key) which would not be obtainable on the German Quint-Fagott in low F, with E_b₁ sounding as its lowest note. By making the Contra in C₁, an octave below the Bassoon, all difficulty as regards transposition was removed and fingering became uniform on both types of Bassoon. One further extract from this excellent article by van Aerde²⁸ reveals the comparative cost of a Bassoon and a Contra *circa* 1830, the approximate date of a price-list of Tuerlinckx instruments :—

| | |
|------------------------------------|-------------------------|
| | With 1 wing and 1 crook |
| Fagotto—Petit basson octave | Fl. 32 |
| „ —Petit basson quinte | 35 |
| „ —Basson ordinaire 8 clefs | 45 |
| „ —Basson ordinaire 14 clefs | 77 |
| Contrafagotto—Basson basse | 105 |
| „ —Anches | un seul 50 sou |

Note.—Prices are quoted in florins of the Pays-Bas. They may be converted into 1914 values by taking the Brabant florin (in 1790) as equivalent to 1 fr. 8129.

²⁴ Mahillon, Catalogue of the Musée of the Brussels Conservatoire, No. 2628.

²⁵ *Op. cit. ante*, p. 110.

²⁶ *Op. cit. ante*, p. 138.

²⁷ Cp. Van der Straeten, *La Musique aux Pays-Bas*, Tome 5, p. 181.

²⁸ *Op. cit. ante*, p. 165.

EARLY USE OF THE CONTRA IN GERMANY AND AUSTRIA.

It would seem that, up to about 1850, the inclusion of the Contra in scores depended entirely on whether it was locally available, and as Vienna seems to have been the centre where the Contra was always procurable, so we find it in the scores of Haydn and Beethoven. It received little attention, however, from Mozart and less from Schubert, and it rarely occurs in German scores as it was first considered more suitable for military music. Gassner in 1838 states that the *Contrafagott*, which included the low Quart fagott, was then very rarely used in Germany (since the Serpent and Ophicleide had been so much improved) and then only in military bands. As an orchestral substitute for the Contra, the Serpent, the Bass-horn or the Ophicleide was used, and it was perhaps more than a coincidence that when these instruments had, each in turn, become obsolete, the Contra underwent improvement and reconstruction until the early years of the present century (cp. figs 3, 4, 5 and 6). It is not always possible to rely upon continental references to a *Contrafagott* as being in reality to that instrument. The *Russisches Fagott*, a form of bass-horn (but of wood, made in bassoon-form, and blown, of course, with a cup-mouthpiece) was often called a Double Bassoon in Germany and in France. In Michel Brenet's *La Musique Militaire*²⁹ an obvious Basson russe is designated "*Basson à tête de dragon*." Evidently the crook without a mouthpiece has been mistaken for the crook of a bassoon. Kastner³⁰ designates an obvious Bass-horn "*Contre-basson autrichien*." Berlioz,³¹ when at Brunswick in 1842, found the same confusion:—

... a Russian bassoon, called by the performer a double bassoon. I had much trouble in undeceiving him as to the nature and name of his instrument, which emits the sound just as it is written, and is played with a mouthpiece like the ophicleide, whilst the double-bassoon, a transposing reed-instrument, is simply a large bassoon reproducing almost the entire bassoon scale an octave lower.

The same doubt does not exist in regard to Viennese references, for actual instruments (bearing the Viennese makers' names) are preserved and there are records of their use in Vienna in Beethoven's time and after. L. Köchel³² gives

²⁹ Illust. facing p. 64.

³⁰ *Manuel général de Musique militaire* (Paris, 1848), Plate XIII, No. 9.

³¹ Berlioz, *Memoirs* (English translation), London 1884, Vol. II, p. 79.

³² *Die Kaiserliche Hofmusikkapelle zu Wien von 1543-1867* (Vienna, 1869), p. 32.

a pay-roll which includes "1 Contrafagott" in 1807. Kastner³³ records the use of two Contras in a performance of Handel's *Timotheus* in 1812.

Beethoven's use of two Contrabassoons is mentioned in a memorandum by the composer concerning the orchestra at a concert in Vienna on 27th February, 1814:—

At my last concert in the Ridotto-room there were 18 first violins, 18 second, 14 violas, 12 violoncellos, 17 contra-basses, 2 contra-bassoons.³⁴

No less than four Contras, one being of brass, were used for a performance of Haydn's *Creation* in Vienna in 1843, according to Gassner,³⁵ while Castil-Blaze³⁶ records the use of four Serpents in a performance of *The Creation* at the Opéra, Paris, in 1800, and two ophicleides in 1844.

Mozart rarely used the Contra and observed Contra C as the downward limit in the *Maurische Trauermusik* (Masonic Dirge) (K.477) in C minor composed at Vienna in July, 1785, for 2 Violins, Viola, Bass, 1 Clarinet, 1 Bassethorn, 2 Oboes, Contrabassoon, and 2 Horns (or 2 Bassethorns). Here the Contrabassoon is not obbligato, and Contra C is the lowest note, occurring thrice—in bar 4, and in the seventh last and last bars. g is the upper limit.

Haydn: In *Die Sieben Worte . . . am Kreuze* (composed in 1786), one of the Intermezzi is a *Largo* in A minor for twelve wind instruments: 2 Horns, Flute, 2 Oboes, 2 Clarinets, 2 Trombones, 2 Bassoons, and Contrabassoon. Contra C is the lowest note for the latter—occurring in bar 13.

In *The Creation* (composed 1795–8) Haydn ventures down to Sub-Contra B \flat in No. 22, "Now Heaven in fullest glory shone," at the well-known passage "By heavy beasts the ground was trod" (on the word "trod"): and again in No. 34 "Sing to the Lord, ye voices all." In *The Seasons* (composed 1799–1800), he appears to have reverted to Contra C as the downward limit, e.g. No. 19, "Ach! das Ungewitter naht" in C minor, where the Contrabassoon has a pedal C near the opening.

³³ *Cours d'Instrumentation* (Paris, 1837), p. 5.

³⁴ *The Life of L. van Beethoven*, by Alex. W. Thayer, edited by H. E. Krehbiel, New York, 1921, vol. II, chap. XIV, p. 268.

³⁵ Gassner, *Dirigent und Ripienist* (1844) quoted in Schunemann, *Geschichte des Dirigierens* (1913), facing p. 310.

³⁶ Castil-Blaze, *L'Académie impériale de musique* (Paris, 1855), Vol. II, p. 372.

Schubert only once included the Contra, and this was in the *Trauermusik* for 2 Clarinets, 2 Bassoons, Contrabassoon, 2 Horns and 2 Trombones. The original MS. dated 19th September, 1813, has been studied in Vienna by Mr. T. C. L. Pritchard of Glasgow, who has kindly furnished the following details :—

The writing bears every evidence of great haste. It is written in four staves, and it may be that it was prompted by the example of Mozart's Nonet. A month before, he had produced a Minuet and Finale for two oboes, clarinets, horns and bassoons, and it is probable that these were exercises in writing for wind set by Salieri, under whom he was studying at the time . . . As to whether he had any practical experience of the Contrabassoon . . . nothing is known : it is not likely that it had a place in the very capable but limited orchestra of the Convict School, where he remained until the month following. It is not used in his first Symphony which they performed on the eve of his departure, nor does it appear in any of his subsequent scores. There is no record of a performance of the *Trauermusik*.

Beethoven employs the Contrabassoon in the Fifth and Ninth Symphonies, in the Mass in D, in the Overture to *King Stephen*, in *The Battle of Vittoria* (1813) and in a military march composed in 1816. Cecil Forsyth has remarked³⁷ upon "the elaborate Double-bassoon part in the Finale of the Choral Symphony." He considers it may have been written by Beethoven for a smaller and more flexible instrument than the one used at the present day. We have no knowledge that such an instrument existed. On the other hand, it may have been written under a misapprehension of the instrument's limitations. This may perhaps have been caused by his deafness.

The Contra is scored continually with the Double-Basses, even in the *Prestissimo*, and the extreme compass is used B \flat , to a' sounding an octave lower. Prout remarks³⁸ that "it is doubtful whether the effect is ever entirely satisfactory." Forsyth also comments upon the *pp* entry of Bassoons, Double-Bassoon and Bass Drum for the first eight bars of the *Allegro assai vivace* which "unless very carefully played, only just misses being grotesque." Beethoven has, however, given the Contra one very noteworthy passage in the grave-digging scene in *Fidelio* where it is scored *pp* with the Double-Basses.

EARLY USE OF THE CONTRA IN FRANCE.

An indication of the limited orchestral use of the Contra may be gleaned from 19th century French records. In 1794, at the Paris Conservatoire, it was proposed to form a class for Contrabassoon consisting of a teacher and four

³⁷ *Orchestration*, 2nd edit., 1935, p. 249.

³⁸ *The Orchestra*, 2nd edit., 1897, p. 144.

students, but the scheme did not materialise.³⁹ In 1813, A. Choron edited a second edition of L. J. Francoeur's *Traité général des voix et des instruments d'orchestre*, but does not deal with the Contra "attendu qu'on n'en fait plus d'usage."⁴⁰ In 1822, however, Nicolò's *Aladin* was produced and the score contained quite an important part for Contra. By 1825 the Contra was much in demand in French military bands,⁴¹ following the custom of German and Austrian bands in which Bassoons and Contrabassoons were supplemented by Bass-horns or Serpents, and in France the practice continued, until the Saxhorns, appearing in 1846, supplanted the other bass instruments.

As regards the orchestra, Constant Pierre, himself a bassoon-pupil of the celebrated Eugène Jancourt, Paris, quotes⁴² an interesting passage from his unpublished *Histoire de l'orchestre de l'Opéra depuis Cambert jusqu'à nos jours*. After expressing the opinion that the Contrabassoon was introduced into France in 1800 for the performance of *The Creation*, he cites a statement in a monograph on the Serpent, published in 1804, to the effect that it replaced with advantage the Contrabassoon "aux sons sourds et criards" used in England. Pierre states that until 1863, when the Société des Concerts du Conservatoire acquired the only Contra made in France, the Contra was replaced by the Ophicleide as the part could not be dispensed with. It was only in the eighties of last century that French composers scored freely for it and that the parts were played on the instrument lent by the Société des Concerts. The following list of French composers and their compositions in which the Contra is included is given by MM. Letellier et Flament in their excellent article on the Bassoon⁴³ :—

| | |
|---|---|
| 1867 Don Carlos (<i>Verdi</i>). | 1883 Henri VIII (<i>Saint-Saëns</i>). |
| 1867 Les Barbares (<i>Saint-Saëns</i>). | 1884 Sigurd (<i>Reyer</i>). |
| 1867 Les Noces de Prométhée (<i>Saint-Saëns</i>). | 1885 Le Cid (<i>Massenet</i>). |
| 1877 Samson et Dalila (<i>Saint-Saëns</i>). | 1889 Esclarmonde (<i>Massenet</i>). |
| 1879 Etienne Marcel (<i>Saint-Saëns</i>). | 1890 Ascanio (<i>Saint-Saëns</i>). |
| 1882 Françoise de Rimini (<i>Ambroise Thomas</i>). | 1890 Salammbô (<i>Reyer</i>). |
| | 1894 Thaïs (<i>Massenet</i>). |

³⁹ & ⁴¹ Lavignac, *Encyclo. de la musique* (Paris, 1927) s.v. Basson, p. 1563.

⁴⁰ Quoted by C. Sachs in *Handbuch der Musikinstrumentenkunde*, p. 323.

⁴² *La Facture instrumentale à l'Exposition universelle de 1889* (Paris, 1890), p. 29 et seq.

⁴³ *Encyclopédie de la Musique* (Paris, 1927), p. 1564.

The use of the instrument in military music in German-speaking Europe led makers there to make a series of attempts to construct a satisfactory metal Contrabassoon. Evidence is somewhat conflicting as to which of these makers led the way.

THE SARRUSOPHONE (Fig. 13).

Adolphe Sax, of Paris, in 1846 patented the Saxophone, and his group of seven sizes, alternately in E \flat and B \flat , may have suggested to Sarrus, bandmaster of the French 13th Regiment of the Line, a similar family of double-reed brass instruments. His idea was that a group of six such instruments should replace oboes and bassoons in military bands, and the Paris maker, P. L. Gautrot, designating them Sarrusophones, took out a French patent⁴⁴ for them in 1856—not 1863 as stated in *Grove* and elsewhere. Sarrus' hopes for these instruments were not fulfilled as only the Contrabass in E \flat , and another Contrabass, in C, made later for orchestral use, have survived. The orchestral model has a compass of two octaves and a fifth from Sub-Contrabass, and Saint-Saëns was the first composer to use it instead of the Contrabassoon in his *Les Noces de Prométhée* in 1867.⁴⁵ Later, in 1879, he had one made at his own expense for performances of *Etienne Marcel* at Lyon, and another which he gave to a Paris musician who used it in concert work and also in 1884 in the Paris production of *Etienne Marcel*. The Sarrusophone is not, however, prescribed by name in his scores, presumably on account of its rarity.

Massenet was next to employ it in *Esclarmonde* in 1889. Pierre gives an interesting account of the instrument and states that Jancourt, when serving as a bandmaster in the Garde Nationale from 1867-70, acquired an E \flat Contrabass Sarrusophone⁴⁶ which was played by Coyon, a bassoon-player and author of a tutor⁴⁷ for Sarrusophone. In 1890, when Pierre wrote his *La Facture Instrumentale*, Couesnon & Cie, successors to Gautrot, were striving to popularize the Sarrusophone and, in the musical press, there was lively controversy over its merits and defects. The instrument has a wide bore and large note-holes which give it a powerful but unrefined tone, and however valuable it may

⁴⁴ Brevet d'Invention, No. 16212, dated 9 June, 1856.

⁴⁵ Pierre, *La Facture*, pp. 40-7.

⁴⁶ Chouquet *Musée du Conserv. de Paris*, Catal. No. 512—bis.

⁴⁷ Coyon, *Méthodes élémentaires de Sarrusophones . . .* Paris, Gautrot (1867), 2 vols., in fo.

be in a military band, it has been very rarely used in the orchestra, e.g. Ravel's *Rapsodie espagnole*, Delius' *Dance Rhapsody*, and Holbrooke's *Apollo and the Seaman*.

In U.S.A., curiously, the Sarrusophone is used to some extent, being first made there by Messrs. C. G. Conn Ltd., at the request of the U.S. Government for military use. The fact that the fingering is very similar to that of the Saxophone may account for this American adoption. Adam Carse⁴⁸ mentions that the non-success of the Sarrusophone as an orchestral instrument has been accounted for thus: "Composers don't write for it because players don't use it, and players don't use it because composers don't write for it!"

JOHANN STEHLE'S METAL CONTRABASSOON (Fig. 12).

Mendel⁴⁹ informs us that the wooden Contra was weak in tone and that this fact led Stehle, instrument-maker in Vienna, in the thirties of the nineteenth century⁵⁰ to make a Contra of brass—5ft. 6ins. high.⁵¹ The holes were apparently all covered by keys—fifteen in number—with a compass of two octaves, and the technique was difficult, but the tone was said to be three times as strong as that of the usual *Contrafagotti*.⁵² Wieprecht states that in order to simplify the difficult technique of Stehle's Contra, Carl Wilhelm Moritz, celebrated instrument-maker in Berlin, invented at the end of 1845 the ingenious *Claviatur-Contrafagott*.

C. W. MORITZ'S CLAVIATUR-CONTRAFAGOTT.

Though it had but a brief existence, this type of Contra embodied the keyboard as we have it to-day on the Piano-accordion. Fifteen keys were operated by the finger-board which had black and white touches as on the piano. The tube of the instrument had the same proportions as those of Stehle's model, the tube was conical, the reed a bassoon one, and a slide-key, raised by a special touch-piece, assisted production of the upper octave. Moritz's Contra was warmly commended by the Berliner *Tonkünstlerverein* on

⁴⁸ Carse, *Musical Wind Instruments* (London, 1939), p. 205.

⁴⁹ *Musikalisches Conversations-Lexikon*, Berlin, 1872, s.v. *Contrafagott*.

⁵⁰ C. Pierre, *La Facture* . . . p. 36, states "in 1855."

⁵¹ Cp. Heyer-Leipzig, *Colln. Catal.* No. 1404.

⁵² "Reisebriefe" of W. Wieprecht in *Berliner Musikzeitung*, Jahrg 1845, Nr. 43.

18th October, 1845, and by the Berlin Akademie der Kunste on 22nd March, 1855, as well as by distinguished musicians including Meyerbeer and Graf Redern. Moritz thereupon applied for a German patent which, however, was not granted until 1856, a year after his death.⁵³ A drawing in *Soldatenfreund* of the 'sixties shows a bandsman of the 2nd Garderegiment of Foot carrying a Claviaturcontrafagott.⁵⁴ No surviving specimen is known.

SCHÖLLNAST'S TRITONIKON.

Although Mendel considers Moritz's invention was an improvement upon Stehle's metal Contra, there are statements to the effect that his improvement was upon a brass Contra invented in 1839 by Schöllnast und Sohn of Pressburg (now Bratislava, Czechoslovakia), and named *Tritonikon* or *Universal-Kontrabass*. The instrument had a total tube-length of 14ft. 11½ins. folded on itself five times, and had fifteen large keys of which only the first was open. This arrangement facilitated fingering which resembled that of the piano, and gave a chromatic compass of sixteen notes from D, to F.⁵⁵ Sachs comments that the preference for simpler fingering entailed the disadvantages of restricted volume of tone and imperfect intonation.

ČERVENÝ'S METAL CONTRA.

V. F. Červený, a skilful maker at Königgrätz in Bohemia, was the next to attempt an improvement on the Contra, and in 1856 he produced his Tritonikon in E♭, claiming it to be an improvement upon the Stehle model of the previous year. C. Pierre has given a description of the fingering⁵⁶ and a drawing of the instrument⁵⁷ which is shaped like a slender tuba—the form adopted later for the lower Sarrusophones. Červený next made a Tritonikon in B♭, a fourth lower than his model of 1856 and this instrument first exhibited at the Paris Exhibition of 1867 was shown again at the Paris Exhibition of 1889. C. Pierre informs us that this B♭ Contra was the only instrument of the renowned

⁵³ Preuss, Patent Nr. 13043 of 24th October, 1856.

⁵⁴ Illustrated in C. Sachs' *Handbuch der Musikinstrumentenkunde*, (Leipzig, 1920), p. 324.

⁵⁵ Sachs, *Real-Lexikon*, s.v. Tritonikon; Specimen, Berlin Colln., No. 821.

⁵⁶ Pierre, *La Facture* . . . p. 34.

⁵⁷ *Ibid.*, . . . p. 35; also Lavignac, *Encyclo.* s.v. Basson, p. 1562, fig. 678.

Bohemian maker to be heard at the Paris Exhibition of 1889. With a compass of two octaves it could be played without fatigue. The tone was powerful but very vibrant, having little analogy with that of the true Contrabassoon. This was largely due to the construction which differed considerably from that of the bassoon. Indeed Pierre considered that the name "contrebasse-à-anche," given by M. Mahillon to an instrument presented by him and constructed on the same system, was more appropriate.

C. MAHILLON'S CONTREBASSE-À-ANCHE.

This brass Contra⁵⁸ was invented in 1868 by Charles Mahillon, the noted Brussels maker. It had as its lowest note D₁, instead of B \flat ² but in other respects was identical alike in mechanism, appearance, and arrangement with Červený's Contra. Of the seventeen keys, two were octave keys and all were closed keys except the first, and the fingering was the same as for Červený's model. The first four notes from D₁ to F₁ were not overblown; the others from F \sharp ₁ to C were overblown using one octave-key, and the remainder of the scale from C \sharp to f using the second octave key. Constant Pierre had the opportunity of hearing the Mahillon Contra and states⁵⁹ that the timbre was not so good as that of Červený's Contra. The vibrations produced a disagreeable sound which seemed to be due to insufficient thickness of the metal.

Both Mahillon's and Červený's Contras had the disadvantage of particular mechanism, and were not, in the literal sense of the term, Contrabassoons, as they did not reproduce the notes of the Bassoon in the Contra octave with the fingering of the Bassoon. Hence arose the difficulty of persuading bassoon-players to adopt it, having regard to the special study required. Pierre concludes by agreeing that bassoon-players had grounds for objection, but one had to consider these brass instruments as being named to denote that they filled the place of the old, inadequate and awkward Contrabassoon and not to denote their nature or their construction.

LOUIS MULLER'S MULLERPHONE.

It was in 1855 that Louis Muller of Lyons invented a French contrebasse-à-anche. Muller was a nephew of François Sautermeister (d. 1830) who had been inventive

⁵⁸ Illustration of back and front in Day's Catal. R.M.E. (1890), p. 34.

⁵⁹ *La Facture* : . . p. 36.

(e.g. basse-orgue in 1812, basse d'harmonie in 1827) and Muller on succeeding to his uncle's business, proved even more inventive. In 1846 he constructed a bass clarinet in bassoon-shape, descending to C₁, and this instrument he proposed should replace the bassoon. In 1855 he was a medallist at the Paris Exhibition, and he brought out his Mullerphone which was coiled in parallel tubes in bassoon-shape, and descended an octave below the bassoon. The bore was cylindro-conical, the bell of metal, and the keys arranged in a new manner. No specimen appears to have survived, and we know only the above details as recorded by C. Pierre.⁶⁰

H. J. HASENEIER'S CONTRABASSOPHON (Fig. 7).

It was in 1847 that H. J. Haseneier, an instrument-maker of Coblenz, first designed a wooden Contra of an entirely new type.⁶¹ Various makers copied Haseneier's design and a short account of each is given below, before dealing with the model used in England. Herr Lenz, Director of the Royal Musical Institute, in an account⁶² of this new type which the inventor named Contrabassophon, stated that Haseneier had at length perfected his Contra and had submitted it in December, 1849, to the most diverse tests. The inventor expressly reserved for himself the production of the instrument in metal, but there is no evidence that this attempt was made. Haseneier's model was copied very closely by several makers, e.g. :—

(a) Ch. Geipel, Breslau—17-key Contrabassophon, 4ft. 6ins. in height.⁶³

(b) C. Fr. Doelling & Sohn, Potsdam—20-key Contrabassophon, 4ft. 5ins. in height, stamped " 1 GRzF (1 Garderegiment zu Fuss) | 1850."⁶⁴

(c) George Berthold & Söhne, Speyer-am-Rhein, a firm founded in 1849, endeavoured to reduce the weight of Haseneier's wooden mode and produced it of papier-mâché. At least two of these survive : in the Heckel Museum, and in the Heyer-Leipzig Colln., No. 1407,⁶⁵ both 4ft. 7ins. in height.

(d) Anonymous, unique model circa 1855-60 with only threefold tube, but taller and descending to Sub-Contra B \flat .⁶⁶

⁶⁰ *Les Facteurs d'instruments de musique*, Paris, 1893, p. 345.

⁶¹ Heyer-Leipzig Coll., No. 1403, & Brussels No. 1003.

⁶² *Neue Zeitschrift für Musik* (Leipzig, 1850), p. 154.

⁶³ Stearns Colln., Catal. No. 684, Illust. Plate VI.

⁶⁴ Berlin Hochschule für Musik Colln., No. 1067, Sachs' Catal., p. 288.

⁶⁵ Described by Dr. Georg Kinsky in his *Kleiner Katalog* as of circa 1875, whereas Herr Heckel suggests 1888 (in *Der Fagott*, p. 23, below illustration (a)).

⁶⁶ Heyer-Leipzig No. 1405. *Kleiner Katalog*, p. 161.

(e) A copy of Haseneier's model was made, circa 1875, by Alfred Morton,⁶⁷ London, and was lent by Messrs. Besson & Co. at the Royal Military Exhib., No. 172. Now largely denuded of keys, it is in the collection of Mr. A. Nettlefold, Wrotham, Kent. This instrument was said by C. Pierre to be one of three⁶⁸ or of four⁶⁹ made by A. Morton, and of these one was played by Morton's eldest son at the Crystal Palace Philharmonic Concerts, at Richter's Concerts and at the Opera House. Other two were used in the bands of the Coldstream Guards and of the Grenadier Guards—the latter conducted by Dan Godfrey—and Pierre seems to indicate that one was used in the band of the Scots Fusiliers—if thus we are to understand his reference to "Scotch Cusseley" (sic.).⁷⁰

Morton also made a Contra in F,⁷¹ identical in design with the preceding Contrassos, but a fourth higher in pitch, and Day stated that Morton made it for Sir Arthur Sullivan, for use in the orchestra of the Savoy Theatre.⁷²

(f) A very neatly made Contrabassoon on the Haseneier model with fourfold coil was made for an Exhibition in 1888 by W. Bradka (1822–1907) an instrument-maker in Gumpoldskirchen, a small village near Vienna. This Contra descends to Contra C, has twenty-two keys, and a water-key at the base of the first bend below the crook. The total tube length is 14ft. 9ins. Diameter of Bell is 3.3 ins, and the instrument stands 4ft 5in. high. ⁷³ (Fig. 10).

(g) Lastly M. Fontaine-Besson decided to manufacture Contrassos on Morton's model (i.e. Haseneier's) to meet French requirements and, to ensure for himself the monopoly, he patented it on 5th August, 1890. Pierre describes and depicts Besson's model.⁷⁴ It had certain advantages over Morton's model in that Besson's Contra descended to Sub-Contra B \flat , a tone lower than Haseneier's, and an exact octave below the Bassoon. A water-key at the foot of the first bend is also mentioned, but this is found on Haseneier's original model. Pierre expressed the hope that Fontaine-Besson, then (1890) still engaged in making his model, would succeed in pricing it at a lower figure than Morton's (£40–£50) so as to compete not only with Cerveny's and Mahillon's brass types and the Sarrusophone, but also with the metal Contra of Martin Thibouville aîné, the price of which did not exceed £22 (4ft. 11ins. in height).

DR. W. H. STONE'S INTEREST IN THE CONTRABASSOPHON.

At this point it may be convenient to refer to the important part taken by Dr. W. H. Stone (1830–91) who was an accom-

⁶⁷ Morton was born in 1827, and went to Vienna where he was apprenticed to the well-known makers Joseph Uhlmann & Sons. Concluding his apprenticeship in 1847, he returned to London, where he settled in Clapham Park Road, and made excellent oboes, cors anglais, tenorons, bassoons and contrabassoons. He died 2nd January, 1898.

⁶⁸ Pierre, *La Facture Instrumentale*, p. 37, illust. p. 38, and *Lavignac Encyclo.*, s.v. Basson, p. 1562, fig. 679.

⁶⁹ Pierre, *Op. cit. ante*, p. 255. ⁷⁰ Pierre, *Op. cit. ante*, p. 255.

⁷¹ Catal. Roy. Mil. Exhib., No. 173, p. 82.

⁷² The Savoy Theatre was not opened until 10th October, 1881.

⁷³ J. Schlosser, *Sammlung alter Musikinstr.* (Vienna, 1920), No. N.E. 532, illust. pl. LIV.

⁷⁴ Pierre, *Op. cit. ante*, pp. 38–9.

plished amateur performer on the Tenoroon, Bassoon and Contrabassoon, and wrote the articles on these and other instruments in the first and second editions of *Grove's Dictionary of Music*. Writing of the Double Bassoon he states: "It has been considerably improved by Herr Haseneier of Coblenz and subsequently improved by the writer who has introduced it into English orchestras . . . as made on the writer's design by Haseneier."

Referring to the Double Bassoon in general, he indicates that it had gone completely out of use until the Handel Festival of 1871—at which, presumably, he played it. The present writer has the good fortune to have on loan from Mrs. Spottiswoode, London, the actual Haseneier Contrabassophon owned and played by Dr. Stone, exhibited at the International Inventions Exhibition, 1885, and at the Royal Military Exhibition, 1890.⁷⁵ It is perhaps unfair to judge the tone produced with an original reed (in a case containing a visiting card bearing the name of Dr. W. H. Stone). The reed must be over fifty years old, and is remarkable on account of its size. The following measurements show the comparative sizes of the reed of the Contrabassophon, and of those of the modern German Contrabassoon and Bassoon:—

| | CONTRA-BASSOPHON | CONTRA-BASSOON | BASSOON |
|--------------------------------------|--------------------|---------------------|--------------------|
| Total Length | 3 $\frac{3}{8}$ " | 2 $\frac{13}{16}$ " | 2 $\frac{1}{4}$ " |
| Breadth at wide end | 1 $\frac{1}{16}$ " | 1 $\frac{3}{16}$ " | 1 $\frac{1}{16}$ " |
| Inside Diameter of lower end | $\frac{1}{4}$ " | 3/16" | 3/16" |

In the first edition of *Grove's Dictionary*, Dr. Stone gives some details of the Contrabassophon: tube, 16 feet, 4 inches long, truly conical in bore, enlarging from $\frac{1}{4}$ inch diameter at the reed to 4 inches at the bell, and curved four times on itself so that the height of the instrument is 4ft. 8ins.—only a little more than the ordinary bassoon, and the weight some 18 lbs. The extreme compass is three octaves from C₁ to c' (middle c), but g is recommended as

⁷⁵ Catal. Roy. Mil. Exhib., No. 171, pp. 81-2 and plate VIII, B.

the upward limit. The scale, which is chromatic throughout, is produced as follows :—

C₁ to F₁ : a single sound is obtained by each key.

F₁ to F and F to f : the fundamental scale is repeated in the octave harmonics by simple overblowing and change of embouchure.

f# to c¹ : seven semitones, which are the twelfths of the fundamentals from B $\frac{1}{2}$, with further increased wind pressure, carry the scale up to middle c.

The sound-holes, all covered by keys, are of graduated size, increasing (from 1 $\frac{1}{2}$ in. diameter to 2 $\frac{3}{8}$ in.) downwards with the size of the bore, and placed as a rule in their correct positions so as to cut off the appropriate tube length. The key mechanism is very ingenious and solid, and incorporates a device to distinguish "open" from "closed" holes. The touches of the open holes, i.e., those covered by keys operated by the first three fingers of each hand, are saddle-shaped, whereas the keys for the two little fingers and the thumb have cushion-shaped touches. Dr. Stone, who was a physician as well as a musician with profound acoustical knowledge, remarks that this device not only facilitates technique for a performer accustomed to the ordinary bassoon, but, by the saddle-shaped touches, "serves to support the upper joints of the finger, and to throw the labour of closing the hole more on the powerful muscles of the forearm than on the weaker fabric of the hand itself." A stout leather supporting strap, 4 feet long, passes over the shoulder round the body and swivels are attached to two eyelets on the instrument. It must be stated, however, that playing the Contrabassophon is very exhausting, although this was not the main reason for its disuse. In the second edition of *Grove's Dictionary*, Mr. D. J. Blaikley mentions the objections made against Dr. Stone's Contra, that its tone is too "open," lacking some of the characteristic "closeness" of bassoon tone, and that it is difficult to obtain a good piano quality. W. H. Heckel, describes⁷⁶ the tone in true German fashion as *ophikleidenartig-kurz klingend und nicht fagottartig-tragend*.

STRITTER SYSTEM CONTRA (Fig. 9).

It was, however, in imitation of the outward shape of the Contrabassophon, that J. A. Heckel (b. 1812, d. 1877)

⁷⁶ *Der Fagott*, p. 21.

commenced with his son W. Heckel (b. 1856, d. 1909) in 1876 to transform his Contrabassoon—until then of bassoon-shape and descending only to Contra D.⁷⁷ He divided the tube into three parallel tubes, altered the shape of the crook, and adopted a curious arrangement by which the instrument was played left-handed, i.e., it was held at the left side of the player, the left hand lowermost where the wing, finger-plates and keys lay on the under side. The fingers of both hands had, however, the same movements as on the regular Bassoon, and only the manner of holding the hands differed. This type descended to Contra C, and its design was termed System Stritter.⁷⁸ Being unable to find any biographical notes concerning Stritter, the writer communicated with Herr W. H. Heckel in 1939 and obtained an interesting reply from which the following is an extract :—

Stritter was a young workman during my grandfather's latter years from 1871 to 1877, and when my grandfather died in 1877 and my father was only twenty years old, Stritter took the opportunity of patenting in his own name my grandfather's latest idea . . . This . . . was the left-handed Contra, i.e. the short type which was not long in use—c in the illustration on p. 16 in *Der Fagott*.

In the Patent Office, London, may be seen the abridgment of the specification of the Patent⁷⁹ in favour of Fr. Stritter of Biebrich. The following is a translation :—

CONTRAFAGOTT ENTIRELY OF WOOD.

This Contrafagott is about 2ft. 3ins. shorter than the Contrafagott hitherto customarily in use, in so far as it is composed not as before of two long tubes, but of three shorter ones. It has the advantage of a compass from high G down to Contra C, and responds quite clearly in the lowest notes—which is not the case on the usual Contrafagott.

This new Contra is made of wood, weighs only 7½ lbs., and is generally on that account not only very light to handle, but also particularly adapted for the performance of marches and military music.

The connecting of the tube-lengths is accomplished not by metal elbow-joints, as hitherto customary, but by wooden bends. This affords a special softness to the tone of the instrument, otherwise in itself very powerful, full and pure.

It is blown with a cane reed (a large Bassoon-reed), "speaks" extraordinarily easily, and is therefore very well suited to be a solo instrument.

The fingering of this Contrabassoon is different from that of all Contras hitherto in use, as, in performance, the right hand lies uppermost and the left hand below, whence there results in marching a much more convenient mode of handling.

⁷⁷ *Ibid.*, p. 16, illust. (a) and (b).

⁷⁸ *Der Fagott*, p. 16, illust. c, and *Zeitschrift für Instrumentenbau*, 1898-9, pp. 340-1, "Zur Geschichte und Statistik des Heckel-Fagotts," by Wilh. Altenburg.

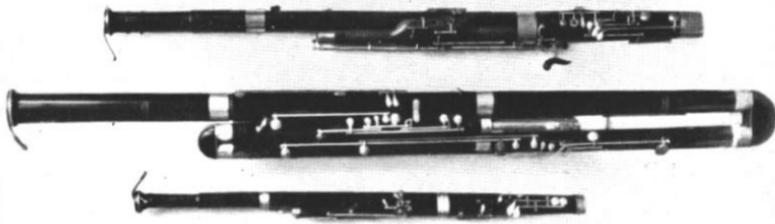
⁷⁹ German Patent No. 1131 of 24th October, 1877.

It is not clear why there should be any greater convenience. No instrument bearing Stritter's name is known, nor does any text-book mention his system which was, in any event, quickly superseded by Heckel's improved types.

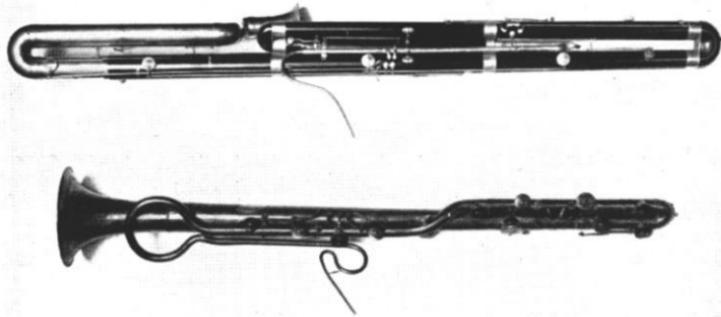
BRAUENLICH'S CONTRABASSOON.

Another attempt to produce an improved Contra was made in 1886 by Professor Adolf Brauenlich of Dresden. A very flattering account of this inventor and his instrument appeared in *Musical Opinion* of 1st May, 1886.⁸⁰ The article contains certain interesting references, e.g., to Contras of bassoon-shape by Bradka of Vienna and those of fourfold shape by Heckel of Biebrich, in all of which a relatively small bore was maintained. The original Contrabassoon, on account of its narrow bore, had been regarded simply as an octave to the smaller instruments; it had no characteristic passages of its own, possessing both the form and scale of the smaller, excepting the lowest B $\frac{4}{2}$ and B $\frac{3}{2}$, which no manufacturer had until then been able to produce. Up to that time (1886) the instruments of Haseneier of Coblenz, and of Heckel of Biebrich on Stritter's System, had been accepted as the best and most practical. The article proceeds to record that long and persevering experiments made with Haseneier's instruments in the Hoftheater, Dresden, led to the conclusion that this type was not in any way suited to orchestral use, however well it might suit the military band. The bore proved to be too large, making the lower register imperfect, and preventing such a *piano* as is required in the Opera. Notwithstanding all efforts to suppress it, the Contrabassophon overpowered the *piano* of the other wood-wind. The same thorough and systematic experiments were made with the Heckel Contra on Stritter's System, but the same imperfections were just as apparent. The narrower bore was considered to cause a dull tone and weakness in *forte* passages. The manner of holding the instrument was tiresome and awkward, and, to one accustomed to playing the bassoon, both contrary and annoying. These and other criticisms were said not to be personal but were made by competent judges assembled to hear *Fidelio*, *Thursnelda*, *Rattenfänger* and *Andreasfest*. Professor Brauenlich's invention is then described. The tube for 16-foot C was exactly once again as large as that required for 8-foot C

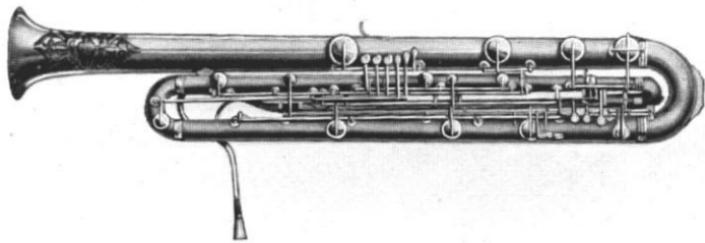
⁸⁰ Being a translation (by L. O'Reilly for the *American Music Journal*) of an article by Hermann Starcke in the *Deutsche Musik Zeitung*.



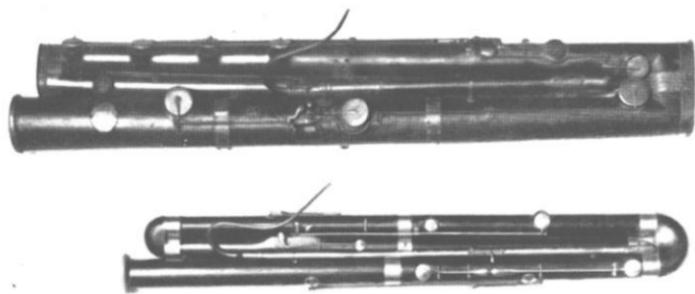
- (8) (a) Tenoroon by Buffet-Crampon, Paris, c. 1900.
 (b) Contrabassoon by Heckel, Biebrich, c. 1896.
 Ht. 5' 4". Lowest note: Contra C.
 (c) Bassoon by Heckel, Biebrich, c. 1912. Crutch (support) for right hand.



- (11) Contra by Heckel, Biebrich, c. 1909. Ht. 6' 4".
 Wooden with inverted metal bell. Five-coil model descending to Sub-contra B.
 (12) Contra of brass by Joh. Stehle, Vienna, c. 1850.
 Ht. 5' 6". Ophicleide shape. Fifteen keys.



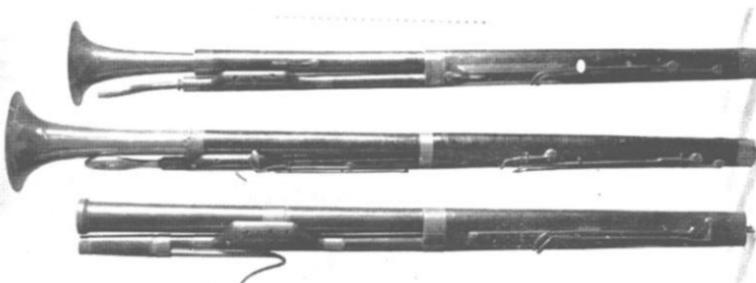
- (13) Contrabass Sarusophone in Eb.
 Ht. 3' 9". Wide brass bore and large holes.
 Lowest note: Contra D₄. Orchestral model in C, to Sub-contra B₄.



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(7) Contrabassoon by H. J. Haseneier, Coblenz, c. 1840. Ht. 4' 8". Nineteen brass keys. Wide bore and large holes. Lowest note: Contra C. (9) Contrabassoon by Heckel, Biebrich, c. 1877. Ht. 4' 4". Spritzer System: played right hand above left, but usual fingering. Lowest note: Contra C.

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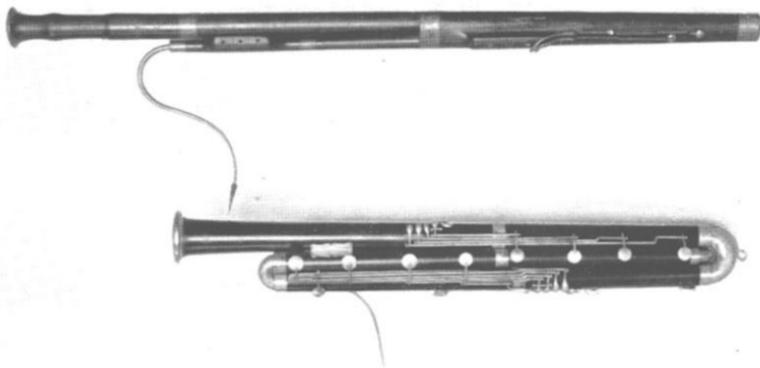


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(4) Contra by Schölnast, Pressburg. Early 19th cent. Ht. 5' 2". Six brass keys. (5) Contra by unknown Austrian maker, mid 19th cent. Ht. 5' 6". Ten brass keys. Both instruments have a coiled brass crook, flared brass bell and lowest note Contra C. (6) Contra by W. Horák, Prag, c. 1830. Ht. 5' 1". Five brass keys. Double butt. Entirely of wood. Lowest note: Contra C.

5

6



3

(3) Contra by Döke, Linz. Late 18th cent. Ht. 5' 8". Six brass keys. Large crook. Lowest note: Contra C.

10

(10) Contra by W. Bradka, Vienna, 1888. Ht. 4' 5". Four-fold coil. Twenty-two keys. Lowest note: Contra C.

on the ordinary bassoon made by Meyer in Hanover, and with this exact measurement, the faults of the other systems disappeared. The compass was from $B\flat_2$ to c' or d' , great emphasis being laid on the availability of $B\flat_2$ and $B\sharp_2$ —of such undoubted value in works such as *The Creation* (Haydn), *Missa Solemnis* (Beethoven), and the later works of Wagner, such as *Parsifal*. So far as is known, no specimen of the Brauenlich Contra exists in any collection.

ČERVENY'S SUBKONTRAFAGOTT.

An unbelievable depth of pitch is said⁸¹ to have been reached in 1873 by V. F. Červeny of Königgrätz, when he invented his Subkontrafagott in $B\flat$ —an octave below the Contrabassoon—with the compass $B\flat_3$ to $B\flat$. Now $B\flat_3$, i.e., 64-foot $B\flat$, is a tone below C_2 which has only sixteen vibrations, and, although Dr. Scholes states⁸² that “a ‘perfect’ ear can take in pitches as low as ten vibrations per second,” it is difficult to imagine how this giant Contra was manipulated. From its pitch— $B\flat$ —and the fact that Červeny was a brass-maker, we may conclude it was designed for military band use—assuredly not for use on the march!—doubled in the upper octave by other brass basses. So far as is known, no specimen of this Contra survives.

HECKEL CONTRAFAGOTT (Figs 8 (b) and 11).

It is to the firm of Heckel of Biebrich that we owe the production of a series of Contras from *circa* 1834 until 1879 when the modern Contra may be said to have been perfected. The successive types are depicted in *Der Fagott*, p. 16, and are the following:—

(1) *Circa* 1834: A Contra of normal bassoon shape but over 5 feet high with an unusually long butt joint and a large looped crook. Such Contras were normally stamped B. Schott but were the work of J. A. Heckel. The lowest note was Contra D. (Illust. a.)

(2) *Circa* 1849: A Contra, also of bassoon shape, but even taller than (1), and stamped Heckel-Biebrich. The compass was chromatic down to Contra D. (Illust. b.)

(3) *Circa* 1876: A left-handed Contra, coiled to reduce its height to less than that of the Bassoon, but played left-handed and descending to Contra C. This is the Stritter System to which reference has already been made, but the instrument is stamped Heckel-Biebrich. (Illust. c.)

(4) *Circa* 1879: Original type of the modern Contra, right-handed, and having a vertical wooden bell rising above the coils of the tubing.

⁸¹ Sachs, *Real-Lexikon*, s.v. Subkontrafagott.

⁸² *Oxford Companion to Music*, s.v. Ear and Hearing.

The instrument, however, descended still only to Contra C. It was this type, the work of Wilhelm Heckel, which was played to Wagner at Bayreuth in October, 1879, when the composer was much impressed.

W. H. Heckel has explained⁸³ that as Wagner, after this, composed only *Parsifal*, it is only in that score that he employed the Contra, writing for it at its actual pitch. In others of his works, the instrument has been introduced by Dr. Hans Richter.

It is not known when the Contra was enlarged to descend to Sub-Contra B \flat , but Heckel refers⁸⁴ to improvements in the bore and the introduction of two octave-keys on the large crook to facilitate fingering in the middle register. It was on the advice of Wagner that Heckel constructed a Bassoon with an extended bell enabling the production of Contra A, and about 1900 the Contra was made to descend to Sub-Contra A, the lowest note on the pianoforte and the lowest sound in the orchestra. For the downward extension from Contra C, the bell is made either of long upright shape, or with a large wooden bend terminating in both cases in an inverted metal bell. There are, however, half a dozen variations in shape, and all the bells to A or B \flat are detachable and may be replaced by an additional wooden bell rim for Contra C. The large metal crook has a tuning slide to regulate the pitch, as the Contra, on account of its large dimensions (19ft. 5ins. to Sub-Contra A), is specially sensitive to variations of temperature.

DEVELOPMENT IN FRANCE SINCE 1860.

About 1860 F. Triébert and A. Marzoli of Paris made a Contra of bassoon-shape and consequently nearly 8 feet in height. This Contra was used by the Société des Concerts du Conservatoire in 1863.⁸⁵ P. Goumas, a Paris maker, also experimented and Evette & Schaeffer, who succeeded him in 1885, made a similar wooden Contra with 15 keys and descending to Contra C, but having the same disadvantage of being nearly 8 feet in height. Constant Pierre was not favourably impressed with this instrument which he heard at the Paris Exhibition of 1889.⁸⁶ At that exhibition Martin Thibouville aîné presented his first attempt at an improved brass Contra, which he had designed in collaboration with Lucien Jacot of the Opéra Comique. By

⁸³ *Der Fagott*, p. 20.

⁸⁴ *Ibid.*, p. 21.

⁸⁵ Lavignac, *Encyclopédie*, s.v. Basson, p. 1562.

⁸⁶ Pierre, *La Facture*, p. 32.

coiling the tube of 17 feet 8 inches in four parallel lengths, Thibouville succeeded in reducing the height to under 5 feet, and the weight was 11 lbs. All holes were covered and there were 19 keys and 6 plates, so arranged that the fingering of the French bassoon was successfully retained.⁸⁷ It was probably this type which led Evette & Schaeffer, who took over the old-established business and trade-mark of Buffet-Crampon et Cie., to make a similar brass Contra corresponding in height and fingering to the Bassoon.⁸⁸ The progress of the Heckel Contra, however, soon led Evette & Schaeffer (now trading as Buffet-Crampon et Cie), to build a Contra of wood, in most respects similar to the German type except that, of course, the French fingering was retained. Their new Contra was heard for the first time about 1906 at the performances of Richard Strauss' *Salomé* at the Académie National de Musique, Paris, and it gave great satisfaction. Strauss has scored in that work a contrabassoon solo of considerable difficulty.

The modern French Contra, like the German, has a wooden bell-rim for use when Contra C is the lowest note required, and an inverted metal bell which can be slipped on when Sub-Contra B♭ is required.⁸⁹

DEVELOPMENT IN ENGLAND SINCE 1871.

Pierre states that in 1890 there were in London only two performers on the Contra—one, the eldest son of Alfred Morton, to whose work and association with Dr. Stone reference has already been made ; the other, presumably Dr. Stone himself. Morton's few Contras and Haseneier's original (owned by Dr. Stone) were the only Contras in use until the early years of this century. Naturally the improved tone and easier manipulation of the French and German Contras of Buffet and Heckel respectively quickly gained approval. At first the French type was most general because bassoons on the French system were then most popular, but the taste for German bassoon-tone grew steadily and professional bassoon-players even changed over to the German system. The adoption of German Contras followed naturally, and the Heckel type or copies of it are those in common use in British orchestras to-day.

⁸⁷ *Ibid.*, pp. 33-4, illust. p. 35, and Lavignac, *Encyclo.*, s.v. Basson, p. 1562, fig. 677.

⁸⁸ Illust. Lavignac, *loc. cit. ante*, fig. 676.

⁸⁹ Illust. of both, Lavignac, *loc. cit. ante*, fig. 680.

ORCHESTRAL USE.

One does not expect to have frequent opportunities of hearing the Contra, for it is normally used to support the orchestral mass in *tuttis*. The treatment by Haydn and Beethoven and others has been mentioned above, but the instrument has also received attention from Mendelssohn in the Reformation Symphony; Brahms in his First, Third and Fourth Symphonies and in the *St. Anthony Variations*; Strauss in *Ein Heldenleben*, and in *Salomé* and *Elektra*—difficult solos in both; Rimsky-Korsakov in *Coq d'Or*; and Ravel in *Mère l'Oye Suite*⁹⁰; and, perhaps best known, in Dukas' *L'Apprenti Sorcier* where a repeated four-note phrase, commencing on Contra F, introduces the $\frac{3}{8}$ theme for three bassoons in unison. Holst (*The Planets*), Respighi (*Pine Trees of Rome*), Elgar, Bax, Vaughan Williams, Parry, Stanford, Delius, and Sullivan (*Golden Legend*) have all included the Contra.

The tone in the lowest register (sounding Sub-Contrabasso B \flat to E) in sustained notes is soft and smooth, becoming easy and flexible as far as E. The instrument is capable even of rapid and staccato passages though the effectiveness of rapid passages is certainly questionable. From E to G the tone commences to lose resonance, and though the compass can be extended from G to f, this portion is better avoided, as the notes sound forced and dull, and can be blown with less effort and more effectively on the Bassoon. Notwithstanding this, Beethoven, Brahms, Ravel and others write up to a, where the Contra is quite useless.

CONTRABASSOON-MAKERS.

As an appendix to this history, a list is added showing practically all known Contra makers who are represented by instruments in the main collections of the world. The list does not include a number of modern makers, all of whom are now making Contras on the same model with German or French fingering. It will be noted that of the forty-five named, no less than twenty-seven are Austrian, German or Bohemian, thus reflecting the lead given by those countries in regard to the Contra, a lead which the German type maintains to this day.

⁹⁰ In an American gramophone recording, the Contrabassoon has been replaced by the Bass Tuba, but, in the writer's opinion, the tone of the Tuba is too hard and aggressive for the particular passage.

SUMMARY.

The successive stages in the evolution of the Contra appear to have been :—

I. *Low-pitched Dulzians.*

Sixteenth and early seventeenth centuries : single wooden shaft with twin bores connected at the foot to form a continuous conical tube. Small squat bell and short crook :—

(a) Quart-fagott descending to Contra G.

(b) Quint-fagott descending to Contra F.

(Cp. Vienna Kunsthistorisches Museum, Nos. 198 and 199. *Illust. Mus. Times*, April, 1937.)

II. *Contrabassoons.*

(1) Tall bassoon-shape, entirely of wood except for metal crook of large size, sometimes bent back on itself more than once :—

(a) In C, descending to Sub-Contra B \flat , e.g., Stanesby Junior, London, 1739. (H. 8ft. 4ins.) (Fig. 1.)

(b) In C, descending to Contra C, e.g., Doke, Linz. (H. 5ft. 8ins.) (Fig. 3.)

(c) In F (Quint-bassoon), descending to Contra E \flat , e.g., H. Grenser, Dresden, c. 1790. (H. 6ft. 1in.)

(d) In G (Quart-bassoon), descending to Contra F, e.g., Samme, London, c. 1855. (H. 5ft. 7ins.)

(2) Bassoon-shape : long butt ; large bell of metal and widely flared. This type is almost exclusively Viennese or Bohemian ; in C, descending to Contra C, e.g., Stehle of Vienna (Fig. 2) and Uhlmann of Vienna ; Horák and Rott of Prague ; Schölnast of Pressburg. (Figs. 4 and 5.)

(3) Similar to (1) but having a second butt joint, inverted and lying side by side with the bell. This permitted the construction of a Contra pitched in C, with normal fingering but reduced to little over five feet in height :—

(a) To Contra C, e.g., Lempp, Vienna (H. 5ft. 2in.) ; Horák, Prague (H. 5ft. 1in.). (Fig. 6.)

(b) To Contra D, e.g., Schott, Mainz (i.e., Heckel), c. 1830-50. (H. 5ft. 7in.)

(4) Fourfold shape, wide bore, narrow rim instead of a bell ; all holes very large and bored at approximately acoustically correct intervals and all covered by keys. In

C, descending to Contra C; height reduced to about 4ft. 7in. :—

(a) Of wood—Contrabassophon, *e.g.*, Haseneier, Coblenz (1849). (H. 4ft. 8in.). (Fig. 7.)

(b) Of papier-mâché—Contrabassophon, *e.g.*, Berthold, Speyer-am-Rhein.

(5) Fourfold shape; narrow bore; of wood; holes of more normal bassoon size; all covered by keys, with bassoon fingering.

(a) Descending to Contra C (H. 5ft. 4in.). Heckel, Biebrich. (Fig. 8.)

(b) Ditto, ditto (H. 4ft.). Heckel, Stritter System (left-handed). (Fig. 9.)

(c) Ditto, ditto (H. 4ft. 5in.). W. Bradka, Vienna. (Fig. 10.)

(d) Ditto, Sub-Contra B \flat (H. 5ft. 9in.). Inverted metal bell. (Fig. 11.)

(e) Ditto, Sub-Contra A. Inverted metal bell.

E.g., Heckel, to Contra C, 1879; later to Sub-Contra B \flat and *c.* 1900 to Sub-Contra A.

III. Metal Types.

All holes covered, not bassoon-fingering. The Sarrusophone alone has survived.

(a) Ophicleide shape :—

To Contra D, *e.g.*, Stehle, Vienna, *c.* 1840 (H. 5ft. 6in.). (Fig. 12.)

(b) Slender tuba-shape :—

Tritonikon in E \flat (Schöllnast, Pressburg, 1839). (H. *c.* 3ft. 3½ins.)

Tritonikon in E \flat (Červený, Königgrätz, 1856).

Tritonikon in B \flat (Červený, Königgrätz, 1867).

Contrebasse-à-anche, to Contra D (*e.g.*, Mahillon, Brussels, 1868).

Claviatur-Contrafagott (*e.g.*, C. W. Moritz, Berlin, 1845-56).

Contrabass Sarrusophone in E \flat or C (*e.g.*, Gautrot, Paris, 1856). (Fig. 13.)

APPENDIX

LIST OF MAKERS OF CONTRABASSOONS.

| Name | Place | Date or Period. |
|--|--------------------------------|---------------------------|
| 1. AUSTRIA AND CZECHOSLOVAKIA. | | |
| Bradka, Wenzel | Gumpoldskirchen bei Wien .. | 1822-1907 |
| Cervený, Vincenz F. | Königgrätz .. | Born 1819 |
| Doke, Carl | Linz | 5 and 6 keys |
| Horák, J. W. | Prag | c. 1830 |
| Kies | Wien | 6 keys |
| Küss | Wien | pre 1840 |
| Koch, S. | Wien | d. 1828 |
| Lempp, Martin | Wien | 5 keys |
| Rott, Vincenz Josef | Prag | 8 keys |
| Schöllnast, F. und Sohn .. | Pressburg .. | c. 1839 |
| Schamal, Wenzelslaus .. . | Prag | 20 keys |
| Schuster, G. | Wien | 19th cent. |
| Stehle, Joh. (successor to Küss) .. . | Wien | c. 1840-50 |
| Uhlmann, J. T. | Wien | c. 1840-50 |
| Weber, Karl | Graz | 8 keys |
| Ziegler, Johann | Wien | c. 1840-70 |
| 2. GERMANY. | | |
| Berthold, G. und Söhne .. | Speyer-am-Rhein | 1849-88 |
| Doelling, C. Fr. und Söhne | Potsdam | c. 1824-c. 1850 |
| Finke, Fr. Heinr. | Dresden | c. 1822 |
| Geipel, Ch. | Breslau | c. 1850 |
| Greiser, Heinrich | Dresden | b. 1764-d. 1813 |
| Haseneier, H. J. | Coblenz | 1849 |
| Heckel | Biebrich-am- Rhein | 1831- |
| Moritz, K. W. | Berlin | b. 1811-d. 1855 |
| Peuckert und Sohn | Breslau | c. 1835 |
| Schott, B., Söhne (<i>i.e.</i> Heckel) | Mainz & Anvers | c. 1834 |
| 3. FRANCE. | | |
| Baumann | Paris | c. 1825 |
| { Goumas & Cie, later | Paris | { 1885- 1885- 1830- |
| { Evette & Schaeffer later .. | | |
| { Buffet-Crampon et Cie | | |
| Gautrot-Marquet | Paris | c. 1863 |
| Fontaine-Besson | Paris | c. 1890 |
| Martin Thibouville aîné .. | Paris | c. 1890 |
| Muller, Louis | Lyon | 1830-c. 1855 |
| Triébert, F., & Marzoli, A. | Paris | c. 1860 |
| 4. GREAT BRITAIN. | | |
| Morton, Alfred | London | b. 1827 d. 1898 |
| Samme, J. | London | c. 1855 |
| Stanesby, T., Junr. | London | b. 1692 d. 1754 |
| 5. BELGIUM. | | |
| Albert | Bruxelles | c. 1868- |
| Tuerlinckx | Malines | c. 1770-c. 1850 |
| Mahillon et Cie | Bruxelles | c. 1868- |

6. RUSSIA.
Lange, C. St. Petersburg c. 1850-78
7. ITALY.
Anciuti, Joannes Maria . . Milano . . . 1732
Pelitti Milano . . . 1853
8. POLAND.
Truška, J. Praga . . . 5 keys

DISCUSSION.

THE CHAIRMAN : I am sure we are all very grateful to Mr. Bate for reading Mr. Langwill's scholarly paper. I have no doubt it has interested many members, especially those who have more technical knowledge of this instrument than I can claim myself. He alluded to the second volume of the *Syntagma* of M. Praetorius, giving 1619 as the date of publication. There is an earlier copy of it at St. Michael's College, Tenbury, which is dated 1618. It was unknown to Eitner and is thought to be unique. The first volume is dated 1615.

Canon GALPIN : I do not think the paper quoted an allusion by Parke in his *Musical Memoirs* (1830), in which he speaks of the double bassoon of his day saying that it was a wonderful instrument and resembled very much the "flue" of a Richmond steamboat except that there was no smoke coming out of it. I thought, living as I do at Richmond, I would try and get a picture of a Richmond steamboat, and I found an old engraving. Certainly there was the steamboat and a magnificent funnel with a convolvulus-shaped top. It must have been twenty feet high.⁹¹

As regards my own double bassoon⁹² I lengthened it in order to secure the B \flat of the 32 ft. octave for the "Heavy Beast" in Haydn's *Creation*. My friends used to call it the anti-Zeppelin when I had to play it during the last war. It reached over eight feet in height.

I think it is strange that the serpent and the ophicleide should have been used at times in place of the double bassoon. They are pitched an octave higher and have nothing like the tone of the deeper instrument. Berlioz strongly objected to this practice and said it was better to do without the part entirely. The more modern metal sarrusophone is a useful instrument, especially in military bands. I have never seen it used in an orchestra, but in its contrabass pitch it might be a very effective bass.

⁹¹ The reference to Parke appears in the paper as printed, p. 6-7, *ante*.

⁹² See frontispiece, fig. 2.

When I was in St. Alban's many years ago, I was shown a double bassoon of the Haseneier type made out of papier-mâché. The man who made it had obtained some moulds, on which he could put his brown paper, and with various layers of that and some good strong glue he had constructed his double bassoon and added metal keys to it. I am sorry I could not hear its tone, but it was certainly very light in weight and easy to carry. The German maker Berthold also made a papier-mâché double bassoon.

As regards the use of the instrument in the orchestra, I suppose the most telling part written for it is in the *Andante* Introduction to the last movement of the *C minor Symphony* of Brahms.⁹³ It is a fine passage played down on the very lowest notes and doubling the bass trombone. It is curious how Brahms and Beethoven, especially Beethoven in the early years of the last century, expected great things from the contra-bassoonists. They gave them terrific parts. How the players managed them, I do not know, considering the state of the double bassoon of those days ; but they did manage them, and all to their credit.

May I say how indebted we are to Mr. Lyndesay Langwill for his researches. It is difficult to follow such a paper as this at a mere hearing, but when we have it in print, I am sure we shall realise more fully how well he has marshalled his facts and his most interesting discoveries.

Mr. BATE : Dr. Stone's own subterfuge when faced with this low B \flat in the *Creation*, was, I believe, to roll up his music and stuff it in the bell !

Mr. LEVIEN : I believe M. Mahillon made some instruments of papier-mâché.⁹⁴ He said he had shown them to five hundred instrumentalists, and claimed that they produced the same tone as instruments made from the usual materials.

The SECRETARY : I understood with reference to a work of Saint-Saëns and his use of the sarrusophone, that the instrument was not indicated in the score. If it was not indicated in the score, what evidence have we that it was written for it ? It is usual for the instruments to be indicated

⁹³ At letter C, p. 97 of the Miniature Full Score ; also in the coda, after letter Q, p. 144.

⁹⁴ " Etudes experimentales sur la resonance des colonnes d'air de forme conique, tronc-conique et cylindrique." *Appendice au Catalogue . . . du . . . Musée . . . du Conservatoire . . . de Bruxelles*, V. C. Mahillon, Vol. III (Ghent, 1900).

at the beginning of a score in the nineteenth century, though in earlier times this would not be so, of course.

Mr. BATE : Yes, that puzzled me too.

The LECTURER : Here is the passage from Constant Pierre, *La facture instrumentale*, pp. 41-42 :—

Le premier compositeur qui ait songé à faire entrer le sarrusophone dans l'orchestre dramatique pour tenir lieu de contrebasson, est M. Camille Saint-Saëns. Sa partition *Les Noces de Prométhée* couronnée au concours de l'Exposition universelle de 1867, comprenait une partie de contre-basson qu'il se trouvait fort embarrassé de faire exécuter par suite du défaut d'instrument. Quelqu'un lui proposa d'y substituer le sarrusophone contrebasse dont il fut entièrement satisfait. Plus tard il en fit construire un à ses frais qu'il donna au Grand-Théâtre de Lyon pour les représentations d'*Etienne Marcel* (1879) et un autre qu'il offrit à un musicien de Paris, qui s'en servit pour l'exécution de fragments de *Samson et Dalila*, de la *Création*, des 5e et 9e symphonies de Beethoven, des fragments d'*Etienne Marcel* aux concerts du Châtelet et Padeloup, puis enfin au Théâtre du Château-d'Eau pour l'audition intégrale de ce dernier ouvrage (1884).

Promoteur du sarrusophone, M. Saint-Saëns ne l'a jamais désigné sur ses partitions. C'est évidemment parce qu'il n'est pas d'un usage général. Il désirerait pourtant en rencontrer un dans tous les orchestres. A l'Opéra, il dut accepter, pour *Henri VIII*, le contrebasson de bois quoiqu'il soit bien au-dessous du sarrusophone comme ressources ; il en a été de même pour *Ascanio*, mais, absent, l'auteur ne put manifester son intention. M. Saint-Saëns fut longtemps seul, parmit les compositeurs, à apprécier le sarrusophone qui restait ignoré à ce point qu'on n'en parlait même pas : aucun compte rendu de l'exécution des ses œuvres n'en fait mention. Les grands orchestres symphoniques du Châtelet et du Cirque des Champs-Élysées, n'ont encore ni contrebasson, ni sarrusophone contrebasse et ce défaut d'instrument occasionne souvent une lacune dans l'exécution de certains ouvrages. Disons toutefois à la décharge des chefs d'orchestre que cela ne dépend pas absolument d'eux, personne en France n'ayant fabriqué le premier jusqu'en ces dernières années ; quant au second, les artistes n'avaient aucun motif de s'y adonner et rien ne les y encourageait.

La difficulté d'introduction à l'orchestre d'un instrument nouveau réside dans ce dilemme : le compositeur n'écrit pas pour un instrument qui n'est pas joué et l'artiste n'a pas intérêt à travailler un instrument non usité.⁹⁵

The SECRETARY : If any member would like to see the patent specification of 1856, I should be glad to show it to him at the Patent office. I work in the Patent Office Library nearly every day.

A MEMBER : Did you not say the tone of Mahillon's contrebasse à anche was not good because the weight of metal was insufficient ?

Mr. BATE : I believe that is so.

The SECRETARY : Is it not actually a question of the specific gravity of the metal that affects the tone ?

⁹⁵ Cp. p. 14, line 11, ante.

Mr. BATE : My own impression is that this is a point which is still very much under discussion by instrument makers. Some are of opinion that a gold flute has the finest tone because the density of that metal is so great, but practice does not seem to bear that out altogether. In illustration of the question of weight of metal, there is a quotation in a reference work the name of which eludes me at the moment, regarding a brass E \flat contra bass in a military band which instrument had been bad for years. The player was a man of weak sight and suffered from the glare of the sun on his instrument. Obtaining permission from his Commanding officer he painted it black, and found that he had now an instrument with a first class tone. Apparently the addition of a coat of paint had made the improvement.

Mr. RENDALL : You will find the reference in Rockstro's *Treatise on the Flute*.⁹⁶

Mr. BATE : Mr. Langwill mentions the difficulties about the dates of the Stanesby Senior and Junior. I have an oboe marked Stanesby Junior, but which is a very much more primitive type than any other of that maker as far as I know. This leads me to think that possibly this instrument was really Stanesby Senior's work and survived the change in ownership of the firm and had been stamped by Stanesby Junior when sold. It occurs to me that some such thing might account for the doubt about the date of the Stanesby contra.

⁹⁶ R. S. Rockstro, *A Treatise on the Flute* (London, 1890), p. 147, § 322.