Boosey & Hawkes:

The Rise and Fall of a Wind Instrument Manufacturing Empire

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Appendices

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Volume 2 of 2

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Appendix 1. List of surviving Boosé instruments

1.i Brass instruments: based on *Journal of surviving Boosé, Boosey and Boosey & Hawkes brass instruments* by Arnold Myers.

http://homepages.ed.ac.uk/am/gdsj.html Accessed 30/07/2015.

Serial number	Date	Instrument	Description	Stamp	Collection
no number		B ♭ ophicleide	9 keys	Crown / H / C. Boosé, London	RNCM collection 48
1957	c.1856	B ♭ cornet	Brussels model, piston valves	PATENT / C. BOOSE. / 28 HOLLES ST. / LONDON / 1957	Millhouse Coll. Private Collection of Giles Whittome, Britain no.47
2167	c.1860	B ♭ cornet	Brussels model, rotary valves	C. BOOSE. / 28 HOLLES ST / LONDON / NO 2167	Private collection, Britain
3222	c.1860	B ♭ cornet	Brussels model, piston valves	PATENT / C. BOOSE. / 28 HOLLES ST. / LONDON / 3222	EUCHMI 216
3264		B ♭ cornet	circular form, three rotary valves	4194 / C. BOOSE / 28 HOLLES ST. / LONDON / 3264	Private collection, Switzerland
3346		B ♭ cornet	Brussels model, piston valves	PATENT / C. BOOSE. / 28 HOLLES ST. / LONDON / 2276 / 3346	Private collection, Germany
*3393		circular bass in E ♭		BOOSEY & COMPY. / 3393 / 24 & 28 HOLLES ST. / LONDON	Private collection, Britain
3461	c.1860	B ♭ cornet	Brussels model, rotary valves	C. BOOSE. / 28 HOLLES ST / LONDON / 3461	Private collection, Britain
3521	Ante 1860	post horn	one turn in brass	3521. BOOSEY & CO.	Boosey & Hawkes per Chatwin 138; current location not known
3533		hunting horn		BOOSEY & CO	Private collection, France

4542		B ♭ cornet	Brussels model, piston valves	PATENT / C. BOOSE. / 28 HOLLES ST. / LONDON / 4542	Private collection, Britain
4828		B ♭ cornet	Brussels model, piston valves	PATENT / C. BOOSE. / 28 HOLLES ST. / LONDON / 4828	Private collection, Germany
4906		ophicleide in C	11 keys, brass	4436 / C. BOOSE / 28 HOLLES ST. / LONDON / 4906	Charles Moore Collection; University of Leicester CM 751
7169		B ♭ cornet	three rotary valves	C. BOOSE / BOOSEY & SONS / 7169 / 24 & 28 HOLLES ST. / LONDON	Boosey & Hawkes 712; Horniman Museum 2004.810
7346		flugel		C. BOOSE / BOOSEY & SONS / 7346 / 24 & 28 HOLLES ST. / LONDON	Boosey & Hawkes 713; Horniman Museum 2004.903
7794		B ♭ cornet	Brussels model, piston valves	C. BOOSE / BOOSEY & SONS / 7794 / 24 & 28 HOLLES ST. / LONDON	Utley; University of South Dakota, National Music Museum 7009
8069	1861	duty bugle in C		1861 / C. BOOSE / BOOSEY & SONS / 8069 / 24 & 28 HOLLES ST. / LONDON	Private collection, Canada
*8393		circular bass in E ♭		BOOSEY & COMPY. / 3393 / 24 & 28 HOLLES ST. / LONDON	Private collection, Britain
8993		B ♭ flugel	bell-forward, 4 rotary valves	C. BOOSE / BOOSEY & SONS / 8993 / 24 & 28 HOLLES ST. / LONDON	Private collection
10141	c.1865	B ♭ cornet		C. BOOSE / BOOSEY & COMPY. / 10141 / 24 & 28 HOLLES ST. / LONDON	Private collection, Britain
10672		flugel		C. BOOSE / BOOSEY & COMPY. / 10672 / 24 & 28 HOLLES ST. / LONDON	Boosey & Hawkes 714; Horniman Museum 2004.823

* The serial number supplied by the instrument's owner seems inconsistent with the address and is probably a mis-reading of 8393

1.ii Woodwind instruments

Serial number	Date	Instrument	Description	Stamp	Collection
No sn	1845-50	B ♭ clarinet	Boxwood with 13 silver keys on pillars, elaborate silver mounts, no rings on lower joint. In tune at A.440. Exhibited at the Great Exhibition of 1851		Horniman 2004.846
	c.1860.	E ♭ clarinet	13 keys. Plated brass. (concentric tubes).	C. BOOSE/ LONDON	Horniman, Carse Collection 14.5.47/173
No sn	c.1870	E ♭ clarinet	13 keys, cocus: German silver mounts.	DISTIN & CO., C. BOOSE/ LONDON	Horniman, (Bull collection) 15.10.48/191
No sn		B ♭ clarinet	Stained boxwood with ivory ferrules and brass keywork	BOOSE / LONDON (both joints)	EUCHMI
662		B ♭ clarinet	Rosewood with german silver ferrules and keywork	C. BOOSE / 28 HOLLES ST / LONDON (bell) C. BOOSE (barrel and both sections)	EUCHMI
1257/ 1253	c.1851	B ♭ clarinet	13 keyed ivory mounted boxwood clarinet in B ♭ with good ivory bands, as shown by Carl Boose at the 1851 Gt. Exhibition.	Stamped on all four joints: C. BOOSE, also stamped on the bell: 24 Holles Street, London. Also stamped on the barrel: 1257, and at top of the first joint: 1253.	http://www.music-treasures.com/anticlar.htm Accessed 13/05/2015
2216		E ♭ clarinet	cocus	C. BOOSE / 24 HOLLES STREET / LONDON (bell). Other joints 2216. Bottom j: C BOOSE	Private collection, JH
6393		flute		C. BOOSE / 24 HOLLES STREET / LONDON /F/6393/RS Pratten's Perfected	Seen on ebay 02/03/2014

Appendix 2. Instrument design

2.i Mr Macnab drawings

The first mention of Mr Macnab is on a drawing of 'Boosey & Co.'s B ♭ Clart mp'ce July 24th/82', on which it is noted 'see also Mr MacNab's measurements of this mp'ce.' This correlates with an extant document of mouthpiece measurements dated 24/07/1882. A few of his drawings survive alongside Blaikley's many plans. Macnab's charts predate Blaikley's, and some of 1885 compare the measurements of experimental flute heads and those from flutes made by different manufacturers such as: Lot 1884, Boosey 1884, Millereau, 1884, 'Munich' 1876, Rudall Carte 1881, Experiment M, W experiment, Rudall Carte 1884, Cone, Cocoa Rudall Flute (R.E. measured Nov. 8th /87) and Howarths measurement of Rudall flute made for [?]Harrington ... Nov 7th/87. Other plans by Macnab show differences between a Boosey model and a flute that was awarded the R.E. Flute Council Medal 1851, a Carte /67 silver flute no.1729 (08/12/1891) and Boehm's scale. 'Heads. J.M. R.E. Flute Council Medal 1851.' 1885: 'Measurement of flute heads in inches.' 10/03/82: 'Tracing from Mr Macnab's drawing of Boehm's flute scale for bore of Flute 19 mill.' There is also a sketch: 'Valve Clarionet Mr MacNab'. (HM/B&H)

2.ii D.J. Blaikley

Research and development of instrument design is an important aspect of any wind instrument manufacturing business, and its significance is evident from the many surviving drawings in the B&H archive. Some of the earliest extant B&Co. notes on acoustics and sketches of flutes and clarinets date from the 1880s by one Mr J. Macnab.[1] However, perhaps the most notable and influential employee at Boosey was David James Blaikley (1846-1936).

Blaikley, a great innovator, was responsible throughout his long career for many improvements and developments in the design of instruments and manufacturing equipment. He was the son of a portrait painter, and commenced

[1] See Appendix 2i.

work at B&Co. in 1859, aged 13, as a harmonium tuner.[2] The Blaikley and Boosey families were Sandemanians,[3] and it seems likely that Blaikley was offered his first opportunity of employment through his contact with the Boosey family at the sect's meeting house.

Sandemanians were followers of a Christian sect founded in Scotland in circa 1730 by John Glas, and spread into England and America by Robert Sandeman, his son-in-law. The Sandemanian community was close and supportive, and it was common practice for worshippers to marry into families of their own faith. The congregation, which met at the London meeting house (1862-99: Barnsbury Grove, Islington) included the Boosey, Blaikley, Faraday and Barnard families, amongst which there were many marriages and business connections. DJB was related by his marriage to Sarah Barnard to Michael Faraday and also to Thomas Boosey, the founder of the Boosey business.

According to George Simms, on Sundays, much of the congregation remained at the meeting house for lunch (the Feast of Friendship) between the morning and afternoon services. He recalls that among the elders of the chapel were 'Professor Faraday and John Boosey, the uncle of the William Boosey of the present day'.[4]

In 1863 Blaikley left B&Co. to work in a surveyor's office of the railway contractors Smith, Knight & Co. who ceased business after the bankers Overend, Gurney & Co. collapsed. His return to Boosey coincided with the company's acquisition of D&Co. in 1868, and five years later in 1873, aged 27, he was appointed Factory Manager. In 1919 he took charge of research and development and his son Arthur took over his position. Apart from the years between 1863 and 1868, Blaikley worked for the firm until his retirement in 1930.

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[2] B&Co. made harmoniums according to the patents of W.E. Evans who was an expert in these instruments. "Personal and Otherwise. D. J. Blaikley, Scientist and Maker of Musical Instruments," *Musical Opinion* (June 1930).

[3] Sandemanians were followers of a Christian sect (founded in Scotland in c.1730 by John Glas) which was spread into England and America by Robert Sandeman, Glas' son-in-law.

[4] Various sources including George R. Sims, *My Life: Sixty Years' Recollections of Bohemian London* (London: Everleigh Nash Company Ltd., 1917). pp.17-18; "Death of Mr. D.J. Blaikley," *Music Trades Review* (Jan. 1937); Jack Smith, "David James Who? Some Notes on David James Blaikley," *GSJ* 56 (2003). p.219.

Blaikley's most notable design was for compensating pistons.[5] He was a highly respected acoustician and during his career gave many papers and lectures on all aspects of acoustics in relation to wind instruments.[6] Most of the extant Boosey plans from before 1930 were drawn by David Blaikley, with many dating from the last three decades of the nineteenth century. There are also a number of extant drawings of instruments and tooling for instrument manufacture by his son, Arthur Blaikley, in the archive.

[5] See DJB's patents: Appendix 2iii, and 'Valves': Appendix 3.

[6] See DJB papers and lectures: Appendix 2iv.

2.iii D.J. Blaikley patents

Brass Musical Wind Instruments, G.B. Patent Specification 4618, Appl:14 Nov 1878; sealed 9 May1879. [Compensating Pistons.][7]

U.S. Patent Specification 216595, Appl: 12 Mar 1879, patented 17 Jul 1879 (equivalent to G.B. Patent Specification 4618). [Compensating Pistons]

Valve Caps for Brasswind Instruments, G.B. Patent Specification 4542, Appl: 7 Mar 1884 (Valve cap with water reservoir).

Clarionets, G.B. Patent Specification 2458, Appl: 17 Feb 1887.

Trombones, Trumpets, etc., G.B. Patent Specification 9989, Appl: 12 Jun 1891 (tuning slide for trombone at the top of the main slide).

Improvements in the Manufacture of Bent Tubes or 'Bows' for Cornets and other Musical Wind Instruments, and in Apparatus for use in such Manufacture, G.B. Patent Specification 17728, Appl:16 Oct 1891.

Cornets etc., G.B. Patent Specification 21709, Appl:28 Nov 1892 (double principle valves).

Mandrel-drawn Tubes, G.B. Patent Specification 13980, Appl: 17 Jul 1893.

Clarinets etc., G.B. Patent Specification 9952, Appl: 22 May 1894.

Cornets etc., G.B. Patent Specification 28474, Appl: 02 Dec 1897.

Improvements in French Horns, G.B. Patent Specification 28599, Appl: 11 Dec 1912.

[7] The system of compensating pistons is explained in extant contemporary literature: B&Co., *Illustrated Catalogue of Military & Orchestral Band Instruments Manufactured Throughout by Boosey & Co*. (1892): AMPC, and Charles Russell Day, *A Descriptive Catalogue of the Musical Instruments Recently Exhibited at the Royal Military Exhibition, London, 1890*: (Reprint Eyre & Spottiswoode, 1891) p.190.

2.iv D.J. Blaikley papers

1878. Communication Respecting a Point in the Theory of Brass Instruments. Royal Musical Academy Proceedings, Feb and March 1878, pp 56-67.

1880. On Quality of Tone in Wind Instruments. Royal Musical Academy Proceedings. 1 March 1880.

1883. On the Velocity of Sound in Air. Royal Musical Academy Proceedings. 4 June 1883, pp.147-157.

1886. The Development of Modern Wind Instruments. Royal Musical Academy Proceedings. 3 May 1886, pp.125-138.

1889 Notes on the Action of Musical Reeds. 3 June 1889.

1890. Acoustics in Relation to Wind Instruments. A course of three lectures delivered at the Royal Military School of Music, Kneller Hall. London: Boosey & Co.

1890. An Essay on Musical Pitch. In Day, C. R. A Descriptive Catalogue of the Musical Instruments recently exhibited at the Royal Military Exhibition, London 1890. London Eyre and Spottiswoode, pp.235-253.

1894. Notes on the Trumpet Scale. Proceedings of the Musical Association I, 20th Session, 1893-4, pp.115-123.

1904. Musical Wind Instruments: Lecture 1, 28 November 1904. Lecture 2, 5 December. Lecture 3, 12 December. Lecture 4, 19 December.

1909. Memorandum on the Pitch of Army Bands. London: Boosey & Co., 1909 revised 1922.

1910. How a Trumpet is Made. Musical Times. 1 January 1910, pp.82-84; 1 March 1910, pp.156-157; 1 April 1910, pp.223-225.

DJB also wrote entries for Groves' Dictionary of Music.

Appendix 3. Additional historical information on types of wind instruments and notes on various models produced at Boosey & Co. and Hawkes & Son

(Instruments in alphabetical order)

Alt horn - see clavicor

Antoniophone

The Antoniophone derived its name from Antoine Courtois who developed the instrument. Between 1887 and 1889 Boosey received a special order from America for a set of Antoniophones. Boosey made twelve instruments which were stamped with a new name, 'Orpheon', on the bell: one E♭ soprano (Feb. 1887), two B♭ cornets (Feb. 1887 and Dec. 1888), two altos (Dec. 1888 and Nov. 1889), two tenors (Feb. 1887 and Dec. 1888) three baritones (Feb. 1887, March 1888 and Dec. 1888), one euphonion (Dec. 1888) and one bombardon (Feb. 1887). A set of orpheons can be seen at the Horniman Museum and one survives in the Joe and Joella Utley Collection at the National Music Museum (University of South Dakota). It is probable that the American order was for Patrick Gilmore's Band in which Alfred Phasey (the son of an eminent London trombonist) was a player. Myers identifies the largest instrument in a photograph of Gilmour's 'Quintette of Antoniophones' as the Blaikley compensating 'Bombardon Orpheon'.[8] Phasey or his father had connections with Boosey, and is recorded in their stockbooks as using a Boosey & Co. contrabass trombone at Crystal Palace.

Bagpipes

Scottish Great Highland Bagpipes were played in many of the Highland regiments that were part of the British colonial forces during the expansion of the Empire. Boosey bought in bagpipe reeds from Messrs. J. & R. Glen of Edinburgh from as early as 1868,[9] and outsourced bagpipes from at least 1881 when an order

[8] Arnold Myers, "Brasswind Innovation and Output of Boosey & Co. In the Blaikley Era," *HBSJ* 14 (2002). p.404-5.

[9] Kelly J White and Arnold Myers, "Woodwind Instruments of Boosey & Company," *GSJ* May 2004, no. 57 (2004). p.76

for twelve sets is recorded in the workbooks, followed by a further nineteen during the next three years. However, an order in 1886 for 180 bagpipes fully mounted in ivory obviously stimulated Boosey to commence manufacture on 13 May 1887, when one workman, Harrison, was employed to make them. Their destination is not known. Some entries in the workbooks specify Black Watch tartan, and Boosey's 1892 catalogue carries recommendations from two Pipe-Majors in the Scots Guards, one (dated 24/02/1887) by R. McKenzie, who states that he had tried over 200 sets of pipes made by Boosey and had 'not found any to better them'. Harrison continued making 'Great Highland or Military Bagpipes' alone until 1899 when Grignon joined him, perhaps to learn the craft of making them; Grignon took over in 1901.

From 1900 some of the sets of pipes were lined with aluminium tubes, a feature that was offered in the 1902 catalogue. From 1902 'Half-size or Reel Bagpipes' and 'Miniature or Chamber Bagpipes' were made to order, and from 1923 Irish Pipes were available. Only four sets of the circa 500 pipes made by Boosey are recorded as Irish pipes.[10] A few bagpipe related drawings exist in the B&H archive: a pattern for the baize for military bagpipes (1887), a sketch of the bag for bignou or Breton bagpipe from an instrument lent by H. Carle (03/03/1892), a drawing of an Irish Pipes chanter lent by Leicester Regiment, and a drawing of pipes plus two drones taken from sketches on glass paper made by Harrison (1906/8).

It is not known when Hawkes commenced making bagpipes, but in their 1908 catalogue, they state that they 'have every confidence in recommending those of their manufacture to the Officers Commanding and Pipe Presidents of the various regiments of the Indian, Egyptian and other Far Eastern troops, where these instruments have been adopted.' Their stocks and drones were lined with metal if required and any tartan could be supplied. All pipes at that time were tested by Pipe-Major Gillies.[11] Boosey & Hawkes continued to offer bagpipes after the merger in their post 1936 catalogue;[12] however, production was discontinued during the Second World War.

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[10] Ibid. p.77.

[11] H&S, *Illustrated Price List of the Hawkes Military Band Instruments* (c.1908): AMPC. p.56.

[12] B&H, Catalogue (post December 1936): EUCHMI/R. p.DF1.

Ballad horn

The ballad horn was an off-shoot of Boosey's popular Ballad Concerts which had commenced in 1867, and its popularity coincided with their success.[13] It was developed in 1869 by Blaikley from the koenig horn, and Boosey's instruments were stamped with the Distin & Co. name. (A few years later in 1873, the lied horn, a soprano instrument, was also developed for the same purpose). The ballad horn was designed as an 'easy to blow' instrument in C for amateurs to play the vocal line of ballads, such as those promoted and published by Boosey, with piano accompaniment. Boosey described the ballad horn as 'possessing a soft tone, much resembling that of the French Horn', and as being 'remarkably easy to blow throughout its whole compass.' It was a tenor instrument in C (with B ♭ crook) and was also offered with the option of compensating pistons.[14] Boosey made 200 ballad horns between 1869 and 1875. Two rare bell-up 'ventil ballad horns' were made; one can be seen in Edinburgh (EUCHMI 604).[15] Hawkes included a 'Ballad or Vocal Horn' in their 1908 catalogue, describing it as 'a charming instrument for amateurs';[16] however, it is not known whether any were made (none exists) as by this time ballad horns were going out of fashion. Boosey offered it in their catalogues until 1905 and production continued until 1928, when the last batch of six were listed as mellophones. Ballad horns did not feature in either Boosey or Hawkes catalogues of 1923. Boosey made a total of 497 ballad horns, the last in 1928.[17]

Baritone

A brass band generally required two baritones, and one superseded the althorn in a military band. Around the turn of the century Boosey were offering baritones in C or B ♭ , whilst Hawkes, besides producing baritones, continued to make althorns at this pitch for army use.[18] After 1921 the demand for baritones declined as the result of a decision made by Navy, Army and Airforce Directors of

[13] Boosey, *Fifty Years*. p.15. See Section 2.3 of Vol. 1.

[14] B&Co., *Illustrated Catalogue of Military & Orchestral Band Instruments Manufactured Throughout by Boosey & Co.,* (1902): AMPC. p.4.

[15] Arnold Myers, "Brasswind Innovation and Output of Boosey & Co. In the Blaikley Era," *HBSJ* 14: 391-423 (2002). p.402.

[16] H&S, c.1908 catalogue. p.18.

[17] Myers, "Brasswind Innovation."

[18] H&S, c.1908 catalogue. p.7.

Music at a conference at Kneller Hall; they considered that the baritone should be replaced by the B♭ tenor saxophone in the military band as its tone quality was considered too thin to match the basses and euphonium with their improved bores.[19] However Hawkes, taking the opportunity to sell more instruments, stated in 1927 that it was 'still considered by some as essential in a Military combination.'[20] This is borne out by Baines' comment that 'one could still occasionally see a baritone in a Guards Band in London as late as 1929.'[21]

Bass

Basses were made in a wide range of models to meet the significant demands of the military and brass band markets. Both Boosey and Hawkes produced many upright and circular instruments in various sizes with different valve systems, numbers of valves and bore dimensions.

In 1892 Boosey's catalogue offered upright models of bombardon in F or E♭, contra-bass in B♭ and orchestral tuba (or contra-bass in C), and circular models of bombardon in E♭ and contra-bass in B♭. They also made a short model (designed for young players) and a contrabass in 'extra large proportions'.[22] In 1902 they added to their list a new bombardon, the 'Guards Model', which came with 3 or 4 compensating pistons and was described as having a new design and bore, and a magnificent tone.[23] Hawkes in 1908 produced a similar range, but their introduction of a new 'Austrian Model', which predated Boosey's, was promoted with Hawkes' customary conceit:

> *We have been to considerable expense and trouble in examining nearly every make of these foreign-made instruments, with a view to producing an instrument ourselves that will be superior to them in every respect... We feel confident that on trial it will be found superior to every foreign manufactured*

[19] Adkins, *Treatise*. p.154.

[20] H&S, 1927 catalogue. p.24.

[21] Baines, *Brass Instruments*. p.258.

[22] B&Co., 1892 catalogue. p.10.

[23] B&Co., *Illustrated Catalogue of Military & Orchestral Band Instruments Manufactured Throughout by Boosey & Co.* (1902): AMPC. p.10.

Bass, and also to every Bass of the old fashioned models now made in England.[24]

The rivalry was fierce with Hawkes claiming that their new upright 'Emperor' basses had won 'golden opinions', and that all bandmasters and regiments who used them placed 'their merits far above any other bass made'.[25] However, Boosey's well-liked model, the 'Imperial', in spite of Hawkes' introduction of new 'Profundo' and 'Excelsior' models, continued to be very popular; Boosey, in their post 1926 catalogue, featured photographs of some of the famous and successful bands who played their instruments, claiming that the majority of leading bands were equipped with their basses).[26]

Boosey's 'Imperial' basses (introduced circa 1911) gained a high reputation amongst brass bands.[27] Boosey explained that they had been made 'to meet the demand for E♭ instruments with the depth and fullness of tone of the BB♭ Contra-bass.' They described the bore of the valves as 'identical with that of the BB♭ Monster Bass and the bell and other tubing proportionally increased.'[28] Boosey promoted the 'Imperial' as 'The Bass with the Big Tone' and considered it responsible for raising many bands 'from obscurity into the limelight of the Contesting World.' They proudly detailed the 'six points of supremacy in Boosey's Imperial Basses: Wonderful organ-like tone. Remarkably easy to blow. "Solbron" Valves – quick as lightening [sic]. Perfectly in tune throughout the entire register. Perfectly symmetrical and compact models. A most important factor at winning at Contests.'[29] Hawkes, by 1923, besides the 'Emperor', were offering 'Standard' basses in E♭, B♭ and BB♭' and the 'Profundo' in E♭ or BB♭ which was their 'latest creation' with 'bell up, right shoulder', a 'Compensating 4th Valve Extension'

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[24] H&S, c.1908 catalogue. p.26; H&S, *Illustrated Price List of the Hawkes Brass Band Instruments* (post 1911): EUCHMI/L. p.18.

[25] 'Emperor' basses had been supplied to some of the leading bands including 'the Royal Military College [sic] of Music, Kneller Hall, the Coldstream and other Guards' Bands, the Royal Artillery Band, Woolwich, and many other staff and line bands.' H&S, c.1908 catalogue. p.26, and ———, post 1911 catalogue. p.18.

[26] B&Co. Ltd., post-1926 catalogue. p.21.

[27] The first Boosey E♭ bass with the Imperial name can be seen in the Museum at the Royal Military School of Music. Museum No.191. It was made March/April 1911.

[28] Model nos. 87 and 91. B&Co., *Illustrated Catalogue of Military & Orchestral Band Instruments Manufactured Throughout by Boosey & Co,* (1923): AMPC. p.19.

[29] B&Co. Ltd., *Instruments for the Brass Band Manufactured by Boosey & Co. Ltd*. (post 1926): AMPC. p.22,23.

and ‘a tone of such immense depth and volume that it can be favourably compared with the deepest tones of the pipe organ.[30] By 1927, they added a new bass, the ‘Excelsior’, to their range.[31] Boosey’s ‘Imperial’ basses must obviously have been considered to be superior as, after the merger in 1930, all of Hawkes’ basses were discontinued,[32] and the same layout and sizes of valve tubing of the ‘Imperial’ instruments were still used by Boosey & Hawkes in 2002 for their compensating E♭ basses.[33]

The circular bass (helicon), which was developed by Stowasser in Vienna in 1849,[34] was designed to be carried wrapped around the player, supported on the shoulder. It became popular in some bands during the second half of the nineteenth century as it was easier to carry than the front held instruments when marching. In 1923, both Boosey and Hawkes offered four models of circular bass. Boosey’s models consisted of a small E♭ model (No. 97 with 3 Solbron valves) recommended for youths’ bands, model in E♭ (No. 100) with 3 compensating solbron valves, a contrabass in B♭ (No. 102a) with 3 compensating pistons, and BB♭ monster model contrabass (No. 104) with 3 compensating solbron pistons.[35] Hawkes’ models were all ‘Emperors’ with 3 valves. Boosey commenced production of E♭ and BB♭ sousaphones in 1923. However, during 1925 they were recorded in the workbooks as ‘Imperialphones’.

Bassoon

In Britain, although both the German and French bassoon systems were used, professional bassoonists traditionally played French system instruments, the most sought after being made by Savary *jeune* (1786–1853). According to Lyndesay Langwill they were ‘passed down from generation to generation of

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[30] H&S, *Hawkes & Son Band Instruments,* (1923): JHPC. p.48.

[31] H&S, *Military Band Instruments Made by Hawkes & Son* (1927): AMPC. p.31.

[32] Boosey used the ‘Imperial’ name for basses from 1911, although it does not appear in the workbooks until 1918 (models A87 x4 and A91 x20). Personal communication with Arnold Myers, and B&Co., *Instruments Brass 10*: HM/B&C A227/054. The first E♭ bass made with this name can be seen in the Museum at the Royal Military School of Music. Museum No.191. It was made March/April 1911. It can be seen from the records that Boosey also made an EE♭ Monster in 1906; this may have been an experimental instrument or a special order.

[33] Myers, "Brasswind Innovation." p.407.

[34] Anthony Baines, *Brass Instruments: Their History and Development* (London: Faber & Faber, 1976). p.260.

[35] B&Co., 1923 catalogue. p.23.

bassoon-players like old violins', with several remaining in use until the end of sharp pitch in the 1920s.[36] In 1908 Hawkes stated that 'of the many past makers - Almenraeder, Savary and Cornelius Ward - it is only Savary whose old models are still sought for and possess some value.'[37]

Savary's instruments greatly influenced design at Boosey and at Hawkes, but at first Boosey imported bassoons from Almenräder in Germany, and from Mahillon and Triébert in France.[38] Boosey's production started in 1884 with a model based on an 1883 drawing of 'Mr Wotton's Savary bassoon' with its new wing joint by Morton that Wotton had lent them. A plan of the subsequent Boosey bassoon was approved by Mr Wotton, after which all bassoons were made in-house, apart from contras which were bought in. Hudson made the first six instruments between 9 February and July 1884 (the first was sn7630) and Taylor took over bassoon making from the next batch, ordered 4 August 1885. The Boosey Wotton-Savary bassoon was continued after the 1913 fire, but a new mandrel had to be made. A plan entitled 'Pre 1894 Bassoon drawn from instrument No. 7630 as approved by Mr. Wotton' has a note added in red ink (dated June 24) 'worked to for new mdl after fire'. Both companies continued to improve the keywork, and Boosey in 1892 used a 'new pattern No. 9 key' on their bassoons;[39] an extant 1892 chart of the bassoon 'scale' shows fingering using the 'new straight No 9 key'.[40] They also introduced a 'Campbell' system' in July 1894 which included a new arrangement of thumb-keys on the long joint to enable the low notes to be played without a break, and improved key-work whereby the A natural and the F holes on the double joint were covered; Boosey offered both previous models (Nos.127 and 128) with or without it and stated that the improvements could be added to any ordinary model

[36] Baines, *Woodwind*. p. 335. William Wotton (1832-1912) and Thomas Wotton (1852-1918) played high pitch Savary and low pitch Triébert instruments. Edwin (Fred) James (1860-1920) played a high pitch Savary and flat pitch Morton bassoon. Langwill, *Bassoon*. p.174 and p.182.

[37] H&S, 1908 catalogue. p.44.

[38] For example: Almenräder sn1144-5. A227/115, p.6. Boosey published a 'Scale of the Boosey's Almenräder Bassoon'. Published by Boosey & Sons Musical Instrument Manufacturers and Music Publishers, 24 and 28 Holles Street, Oxford Street. HM/B&H. The French bassoons were described as 'palisandre' (rosewood) and marked 'M' or 'T'; it is probable that these instruments were bought from Mahillon and Triébert. For example: M Palisandre [rosewood] sn11668 and T Palisandre, sn11768, 27/10/1868; Stock Book A227/115. p.18.

[39] For example sn11219. B&Co., *Instruments Wood 2*: HM/B&H A227/014.

[40] HM/B&H.

bassoon.[41] The 'Campbell' system is recorded in the workbooks for about 30 bassoons made between its introduction in 1894 and the last instrument, which was made in 1924.

At Boosey, in the early 1920s,[42] further planned development of the bassoon in collaboration with professional players took place in 1924. A drawing 25/01/1924 compares the bassoon bores of their own standard model with Mahillon and Buffet bassoons; the Hawkes model dimensions were added in 1925. Other drawings show bassoons by Mahillon 'reported good by Mr Adkins', by Buffet (lent by W. James), and by Hawkes (lent by Mr Gordon), besides drawings for crook tools for an extending machine and for a seamless crook (12/04/1924).[43] On 4 December 1924 an experimental bassoon No.128 was recorded in the workbooks but noted as 'no good'.[44] Bassoon production and development continued during the last few years of the decade with evidence of further trials with the Buffet model; a note on a plan, dated 20/5/30, states 'The IP Buffet bassoon borrowed by Mr Brazil was reported to have a good C# shake and good B♭. It appears that Boosey were working at improving their French models and not developing a German model.

Hawkes also modelled their bassoon on Savary's, declaring in circa 1908 that they had carried on the manufacture of bassoons 'exactly on the same ideas' as the late A.W. Morton, who they described as 'a true successor to Savary'.[45] Hawkes, from 1912, manufactured two basic models: the 19 key 'Artist or Army Solo Model – constructed on the Savary and Morton principles' which was also available to low A, or with an extra D and D#, and a 17-key 'Orchestral Model' (the same described as the 'Military Model' in their circa 1908 catalogue)[46] which was

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[41] B&Co., *Illustrated Catalogue of Military & Orchestral Band Instruments Manufactured Throughout by Boosey & Co*. (1894): HM/B&H. p.17, attached slip.

[42] The 'Creation Key' was first mentioned in the 1923 catalogue, no bassoons were documented with this additional feature until 1929 when a new model, which was promoted as 'Boosey's New Regent Bassoon', was noted in the workbooks and included in the woodwind catalogue. From 15 March 1929 model nos. 127/128 are noted in *Instruments Wood & Percussion 7* HM/B&H A227/018 as new models, and reference is made to an instrument with ebonite wing and 'Creation Key' in 1929. As described in Boosey's 1927 catalogue, the redesigned model No.127 had 19 keys including the 'creation' key, alternative keys for C#, and an alternative pipe key. B&Co. Ltd., *Wood Wind Instruments* (post 1927): EUCHMI/L.

[43] HM/B&H.

[44] B&Co, *Instruments Wood and Percussion 6*. HM/B&H A227/017.

[45] H&S, c.1908 catalogue. p.44 and H&S, 1923 catalogue. p.17.

[46] An ebonite wing joint was recommended for military use. H&S, c.1908 catalogue. p.44.

also made with an improved crook key 'for perfection of the low register'.[47] By 1923 all Hawkes' Morton & Savary models had acquired additional keys (19 or 21 keys) and were commonly offered in wood, ebonite and wood with ebonite wing joint, as was their 18-key 'Military Model'. In 1923 Hawkes, no doubt aware of the increasing British interest in German bassoons, added a German system instrument to their production – the 'H. New Model' (nos 489, 490).[48] Demand for this system continued to grow over successive decades. The 'H. New Model' was a German system instrument made of wood or with an ebonite lined wing joint and small bore of the double joint. This was executed 'by the new process lately evolved and developed at our Highgate works.'[49] All bassoons were recorded in the Hawkes extant workbook as 'Morton' or 'Military' until 30/11/1926 when their new German model was first noted.[50]

Contra-bassoon: Neither Boosey nor Hawkes made any contra-bassoons. Boosey's early instruments with 17 keys (recorded from 1868) were imported from Mahillon; in their 1892 catalogue they offered 'Contra-Fagotts of wood, an Octave lower than the Bassoon made to order',[51] and between 1892 and 1905 'Contra-Fagotts of the best foreign manufacture' in E♭ that were made of brass.[52] Workbook records show that they imported around twenty instruments between 1881 and 1899.[53] Hawkes, likewise, did not make contra-bassoons; however, in 1923 they offered a rosewood 'Conservatoire Model' with a detachable metal bell 'as supplied to the Elder Conservatorium of Music, Adelaide, Australia, to Mr W.H. Foote, ARCM,' and to the professional bassoonist Paul Draper.[54]

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[47] H&S, *The Hawkes Catalogue of Orchestral and Instrumental Music Also Illustrated Price List of Orchestral Instruments* (1912): JHPC. p.80.

[48] H&S, c.1908 catalogue. p.44 and H&S, 1923 catalogue. p.19.

[49] Hawkes 18-keyed Military Model (nos. 486,487,488) was made using 'a special set of boring bits and mandrils... designed by ourselves after most careful study and numerous experiments. H&S, 1923 catalogue. p.17and p.19. Extant Hawkes plans from the 1920s include several of a 'Morton type bassoon'. Plans W25, W26, W27. HM/B&H.

[50] 'New Model Bassoon, wood, s plate, LP sn12029; 17/06/1927 Bassoon, Wood, Ebonite Lined Wing, LP, New Model, sn12269'; 30/09/1927 wood [x6] etc. H&S, *Journal* (1921-31): HM/B&H A227/138.

[51] Contra Faggotts 17 keys Mahillon. *Stock Book*. HM/B&H A227/115. p.18; B&Co., 1892 catalogue. p.16.

[52] Ibid; 1902 catalogue. p.18; 1905 catalogue. p.20.

[53] HM/B&H A227/013, A227/014, A227/015.

[54] H&S, 1923 catalogue. p.20.

Boosey also made a ‘Tenoroon’ in 1899 and a B ♭ Bariton Sarrusophone, in 1913.[55]

Bersaglière horn

The bersaglière horn, a one-valved bugle, was developed in Italy for military use during the late nineteenth century. It was introduced to Britain in the early twentieth century were manufactured by Boosey between 1910 and 1921. According to Boosey in 1923 bersaglière horns could be ‘effectively used in combination for more varied music than the ordinary bugle band. These instruments will be found very useful when a full Military or Brass Band cannot be maintained.’[56] However, no orders were placed after 1921 when only four were produced. Bersaglière horns were made by Boosey from 1910 with the first order for given out on 16 June 1910 for 6 sopranos (sns80376-81), 6 altos (80382-7), 3 tenors (80388-90) and 3 basses (80391-3). Photographs dated 28 Oct 1910 of the first of each instrument are included in Blaikley’s album pp.55-8. (HM/B&H): ‘B-flat Sop Bugle IV/Sun ct bell/Sotone fh branch’, ‘B-flat Alto Bugle IV’, ‘B-flat Tenor Bugle IV / Uses Tenor bell’, B-flat Bass Bugle IV / Uses cheap baritone bell’. The highest production was during the First World War.[57] Soprano and alto bersags were 4½-ft B-flat and narrow and wide bore respectively; tenor and bass bersags were 9-ft B-flat and narrow and wide bore respectively.[58]

Bugles and duty and cavalry trumpets

Both Boosey and Hawkes produced numerous bugles and duty and cavalry trumpets for the military services. Large numbers of instruments were made to satisfy contracts from the government, especially during the First World War, for use in the field. Boosey, like other manufacturers, made many of these instruments, with orders (recorded in large batches) at their highest from 1913 to 1915 with in excess of 1,600 instruments produced each year.

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[55] Tenoroon 14/12/1899: *Instruments Wood 3.* HM/B&H A227/015. B ♭ Bariton Sarrusophone 07/06/1913. B&Co.,*Instruments Wood and Percussion 5.*HM/B&H A227/016.

[56] B&Co., "Illustrated Catalogue of Military & Orchestral Band Instruments Manufactured Throughout by Boosey & Co." (1923): AMPC. p.13.

[57] 1913: 23, 1914: 60, 1915 138, 1916: 59, 1917: 13, 1919: 18.

[58] Myers, "Brasswind Innovation." p.407.

Orders 3 September - 3 December 1913: approx. 1,350 bugles, 525 trumpets. 1914: note written in pencil in workbook '1739 bugles in 1914.' 1915: approx. 1350 bugles (incl. 175 for Williams), 300 duty trumpets. 1916: more than 300 bugles. 1917: about.160 bugles, 24 duty trumpets (not contract).[59]

Clarinet

At Boosey & Co. clarinets were bought in until 1879 with some purchase details recorded in the stock books.[60] They were commonly described as 'simple system', i.e. with 13 keys, as developed by Eugène Albert, a distinguished Brussels wind instrument maker. (Albert's 'simple system' clarinet was in common use in Britain and the Empire, and remained popular in military bands until as late as the 1950s). They were made of cocus or boxwood, with some noted as having slides or sockets, an extra C#, or an A shake (trill key) or long G#. A small number of less common models were recorded including a Boehm model, Albert D clarinet, Buffet alto, and a boxwood double bass clarinet by the Parisian maker Marzoli; other unusual clarinet models included Euler, Smyth's, Hudson's, and Buffet.[61] However, these instruments were clearly not as popular as the standard simple system clarinet, and it was some years before most of these instruments were recorded as sold.

As mentioned in Volume 1, Eugène Albert oversaw clarinet making at Boosey from the commencement of manufacture, and the first of each new model was usually made by the most experienced employees, often Albert. Most clarinets were made out of wood or ebonite.[62] At first cocus wood was imported from the West Indies in logs of about five or six feet in length and eight inches in diameter.

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[59] B&Co., *Instruments Brass 9* and *Instruments Brass 10.* HM/B&H A227/053 and A227/054.

[60] Three Band Instrument 'Stock Account' books from 1868-1873, 1874-75 and 1882-85 survive. HM/B&H A227/115, A227/116, A227/117.

[61] Ibid.

[62] Ebonite was proven to be a more resilient and stable material, and therefore highly suitable for military instruments, especially in the Colonies. It was noted that 'this material cannot split; the only objection that can be urged against it being that in very cold weather it loses something of its toughness.' Miller, "How Band Instruments Are Made." p.1; Charles Goodyear from 1834 developed a material by combining the latex-sap of the South American tree *hevea braziliensis* and sulphur at high temperature. It had many uses and was known by a number of names including 'vulcanite', 'gutta percha' and 'ebonite'. The first ebonite flutes and clarinets were made by Alfred G. Badger, New York prior to the Great Exhibition in 1851, where he exhibited some flutes in Goodyear's extensive display of vulcanised items. However, ebonite was not widely used for instrument manufacture in America or Europe until the 1870s. Susan Berdahl, "The Story Behind the Earliest Flutes of Ebonite and Their Honoured Place among the Earliest Boehm-System Flutes Made in America," in *Geschichte, Bauweise, Und Spieltechnik Der Querflöte*, ed. Boje E. Hans Schmuhl and Monika Lustig (Augsburg : Wissner-Verlag, 2008, 2008). pp.165-180.

African blackwood was also used for mouthpieces. Wood needed to be sufficiently seasoned before use, and in 1892 Boosey claimed that the wood stayed in the factory for at least eight to ten years before leaving as finished instruments.[63] The wood was initially kept for five or six years so it could season, and then left again in the 'roughed and bored stage' before being turned to the finished sizes. The sections were soaked in a linseed oil bath for some months and stored until the oil dried and hardened.[64] This process was generally adhered to in order to minimise the chances of the instruments cracking.

However, it seems that Boosey learned this through experience. It is probable that the company, eager to satisfy customer demand at the outset of clarinet making in 1879, employed insufficiently seasoned wood, as a number of clarinet top joints are recorded as having cracked a year or so after manufacture.[65] The cracked sections were pinned or replaced. Between 1882 and 1885, for a few specific instruments the dates that the wood was 'roughed' and 'turned' were noted in the workbook, but in all instances the wood was left to season for a period of only thirteen or twenty months between the two processes. As the years progressed, a greater time elapsed before the wood was used.[66] In 1912 Hawkes acknowledged the problem in their catalogue, stating that 'no wood can be put into work until it has been five years roughed and bored, then stored with a view to securing the best results.[67] They reassured customers that as instruments carried a year's guarantee and 'the number of instruments cracking is slightly over 1% per annum,' customers were not at risk.[68] Although Boosey continued to buy in some clarinets after they commenced making, the number gradually diminished during the next decade with, by 1890, all except the 'C' class clarinet produced in their factory.

Gradually newly developed features were added to Boosey's clarinets, and during the 1880s and 1890s B&Co. introduced various improvements to clarinets and several new designs: these were recorded in the workbooks. The extra little

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[63] B&Co., 1892 catalogue.

[64] Miller, *How Band Instruments are Made*. p.14.

[65] B&Co., *Wood 2 [sic]*.

[66] 1882: wood 'roughed' 10/80, 'turned' 11/81. 1883: 'roughed' 10/80, 'turned' 11/81 and 'roughed' 10/80, 'turned' 06/82. 1884: 'roughed' 10/80, 'turned' 11/81. 1885: 'roughed' 10/80, 'turned' 11/81 and 'roughed' 10/80, 'turned' 06/82. HM/B&H A227/013.

[67] H&S, 1912 catalogue. p.70.

[68] Ibid.

finger c#[2] key was first mentioned 04/05/1880, side B ♭ key 10/11/1884, and Blaikley's patent B ♭ 30/03/1885.

David Blaikley's patented B ♭ mechanism which improved the tone of 'throat' B ♭ was presented on a new model - Boosey's 'New Clarionet, the '94'- in their 1894 catalogue.[69] Rendall described its feature as being 'an extremely simple and ingenious mechanism which opened a special hole for the middle B ♭ flat with the normal fingering' but stated that it did 'not seem to have found general favour, possibly on account of its employment of opposed springs of different strength.[70]

It appears from the workbooks that this feature had already been available since 30 March 1885 with, from as early as 1890, the figures 94/. denoting a small number of instruments that it was applied to. On 2 April 1894 'new B ♭ key + corresponding altered set-out' is noted in the workbook.[71] A certain number of instruments were made with the mechanism; however, it did not gain popularity and was not widely adopted.

Boosey made three new models between 1883 and 1895: the Clinton system designed in collaboration with the professional player George Clinton, the first Boosey clarinet with Barret action, and their first Boehm clarinet. Although these instruments were adopted by many players, neither the Clinton nor Barret models caught on like Boehm system instruments. The Boehm system clarinet rapidly gained popularity in France and was introduced as standard in all French conservatoires.[72] Klosé wrote his *Méthode* in 1844, which was published in English translation in 1873; however, it took some years for the new system to become widely accepted outside France.[73]

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[69] Patent 22/05/1894, accepted 23/03/1895. 9952. Improvements in Clarionets and other Wind Musical Instruments. [Separate hole and lever for throat B ♭]. B&Co., 1894 catalogue, attachment inside catalogue dated July 1894. HM/B&H.

[70] F. Geoffrey Rendall, *The Clarinet: Some Notes on Its History and Construction*, Instruments of the Orchestra. (London: Ernest Benn Ltd, 1954). p.118.

[71] HM/B&H A227/014.

[72] A preliminary model exhibited at the Paris Exhibition in 1839 won a medal, but it was not until 1844 that the idea was patented (brevet 9759). Rendall, *Clarinet*. p.97.

[73] Advertisements for Boehm clarinet are included in Rudall Carte's catalogue of 1854 and Tamplini's *The Bandsman* of 1857. Older players in other countries were reluctant to have to learn the new fingerings; although Lazarus never played Boehm system clarinets, he recommends the system in his *New and*

Boehm clarinets did not start to gain popularity in England until the influential clarinettists Manuel and Francisco Gomez came to London from Paris in 1886. Both had won scholarships to the Paris Conservatoire where they had studied under Cyrille Rose. Francisco inspired British players to change to Boehm system instruments, obtaining instruments for Charles Draper and George Anderson in 1892 and 1893.[74] Although British clarinettists were reluctant to adopt the new system it eventually caught on, and this model is normally used today in most countries outside Germany and Austria.

The Clinton clarinet model was first recorded on 23 February 1883 (sn7381). Clarinets with Barret action were introduced a year later (15/03/1884), and in 1895 Boosey produced their first Boehm clarinet (30/07/1895) BOEHM 1895 $A^{94}/_{1}$). However, Boosey made no more until 1899 when they produced a new Boehm model that was designed in collaboration with Manuel Gomez. It was a full Boehm system with extension to low E♭, which allowed players to use one instrument for both B♭ and A clarinet parts; however, this was not common practice, and Gomez-Boehm clarinets never gained popularity. Only three were produced prior to 1904,[75] after which production is unknown until 1912 as the next workbook is lost. The Boehm clarinet (model 114a in cocus, 114b in ebonite, and 114c 'Gomez-Boehm' model) was first offered in Boosey's 1902 catalogue (p.16). Only another three Gomez-Boehm clarinets were recorded from 1912; however, a number of the ordinary Boehm system instruments were made. At Boosey, with the exception of the war years of 1915-18, production of Boehm clarinets rose from an average of 42 a year in 1912-14, 43 in 1919-21, 58 in 1922-25, to 74 in 1926-29.

Other new clarinet features were 'new pattern long keys' (15/01/1897), cross over G# (08/10/1897) 4 rollers and basset ring (22/03/1898).[76] Clarinets customised by Boosey include two ebonite instruments, A and B♭, made in 1894 with the same additions, nine rollers and an 'Egerton A'.[77] The 'Egerton A', described as 'Duplicate A closed by 2nd LH which has two keys under it to improve the fork note',

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Modern Method 1881. Likewise, Gustav Poncelet at the Brussels Conservatoire continued to play his old instruments, but taught it in the last years of his career. Ibid. p.99.

[74] Eric Halfpenny, "The Boehm Clarinet in England," *GSJ* 30 (May 1977).

[75] 17/03/1899 sn13603, 25/07/1899 sn13719, 31/08/1900 sn14175. HM/B&H A227/015

[76] A227/015.

[77] A clarinet: model A109, superior 13 key, 02/07/1894. B♭ clarinet: model A114, Spencer, 15/09/1894. HM/B&H A227/014.

is documented, besides other measurements taken from Egerton's Fieldhouse clarinet, in the notebook of Henry Carte (of Rudall Carte) dated 1896.[78]

Plans of other clarinets made for particular clients include some in different pitches.[79] For example:

Drawing
'Flat Pitch Clarts, 14375 & 6. Made for Mr G.A. Collins.' November 1900.
'Mr Collins ebony clarinets'. 19/08/01, A112, sns14625/6
Pogson's model was drawn on 14/04/1902 and again 'as made' on 20/05/1903.
'B ♭ and A Clarionets, Flat Pitch, Made for Mr. G.A. Clinton 1900-1' .
'Pair of Clarionets, Made to Mr Clinton's instructions for Miss Pamphilon' 18/10/1901.
B ♭ clarinet mouthpiece which was 'considered very good by Mr. Browne' dated 17/12/1903; this perhaps was related to an order ten months earlier by J. Browne for a pair of clarinets: 20/02/1903 'IR crossover A ♭ , long tenon' sns15291/2.
'E ♭ Spencer 13 key clarinet, A108 sn16934. FP lengths corrected to agree with KHP [Kneller Hall pitch] 16936'.

Little is known about clarinet production at Hawkes prior to 1908, but it is probable that most of their instruments were imported from France for resale and stamped with the Hawkes name. As at Boosey, most instruments sold were simple system, but in their circa 1908 catalogue Hawkes offered their 'newly-perfected Boehm System Clarinet' and a cheaper model of 'French make'.[80] In 1912 they described the Boehm system as 'scarcely adopted in England' but they predicted correctly that it would be 'one of the clarinets of the future'.[81]

Hawkes, by 1912, advertised an 'Extensive Clarinet Department' where 'the models originated and adopted have for many years been under the control of a very competent artist, who has perfect technical and practical knowledge of the

[78] A227/163.

[79] Instruments are recorded in HM/B&H A227/015.

[80] H&S, c.1908 catalogue. p.40.

[81] H&S, 1912 catalogue. p.70. It is generally thought that from 1900 Hawkes imported their top-of-the-range Boehm clarinets, Excelsior Sonorous Class, from the Parisian makers Martel Frères. These instruments are marked with a cross above and below the Hawkes stamping. Nicholas Shackleton and Keith Puddy, "Charles Draper and English Clarinets," *The Clarinet* 17, no. 4 (July, August 1990). These instruments were played by a number of eminent clarinettists including Charles Draper who was a tester for Hawkes. Hawkes copied them and commenced their own production in January 1924, and these instruments were often referred to as 'fake Martels' Reginald Kell's clarinets date from this period: they can be seen in Edinburgh: EUCHMI 2800 and 2801. However, it appears from the extant workbook that Hawkes were still buying in all Boehm system clarinets and many others until their move to Edgware in 1924. H&S, *Journal.*

instrument.'[82] Companies often promoted manufacturing design features that were peculiar to their own factories; Hawkes made their clarinets with the wood of the ring keys flush with the face of the ring, turned as part of the body, 'and not let in and [...] fixed by shellac, which is the system in common makes.' However, most of Hawkes clarinets at this time continued to be imported. They promoted simple system clarinets with 13, 14, or 15 keys with or without the C# key, 'as described in "Berr's celebrated Clarinet School"', Boehm system clarinets and 'The 20th Century Clarinet.'[83]

Hawkes' promotion of their '20th Century Clarinet' was a brave attempt to introduce a new and rather different clarinet model for the new century; it obviously did not gain favour, and no known Hawkes' models exist, although one un-named example can be seen in Edinburgh.[84] It was presented as a whole page feature in their circa 1908 and 1912 catalogues and was described as possessing 'unique advantages over all other models and inventions' and as a system that 'practically embraces all Models'.[85] There is no evidence to support that it was a Hawkes' patent; records show that the Italian maker Pupo Pupeschi actually applied for and obtained the British patent in 1907,[86] although it is possible that Pupeschi might subsequently have assigned the rights to H&S for a royalty fee on each instrument sold. The design of the instrument is similar to a simple model offered in Pupeschi's 1906 catalogue, but slightly more developed.[87] It is not known how many were produced or whether Hawkes manufactured or imported them; however, it is clear that the model's 'unique advantages' did not appeal to British players, as there are no records of its adoption. Most British clarinettists were reluctant to have to change their fingering and continued to favour the simple system above the Boehm system.

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[82] Charles Draper is named as tester and tuner from 1908.

[83] H&S, 1912 catalogue. p.70.

[84] An extant Pupeschi system clarinet in EUCHMI (Rendall Collection 122) matches the H&S '20th Century Clarinet'. It bears no makers mark, but is stamped HN 875 08. It is possible that the 08 could refer to the year 1908. Mahillon made Pupeschi system clarinets. A different model survives from c.1900; see http://www.instrumantiq.com/pages_html/galeries_ABV-clarinettes.htm Accessed 29/02/2012.

[85] Hawkes state that 'The 20th Century Clarinet 'is fully described in a separate pamphlet [...], which gives illustrations of its improvements and examples of how these are applied.' They claimed its main feature was the improved facility from G# to B^1 and C#. H&S, 1912 catalogue. p.48.

[86] Improvements in Musical Wind Instruments, G.B. Patent Specification 11841, Appl: 21 May 1907.

[87] Pupo Pupeschi, *Ultime Innovazioni L'ideale Degli Artisti. Lavorazione Artistica. Cav. P. Pupeschi* (1906): EUCHMI/L. p.6.

The Hawkes workbook records are limited and are often unclear. Although Hawkes were offering their own Boehm model in their 1908 and 1912 catalogues, their earliest extant records show that during 1922 and 1923 all Boehm clarinets were bought in (about 30 and 66 instruments), noted as 'not makers'. Hawkes offered their 'New Perfection Excelsior Sonorous Class A' Boehm clarinet in their 1923 catalogue (p.9), but it appears from their workbook that they did not actually commence production of Boehm clarinets until January 1924. It is generally considered that prior to making these instruments their early high-quality Boehm clarinets were imported from Martel Frères.

During the late 1920s both Hawkes and Boosey started manufacturing metal clarinets, which had been re-gaining favour in America.[88] They had been produced in Britain for many years for use in bands, although they had achieved very little popularity. Hawkes first made the 'XXth Century' skeleton design clarinet in 1928. It was part of a new range of metal instruments which continued beyond the merger of Boosey and Hawkes in 1930.[89] Boosey were obviously keen to keep up with Hawkes since the process of design to production took only two months, starting in May 1929, but they then only produced a very small number.Ten were made on 14 May and 11 July 1929 (six were chromium plated). It can be seen from the workbooks that the process of design to production took only two months. Surviving evidence includes:

Date	**Description**
13/04/1929 and 24/04/1929	lists of materials required to make 150 B♭ or A instruments.
24/04/1929, 16/04/1930	drawings of 'Metal Clarionet Parts' U7/CLA 296 - 24/04/1929, and U8/CLA 307 - 16/04/1930. These show parts for Clinton and A110 models. A rough note written in pencil records that Mr Anderson and DJB tested metal clarinets 28087 and 28132 on 20/06/1929, 21/06/1929 and 01/07/1929 at different room temperatures; it is recorded that on 20/06/1929 'Metal Clart 28087 was blown by Mr Anderson for 10 minutes'.
08/05/1929	sketches of 'Metal Clart Parts.'

[88] American companies such as Conn, H.N. White and Cundy-Bettony had started producing professional level metal clarinets in the first half of the decade. Two designs had evolved, a double-tubed model (one tube inside the other, through which short tubes were placed for tone holes) and the 'skeleton' (a thin tube onto which short tubes for tone-holes, and keys were soldered).

[89] 347 'XX Century' metal clarinets were recorded May 1928-April 1930, 2 piccolos, 30 concert flutes and three metal Morton No. 1 oboes. H&S, *Journal* (1921-31): HM/B&H A227/138.

Bass clarinets: Boosey did not offer bass clarinets in their catalogues; however, the first bass clarinet (model A114) that Boosey made, rather than bought in, was recorded on 25 November 1882.[90] A couple of extant drawings show that Boosey worked on developing a few designs, the earliest in 1890, entitled 'Bass Clarionet', drawn on 19 November 1890 and revised on 17 October 1892. It is annotated in pencil 'for bass Clart see new drawing dated 23/1/22 [crossed out] 29 – destroyed DJB'. Another plan of alto and bass clarinets, dated 19 November 1890 and revised on 19 November 1892, is annotated in pencil that it was 'made 9/7/35' (after the merger of Boosey and Hawkes).[91] A further plan survives from 1913.[92]:

In 1925, Boosey were planning a Boehm model; drawings were made of a B ♭ bass that had been lent to Mr Lear, a Boehm bass, and a Boehm bass clarinet to low B ♭ ,[93] and further design initiative followed in 1929 with drawings made of low pitch bass clarinets in B ♭ . The workbooks show that Boosey manufactured two Boehm bass clarinets in 1925; it is probable that they were experimental instruments. Boosey did not produce Boehm bass clarinets until 1933, after the merger with Hawkes.[94]

Hawkes offered both simple and Boehm system alto and bass clarinets in their 1923 catalogue, but in 1927 only a simple system bass clarinet.[95] The enduring popularity of the simple system is reflected in that only six out of forty-two bass clarinets listed between 1922 and 1929 were the Boehm model. It is not known what design development was taking place at Hawkes, but in May 1927 records show that one of a new model bass clarinet was made.

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[90] November 25th 1882. Made with wood that had been 'roughed' in October 1880 and 'turned' in November 1881. The maker was Mönnig. HM/B&H A227/013.

[91] Alto/bass clarinets. Nov 19th /90 Revised Oct 17th /92. In pencil – 'made 9/7/35'. Bass Clarionet Nov 19th/90. In pencil – 'for bass Clart see new drawing dated 23/1/22 [crossed out] 29 – destroyed DJB.' HM/B&H.

[92] Bass clarinets IP/KHP ordinary and Boehm. C and A bells as sent to American H.R.Co 17/03/1919. HM/B&H.

[93] 10/3/1925. Drawing of No 25681 as made for Copeland and Euper which was tried by Lear (figures added from 26146 an instrument 'tried by Lear 2/2/26 and highly approved'. Initialled by DJB 17/03/1925. HM/B&H.

[94] Boehm bass clarinets are not offered in the 1926 B&Co. catalogue, but are in the first B&H c.1935/1936 catalogues.

[95] H&S, 1923 catalogue. p.25 and H&S, *Military Band Instruments Made by Hawkes & Son* (1927): AMPC. p.7. No bass clarinets were made or bought in at H&S in 1922.

The **alto clarinet** in E♭ (also known as tenor clarinet) had been adopted by British military bands in the middle of the century, but its use was gradually superseded by the saxophone. The initial alto clarinet at Boosey, model A112, was made on 26 June 1882 by Albert. Not many of these instruments were made. It can be seen from the Hawkes extant woodwind workbook that between 1921 and 1931 only a few alto and bass clarinets were bought in; none were made in-house.[96]

Clavicor

The clavicor was invented by Danays in Paris in 1837 and patented by Guichard in 1838 to replace the alto ophicleide (quinticlave). It was an upright tenor with a long conical bell, conical mouthpiece and three Stölzel valves. Two valves were operated by the right hand, and one that had a narrower bore and was situated nearer the mouth-pipe, by the left. The clavicor was made with three normally placed valves from 1839 and was produced in Britain initially by Pace and Köhler. In Britain it was generally called an alt horn and was employed by bands during the 1840s and 1850s.[97]

Cor anglais

Boosey bought in their first cor anglais in March 1889. The first to be made in the factory was a conservatoire system instrument made by Egelkrut four years later 1893. It was given the new model number 133 and was offered in the 1902 catalogue alongside three models that corresponded with Boosey's 'perfected' oboe models.[98] Order numbers were low as the role of the cor anglais has always been that of an occasional orchestral instrument. Only thirteen were made in the period to 1930 (excluding the missing workbook of 1904-11).[99] Hawkes in 1912 offered a model with 15 keys, 3 rings, plate for D, and double action E♭ resonant key, and two Hawkes-Morton models.[100] However, cors anglais were not included in the 1923 catalogue.

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[96] H&S. *Journal.* HM/B&H A227/138.

[97] Baines, *Brass Instruments*. p.253, and in Oxford Music On-line: http://www.althorn.ch/Clavicor.pdf Accessed 01/11/14.

[98] B&C., 1902 catalogue. p.18.

[99] 1894 x2, [1912 x1,1913 x1,1914 x1] 1923 x1, 1925 x2, 1926 x1,1927 x1.

[100] H&S 1912 catalogue. p.72.

Cornet-à-pistons - see cornet

Cornet

Cornets were produced prolifically by manufacturers, mainly for brass band use; by the first decade of the twentieth century a brass band of 24 musicians required about seven cornet players, although a military band of 25 players included only two.[101]

The cornet was developed in France in about 1828 from the post-horn by the addition of valves. It rapidly gained popularity in France and Britain. Initially it was known as the cornet-à-pistons, and by the end of the 1830s many instruments were being imported from France and Germany.

The first instruments made in England were by Pace and Köhler and were called cornopeans. (See separate entry). Significant numbers were made by both Boosey and Hawkes, and numerous different models were developed for all situations including orchestral work. Boosey manufactured the cornet-à-pistons from circa 1851 by which time it was already widely in use, and it is clear from the earliest workbooks that cornet production quickly became well established. Both Boosey and Hawkes continued to produce cornets in many designs until the Depression in the late 1920s when, owing to severely diminished trade, all manufacturers were forced to reduce their lines.

Hawkes' 'Clippertone' cornet was highly regarded and remained popular for some years. It was described in 1908 as the 'latest creation' and 'a perfect shankless cornet [...] eminently useful to all orchestral soloists'.[102] In 1912 it was promoted as 'universally admitted to be the most perfect cornet ever made... recommended by the Highest Teachers and used by all the Leading Soloists', with the 'Litewate' version, which was 'built specially light in weight for the Profession,' suggested for orchestral use.[103] The 'Clippertone' title was also given to the previously named 'Rapid Change Sonorous Cornet' (in B ♭ and A).[104] In 1923 the

[101] B&Co., 1902 catalogue. p.677 and H&S, c.1908 catalogue. p.7 and p.8.

[102] H&S, c.1908 catalogue. p.14.

[103] H&S, 1912 catalogue. p.86.

[104] Ibid.

'Clippertone' model was available in four designs: Standard, Light Soloist, Standard Rapid Change, and American Long Model (nos.10 to 13).[105]

In 1923 most of Boosey's cornet models were improved with 'Solbron' valves. Three models (Nos. 3, 3a and 4) were promoted as the 'Acme Solbron' Cornet which was considered to be 'a splendid instrument for all purposes' and was 'designed expressly to meet the requirements of orchestral and Solo Players.' It was 'used by the soloists and leading players in the Grenadier Guards, Coldstream Guards, Scots Guards, Irish Guards, Life Guards, Royal Horse Guards, Royal Engineers, Royal Marines, etc.'[106]

Boosey brought out a new cornet model for brass bands with 'Silbron' valves and 'New Valve Action' (model 6b) in 1924; It was described in a subsequent catalogue as 'famed throughout the contesting world. Perfect intonation, beauty, fine workmanship and durability are represented to the highest degree [...] The majority of the leading Brass Bands favour this model on account of its brilliant and weighty tone.'[107]

During the Depression in the late 1920s manufacturers were forced to reduce their lines owing to a serious decline in trade. In their 1927 military catalogue Hawkes offered only three models: the 'Clippertone' (M25) with *Clear Bore*, the Excelsior Cornet (M27) adapted for all-round band use, and the Long Model 'Clippertone' (M26) which was popular at home and abroad.[108]

Long model cornet: In 1915 two instruments described as 'B♭ and A Cornet, trumpet model, Williams, model A9 in 1916 list' were recorded in the Boosey workbooks.[109] These may have been made for export to Williams, an agent in Toronto. In 1922 the 'Columbia' long model cornet, which had been produced from 1910, was improved with a transposing cylinder to A. An average of 116 of these cornets were produced annually between 1922 and 1927, but in 1928 the

[105] H&S, 1923 catalogue. pp.31-32.

[106] B&Co., 1923 catalogue. p.6.

[107] *Instruments Brass 12.* HM/B&H A227/056. This model was also produced with a transposing cylinder to A (No.6ab) and in an E♭ soprano model (No.12b). B&Co. Ltd. *Instruments for the Brass Band Manufactured by Boosey & Co. Ltd.*, (post 1926): AMPC. p.8.

[108] H&S, 1927 catalogue. p.16.

[109] Sns 94292 and 94293. *Instruments Brass 9* A227/ 053. No copy of the 1916 list exists.

number fell dramatically to 48, followed by 5 in 1929 and 6 in 1930, no doubt owing to the lack of trade during the Depression at the end of the decade.

Echo cornets were popular from the late nineteenth century until the First World War. They had a fourth piston which redirected the air into a second bell which produced a muted effect. Boosey sold many of these instruments, dating from Distin & Co. stock until 1910. The echo cornet was recommended by Hawkes in 1908 as an instrument that can be practised 'In places where sound is a consideration [...] without giving annoyance' adding that 'to amateurs and artists who do much solo work, it is of great service, and the effect of its use in concert hall or drawing room is very fine.'[110]

The 'pocket' or **'miniature' cornet** had the same length of tubing as a standard cornet, only more it was more tightly wrapped. At Boosey at least nine miniature cornets (in C or B♭) were recorded between 1877-1906, and eight miniature soprano cornets (in high E♭) 1877-90. They were also made by Distin. Boosey's 'miniature' cornets had light valves and were designed 'for performers with numerous and distant engagements.' In 1892, they 'beg to draw the attention of Professional and Amateur Performers' to it, 'the size of which is only 8 by 5 inches' explaining that 'it is of the same pitch, and has *precisely the same volume and quality of tone* as an ordinary sized Cornet.'[111]

Cornopean (see also Cornet)

The word 'cornopean' ('horn of triumphal song')[112] is commonly used as a synonym for the 'cornet-a pistons'. Myers cites the *Oxford English Dictionary* as stating that the cornopean was introduced to England in 1833, and states that the term is sometimes reserved for instruments with a single 'clapper' key, or for any cornet-like instrument with Stölzel valves. However, he explains that there is 'a distinct form of instrument, sharing its sounding length and predominant use in bands with the cornet a piston, distinguished by its wide mouthpiece receiver and virtually cylindrical shanks and crooks, for which it would be useful to reserve the

[110] H&S, c.1908 catalogue. p.34. No. 19 Clippertone Echo Cornet, No. 20 No 2 Echo Cornet.

[111] B&Co., 1892 catalogue. p.2.

[112] Baines brass. p.228.

term “cornopean”’. For further information see Myers *‘How different are Cornets and Trumpets?’*[113]

Euphonium

The euphonium is said to have been developed from the ophicleide by Ferdinand Sommer, ‘Concertmeister’ in Weimar, Germany and patented by Franz Bock who made it. The name euphonion is derived from the Greek *euphonos* – ‘sweet voiced’. Sommer exhibited it in London in 1851 as ‘Euphonic Horn’ or ‘Sommerphon’.[114] It was adopted and improved in 1859 by Alfred James Phasey (1834-88), an ophicleide player and Professor at Kneller Hall in 1859.[115] However, according to Myers, the euphonium as used in Britain was closely modelled on the bass saxhorn.[116]

Both Boosey & Hawkes developed and manufactured many euphonium models with different numbers and types of valve and varying bore sizes. In the late nineteenth century one euphonium was required in a military band and one in a brass band. The euphonium, which superseded the ophicleide was valued for its strong and expressive tone and its suitability for playing tenor melodic lines. The competition for custom amongst manufacturers was clear in their trade catalogues; Boosey declared that their ‘euphonions’ were ‘the definite choice of the World’s most famous Bands, and as instruments for the Soloist are unrivalled’,[117] whilst Hawkes considered that their brand, ‘The Dictor Compensating Euphonium’ had ‘always held pride of place in the estimation of the leading soloists throughout the world.’[118]

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[113] Arnold Myers, "How Different are Cornets and Trumpets?," *HBSJ* (2012).113-128. p.119.

[114] William Waterhouse, *The New Langwill Index* (London: Tony Bingham, 1993). p.377.

[115] H.E. Adkins, *Treatise on the Military Band* (B&Co. Ltd., 1931): p.173, and list of professors at Kneller Hall museum.

[116] Personal communication with Arnold Myers.

[117] B&Co. Ltd., *Instruments for the Brass Band Manufactured by Boosey & Co. Ltd.* (post 1926): AMPC. pp.18-19.

[118] H&S, 1923 catalogue. p.41. The ‘Dictor’ was the one real innovation that Hawkes brought to brasswind making. Whereas Boosey used Blaikley's patent compensating pistons and Besson their 'Enharmonic Valves', Besson patented their 'Enharmonic Valves' which worked on the same principle as double horns to address the intonation problems of valves used in combination in 1904. This was a refinement of their earlier ‘Victory’ model. Hawkes, in order to address the intonation problems of valves used in combination, introduced a simplified form of compensation. The tubing brought into play by the third valve passes through the fourth valve - and when the fourth and third valves are operated together, an additional loop of tubing attached to the fourth valve is brought into play. The 'Dictor' euphonium was lighter in weight than the heavy Boosey and Besson instruments but the intonation was compromised. The Boosey and Besson

Flugel Horn

The flugelhorn was derived from the German bugle which developed into the valved bugle. In Britain, from 1844 to 1851, instruments made by Sax were imported at first by Distin and later by Rousselot and Rudall Carte. Brass bands generally adopted two or three flugelhorns in the 1860s and 70s to double the cornet parts[119]

Flute

During the eighteenth and first half of the nineteenth centuries the flute had undergone many developments with new systems, bores and different fingering patterns introduced. The Munich flautist, Theobald Boehm (1794-1881) was the single biggest influence on woodwind design. Boehm's revolutionary introduction of his conical flute in 1832 and his cylindrical model in 1847 fuelled much debate with, at first, his systems slow to be adopted; players reacted against having to learn the new fingerings required. This inspired the development of many 'improved' models of the 'old' flute.

Flutes were produced in different keys for band and orchestral use, and the pitch terminology attached to them remained confused until well into the twentieth century. By tradition the pitch names of flutes derived from the note sounded when the six finger holes were covered. Therefore, concert flutes, although in C, were often called flutes in D because the D scale is closely related to the simplest fingering. (D is the home key of the 1-, 4- and 8-keyed flute); D♭ and E♭ flutes were often named and F flutes. The old terminology was gradually superseded. Boosey retained the old nomenclature until their merger with Hawkes in 1930, whereas Hawkes adopted the new names from circa 1908.

As with the clarinet, the old-style simple system flute retained its popularity in Britain. Like other manufacturers Boosey supplied many woodwind instruments to service bands. To satisfy the demand, all those that Boosey sold prior to their acquisition of John Hudson's flute making business in 1856 were bought in for

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systems proved more popular, and the last time a Dictor was mentioned in the Hawkes plating book was in July 1923, after which fully compensating euphoniums and basses were produced by Hawkes. Personal communication with Arnold Myers.

[119] The flugelhorn was never considered a military band instrument in Britain. Myers, "Instruments and Instrumentation." p.170.

resale. After this, most flutes, piccolos and fifes were made in-house; however, a few instruments by Monzani, Metzler, Rudall and Rockstro were still purchased, possibly for use in the research and development of new models.[120] Boosey's flute department, established in 1856, 'was organised, in the first place, for the purpose of carrying out the views of the distinguished flautist, Mr R.S. Pratten, who continued to give his advice up to the time of his death' (in 1868).[121]

Most of Boosey's flutes were simple system, made for the many fife and drum bands that had originated in the British army infantry regiments during the time of George I's reign; fife and drum bands were subsequently adopted by Irish Volunteer bands.[122] Large numbers of flutes and fifes were required for this purpose, whereas only one flute in E♭ with the player doubling on piccolo was commonly used in a standard military band[123] and only a few instruments were needed in an orchestra. Hawkes supplied many service fife and flute bands with instruments, and their most popular and widely used range of flutes was the 'Crown AZ' which was introduced during the first decade of the twentieth century; extant instruments are still much sought after today for use in bands, particularly in Ireland.

At Boosey, **military piccolos** were made in D, E♭ or F (keys of C, D♭, E♭), and military flutes in E♭ or F (Db, E♭). All except one model had a conical bore and the number of keys available ranged between 5 and 12. Many instruments were produced and numbers fluctuated according to orders. A drum and fife band of twelve players usually included one F piccolo, six B♭ fifes and two F flutes. The B♭ fife was traditionally a small keyless flute with a cylindrical bore; however, in Britain, from the middle of the nineteenth century, it was replaced by the 5 or 6-keyed B♭ flute which retained the name 'fife'.[124] Production figures of actual fife models for the years 1905-1912 are not available, but the average annual production for the years 1902-4 was 65 instruments compared with an

[120] B&Co., *Stock Account 1868-73*.

[121] B&Co., 1892 catalogue. p.13.

[122] By the late nineteenth century most districts of Northern Ireland had a band comprising B♭ flutes playing in unison, accompanied by snare drums and a bass drum. *The Flute and Ireland, Our Musical Heritage* (Ulster Folk and Transport Museum, 1984). p.16.

[123] This had largely been replaced by concert flute by 1931.

[124] Philip Bate, *The Flute: A Study of Its History, Development and Construction*, Instruments of the Orchestra (London: Benn, 1969; 2nd edition 1979). p.6.

understandably dramatic increase in 1913-15 to 174 during the First World War. However, no fifes were made in 1916, followed by an annual average of 76 during 1917 to 1926. After this numbers dwindled to five a year until the end of the decade. The terminology used by Boosey was not always consistent; it appears that fife and flute were synonymous for the 'fife' models.[125] B ♭ 'flutes' continued to be offered at Boosey until 1926.[126] Hawkes did not offer fifes or B ♭ piccolos in any of their extant band catalogues; however, it is probable that, as in circa 1927, they issued separate literature for drum and fife bands.[127] Hawkes military flutes were listed separately in their extant woodwind workbook.[128]

Concert flutes: Boosey produced concert flutes in many models with instruments ranging from basic to more sophisticated high class flutes with silver keys. Prices varied accordingly, with dramatic differences between the cheapest models and those at the top of the range.[129] Most of their early flutes were 'R.S. Pratten's Perfected Models, the 'Improved Siccama Flute' and Boehm system.[130] Hawkes offered fewer models than Boosey with only their 'Class A' flute and three piccolo models made in-house. Although Boosey's department was highly regarded, the manufacturer Rudall Carte developed the highest reputation for flute-making with the majority of professional flautists favouring their instruments, a number of which are still used professionally today.[131]

In 1889 David Blaikley entered into correspondence with Maximillian Schwedler concerning the possibility of producing his improved 'reform flute' which had achieved rapid success in Germany but had yet to gain acclaim in Britain.[132] However, nothing ultimately came of these plans. Schwedler explained that he had

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[125] The terminology used in catalogues from 1923 was B ♭ flute.

[126] B&Co., 1926 catalogue. p.48.

[127] Inexpensive Drums, Fifes Bugles and Brass Band Instruments for Boys' Band. Hawkes & Son (London) Ltd. (c.1927): Library of Congress.

[128] H&S, *Journal* HM/B&H A227/138

[129] For example: in comparison, Model 164, a basic cocoawood 8-key concert flute cost £4.4.0, Model 176 in sterling silver with gold mounts cost £52.10.0. B&Co., 1892 catalogue. p.18.

[130] 'R.S. Pratten's Perfected Models on the old system of fingering' (with cylindrical or conical bore and with small or large holes), the 'Improved Siccama Flute' and the Boehm system with conical or cylindrical bore.

[131] Biographies and photographs of 194 professional players of RC flutes are contained in a RC publication. Rudall Carte & Co. Ltd., *Photographs of Well-Known Flute Players* (1938): EUCHMI/L.

[132] The reform-flute was designed by Schwedler in 1885 and was awarded a gold medal at the Leipzig exhibition in 1897. Bate, *Flute*. p.158.

developed the flute in 1886 in conjunction with the maker Krüspe after having adopted Boehm's flute. Whilst fully aware of the advantages of the new system, he found it 'unsympathetic' and considered the old conical flute tonally superior and resolved to improve the old flute. Since then eighty Schwedler-Krüspe flutes had been made and another twenty ordered. As Krüspe's sales were principally in Germany and Russia, Schwedler felt that the production or sales of his flute in Britain would not affect his business. Blaikley was given the option of an instrument extending to low C or B, and was required to supply a tuning fork at British pitch. The instrument was completed by 2 September 1889 and given to Schwedler for testing, before it was sent with a fingering chart and testimonials by Brahms, Nikisch and eminent flautists.[133] The flute is recorded in the workbooks as ordered on 21 October, 1889.[134]

However, the Schwedler flute was never manufactured or bought in by Boosey, who continued to make the traditional conical flutes that were so popular with British players and to promote and increase production of Boehm system instruments. Hawkes too promoted their new Boehm flute which they considered would 'mark another stage in the evolution of this historic instrument'.

Boosey's 'Pratten' system concert flutes had 8 to 12 keys and conical or cylindrical bores; a superior large holed version was also available with 14 or 17 keys. Other concert flute models offered were 'Siccama' and Boehm system. A new 13-key 'Siccama' flute was introduced in 1880 and an 'improved model' in 1881;[135] they appear in the 1892 catalogue as 'Boosey & Co.'s Improved Siccama Flutes'. A small number of 'Siccama' flutes was documented in the workbooks each year from 1879 until 1893, and then intermittently until the 1912-16 break in records. They were included in the circa 1905 catalogue, but not in 1923. At first the Boehm flute was slow to gain custom with only four recorded from 1879 until 1889.[136] Thereafter, regular production commenced. Development was on-going, and six 'Boehm New Model Ebonite Concert Flutes' (A181) are noted in the workbooks in

[133] According to Baines 'This was the staple instrument of the 'old school' of German flautists during the Wagner-Brahms period, and we may perhaps see some mutual influence between them and the latter composer in his sombre orchestration.' Bate, *Flute*. p.158.]

[134] sn13345 'Con. Flute cone (Schwedler's model) Af blk [African blackwood] Kruspe.' HM/B&H A227/014.

[135] 13-keyed Siccama 15/09/1880; 'Improved Model' (A159) 07/12/81; New model (A170) 1886. HM/B&H A227/013.

[136] HM/B&H A227/014.

1889;[137] these were included in their 1892 catalogue. A further development was the introduction of a new design of pad with light aluminium rivets to secure centre of pad. This improvement was 'applied to the 16 Guinea Boehm Flute, as well as to those of higher price.'[138]

Hawkes offered fewer models than Boosey. The class 'A' model was made 'in house', and classes 'B' and 'C' imported. Three piccolo designs made by Hawkes were available: Hawkes & Son's Solo Piccolo with 6 keys which they described as 'constructed on the Hawkes-Whittaker Model',[139] G.L. Roe's system 'with all extra shakes', and the 'Boehm System, Large Bore, Hawkes & Son's perfected make'.[140] In 1908 flutes offered in D ♭ , E ♭ and C were made in 'Hawkes Model Cylinder Bore', the 'Military Model', Siccama system, and Hawkes & Son's latest pattern. Boehm system flutes were available in D ♭ for military band and C for orchestral use, and the '1867 Pattern Cylinder Bore Flute' was made only in C.[141]

Whereas Boosey's available models remained more or less the same through to the 1920s, Hawkes, during the 1920s, increased the number of models they manufactured, maybe in an attempt to keep up with Rudall Carte. In 1923, in addition to their previous designs, Hawkes included the '1867' system and the '1867 Guards Model'. They also offered 'thinned flutes' in Boehm and 1867 systems, (and separately, thinned heads for these models) in accordance with the new idea that 'a thinned flute vibrates much more freely and responds quicker than one of ordinary dimensions'.[142] In their circa 1924 Hawkes added a 'Radcliff' Model, for which a thinned head joint was also available, separate thinned flute heads for

[137] 12/11/89: batch of six instruments. A227/014. Extant drawing: 19/12/1889 Concert cylinder flutes. Boehm flute hole sizes, new and old. ([Later annotation in red ink] Correction of head DJB 12/4/21.)

[138] B&Co., 1892 catalogue. p.13. The use of aluminium became widespread in all industries during the 1890s following the discovery in 1886 (independently, by the American Charles Martin Hall, and Frenchman Paul Heroult) of a low-cost process for producing it.

[139] H&S c.1908 catalogue. pp.37-38.

[140] Ibid. p.38. Hawkes catalogue states that a 'diagram and scale by Mr Roe, shewing the fingering and shakes' was supplied free with the instrument.

[141] H&S, c.1908 catalogue. p.38.

[142] H&S, 1923 catalogue.

the Boehm and 1867 system and '1867' system and '1867 Guards Model' piccolos.[143]

Boosey also made a 'Radcliffe' [sic Radcliff] model besides other flutes that were not included in their catalogues. In 1890 eight flutes were made to Mr Owen's pattern, in 1894 a 'Radcliffe' model, in 1897 a 'Rockstro' model flute, and in 1902 an E ♭ Radcliffe. Only one conical Boehm flute in F features in the workbooks. A plan was developed from it on 17/04/1896: 'F cylindrical flute Boehm system from 15056, pitch 452.' Subsequent plans show further comparison between military flutes made by other firms, experiments concerning different pitches, and the development of cylinder flutes. Other features such as an extra thumb key for C,[144] flutes made with body and foot in one piece (1900), and 'Briccialdi' action (the addition of a B ♭ thumb key to Boehm Model no.181) were offered on some Boosey models.[145] A number of drawings survive from the 1920s showing development of head-joints, use of other firm's models, bass flute, the Radcliffe [sic] model and cone flutes. Just two Radcliffe flutes were made in 1930.

Examples of extant drawings showing the development of flute design in the HM/B&H archive.
Feb 27 1903 Sundry E ♭ Piccolos – Potter 6kp, 4kk Woolwich contract [19/11/21 same set out exactly and lengths but .020 taper had very good top notes], Rudall 6kp, Besson 6kp, Hawkes 6kp, B&Co. E ♭ 6kp No. 21883.
23/06/1904 Concert cylinder flutes. All using standard Kneller Hall Pitch Heads
14/9/1905 B ♭ cylinder flute, Boehm system 17401 -12 made to this B ♭ 479.3
15/9/05 B ♭ cylinder flute head.
1905 Chromium plated cylinder head.
1907 Cylinder flutes in E ♭ KHP based on concert models. See drg '07 +'88. 21/3/1907 scale of dimensions for cylinder flutes.
29/11/09 Siccama Cylinder Piccolos. D Piccolo FP, D Piccolo KHP
1909 D cone piccolo Boehm KHP/FP
1914 NM B ♭ cylinder fl x1
7/4/21 Mr Chaudoir's Rudall Flute Head [on scrap of paper] Agreeing with B&Co's standard head except at parallel end. Head is slightly oval but did not measure actual amount; above dimensions areas taken with cylindrical gauges. AB.
11/4/1921 Cylinder concert flute heads. B&Co's standard Mandrel. B&Co's Ebonite head from boring bit. Rudall's head from Mr. Chaudoir's flute (date about 1880). Rudall's head from RE flute (taken about 1887) No.1 on drg Sept '87
1921 Notes B&Co. standard head
1923 E ♭ cylinder fl head/ sketch RC flute head 1883

[143] H&S, *Flutes & Piccolos* (c.1924): HM/B&H.

[144] B&Co., 1892 catalogue. p.20.

[145] B&Co., 1923. p.43.

14/2/25 Boehm Piccolo Rudall Carte D KHP Cone All covered No.3527
1/5/28 B ♭ flute, cone, KHP from 22662
1929 Bass flute
1/4/30 DJB Cylinder flutes, Radcliffe [sic] model for key-work see detailed drawing. [In pencil] see AB of 17/4/30.
1930 Ratcliffe [sic] flute (no extras) made by Quilter – borrowed . Lent by Bowens GG
17/4/1930 Ratcliffe [sic] Flutes. IP Concert 22960 as finished. IP E ♭ dev from it. For keywork see detailed drawing 10/3/30. [in pencil] this drawing made 17/4/30 when in Mr DJB's absence his of 1/4/30 seemed doubtful.
15/3/1930 D concert flute, 8 keys, cone, IP No 22965

Fife: The so-called B ♭ fife was the core instrument of flute bands, but at Boosey the word 'fife' was rarely used with its strict meaning (cylindrical bore) and was also used for the small band flute (conical bore); terminology varied in the workbooks between B ♭ flute and B ♭ fife from 1883. It is not known whether Boosey's fifes had a cylindrical or conical bore, but a picture in the 1902 catalogue shows the Model 155 fife with the latter. However, it does seem that the B ♭ flute replaced the fife after the First World War. In the same catalogue Boosey stated that they had 'lately brought out a series of Flutes specially adapted for Drum and Fife Bands', and two of their established piccolo and two flute models, slightly modified, were designated specifically for this use.[146]

Bass flute: The bass flute, although rarely used in orchestral works, was regularly employed in flute bands. Boosey did not offer bass flutes in any of their catalogues but started making them at some point between 1904 and 1912. (The workbook *Instruments Wood 4* which covers this period is missing. Production figures collated by White and Myers for bass flutes show that the number made remained consistent until a rise the late 1920s: 1912-16: 6, 1717-21: 8, 1922-26: 8, 1927-31: 22.[147]

Georgephone

Claude George of Toulon obtained a patent in 1867 (with additions in 1869 and 1870) for a saxophone with modified keywork and made them until 1875, after

[146] B&Co., 1902 catalogue. Model numbers 150, 151, 158 and 159. (Model numbers 156 and 157 were discontinued from c.1900.) Ibid. p.15 and p.20.

[147] Kelly J. White and Arnold Myers, "Woodwind Instruments of Boosey & Company," *GSJ* May 2004, no. 57 (2004). p.68.

which he licensed Pélisson frères of Lyon to make them.[148] Boosey & Co. made one Georgephone, ordered 30 March 1896.[149]

Horn

Orchestral horns made by Raoux were the most sought after in Britain during the nineteenth century, and manufacturers copied and developed them, using the Raoux name for publicity.[150] From 1874–84 Rivière and Hawkes were sole British agents for Raoux; they explained in their catalogue that 'Labbaye-Raoux's Horns are recognised by all the Artists as the only perfect instruments of that description. They are performed upon by all the principal Cornists of the Opera House and Concerts on the Continent, and by the most distinguished Horn players in England.'[151] Boosey produced Raoux-style horns, describing their orchestral model in 1892 as

> *light as possible in the hand, and on the general lines of the well-known 'Raoux' horns, with such improvements as experience has suggested. Purchasers should understand that as the maker Raoux is no longer living, any such designation as 'genuine Raoux horn' is entirely misleading as applied to horns made at the present day, and that mere similarity in model to the Raoux horns is no guarantee of excellence apart from the reputation of the maker.*[152]

In 1910 Boosey copied a Raoux horn which they used to produce their newly named 'Sotone' (solo-tone) horn, which was available in orchestral and military models. Boosey stated that they had 'succeeded in retaining the charming tone character of the Raoux hand Horn, and with the application of their new "Solbron" pistons the valve action is delightfully light and responsive.'[153] It is surprising that Hawkes did not apply the Raoux name to any of their models until after 1927.[154] Instead, they focused their sales pitch in their catalogues from 1908–23 on the

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[148] Albert R Rice, "Making and Improving the Nineteenth-Century Saxophone," *JAMIS* 35 (2009). p.94.

[149] HM/B&H A227/015.

[150] They were continued by J.C. Labbaye from 1857 and Millereau 1878. Waterhouse, *Index*. p.319.

[151] R&H, c.1876 catalogue. p.63.

[152] B&Co., 1892 catalogue. p.6.

[153] B&Co., 1923 catalogue. p.14.

[154] There is no mention of Hawkes producing Raoux style horns in their extant catalogues 1908, c.1911, 1912, 1923, and 1927. However, in their post 1927 specialist horn catalogue their 'Professional French Horn' is described as the 'Raoux Model. Built specifically for the finest and most delicate solo work'. H&S, *French Horns by Hawkes & Son* (post 1927): UOBC. p.2.

changes made in the mixture of brass used to recreate the quality of instruments from the past.[155] In each catalogue they claimed that a great advance had been made in the construction of their horns since their last catalogue, adding that 'these modern Horns of our make are pronounced superior to any other make by the principle [sic] Artists of the London Symphony and Queen's Hall Orchestras, by Mr. T. Busby, Mr. A. Borsdorf, Mr. A. Priegnitz, and also by Mr Thornton, Professor of the Horn at Kneller Hall.'[156]

In 1897 a different horn system was developed in Germany by Krüspe to meet the demands being made of horn players by nineteenth-century Romantic composers, such as Richard Strauss. Players were being forced to use the high B♭ crook to achieve loud, sustained high notes, which resulted in poor tone quality. Krüspe first developed a compensating double horn with four rotary valves before producing a full double horn five years later. This system became particularly popular in Germany and Italy, and was used by a few players in Britain circa 1910.[157] The 4-valve compensating horn fulfilled the same purpose but was considerably lighter in weight. Both Boosey and Hawkes experimented with compensating and double horns, but there was little interest in them. Boosey, in 1911, produced a French horn in F with fixed mouthpipe, large bore, 4th valve, and a range to high B♭, and Blaikley applied for a patent for it in 1912.[158] They only made ten compensating double horns, and according to Myers these may have been the first fixed mouthpipe piston valve compensating horns.[159] British interest in German system horns was stimulated by the Berlin Philharmonic Orchestra's visit to London in 1927,[160] but such horns did not really start to catch on in Britain until the 1930s[161] when Beecham acquired and paid for a set of horns made by Alexander for the players of the London Philharmonic Orchestra.[162] British players

[155] H&S, c.1908 catalogue. p.18; H&S, 1912 catalogue. p.90; H&S, 1923 catalogue. p.39.

[156] H&S, 1912 catalogue. p.90.

[157] Adkins, *Treatise*. p.131.

[158] Sn82028. (Another experimental double horn had been made in 1909 'To Mr DJB's instructions' A41 sn79954). B&Co., *Instruments Brass 8*: HM/B&H A227/052. Patent: 'Improvements in French Horns' GB Patent Specification 28599, 11/12/1912.

[159] Myers, "Brasswind Innovation." p.407.

[160] Stephen Pettitt, *Dennis Brain: A Biography* (Faber & Faber, 2012). p.49.

[161] Alan Hyde was one of the first British horn players to adopt an Alexander instrument in 1930. Baines, *Brass Instruments*. p.225.

[162] John Humphries, *The Early Horn: A Practical Guide* (Cambridge: CUP, 2000). p.41.

generally continued to prefer French-style instruments until after the Second World War.

Until 1910 Boosey produced ten different models of horn. However, between 1905 and 1912 they discontinued six models with final orders for the 2-valve B♭ alto to E♭ basso (A41a) model in 1913 and F and E♭ (B42) model in 1918.[163] These were superseded by two 'Sotone' (solo-tone) models introduced in 1910,[164] based on a Raoux horn that had been lent to the company. An extant drawing 'French Horn, Sotone, to follow Raoux lent by Mr. Barrow, 27/05/1910' shows that Boosey continued to make alterations for players based on this instrument. Notes on the plan record 'centre of crook to rim, 15'. Mr Thornton's altered to this 12/06/1930. Several first class players have had same or similar alterations. AB'. The first surviving instrument stamped 'Sotone' dates from 1912, and belongs to Graeme Evans (Principal Horn, Melbourne Symphony Orchestra).[165] 'Sotone' horns are last mentioned in the workbooks in 1940/41 but Boosey may have continued making them without stamping the instruments.

Separate models of French horn were required for orchestral and military purposes as the slides of the military models in F and E♭ were too long for use with the short A crook used by orchestral players. Therefore, the orchestral model could have played band parts in F and E♭, but not vice-versa, and the orchestral model could also be used with a wider range of crooks.[166] During the first half of the twentieth century, orchestral horns generally had a narrow bore and crooks for A and F. These French-style instruments were in regular use until the Second World War, but owing to the growing interest in larger-bore German horns David Blaikley at Boosey & Co. started experimenting with compensating and double horns in 1911,[167] although there was little interest. In 1912 Boosey made three F and B♭ alto French horns and in 1913 one horn in F and E♭ with four compensating valves.[168] In 1923 an 'experimental double horn' was made 'to Mr DJB's instructions' and in 1926 a new model (40a) with four compensating 'Solbron'

[163] But they made 6x B42 in 1924, and 2 more in 1930. HM/B&H A227/056, A227/058.

[164] No.40: orchestral model, No.41: military model. The 'Sotone' horn was included in David Blaikley's Photograph Album in 1910. p.55.

[165] Personal communication with Arnold Myers.

[166] B&Co., 1923 catalogue. p.14.

[167] Sn82028. HM/B&H A227/052.

[168] Sns85594, 85905-6, 86758. A227/052, HM/B&H A227/053.

valves was featured in the catalogue; depression by the thumb of a 4th valve enabled the normal pitch of F to be changed to B♭.[169] Only five of these horns were actually made in 1928.[170]

Keyed bugle

The keyed bugle was developed from the bugle and used in bands in the first half of the nineteenth century. It was patented in 1810, and was rapidly adopted by bands as a melody instrument owing to its chromatic compass and agility. Keyed bugles later played together with cornets before their popularity diminished from about 1840.[171] According to Baines, Halliday applied for a patent for 'Certain Improvements in the Musical Instrument called the Bugle Horn' 1810.[172] It was also called the 'Royal Kent Bugle'. The only keyed bugle recorded in the extant Boosey workbooks is listed in 1894;[173] there is also an extant drawing of it in the B&H archive entitled 'Key Bugle in C and B♭ No. 46512 Jan. 15th /95' signed by David Blaikley.[174]

Koenig horn

The Koenig horn was developed from the saxhorn by the Parisian maker Antoine Courtois. It was first made for the cornet player Herman Koenig in the 1855 and had similar proportions to the tenor saxhorn, but was horn-shaped with a downward bell.[175] Boosey made many of them in F and E♭ until the second decade of the twentieth century. The Koenig horn was in effect 'a saxhorn wrapped in left-handed French-horn configuration' and it is commonly assumed that the tenor cor was derived from it.[176] The tenor cor superseded the Koenig horn for band use. According to Myers, no Koenighorns by the firm appear to have survived

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[169] B&Co. 1926 catalogue. p.13.

[170] Possibly another experimental horn was ordered on 28 March 1927. '2,3 slides, no crooks, new slide lengths.' HM/B&H A227/057

[171] Arnold Myers, "Instruments and Instrumentation of British Brass Bands," in *The British Brass Band: A Musical and Social History*, ed. Trevor Herbert (Oxford: OUP, 2000). p.159.

[172] Baines, *Brass Instruments*. p.194.

[173] 'C & B♭ Key Bugle copper 7k brass rim to bell', sn46512, produced 12/12/1894. B&Co., *Instruments Brass 4:* HM/B&H, A227/048.

[174] HM/B&H.

[175] Day, *Descriptive Catalogue*. pp.218-9.

[176] Myers, "Brasswind Innovation." p.104.

apart from a pre-1868 example in the Carse Collection at the Horniman Museum (14.5.47/161), which very closely resembles those made by Courtois.[177]

Lied horn (also see ballad horn)

The lied horn in C, with crooks for B ♭ and A (alto), sounded an octave higher than the ballad horn and had a similar tone to the flugel horn. The first lied horns were made in 1873. 48 were made between 1873 and 1903.[178]

Oboes

Although the oboe was generally considered to be for orchestral use, one oboe was regularly included in military bands.[179] The majority of both Boosey and Hawkes' oboes were made for military players for band or orchestral use, as most professional orchestral players favoured instruments by Triébert, Lorée, Morton etc. Boosey made their first oboe in 1886 after which most oboes were produced in-house. From 1902 Hawkes 'solo' and 'orchestral' oboes were based on the models made by the respected oboe and bassoon maker, A.W. Morton.

Until 1868 all Boosey's oboes were imported from Triébert and probably Maillon,[180] and it seems that Boosey's first oboe was based on a Triébert instrument bought in to copy.[181] Manufacture began two months after an ambiguous entry in the workbook dated 1 July 1886 for a Class 'A' oboe where the worker's name was recorded as Triébert. (This could not have been the case as Frederic Triébert, the last member of the family to be involved in the family business, died in 1878;[182] therefore it is probable that the instrument was bought in to copy). Boosey's first oboe (model A126) was made on 30 August by Taylor,[183] who then produced another five instruments before the end of the year. After this most oboes were made in house with only a small number imported until 1894.

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[177] Ibid.

[178] Personal communication with Arnold Myers.

[179] Farmer, *Memoirs*. p.454.

[180] Some oboes were denoted in the workbooks simply my an 'M'. HM/B&H A227/115.

[181] Class 'A' Triébert oboe bought in 01/07/1886, sn8410. HM/B&H A227/013.

[182] After an interim owner, F. Paris, and bankruptcy, the firm was subsequently bought by Gautrot ainé and taken over by Couesnon in 1883. Waterhouse, *Index*. p.403.

[183] First oboe A126 (made of ebonite) 30/08/1886 sn8441 by Taylor. HM/B&H A227/013.

Comparison of Boosey's models offered in their 1892 catalogue and Triébert's models show close similarity; the 'Perfected' "simple-system" models' A123 and A124, and A123a and A124a (more robust for military use) are like Triébert's 'Systeme 4' circa 1843, and models A125 and A126 ('thumb-plate' system) are like Triébert's 'Systeme 5' circa 1849.[184] There is evidence that Boosey & Co. were interested in Heckel oboes; extant Heckel oboe fingering charts, price lists and a drawing from 1905 of a Heckel oboe are included in surviving material in the B&H Archive. Both Boosey & Co. and Hawkes & Son in time developed their models, and keywork became more sophisticated. For example the 'Artist' model offered in Boosey's 1923 catalogue was offered with 19 keys and 4 rings.

There have been claims that the renowned nineteenth century oboist Antoine Lavigne, a committed player of Buffet-Boehm instruments, collaborated with Boosey on experimental designs of the Boehm system.[185] Langwill states that 'his models were built for him by Boosey & Co.', but there is no evidence to support this in the workbooks. However, three of Lavigne's oboes have been part of the Boosey museum collection since at least 1890,[186] and one unsigned model is thought to have been made by the firm along with some experimental tubes.[187]

Hawkes offered a wide range of models, using Morton's name, success and improvements to promote them. In 1912 they detailed Morton's oboe as having 17 keys, 5 rings and single action octave keys, but stated that he made 'additional keys to requirements of special customers.' Hawkes offered three Hawkes-Morton models. Hawkes claimed 'The No.1 is absolutely the original, without any changes,

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[184] See Appendix 5.ii.b.

[185] Waterhouse, *Index*. p.227.

[186] Charles Russell Day, *A Descriptive Catalogue of the Musical Instruments Recently Exhibited at the Royal Military Exhibition, London, 1890* (Reprint: Eyre & Spottiswoode, 1891, 1890). Exhibition Nos. 191, 192, 193 and a boring bit 194.

[187] Day, *Descriptive Catalogue.* Exhibition Nos. 191, 192, 193 and a boring bit 194. HM: 2004.838. (Day 1890 catalogue No.191) - modified Boehm system, large bore, pearwood, 1860-70. Other Lavigne exhibits are 2004.860 unmounted body with rapidly enlarging conical bore, and large pads and fingerholes *c.*1880 and 2004.865 Triébert pastoral oboe *c.*1860. Three oboes, thought to have belonged to Lavigne are in the Bate Collection: pc227 A.J. Lavigne, cocus Boehm-system, to low A, known as `old spider keys' oboe. pc228 Antoine Joseph Lavigne, cocus Boehm system, to low A, + shorter keys oboe. pc229 A.J. Lavigne, unmounted cocus tube, drilled for Boehm-system to low A oboe. Bate, in 1956, explained that Montague George (Managing Director of Rudall Carte) had recognised from his apprenticeship at Rudall Carte one of two oboes found in dealers' shops as one of Lavigne's later instruments. It was nick-named 'old spider keys' on account of its strange appearance and had often been taken to Rudall Carte for repair. Bate writes that he 'had the opportunity to examine certain of Lavigne's experimental oboe tubes which now belong to Boosey & Hawkes, and one of these corresponds in almost every detail to this instrument.' Philip Bate, *The Oboe*. p.73.

additions or modifications, and is the instrument that Mr. Morton considered as his highest point in manufacture; it is still the instrument almost exclusively used by the principal professionals in London', two top of the range 'Corot' models which were described as 'Hawkes & Son's latest production', 'Hawkes New Perfected Bore' oboe in three models, two simple system designs, and the 'Hawkes Model Military Oboe'. In addition they bought in cheaper models: a 'Good Orchestral or Military Band Oboe' and two of 'good French make'.[188] In 1923 they reduced the number of models offered from 14 to 12.[189]

Ophicleide

The ophicleide, a tenor-bass keyed brass instrument, was developed from the keyed bugle in France in 1817 and patented in 1821 by the Parisian brass maker Halary, whose real name was Jean-Hilaire Asté.[190] He invented it having seen the British keyed bugle in a military review after Waterloo. (French Patent No. 1849, Mar. 1821.) The name 'ophicleide' comes from the Greek words 'ophi' - serpent and 'kleis' – key, but it is this only in name.

Ophicleides were distained by many musicians; however, in the right hands they could be well played. Cottrell relates that they were described by Berlioz in 1842 as 'poorly studied. Good performers are rare; in general they leave much to be desired [...]. One uses them in military music to fill out the harmony or to double the melody; but their timbre is generally very unpleasant, and they lack exactness.'[191] Therefore it is hardly surprising that they were disregarded in favour of other instruments. Before 1845 a typical French military band included six ophicleides and one keyed bugle; however, after Adolphe Sax's proposed reforms in 1854 these instruments were omitted, with the scoring altered in favour of Sax's own instrument designs.[192] Britain, influenced by developments abroad, also adopted new improved instruments in place of the ophicleide and keyed bugle. Boosey, between 1869 and 1870, bought in only six ophicleides for resale to

[188] H&S,1912 catalogue. pp.71-72. Some Hawkes blueprints survive including one of Morton No.2 and Corot No.4 models. See Appendix 6.

[189] H&S Simple System x2, H&S Perfected Bore x3, Hawkes- Morton x3, Corot x2, Military Model x2 H&S, 1923 catalogue.

[190] Baines, *Brass Instruments*. p.198.

[191] Stephen Cottrell, *The Saxophone* (Newhaven and London: Yale University Press, 2012). p.40.

[192] Ibid. p.20 and p.28.

Lacheur & Son, and in 1883 an 11-keyed instrument for 'The Jau'.[193] Rivière & Hawkes offered ophicleides with 11 keys in their circa 1876 catalogue, but it is not known how many were actually sold.[194]

Orpheon - see antoniophone

Saxhorn

One of the most influential and innovative makers in the history of brass instrument manufacture was Adolphe Sax. By using current ideas and changing and improving existing instruments Sax created and developed a number of new ones, the invention of which rapidly altered the constitution and sound of both brass and military bands, and extended the timbre available in orchestral scoring. His two most influential inventions were the saxophone and the saxhorn, which he created in circa 1840 and circa 1843.[195]

Saxhorns were produced in a number of different pitches and were intended to be used as a related family of instruments that could replace the disparate collection of instruments in bands.[196] They were immediately adopted in Britain (particularly the tenor and baritone) and the complete set of instruments was much promoted by the Distin family ensemble.[197] However, saxhorns were not retained as such for long as they were superseded by instruments of a similar type that were more developed.[198]

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[193] 1869-70: 4 in C, 2 in B ♭ . 1883: in B ♭ sn29107.B&Co., *Band Instrument Stock Account.* HM/B&H A227/115.

[194] R&H. Catalogue (c.1876). Private collection of Thomas Lord, Bacup. p.58.

[195] Albert R. Rice, "Making and Improving the Nineteenth-Century Saxophone," *JAMIS* 35 (2009). p.83 and Mitroulia, "Sax's Brasswind Production". p.103.

[196] The saxhorn was never actually patented; however, it was illustrated in Sax's 1845 patent for the saxatromba. Evgenia Mitroulia, "Adolphe Sax's Brasswind Production with a Focus on Saxhorns and Related Instruments" (2011). p.42

[197] Myers, "Instruments and Instrumentation." p.169.

[198] In simple terms, the B ♭ contralto (4 ½ ft) became the flugel horn, the Eb alto or tenor (6 ½ ft) became the tenor horn, the B ♭ baritone (9ft), the baritone or althorn, and the B ♭ bass (9ft, wide bore), the euphonium which sometimes had a larger bore was more compact in shape. The bore of the Eb contrabass saxhorn widened in the second half of the nineteenth century; built a tone higher in F with a compensating 4th valve, it became the orchestral tuba until the Second World War, after which Eb bass with wide bore and bell superseded. B ♭ contrabass became the BB ♭ in the band. Personal communication with Arnold Myers.

Saxophone

Boosey & Co. initially bought in saxophones from Mahillon and other foreign manufacturers. Before saxophone making started at Boosey & Co. in 1899, the demand for the instrument was very low with the first order for a B ♭ tenor in 1868 and E ♭ alto saxophone 1882; the average order was four a year until 1898 when 18 were bought in.[199]

Boosey & Co. was the first London company to commence making saxophones, and production started on 5 April 1899.[200] The first instrument was made by Drayton, and ten were manufactured that year. In 1900 new saxophone models and model numbering were introduced. Numbers remained at an average of 18 for the next three years, followed by 32 in 1903.[201] There are extant drawings of saxophone mouthpieces dated 1899,[202] and soprano, alto and tenor saxophones at KHP [Kneller Hall pitch] dated 1900.

Twenty four Hawkes blueprints of saxophones survive from the period circa 1917 to 1924 (see Appendix 6). The drawings show H&S and Buffet models by Evette & Schaeffer of melody saxophones in C, E ♭ alto, and F alto, and soprano saxophones. One plan is of a Boehm system soprano; however, this model was not adopted for manufacture by Hawkes. The only surviving Hawkes workbook records are for alto saxophones, and from the data available their annual average from December 1925 to April 1927 was 356 instruments. All other woodwind instruments in the Hawkes extant workbook were listed until the merger. Two different serial number sequences were used for the alto saxophones: 50002-50499 Dec 1925-Sept/Oct 1926 and 52000 starting Sept/Oct 1927. There are many gaps in the number sequence indicating that other instruments in the number sequence must have been noted elsewhere. Boosey's production was low between 1922 and 1925, but numbers expanded from 1926 to the end of the decade to an average of 141 saxophones a year.

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[199] The first recorded saxophone was in 1868: B ♭ Tenor Saxophone sn11650 (Distin & Co.) HM/B&H A227/115, p.15; The first recorded E ♭ alto saxophone was 30/12/1882. HM/B&H A227/013,014,015.

[200] Boosey claimed in their 1905 catalogue (p.1) to be the only saxophone manufacturers in Great Britain; however, the Liverpool maker R.J. Ward & Son may have made saxophones earlier as there is a surviving curved simple system B ♭ soprano saxophone (*c.*1870) in the Bate Collection, Oxford (ref.51).

[201] A227/015.

[202] Boosey exported saxophone mouthpieces to America in 1900. An extant drawing shows the 'Actual dimensions of first set of mouthpieces sent to NY.' HM/B&H.

Serpent

The serpent is a conical-bored bass instrument developed from the cornett, usually made of wood covered in leather, sometimes metal, in the shape of a zig-zag snake with a cup mouthpiece. It is described by Reginald Morley-Pegge as 'a sinuous conical tube about 212 cms. long, with a bore expanding from approximately 1.3 cms. to about 10.2 cms. at the bell. It is generally covered with leather and has six finger-holes. Into the small end a right-angled crook is inserted, which increases the length to around 244 cms. The mouthpiece, usually of ivory, has a hemispherical cup and practically no rim.'[203] Keys were added to some instruments from the beginning of the nineteenth century.

Sousaphone

The instrument was developed by J.W. Pepper in about 1892,[204] at first with a large upward pointing bell (known as the 'rain-catcher') and then later with a flared detachable front-facing bell. Both Boosey and Hawkes introduced sousaphones in E♭ and BB♭ around 1923. Hawkes, appealing to the fashions of the time, declared that they were 'produced in the first instance at the request of Bands and Orchestras who required an instrument whose entire tone-volume could be efficiently concentrated in any one direction.' They added that they were 'practically a necessity' in all 'up-to-date' dance orchestras, and that they had detachable recording bells.[205] Boosey, from 1925, renamed their sousaphones 'Imperialphones' (see above - Bass).[206]

Tenor cor

In military bands two tenor cors (developed from the tenor saxhorn) were often employed as substitutes for French horns because they used the same fingering but with the valves operated by the right hand, thus enabling them to be played by bandsmen.[207] Boosey produced many tenor cors from 1868 (Distin had made them prior to this date), but production declined from 1925 to the end of the

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[203] Reginald Morley-Pegge, *Catalogue of the Galpin Society Exhibition of European Musical Instruments at the Edinburgh International Festival*, ed. Graham Melville-Mason (1968). p.57.

[204] Waterhouse, *Index*. p.298.

[205] H&S, 1923 catalogue. p.42B.

[206] B&H, *Instruments Brass 13*.

[207] According to Boosey they had 'a delicate tone quality' which was similar to that of the French horn. B&Co., 1902 catalogue. p.6.

decade as they were replaced by French horns. Hawkes continued to offer a range of them in 1927.[208]

The tenor cor was a similar instrument to the Koenig horn but had a narrower mouth-pipe; it superseded the Koenig horn within the band. In 1902 Boosey described the tenor cor as 'an instrument of a delicate tone quality' which was similar to that of the French horn owing to its deep cone-shaped mouthpiece and the taper of the instrument.[209] It had the same fingering as the tenor horn which made it a good substitute for the French horn in military bands.[210] In 1923 Hawkes explained that even under the most favourable conditions, every bandmaster experienced great difficulty in using French horn in regimental bands. Therefore, they had 'recently constructed a New Model Tenor Cor, which will be found, on trial, to more closely resemble the tone of the French Horn proper than any other instrument of this family. It has been largely adopted by Regimental Bands.' Hawkes offered two classes of French horn type cor (No.39 'A' class, No.40 'B' class) and a 'Cavalry Model' (with bell upwards).[211] Boosey, the same year, offered only one model - circular with 'Solbron' valves.[212] At Boosey, a few non-standard designs of the instrument were made: a French horn model with bell up which was made until 1914, and one with bell forward ('forcor'), perhaps for the American market from 1927.

Tenor horn

Brass bands generally adopted three tenor horns (originally known as E♭ alto or tenor saxhorns). The number of tenor horns (model nos.46-48) and baritones (nos.49-51) produced at Boosey remained reasonably consistent between 1912 and 1930, with most for use in brass bands. The new 'Tenortone' model that Boosey brought out in June 1930 first appeared in the workbooks as a 'special' instrument: '5/6/30 137515 E♭ Tenor spec: (see photo) A47 Overdyk J^{r} [Junior]' in *Instruments Brass 14* (A227/058) and it was illustrated in Blaikley's album: 'New Model E♭ Tenor A47 HP / but trial only & subject to approval.' A note

[208] H&S, 1927 catalogue. p.20.

[209] B&Co., 1902 catalogue. p.6.

[210] Day, *Descriptive Catalogue*. p.218.

[211] H&S, 1923 catalogue. p.38.

[212] B&Co. 1923 catalogue. p.23.

in the front of *Instruments Brass 14* states: 'A47 137515 new model as photo page 103 photo book Piston No 109632 all A47s with later piston No's than this are built to this model'. Although the 'Tenortone' was offered in the 1935/36 catalogues the actual name was not used in the workbooks until 1939.

Trombones

The trombone, which had been invented in the fifteenth century, was well developed by the nineteenth century, with the standard pitches of E♭ alto, B♭ tenor and F bass giving way in brass and military bands and orchestras to two tenors in B♭, and in Britain one bass, generally in G.[213] Different conventions often existed for notation of parts. In orchestral scores trombones were written at concert pitch with players reading at sight having learned their slide positions accordingly. However, in brass bands tenor trombone parts were written in the tenor clef until the early twentieth century, after which they were transposed and written in the treble clef. Manufacturers produced different types of trombone: slide, valve and a less used model which was a combination of the two. Specific models were made for cavalry use. Demand for small bore trombones in Britain continued well into the twentieth century. By the end of the nineteenth century brass and military bands generally included one bass and two tenor trombones; British players generally preferred French narrow-bore models. These were retained by first and second orchestral players until after 1930 and by brass bandsmen for some time after.[214] Boosey made their instruments with medium or small bore, both of which were considered small in comparison with the standard abroad at that time. These small bore trombones were colloquially known as 'peashooters'. Hawkes offered a similar range.

Although trombones were sometimes advertised expressly for military or for orchestral use, naturally these categories were not strictly adhered to in practice. None of these models was aimed specifically at brass bands, yet this was the biggest market for trombones. Bass trombones were as numerous in early bands as tenor trombones, but British players favoured the bass in G which was more

[213] In 1890 Day stated that 'the family of trombones consists in the present day of the alto in e-flat or f, the tenor in B-flat, and the bass in G or F. The F bass trombone is in constant use in Germany, but unfortunately is little employed in this country.' Day, *Descriptive Catalogue*. p.176.

[214] Baines, *Brass Instruments*. p.243.

manageable than the F bass and became standard in British orchestras. A wooden handle on the slide enabled players to reach 7th position.[215]

Boosey, by the end of the nineteenth century made trombones with medium or small bore (see Appendix 10.xiii). However, both sizes were considered small in comparison with the standard abroad at that time. In their early catalogues Boosey offered a full selection of trombones: F or E♭ alto, C or B♭ tenor, B♭ baritone, G bass, and the contra-bass in B♭, with F, E♭ and A♭ bass also included for military use.[216] They also produced a wide range of valve trombones: alto in F or E♭ (Nos.62-64), tenor in C or B♭ (Nos.65-67), bass in A♭ or G (Nos.68-70) and F or E♭ (Nos.71-73), plus bass cavalry models (Nos.74,75); tenor cavalry trombones could be made to order. Hawkes also offered a B♭ tenor model with both slide and patent compensating pistons (No. 76).[217]

In 1885 George Case worked with Boosey on developing a new model with a tuning slide.[218] One of its features was that the proportions of the main slide had been altered to prevent certain notes 'breaking'. It was available for F or E♭ alto, C or B♭ tenor, bass in G, and bass in F instruments and could be fitted to medium quality instruments. It never gained popularity; only thirteen Case trombones were made, all in 1885.[219] Hawkes introduced a unique 'trill valve attachment' for tenor trombones in about 1908; this was continued in use into the 1920s with examples still recorded in the extant 1922 workbook.[220]

According to Hawkes, in 1908 British performers, with few exceptions, used trombones with a small bore and 6" bell, but they included a note in their catalogue to American and German performers explaining that special models were made 'to suit their characteristics' with a medium bore and 6½" bell, and a large bore 6⅞"

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[215] In 1914 Cecil Forsyth stated that 'our G-instrument - already, perhaps, the most tiring instrument to play in the orchestra - is much more manageable than the continental F-Trombone. This somewhat counterbalances its obvious disadvantages when required to "cry out from the depths."' Cecil Forsyth, *Orchestration* (Macmillan & Co. Ltd., 1914). p.140. For further information on the bass trombone in G see: Gavin Dixon, "Farewell to the Kidshifter: The Decline of the G Bass Trombone in the UK 1950-1980," *HBSJ* 22 (2010).

[216] B&Co.,1892, 1894 and 1902 catalogues. p.8.

[217] H&S 1908 catalogue.

[218] Registered No. 28775. B&Co.,1892, 1894 and 1902 catalogues. p.8.

[219] First Case model recorded: sn31228 'Alto slide Trombone in Eb Case's Model'. HM/B&H A227/046.

[220] E.g. 17/03/1922 '2 Son B♭ Slide Trombones (Light) Fitted with Trill Valves'. H&S, *Journal*. HM/B&H A227/139. p.16.

bell'.[221] However, in the 1920s British players were beginning to show an interest in larger bores. Both Boosey and Hawkes made wide-bore trombones based on American models, to compete with American companies who, by this time, were making trombones with larger bores and bells than in Europe.[222] Extant Boosey plans include a drawing of an 'American Model' based on an instrument by Holton,[223] but this probably was not used, since from circa 1925 Boosey produced an 'Olds model'. This was made in some numbers, with many instruments exported to the US and Canada.[224] There is also an extant Hawkes blueprint of a Holton trombone dating from the 1920s.[225] Hawkes developed their popular 'Cabaret' model with a 12mm bore, based on the wide-bore American designs.[226]

Valve trombones were easier to learn to play than slide trombones and were more robust. They were employed by some brass bands, although they became less common towards the end of the nineteenth century. They were also doubled on by trumpet players in Belgian orchestras and in pit orchestras where space was limited. Very few valve trombones were made at Boosey after 1923, and Hawkes at this time stated that the majority of their valve trombones were used by regimental players of the Indian and Egyptian forces and boys' bands in Britain.[227] In 1892 Boosey offered a full range of valve trombones including a B ♭ tenor model with both a slide and patent compensating pistons. Hawkes' combined valve and slide trombone, the 'Duplex', first appeared in their 1911 catalogue;[228] however, it is possible that none of these instruments were actually made as no extant models are known.

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[221] H&S, c.1908 and post 1911 catalogues. p.30.

[222] HM/B&H A227/055, A227/056. Medium bore was about 12.4mm and medium large 13.4mm with a wide bell about 18cm. 'Am. B ♭ Trombone. Am. model x12 10/03/22, sn114951 21/2/22'. [In red ink] 'instr. experiment re-made Nov 1923.'

[223] Extant plans B36, B37, B38. B ♭ Trombone, American Model (Holton's). HM/B&H.

[224] The Boosey 'Olds model' ('LARGE BORE' stamped on the bell of extant examples) had a bore size of 12.3cm or 12.35cm (0.485 inches). Personal communication with Arnold Myers. 43 are recorded in the workbooks in 1925 [from sn123585] and many others in subsequent years.

[225] See Appendix 6.

[226] The earliest H&S 'Cabaret' trombone recorded is sn50620. Stamped on bell "THE CABARET" / hawk-and-globe trademark / "HAWKES & SON / MAKERS / DENMAN STREET / PICCADILLY CIRCUS / LONDON.W./ 50620" [the "6" not clear]; also "... MAURICE ILIFFE / MARCH 1926". Clearly 1926 or earlier, estimated *c.*1925. Bore size 11.9 or 12.0cm (0.47 inches). Seen on eBay March 2012. Personal communication with Arnold Myers.

[227] H&S, 1923 catalogue. p.45.

[228] H&S, post 1911 catalogue. p.20.

Contrabass trombone: During the late nineteenth century some slightly more idiosyncratic bass instruments were developed for orchestral use. The contrabass trombone was first included in Wagner's Ring cycle (1860), for which the score required four trombones including one descending to E_1.[229] In 1862 Boosey & Sons exhibited a double-slide B♭ contrabass under the name 'Basso Profundo' which was played at massed brass band festivals in London.[230] Thirty years later Boosey promoted it as 'the Instrument for which Wagner wrote parts in some of his operas', adding that 'these parts cannot be properly rendered on any other instrument';[231] it was still offered in the 1905 catalogue.[232] They only made a small number of contrabass trombones including one in 1898, which was built for use in London orchestras and known in the profession as 'King Kong'.[233] Hawkes featured a 'BB♭ Bass Contra Slide Trombone' in their post 1911 catalogue, as used by the Beecham Orchestra;[234] they may only have made one, which survives in the museum at Kneller Hall.

Trumpet

During the nineteenth century a variety of trumpet designs were used by orchestral players. The natural trumpet was progressively improved with side holes, a slide, and then as with the cornet, keys and valves. Keyed trumpets, made until the 1840s in Italy, found little favour with British players who preferred the slide trumpet, particularly for oratorio.[235]

In Britain the natural trumpet, which was used by orchestral players, gave way to the slide trumpet. In May 1891 Boosey developed a new 'ortho-chromatic' model (in D or in F with crook for D) with George Case, and it was offered in their 1892 and 1902 catalogues. It had a slide which was arranged 'to give a shift

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[229] A. Moritz made *a double-slide contrabass trombone* in 18-foot B♭ for the first production of Wagner's Ring cycle at Bayreuth in 1860. Baines, *Brass Instruments*. p.247.

[230] *London Exhibition Catalogue* (1862). Class XVI Musical Instruments.

[231] B&Co., 1892 catalogue. p.8. Also in 1894 and 1902 catalogues.

[232] B&Co., 1905 catalogue. p.10.

[233] sn52186 C Contrabass Trombone / extra slide for F.P., Model A. Bailey. Given out 27 Apr. 1898; received 6 May 1898; given to polisher 2 May 1898; charged to Regent Street 15 Jun 1898. sold 22 Jun 1898 onwards. W. Reynolds, Owned by Arthur Falkner; Godfrey Kneller; Frank Tomes; EUCHMI (6069)

[234] H&S, post 1911 catalogue. p.20.

[235] Baines explains that 'The slide is drawn back with the second and third fingers by a finger-piece fixed to a telescopic rod, and returns by means of a length of gut, such as violin D or A string, wound three or four times round the drum of a clock spring enclosed in a brass spring box.' The spring was later replaced with a rubber cord. Baines, *Brass Instruments*. p.182 and p.194, and Bate, *Trumpet and Trombone*. p.126.

sufficient for two tones' and therefore had a complete chromatic scale from the lower E♭ upwards without having to change crooks.[236] However, it was not successful owing to the falling favour of slide trumpets, and only two were produced.

'Bach' long trumpets (straight) replaced slide trumpets for oratorio work in the 1890s.[237] Boosey first offered a Bach Trumpet in A with 2 valves in their 1902 catalogue, and Hawkes included them in E♭ and D with two and three valves in 1908.[238] During the first half of the nineteenth century composers of orchestral works were often not acquainted with the most up-to-date instruments that musicians were using; this resulted in scoring for pairs of brass instruments tuned in different pitches at the same time to achieve a greater range of harmonic variety and chromaticism.[239]

The original Bach trumpets (5 feet long in A) were unwieldy and difficult to play. Boosey made 12 2-valved Bach Trumpets in A between 1896 and 1910.[240] In 1923 Boosey addressed the problem by producing instruments with 3 valves that were only 3½ feet long. They explained that as 'Bach's music was written for a D or E♭ Trumpet about 7 feet long, which was played entirely in the open notes of the upper register [... they] have lately made a few Bach trumpets an octave higher for the people who require a D Trumpet', but they felt that character and quality of tone was not as intended by the composer.[241] The tone of the new design was not as good, so in order to achieve the right effect Boosey made a 5-foot B♭ and A trumpet with two valves 'of intermediate length for this purpose; [as] the majority of

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[236] A plan drawn by Arthur Blaikley exists of 'Mr Case's suggestions for slide trumpet, 01/04/1935. Believed to be D Slide Trumpet.No. 40349 Mr Case's design 23/5/91.' only two were produced. sn40349 23/05/1891, and sn40493 18/09/1891. B&Co., *Instruments Brass 3*: HM/B&H A227/047. B&Co. 1892 and 1902 catalogues.

[237] Baines, *Brass Instruments*. p.240.

[238] H&S, c.1908 catalogue. p.16.

[239] In 1840 Berlioz employed pairs of Horns in F, E♭, and C, and Trumpets in F, and in C in his 'Grande Symphonie Funèbre et Triomphale'. Two Cornets in B♭ (which were valved and therefore capable of a chromatic range) were used for melodic passages. Later in the century the cornet and trumpet existed alongside each other, with both instruments scored in certain works; 2 cornets and 2 trumpets were included in Franck's symphony and in Elgar's Cockaigne Overture. Trumpet parts were sometimes played on cornet in performances of Berlioz's compositions and other French works, and Sullivan often wrote high brass parts for cornet to make it easier.

[240] B&Co., *Instruments Brass 4-8*. HM/B&H A227/048-052.

[241] 3½ft Bach trumpets in D with 3 valves plus a low pitch slide were made in 1922 x4, 1926 x2 and 1930 x1. The tone quality of this model was not as good as the 7ft model.

players have no difficulty in playing the parts written, on a valve instrument, in the closely related keys of B ♭ and A.'[242]

Whilst both Boosey & Co. and Hawkes & Son produced Bach trumpets, only Hawkes made 'Aida' trumpets. In 1908 Hawkes built to order a straight 1-valved trumpet in C, B ♭ or A, and they also offered a 'Buccina Roman Trumpet', which they described as 'a reproduction of the ancient Trumpet used by the Romans in the Gladiatorial Processions, made by us for "Caesar," when produced at His Majesty's Theatre, and other Theatrical Productions and Pageants. The instrument is two thirds of a circle, the mouthpipe leaving the performer's lips, passes under his arm and comes over his head.' A treble and a bass model were available in F, E ♭ , C, B ♭ or A.[243] In 1923 Hawkes offered Bach 2 and 3 valve trumpets in E ♭ and D, and a one-valve 'Aida' trumpet built to order in C, B ♭ or A.[244]

By the first decade of the twentieth century fashions were changing and the B ♭ trumpet was being used orchestrally. Hawkes acknowledged this in circa 1908, stating that 'for some years now the B ♭ Trumpet has been steadily finding its way into most of the principle [sic] Orchestras, such as the London Symphony, Queen's Hall and others, and its brilliancy of tone and fine colour, in the hands of an artistic performer, has certainly convinced all conductors and musicians that it has definitely found a position for itself, and has come to stay.'[245] In 1922 Boosey developed a new B ♭ model with a cylinder change that immediately superseded production of their F and E ♭ trumpet;[246] Hawkes brought out the same system a year later.[247] However, both Boosey and Hawkes continued to make a few F and E ♭ trumpets in the 1920s.

[242] B&Co., 1923 catalogue. p.11.

[243] H&S, c.1908 catalogue. p.16

[244] Bach trumpets: model nos. 81, 82. Aida trumpet: model nos. 28, 29. H&S, 1923 catalogue. p.30.

[245] H&S, c.1908 catalogue. p.16.

[246] From 1923 to 1929 many 'A' class B ♭ trumpets were produced, only three were made in F and E ♭ . B&Co., *Instruments Brass 12-14*: HM/B&H A227/056-058.

[247] H&S, 1923 catalogue. p.36A.

Valve trumpets were adopted by British military and brass bands in the 1840s and 1850s,[248] but not on the scale of cornopeans and cornets. Trumpets were superseded in brass bands by the saxhorn and clavicor (or alt horn),[249] although they were retained in military bands (Boosey included one F and E♭ trumpet in their instrumentation list in 1905);[250] however, by the 1920s their place was being taken by the B♭ trumpet, which was easier to play.[251] Hawkes seized the opportunity to increase their sales by adding trumpet parts to the scoring of their military band edition 'thereby giving this instrument a definite position in the band which is not offered by any other edition',[252] but they still retained an F military trumpet in their 1923 catalogue.[253]

Tuba

The tuba in F was patented in 1835 by Wilhelm Wieprecht and Johann Gottfried Moritz in Berlin. The original instrument used five Berlin valves that were the forerunners of the modern piston valve. The conductor Hans Richter commissioned a five-valve F tuba for his orchestra in 1879.[254] The orchestral F tuba was designed to provide a fuller tone than the euphonium in its low register, and sounded an octave lower; it became the instrument of choice in British orchestras; however, instruments in E♭ were occasionally used. Boosey made a small number of F tubas with four compensating valves, and gradually, until the 1930s, the bore became much wider.

Valves

Over time the demand for different types and models of instruments changed and musical instruments developed accordingly. At the beginning of the nineteenth century wind bands generally consisted of woodwind instruments

[248] Valve trumpets had been used in military bands in Prussia from 1824. Wieprecht included high B♭ and E♭ valve trumpets in his cavalry music. Anthony Baines, *Brass Instruments: Their History and Development* (London: Faber & Faber, 1976). p.232.

[249] Myers, "Instruments and Instrumentation." p.157.

[250] B&Co., 1905 catalogue. p.2.

[251] In 1927 B&Co. published a tutor for Valve Trumpet in B♭ in B&Co's *Modern Series of Tutors for Band Instruments* by Lieut. H E Adkins.

[252] H&S, c.1908 catalogue.

[253] H&S, 1923 catalogue. p.30.

[254] Clifford Bevan, "The Low Brass," in *The Cambridge Companion to Brass Instruments*, ed. Trevor Herbert and John Wallace (Cambridge: CUP, 1997). p.152.

playing the melody, accompanied by horns and other brass instruments, with bassoons and serpents providing the bass. Tone and intonation became more refined as models were improved, and each different brass instrument was given its own role within the band. Natural horns and bugles gradually evolved into more sophisticated instruments through the addition of keys and valves; the first instruments to gain keys were serpents and bass horns, followed by keyed bugles and ophicleides. However, the most significant improvement to brass instruments around this period was the addition of valves, which enabled the production of a chromatic compass as well as improving intonation.

The valve was invented circa 1814 in Prussia by Heinrich Stölzel and Friedrich Blühmel and was used initially on the horn and the trumpet. The first developments took place in Germany and Austria. However, it was the subsequent French models that were copied in Britain, although this did not occur until the middle of the century.[255] The introduction of valves revolutionised brass playing, but it was essential that the mechanisms worked efficiently without sticking. Reliable actions were thus much in demand, and valve making became a skilled job undertaken by specialist craftsmen, many from abroad. Towards the end of the nineteenth century a few piston makers were predominant at the Boosey company: Kurzendorfer, Derkinderen, Holmes and three members of the Rockaerts family.[256]

Companies developed and were keen to promote their own specific makes in their catalogues. In 1892, Boosey advertised 'Light Valves', 'Equisonant' or clear bore pistons and 'Compensating Pistons' – a valve system that improved the intonation of lower brass instruments. Although Gautrot had previously patented the idea of compensating pistons in France in 1864 and Britain in 1865,[257] David Blaikley was credited with their invention. Blaikley patented the design in 1878.[258] According to Myers

[255] Myers, "Instruments and Instrumentation." p.161.

[256] B&Co., *Pistons & Sundries 3*: HM/B&H, A227/091.

[257] Myers, "Brasswind Innovation." p.403. GB Patent 741, 16/3/1865 'système equitonique'. Myers explains that Gautrot's instruments 'have four valves, with two distinct sets of passages through valves 1-3 (six passages per piston).

[258] Brass Musical Wind Instruments, G.B. Patent Specification 4618, Appl:14 Nov 1878; sealed 9 May 1897. The first instrument with compensating pistons recorded in the company work books is a Euphonium in C 'perfected' A36, sn26026, 17/06/1873. *Distin Workshop Order Book 3*: HM/B&H A227/005.

When Blaikley took out his patent [...] it covered exclusively the three-valve compensating pistons with the third valve acting as the master and the first and second pistons having five passages. Boosey & Co. had, however, made a four-valve compensating instrument as early as 1874 in which [...] the fourth is the master. The compensating instruments made before the date of the patent were referred to in the Instrument and Pistons book as "Perfected".[259]

The first instrument to be recorded as such in the workbooks was a C Euphonion with 'New model 5 passages to each pump'.[260] Blaikley's compensating pistons were perhaps the most notable improvement in the design of brass instruments in Britain.

In 1892 Blaikley took out a patent for 'double principle valves'; with these Myers explains that 'the first valve acts as a master valve and the second and third each have two valve loops, but here they are alternatives of slightly differing lengths, rather than main and much shorter compensating loops'. Surviving instruments from the period 1895-1901 include an E♭ soprano cornet, several B♭ cornets and some E♭ tenor horns.[261] 'Double principle valves' were used on some instruments that were stamped 'Compensating Pistons'; however, they were never widely used or widely adopted.[262]

The demand by players for silent valves led to further developments. By 1906 Hawkes were fitting their cornets with 'Improved Silent Valves, made upon a new principle'[263] (although they did not explain what this was), and Boosey had replaced German silver valves with 'Solbron' valves on their more expensive models, and had introduced 'stockingless slides' for trombones. Both were allegedly made of a special bronze alloy (phosphor bronze) that reduced friction.

In 1922 Boosey introduced the 'New Spring Suspended Valve Action' whereby the spring in the valve was extended rather than compressed when the piston was depressed; they claimed that this prevented the spring 'buckling and

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[259] Ibid. p.404.

[260] *Brass Musical Wind Instruments*, G.B. Patent Specification 4618, Appl: 14 Nov 1878; sealed 9 May 1879. Ibid. p.403. C Euphonion sn.26026.

[261] The patent, *Cornets etc., G.B. Patent Specification 21709, Appl:28 Nov 1892* came close to violating Besson's 'Victory Compensator-Transpositor' 1890 cornet patent. Besson brought out their 'Enharmonic Patent' valves in 1903. Ibid. p.404.

[262] Myers, "Brasswind Innovation." p.404.

[263] H&S, c.1908 catalogue. p.14 and H&S, post 1911 catalogue. p.6.

rubbing against parts of the instrument and causing noise.'[264] This was renamed 'New Valve Action' (NVA) and was first recorded as such in the workbooks in August 1925: Cornet Model A6b and some trumpets Model A18b A227/057. However, the earliest existing instrument with NVA dates from 1st May, no.123472.[265] The valves were described as being 'Silbron'. The difference, if any, between 'Silbron' and 'Solbron' is not known.

It appears that Hawkes were later than Boosey to adopt phosphor-bronze in the manufacture of valves, first mentioning its use on 'Clippertone' cornets in 1923.[266]

Ventil horn

The ventil horn was a bell-up band instrument which had a similar role to other band instruments like the saxhorn. Boosey made over a hundred of them but the ventil horn had no independent repertoire and was replaced by the tenor horn or the tenor cor. They made only a few sopranos, around 60 altos in B♭, more tenors in F and E♭, 34 baritones and 15 basses. Only alto and tenors nos. 33-36 were offered in the 1902 and 1905 catalogues.

[264] Blaikley, A., 1922. G.B. Patent No.193729, 2 April 1922, and B&Co., 1923 catalogue. p.3.

[265] http://homepages.ed.ac.uk/am/gdsj.html Accessed 27/07/2015.

[266] H&S, 1923 catalogue. p.3. Phosphor-bronze is not mentioned in the post 1911 or 1912 catalogues.

Appendix 4. Brief notes on musicians involved with Boosey & Co. and Hawkes & Son

(Information for this appendix has been taken from many varied sources)

Alexandra, John: Tested bassoons for Boosey & Co. Principal bassoon in the LSO until he joined Beecham's London Philharmonic Orchestra in 1932 (with Gwydion Brooke, 2nd bassoon). Later joined the Philharmonia. Played a Heckel bassoon.

Anderson, George: Clarinet and saxophone tester at Boosey; the first reference to him in the workbooks was in April 1919; by June he had become the sole tester. Anderson was a founding member of the LSO in 1902 (with Manuel Gomez on 2nd clarinet, Percy Egerton on 3rd/ E♭, and Francisco Gomez, bass). He was a professor at the RAM. (Adopted Boehm system whilst pupil of F. Gomez at RCM 1892/3).

Atherley, C.: named tester and tuner of tenor trombones for Hawkes in their 1908 and 1912 catalogues.

Augarde, Edward: (1887-1985) Augarde played bass clarinet in the BBC Empire Orchestra and in the LSO 1913-1933.

Baker, Kenny: (1921-99) Lead trumpeter in Ted Heath's orchestra, Baker's Dozen, respected jazz, big band, variety, TV and session musician. Endorsed instruments made by B&H.

Barret, Apollon Marie-Rose: (1804-79) Pupil of Vogt at Paris Conservatoire where he won a Premier Prix in 1824. Settled in London in 1829, where for nearly 50 years he held principal positions including at the Italian Opera and RAM. He was appointed Professor of oboe at Kneller Hall in 1859. He promoted Triébert instruments in Britain and introduced his own key system in 1862. Barret was an influential performer and teacher in Britain.

Betty, William: may have played bass trombone with the Bournmouth Municipal Orchestra before 1950. Collaborated with B&H in the 1930s on producing the Betty wide-bore bass trombone.

Borsdorf, Friederich Adolphe: (1854-1923). Came to England from Saxony in circa 1882, when he changed from playing a wide-bore German horn to a Raoux. He was a leading London horn player. Founder member Queen's Hall Orchestra and played with LSO and at Covent Garden. Professor at RCM 1882 and RAM 1897. In H&S 1912 catalogue he considered Hawkes horns 'superior' to other makes.

Brazil: bassoon tester for Boosey circa 1929/30.

Brooke, Gwydion: (1912-2005) Studied with Richard Newton at RAM. In 1932 was appointed 2nd bassoon in LPO, 1935 principal BBC Scottish Radio Orchestra. 1939-45 did military service. 1946 Liverpool Philharmonic Orchestra, 1947 RPO, 1961 principal bassoon Philharmonia. Wigmore and Prometheus Ensembles, London Wind Quintet. Played a much modified 1930s Adler bassoon.

Browne, George: named tester and tuner of oboes for Hawkes in their 1908 catalogue. Described as 'Mr. George Browne, Principal Oboe The Palace Orchestra'.

Brown, J.H.: Clarinet tester for B&Co. Solo clarinet in the Grenadier Guards during the 1890s/early 1900s.

Brymer, Jack: (1915-2003). 1947-63 Principal clarinet RPO, 1963-71 Co-principal BBC SO, 1971-86 Principal LSO.

Busby, T.R.: named tester and tuner of French horns for Hawkes in 1908 and 1912 catalogues. **'**Principal horn in the Private Orchestra of His Majesty King Edward VII, Professor at the Guildhall School of Music, The London Symphony Orchestra etc., etc.' (He was a founder member and chairman of the LSO). A testimonial dated 1898 in the same catalogue gives him as Professor of French Horn, Guildhall School of Music, Trinity School of Music, Queen's Hall Orchestra, Royal Italian Opera etc.'

Camden, Archie: (1888-1979) 1914 Principal bassoon Hallé Orchestra, 1933 BBC SO, 1946 RPO. Taught at the Royal Manchester College of Music and the RCM.

Case, George: Worked with Boosey on developing a new model trombone (1885) and slide trumpet (1891). Professor of trombone at the RCM.

Castle: Clarinet tester at B&Co. during the 1890s. Probably from a military background.

Chaudoir: Flute tester for B&Co. circa 1929/30. There is an extant drawing of his Rudall head joint in the B&H archive (07/04/1921).

Clarke, Ralph: (1901-85) Student of Charles Draper. LSO, Principal clarinet BBC SO and Professor at RCM.

Clinton, George: (1850-1913) Used simple system clarinets. Clarinet professor at TCM (1892-1912), RAM (1900) and Kneller Hall (1905). Member of HM Private Band and Philharmonic Society. Principal at Crystal Palace. Collaborated with B&Co. on the design of the 'Clinton' and 'Clinton Boehm' models of clarinet. (See 5.ii.a)

Cozens, J.H.: Principal trumpet LSO (1929-32), founder member of LPO (1932-1940), LSO (1940).

de Peyer, Gervase: Principal clarinet LSO (1956-73). Soloist. Melos Ensemble.

Draper, Charles: (1869-1952). Studied at RCM. Whilst a pupil of Egerton, Draper changed from simple to Boehm system inspired by Francisco Gomez, who obtained instruments for him. He played wide-bore Martel clarinets. Named tester and tuner of clarinets for Hawkes in 1912 catalogue: 'Principal Clarinet in the Philharmonic and the New Symphony Orchestras, the Private Orchestra of His Majesty King George V, and of the Leeds, Gloucester, Worcester, and Hereford Musical Festivals'. Professor at Guildhall 1895-1940, TCM 1915-37, RCM 1911-33, Kneller Hall 1913-19.

Draper, Haydn: (1889-1934). Nephew of Charles Draper. Principal tester for the firm Albert for some years. Played Boehm system. Scholarship RCM. From 1911 toured with Ballet Russe and played at Covent Garden under Beecham. Principal of Queen's Hall Orchestra 1915-30, led BBC Military Band 1927-34. Professor at RAM from 1923).

Egerton, Julian: (1848-1945). Succeeded Lazarus as professor at RCM 1894-1910. Professor at Kneller Hall from 1889. He taught Charles Draper and Haydn

Draper. Principal clarinet at Hans Richter concerts from 1879 and played in Queen's Hall Orchestra. He played on clarinets by Fieldhouse.

Ellis: oboe tester at Boosey circa 1929/30.

Falkner, Arthur: (1871-1954) Principal Trombone, Queen's Hall Orchestra, RPO, BBC SO. Gave a testimonial in Boosey's 1923 catalogue for their 'Perfecta' trombone.

Farfel, Grisha: Trumpet soloist in the Billy Cotton Band. Was described in B&H catalogues as helping to produce the 'Sessionair' trumpet.

Foreman, Arthur: named tester and tuner of oboes for Hawkes in their 1912 catalogue. 'Principal Oboe New Symphony Orchestra, and Professor, Guildhall School of Music.'

Goossens, Leon: (1898-1988). Principal oboist in the Queen's Hall Orchestra, played at Covent Garden under Beecham and the LPO. Influential player and teacher. 1924-35 Professor at RAM, 1924-39 Professor at RCM.

Gomez, Manuel: (1859-1922). Studied with Palatin in Seville and won a scholarship with Rose at the Paris Conservatoire. Moved to England in 1886. In 1992 Manuel and his brother Francisco played in a season of Italian Opera at the Olympic Theatre under Henry Wood. Principal clarinettist in the New Queen's Hall Orchestra, Covent Garden, and LSO (1904-15). Played a full Boehm clarinet made by B&Co. that is now in the HM/B&H collection.

Gomez, Francisco: (1866-1938). Studied with Palatin in Seville and won a scholarship with Rose at the Paris Conservatoire. Moved to England in 1887/8. Played standard Boehm clarinets, and a basset horn (made for him by Henri Selmer). Played 2nd clarinet to his brother in the New Queen's Hall Orchestra, and at Covent Garden. Built up an outstanding reputation on the basset horn and bass clarinet. Took over as 1st clarinet after his brother's death.

Griffiths: oboe tester at B&Co. circa 1929/30.

Gutteridge, Tom: named tester and tuner of bass trombones for H&S in 1908 and 1912 catalogues, 'Queen's Hall Orchestra, King's Private Band etc., etc.' LSO

1924-37.[267] Professor at Kneller Hall 1914-17. According to Forsyth in 1914, he was a pioneer of the G trombone with thumb valve to D – before Betty.[268] He also worked with B&Co. and B&H.

Handley: Clarinet tester at B&Co. during the 1890s. (He was probably a military musician).

Heath, Ted: (1902-69). Trombonist and big band leader. He played with many prominent bands including Bert Ambrose in his early career. In 1944, influenced by Glenn Miller and supported by a BBC broadcasting contract, Heath formed a large jazz-orientated band which attained much success for many years.

Hill, Ocean: (1883-1904) Born at sea. Joined the Coldstream Guards aged 10. Played E ♭ clarinet. Left after 21 years service in 1904 to join the LSO.[269]

Hyde, Alan: Horn player in the RPO.

Jackson, Gerald: Principal flute: 1929 old RPO, 1932 LPO, 1937 BBC SO, 1946-58 RPO.

James, E.F.: (Edwin) Fred. James (1861-1921) Self taught. Played a Savary sharp pitch bassoon, and then a low pitch Morton. Also played a rosewood tenoroon. He was a named tester and tuner of bassoons for Hawkes and described in their 1912 catalogue as 'Principal Bassoon in the Philharmonic Orchestra, the Private Orchestra of His Majesty King George V, The London Symphony Orchestra, Royal Academy of Music, London, and of the Birmingham, Leeds, Gloucester, Worcester, and Hereford Musical Festival Orchestras.' Appointments included: Queen Victoria's Private Orchestra- 'Musician in Ordinary to HM the Queen. Royal Italian Opera, German Opera at Covent Garden, Queen's Hall Orchestra from 1904 – Founder member and chairman of Board of LSO. In 1918 he resigned from the LSO and rejoined Queen's Hall orchestra as 2nd to his brother Wilfred. In 1906-18 he held a joint appointment at RAM with T.E. Wotton, and then 1918-20 on his own. 1897-1920 Professor at TCM, 1912-16 Professor at Guildhall, and 1912-20 Professor at RCM.

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[267] List of LSO trombone players from Gavin Dixon.

[268] Cecil Forsyth, *Orchestration* (Macmillan 1914, Dover Publications 1982). p.141.

[269] http://www.coldstreamguardsband.com/phpBB3/viewtopic.php?f=5&t=199&start=2540 Accessed 15/07/2015.

James, Frank: Named tester and tuner of cornets and trumpets for Hawkes in 1912 catalogue. 'Principal trumpet at the Royal Opera House, Covent Garden, solo cornet in the London Symphony and Philharmonia Orchestras etc., etc.'

Kell, Reginald: (1906-81). Studied with Haydn Draper at the RAM. He was renowned as a soloist and player of chamber music, principal clarinettist in the LPO, Liverpool Philharmonic Orchestra, Philharmonia and RPO. Went to live in the USA in 1948 where he pursued his career. He retired from performance in his fifties and returned briefly to Britain in 1958, when he taught at the RAM. On his return to America he became a director of B&H.

Lavigne, Antoine: (b.1816) Studied at the Paris Conservatoire under Vogt. Came to London in 1841 where he played in the Promenade Concerts at Drury Lane before taking up principal oboe of the Hallé Orchestra in Manchester. He was an advocate of the Boehm system oboe, which he worked at improving.

Lear, Walter: Clarinet and saxophone tester at B&Co. circa 1929/30. Saxophone professor at Kneller Hall from 1930-48. He played bass clarinet in the BBC SO, and bass clarinet, basset horn and saxophone in the LSO, RPO and the Royal Opera Orchestra, Covent Garden.

Lowndes: Bassoon tester at B&Co. circa 1929/30. Royal Marines Band.

Mills: B&Co. state in their 1902 catalogue that 'every instrument is carefully tried by Mr. Mills, the well known Saxophone player'. He is recorded in the company workbooks as testing clarinets from 1914.

Pogson, Dan Barrett: From Queenstown, Cape Colony [South Africa]. Obtained English patent 1902, no. 698,322, German patent 1903, no. 146480. Boosey & Co.[270]

Priegnitz, A.: Horn player in Queen's Hall Orchestra and LSO. Endorsed Hawkes horns as superior to other makes in the Hawkes 1912 catalogue.

Raine, Jack: Raine was lead trumpet in Jack Hylton's Band.

[270] Albert Rice, *20th Century Clarinet patents, systems, and models*. p.7.

Reynolds, Charles: (1843-1916) was an eminent oboist who played with Lavigne in the Hallé Orchestra. He was the first named oboe professor at the Royal Manchester College in 1898, and taught many young players (including Goosens) who became were successful. From 1871 until his death in 1916 he played beside Lavigne in the Hallé orchestra.

Shand, Dave: (1909-1983) Saxophonist in Jack Hylton's Band.

Spencer, John: was principal clarinet in the Grenadier Guards under Dan Godfrey, and a consultant and tester at Boosey. He worked with Blaikley on the development of a new model, Spencer's model (A113/114), first produced on 12/06/1885; it was included in the 1892 catalogue and continued to be offered and made during the next twenty years. The last recorded order of this model was in 1922 although none was ordered during the previous seven years. Drawings survive from 1886 of clarinets in A, B♭, C and E♭ showing amended figures after trials by Spencer. There is also a drawing of Mr Spencer's mouthpiece from 1888: 'Clarionets in A, B♭, C, & E♭. Pitch A=452v at 60 degrees. The red figures to bells and sockets show alterations made after trials by Mr Spencer Aug 23rd 1886 and Dec 9th 1886. Note Oct 9th/88. Several BMs having reported that the E♭ clarts were flat with sockets 1.45in long. the length was altered to 1.39in by DJB in /87 + subsequently with Mr Spencer's concurrence to 1.33in.' [Outside Dia's added 16.10.30]. There is also a sketch: 'May 31st/88 Mr Spencer's B♭ M'p'ce.'

Stutely, H.W.: Clarinet tester at B&Co. from 1914. Professor at Kneller Hall 1914-16.

Taylor, Frank: Collaborated with B&Co. on trombone design. Professor at Kneller Hall 1918-39. BBC SO.

Thornton, H.F.: Endorsed Hawkes horns as superior to other makes in Hawkes 1912 catalogue. Professor of horn at Kneller Hall 1908-1930.

Thorpe, Tony: Bass trombonist in LSO 1957-62 and Royal Opera House Orchestra in the 1960s. He also played with Ray Noble and his Orchestra, BBC Dance Orchestra, the New Mayfair Dance Orchestra and was a member of the Ambrose Orchestra's trombone trio.

Thurston, Frederick: (1901- 53). Studied under Charles Draper at RCM. Played with Royal Opera House Orchestra, BBC Wireless Orchestra, LSO, Philharmonia. Professor at RCM from 1930.

Wallace, John: (b.1949) 1974-76 Assistant principal trumpet LSO. 1976-95 Principal trumpet Philharmonia Orchestra. 1992-2001 Artisic director brass RAM. 2002-14 Principal Royal Conservatoire of Scotland.

Watkins, Derek: (1945-2013): Free-lance lead trumpet, particularly known for his playing in the sound tracks for the James Bond films.

Watson, Ernie: Lead trumpet in the Northern Dance Orchestra.

Whitaker, Walter: Flute tester for Hawkes. Whitaker was a flute maker who had worked at Rudall and Rose.

Whittaker, Alec: Oboist in the BBC SO from 1930.

Whittaker, Alfred Henry: Professor of flute at Kneller Hall 1918.

Whittaker, Stephen: A successor of Reynolds in the Hallé orchestra from 1926. Professor at RMCM.

Wick, Denis: (b.1931) Developed a range of brass instrument mouthpieces and mutes. Principal trombone LSO 1957-88. Taught at Guildhall 1967-89 and subsequently RAM.

Wotton, William B.: (1832-1912) Bassoonist in Crystal Palace Orchestra. Professor at RAM 1883-1912 (from 1906 with E.F. James). Played a high pitch Savary with brass keys and a low pitch Triébert.

Wotton, Thomas E.: (1852-c.1918) younger brother of William. From 1879 played 2nd bassoon to his brother in Crystal Palace Orchestra, 1st when he retired in 1897. Professor RCM 1906-1918. Played a high pitch Savary with brass keys and a low pitch Triébert.

Appendix 5: Brief details of instrument makers and instrument systems

(Information for this appendix has been taken from various sources including Waterhouse*, The New Langwill Index)*

5.i Instrument makers

Albert

In 1862 the Belgian maker Eugène Albert (1816-90) developed a system of key-work and fingering, based on the 13-key clarinet design of Iwan Muller (see Appendix 5.ii.a) that was widely used until superseded by the Boehm system. This system is known in Britain as 'simple system'.

Almenräder

The German bassoon system was developed by the German bassoonist Carl Almenräder (1786-1843) in conjunction with B Schott Sohne of Mainz, and then from 1831 with Johann Adam Heckel (d.1877), who had previously worked on it in the Schott workshop. On Heckel's death, his son Wilhelm took over. The Heckel- Almenräder bassoon was fully developed by circa 1880.

Buffet Crampon

Buffet was established in 1825 in the Passage du Grand-Cerf, Paris by Buffet-Auger, an experienced instrument maker. He was succeeded by his son, and after his marriage his wife's name, Crampon, was added to the company name. Over the following years, his uncle, Louis-Auguste Buffet, worked with clarinettist Hyacinthe-Eléonore Klosé on improving the 13-keyed clarinet by adapting Theobald Boehm's ring system that he invented for the flute. The 'clarinette a anneaux mobiles' (clarinet with moving rings) won a gold medal at the Paris Exhibition in 1839 and later became known as the Boehm system clarinet. In 1850 the company expanded and opened workshops in Mantes-la-Ville outside Paris.[271]

[271] Buffet Crampon leaflet. 1975.

Höfner

The Höfner company was established in 1887 in Schönbach, then a centre for stringed instrument making. After the Second World War, in 1948, the company moved briefly to Möhrendorf, West Germany, before establishing a new factory and estate for the workers in Bubenreuth in 1950. The spread of Rock 'n' Roll from America, and subsequently the purchase by Paul McCartney of a 500/1 Violin Bass Guitar led to great demand for Hofner guitars and consequent expansion of the works with the building of an additional factory in Hagenau in 1964. However, in spite of this, in 1961, when trade restrictions were lifted on goods from the USA to Britain, American imports caused a great decline in guitar sales from 1965-70.[272]

Keilworth

The Keilworth Saxophone Company was established in 1925, and in 1930 it relocated to Graslitz (at that time part of Germany). In spite of the poor economy, Keilworth was able to expand, and by 1938 had become the largest saxophone manufacturer in Germany with a workforce of 150 and exports of over 2,000 instruments to 22 countries. After dispossession during the war, in 1946 Julius Keilworth relocated to Nauheim near Frankfurt, where he set up a repair business before setting up a new company in 1947. Within two years the firm employed 80 workers (mostly old employees from Graslitz) to make saxophones, trumpets and trombones. The company remained in the family until its purchase by the Boosey & Hawkes Group in 1989.[273] Keilworth was one of the predominant makers of saxophone in Germany. It was merged with Schreiber in 1997, from when it traded under the name W. Schreiber & Söhne GmbH.

J.R. Lafleur

The company Lafleur was an affiliated company of H&S and subsequently B&H, with Geoffrey Hawkes, Ralph Hawkes and Couesnon as directors. Sometimes particular model names, such as 'Piccadilly Zenith,' were used specifically for Lafleur instruments. Until the 1960s it was generally used for exporting and importing instruments, after which the name was applied to budget-price models.

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[272] http://www.w-schreiber.com/en/saga/our-history Accessed 06/03/2014.

[273] http://www.julius-keilwerth.com/en/saga/our-history Accessed 6/3/2014.

Louis Musical Instrument Co.

Louis was established in 1923 with the respected clarinettist Charles Draper as director. The company made high-quality professional woodwind instruments; Clarinets were based on Martel instruments and oboes on Lorée. It is the latter that they are most remembered for.[274]

Nadir Ali & Co. (Uttar Pradesh, India)

The company, established in 1885, became Nadirali Band Instrument Private Ltd. in 1990 when a new factory was built at Gulaothi District, Bulandshahar, 50 km from Meerut. David Humphrey, Managing Director of B&H, first visited the factory in March 1995 for discussions.[275] When The Music Group acquired Boosey & Hawkes manufacturing division, the company continued to produce Besson instruments for it, and was re-named Besson Musical Instruments Private Limited.[276]

Paesold

The Paesold family stringed instrument and bow making business was established in 1848 in Bohemia. After a break in manufacture during the Second World War, in 1950 Roderich Paesold re-established the company in Bubenreuth and commenced manufacture of high quality string instruments. The business was taken over by W. Schreiber & Söhne in 1968.[277]

Rico

After the fraud case in America in 2000, Boosey & Hawkes Musical Instruments Inc. restructured and moved its operations from Libertyville, Illinois to Sun Valley, California to share resources with Rico Reeds The new premises contained sales, customer services, instrument repair, marketing departments and

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[274] Langwill index states that 'the company became merged in Rudall Carte & Co. Ltd.' Lyndesay G. Langwill. *An index of Musical Wind-instrument Makers* (1960). Although this is not recorded elsewhere, it is likely that Louis, like other companies, suffered difficulties during the War and sold their business interests around 1940.

[275] Photograph album. HM/B&H.

[276] http://www.indiamart.com/besson-musicalinstruments/ Accessed 09/09/13 According to John Myatt's 2001-2002 catalogue, the first instrument model sent to the UK from the Indian factory was a high specification student model trumpet, with top centre sprung stainless steel valves, 1st valve slide thumb shunt, finger ring with slide stopper, lacquer or silver plate finish, £199.

[277] http://www.paesold.com/about-paesold.html (accessed 6/3/2014) and (February 2004) Accessed 6/3/2014. www.entrepreneur.com/tradejournals/article/112862385-2.html Accessed 9/10/13.

a showroom. Existing specialist staff, including Francois Kloc (woodwind) and Patrick Sheridan (brass), relocated with the company. Accounting, credit and collection and human resources were provided by Rico.[278]

Rudall Carte & Co.

The company was established circa 1821 as Rudall and Rose by George Rudall, a London player and teacher, and John Mitchell Rose, an Edinburgh born flute maker. From 1843 they obtained the British rights to produce Theobald Boehm's 1832 conical flute, which by then had been accepted by several top professional players in London. RC&Co. subsequently obtained rights to produce Boehm's cylindrical flute in 1847. In 1850, the flautist Richard Carte, a former pupil of Rudall and exponent of this flute, joined the firm, and two years later the company name became Rudall, Rose and Carte. In 1852 Rudall Rose & Carte moved from Southampton Street to 100 New Bond Street. From 1872 it was known as Rudall, Carte and Co. with the factory located at 23, Berners Street from 1878 until around 1958. Rudall Carte moved to 20, Romilly Street W1 in 1958.

Sax

Adolphe Sax established his wind instrument making business at first in Brussels (1835-1842) and then in Paris (1843-94). He developed many new instruments achieving recognition and success; however, he attracted great opposition from wind instrument makers in Paris who collectively brought litigation against him. His saxophones and saxhorns were adopted by the Paris Conservatoire and military forces in France.[279]

Schreiber

Wenzel Schreiber established a woodwind workshop in Nauheim, near Frankfurt, Germany in 1946, and a few years later specialised in making clarinets and bassoons. In 1991 production moved to Markneukirchen, East Germany.[280]

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[278] "Boosey & Hawkes opens in California" *Music Trades* (01/04/2001).

[279] For further information see: Cottrell, S., *The Saxophone,* Newhaven and London: Yale University Press, 2012, and Mitroulia, Evgenia. *Adolphe Sax's Brasswind Production with a Focus on Saxhorns and Related Instruments.* University of Edinburgh PhD thesis, 2011.

[280] http://www.w-schreiber.com/en/saga/our-history Accessed 06/03/2014.

Smith Watkins

Smith Watkins was established by Richard Smith, acoustician and brass instrument designer, and international lead trumpeter Derek Watkins. Based in Yorkshire, the company has in particular developed instrument lead-pipe and bell design, and has designed and made many instruments, in particular fanfare trumpets, for British military bands.

5.ii Instrument systems

5.ii.a Clarinet

The 'Simple system', as developed by Albert, was widely used in British military bands, with some instruments still in regular use until the 1950s. At first instruments had 13 keys and two rings; however the design was developed with additional keys. It is often characterised by a wrap-around register key on the front of the top joint, a long touchpiece for a b^1 and extra $c\#^2$ key.

Barret action for the clarinet was developed from an oboe system devised by Apollon Barret in circa 1860 and adapted during the 1870s to $e b^1/f^1$ on the right side of the top joint of the clarinet to facilitate playing some trills and in sharp keys.

The 'Clinton' model clarinet, devised by George Clinton,[281] has the Barret action on the top joint, additional $c\#^2$ key, venting for forked $f^2/b b^{1,}$ improved positioning $c\#^1/g\#^2$ holes, an additional $b b^2$ shake key (RH 1st finger), and lengthened cross-over $g\#^1/a b^1$ key (for LH 1st or 2nd finger).

The Boehm system clarinet: The *clarinette à anneaux mobiles* (clarinet with moving rings), later known as Boehm system, was developed between 1839 and 1843 by the clarinettist Hyacinthe Klosé and maker Louis-Auguste Buffet; this system was based on Theobald Boehm's principles that tone holes should be placed where acoustically correct, and then keywork provided to cover the holes. Although British clarinettists were reluctant to adopt the new system it eventually caught on, and this model is normally used today in most countries outside Germany and Austria. Even Francisco Gomez in a letter dated 15/12/1934 declared that although he considered that the plain Boehm was the best system and that the tone in its upper register was as good as that of the Albert ['simple system'], the

[281] See Appendix 4.

intonation of the Albert 14-key was better. He expressed that he felt the Boehm needed work on intonation and acknowledged that both Selmer and Manton-Myatt (who had been one of his pupils) at Boosey & Hawkes were working on improvements.[282] Rendall in 1954 shared this opinion stating that 'the intonation and tone of these instruments were very fine – they have in fact never been surpassed – and were, generally speaking, much more superior to those of the contemporary Boehm. Hence the reluctance of Belgian and English players to change their fingering until the increasing demands of composers made it necessary.'[283] Obviously the tuning problems could be overcome as George Anderson is described as having a 'full sweet tone and impeccable intonation' on his Boehm clarinet, and Jack Brymer declared that, in spite of having to make the change, the Boehm system was 'far superior to the old simple instrument' and he considered his 'change to it at the age of twenty was long overdue.'[284]

5.ii.b Oboe

Barret action enabled c^2 and $b\flat^2$ to be produced by putting down any of the right hand fingers instead of lifting the left thumb from the thumb-plate.[285]

The thumb-plate system was based on Triébert's 1849 système 5: low b^0-c^1, articulated $e\flat^1$, brille, forked f^1 vent, articulated $g\#^1$, thumb plate action c^2 and $b\flat^2$, half hole plate, open $c\#^3$, 8ve keys, trill keys.[286]

The Conservatoire system was developed circa 1880 and adopted by the Paris Conservatoire in 1881.[287] Developed by Triébert (his système 6), it became the standard model used in most countries, although it did not gain popularity in Britain.[288]

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[282] Eric Halfpenny, "The Boehm Clarinet in England." *GSJ* 30: 2-7 (May 1977).

[283] F. Geoffrey Rendall, *The Clarinet: Some Notes on Its History and Construction.* Instruments of the Orchestra (London: Ernest Benn Ltd. 1954). p.106.

[284] Brymer, Jack. *Clarinet* (Yehudi Menuhin Music Guides. London: Macdonald and Jane's, 1976). p.115 and p.11.

[285] Anthony Baines, *Woodwind Instruments and Their History* (London: Faber, 1977, 3rd ed., 1979). p.328.

[286] Ibid. pp.100-101.

[287] Baines, *Woodwind Instruments.* p.106.

[288] For technical details of the Conservatoire system, see Baines *Woodwind Instruments.* pp.108-11.

Appendix 6. Extant Hawkes & Son blueprints

The majority of Hawkes technical drawings have been lost. However, the surviving Hawkes blueprints were all carefully and beautifully drawn by one draughtsman with the initials GWAA at 43A Ashbrook Road. This address dates them between circa 1917 and circa 1924.

Hawkes and Son instruments with one or more related blueprints in the Boosey & Hawkes archive at the Horniman Museum, dating from the period circa 1917 to 1924. Small instruments and components are drawn full size, large instruments are scaled 6 inches = 1 foot; all to fit on approximately A2 size paper.

Oboe, Morton model No.2
Oboe, Corot model No.4
Oboe, military model, high pitch
Bassoon, Morton type, flat pitch
Soprano saxophone, flat pitch
Soprano saxophone, straight model, H&S model
Soprano saxophone, Boehm system
Saxophone (Alto), high pitch, H&S model
E ♭ saxophone, flat pitch, H&S model
E ♭ alto saxophone, flat pitch, Buffet model by Evette & Schaeffer
F alto saxophone, high pitch
Melody saxophone in C, flat pitch, H&S model
Melody saxophone in C, high pitch, Buffet model by E and S
Tenor Saxophone in B ♭ , low pitch, H&S model
Baritone saxophone, low pitch, H&S model
Clippertone [cornet] long model
Flugel horn B ♭ , Excelsior Sonorous, Class A
Flugel horn (Superior Class)
B ♭ trumpet, Clippertone Class
Trumpet in F & E ♭ , Excelsior Sonorous Class A
B ♭ slide trumpet, trombone model
B ♭ trombone (flat pitch) American model (Holton's)
B ♭ trombone, Excelsior Class

G trombone, Superior Class model

Bass slide trombone in F

B ♭ Excelsior trombone

BB ♭ double slide trombone (high pitch)

B ♭ valve trombone

E ♭ bass valve trombone

Orchestral type french horn (5 Crooks: A, A ♭ , G, F, E ♭)

French horn in F and E ♭ (military type), Excelsior Sonorous Class A

French horn in B ♭ , Schuster German model with sliding crooks, rotary valves

Tenor cor in F and E ♭ (Excel. Sonorous)

Tenor horn in F and E ♭ (Excelsior Sonorous Class A)

Euphonium (Dictor)

Euphonium Excelsior Sonorous, Class A, 4 valve model

Euphonium (Class A) Excelsior Sonorous, high and flat pitch models

Euphonium Superior Class, 4 valve model

Euphonium Superior Class, 3 valve model

5 valve euphonium, Excelsior Sonorous Class A

Euphonium, 4 valves all compensating

E ♭ circular bass (R. Hand Model)

Bersag cor B ♭ soprano

Bersag cor B ♭ alto

Bersag cor tenor

Bersag cor B ♭ baritone

French bugle B ♭ , high pitch

B ♭ trumpet HP, cavalry trumpet model

Herald trumpet

Chinese Drum, Tympani, ‘Fraser’ Pedal Castings, Beater, Cymbal fittings, Spur fitting

Appendix 7. Old models, new models. 1930s B&H

7.i Instruments sold under the name British Band Instrument Company

Examples of instruments marked BBIC	Date	Serial numbers	Description	References
Earliest brass entries in workbooks marked BBIC	20/10/1931		B ♭ trombones ordered	A227/058
Earliest reed entries in workbooks marked BBIC Many saxophones	10/08/1932 1932 1933 1934	30195	Alto Sax, FP, Regent, Mills [first recorded] 30 saxophones recorded BBIC (including eleven 'Regent' and two '32' instruments). 124 saxophones recorded BBIC - about 50% of saxophone production. 39 saxophones recorded BBIC. After this no more were noted BBIC.	A227/059
Other woodwind instruments	06/12/1932 16/01/1933 31/01/1933	30373/ 30431 30453-5	B ♭ Oboe x2, LP, B/Wd, 226, G.H. Skillin B ♭ clart boehm, LP, eb. B ♭ Cl HP, 14k, ebt, Reynolds x3	A227/059
Extant trumpet	September 1933	143043	Stamped 'The Regent / British Band Instrument Company Ltd /295 Regent St / London W1'. 'British Band Instrument Company'.	Personal communication with Arnold Myers
Last known surviving instrument stamped 'British Band Instrument Company'	1960			Personal communication with Arnold Myers

7.ii Instruments represented in the first post-merger catalogue, 1932

B&H Ltd. *Band Instruments and Accessories by Boosey & Hawkes* (1932): AMPC.

Boosey models	**Hawkes models**
Cornet: NVA model and NVA model with quick change	'Clippertone' models
Flugel horn with 'Silbron' valves	
'Tenortone' tenor horn	'Excelsior Sonorous' tenor horn
'Truline' trombone	
B ♭ baritone with solbron valves and compensating pistons, and 'Imperial' model	B ♭ baritone
B ♭ euphonium with solbron valves and compensating pistons, and 'Imperial' model	B ♭ euphonium
	'Artist's Perfected' trombone
'Imperial' basses	'Profundo' basses
	The 'Empire' low-priced model was offered throughout the full range of brass instruments
'New Valve Action' was featured in the catalogue	

During the early 1930s the cornets that B&H manufactured were predominantly Boosey models plus Hawkes' 'Clippertone':

Boosey models: B2 A3^{b} A4^{b} A6^{b} A6$^{ab.}$ The last Boosey B2 cornet to be recorded was June 1935.

Hawkes 'Clippertone': M25. The last 'Clippertone' cornet to be recorded was in April 1932.

Only a small number of soprano cornets, echo cornets and flugel horns were made.

B&Co. A11 and B11 models were offered as the 'N.V.A. Soprano Cornet' B4026. (B&H, c.1935/36 catalogue).

7.iii New model numbers for brass and woodwind

7.iii.a New model numbers for brass instruments 1932

The first two columns are as transcribed from notes entitled ‘New Brass Catalogue 23/9/32’ in the front of *Instruments Brass 15* A227/059. The new model numbers were at first added next to old model numbers in the workbooks in red ink, but from 30/10/1935 only the new numbers were recorded. Old numbers continued in use for some models.

New no.	New Brass Catalogue 23/09/32:old no. or description	Description	New 1st recorded
D3101	Herald’s trumpet		02/01/1936
D3105	do sterling silver		---
B4010	A3b	Acme Silbron, NVA B ♭ Cornet, double water key	03/07/1936
B4011	A4b	Acme Silbron Cornet, double water key, rotary transposing cylinder B ♭ - A	12/11/1935
B4012	A6b	Contesting model, NVA, B ♭ Cornet, double slide, single water key	15/10/1935
B4013	A6ab	Contesting model, rotary transposing cylinder B ♭ - A	06/04/1936
B4014	B ♭ and A trumpet, Clippertone N.V.A.	Trumpet - The Clippertone NVA	---
B4015	do A18b, left or right hand	Trumpet - The NVA Model with rotary cylinder. The original B&Co. model of which many thousands are in use	20/12/1937
B4017	Bach trumpet, 3 v., D & E ♭	Bach Trumpet, D and E ♭ , 3 valves	---
B4018	do B ♭ & A	Bach Trumpet, B ♭ and A	07/10/1935
B4019	Post horn, A & A ♭	Post Horn in A (slide to A ♭) 29 ½”	07/10/1935
B4020	Hunting horn, 10”, copper or brass	Hunting Horn, 10”	07/10/1935
B4024	Coach or drag horn, 52”, brass	52" brass	---
B4025	Coach or drag horn, 52”, copper	52" copper	---
B4026	A12b	The ‘NVA’ E ♭ Soprano Cornet	---
B4027	A31	B ♭ Flugel Horn - Contesting Model	---

B4029	A47	Tenor Horn, Imperial Model in E ♭	---
B4030	A39 F & E ♭	Tenor Cor, F and E ♭	11/05/1936
B4031	A51, L	Imperial Model, B ♭ Baritone, large bore	---
B4032	A50, S	B ♭ Baritone, small bore	20/09/1935
B4033	A82	Imperial Model, B ♭ Euphonium, 4 valves, compensating pistons	04/11/1935
B4034	A79	Euphonium B ♭ , 3 valves compensating pistons	04/06/1934
B4035	A87	Bombardon E ♭ Imperial [1923 cat: 3 compensating pistons, monster bore]	26/05/1936
B4036	A91	E ♭ Imperial [1923 cat: 4 compensating pistons, monster bore] [In workbooks: E ♭ bombardon]	23/09/1935
B4037	A85	E ♭ Standard Bass, 3 valves	17/01/1935
B4038	A95a	BB ♭ Bass Imperial, 3 valves, comp. pistons. [Noted in workbooks as BB ♭ Contra]	26/10/1935
B4039	B ♭ slide trombone, Artist's Perfected	H&S	25/10/1935
B4040	do featherweight	H&S	25/05/1936
B4041	A95	BB ♭ Standard Model Bass, 3 valves, Monster bore	16/03/1936
B4042	G slide trombone, Artist's Perfected	H&S	07/11/1935
B4043	B ♭ valve trombone, A66	B ♭ Tenor Valve Trombone	27/01/1935
B4044	G do A69	G Bass Slide Valve Trombone	---
B4045	A86	E ♭ Standard Bass, 3 valves, compensating pistons	---
B4046	French horn, A & F (generally old A40) Sotone No.1.	sm. bore, A and F crooks, 'solo tone'-fr solo perf, true Fr Hrn tone demanded by Eng mus	25/09/1935
B4047	do (generally old H&S) Sotone No.2.	med bore, A and F cr., Slightly larger, originally Hawkes Raoux model, more freedom in playing	12/11/1935
B4048	A90	E ♭ Standard Bass, 4 valves [1923 cat. 4 comp pist + patent protector for 4th valve]	07/08/1936
B4049	French horn A & F (German bore) "Imperial"	Large bore, A and F crooks, big tone for large ensembles, for Military Band use	09/10/1935
B4050	French horn, 4 v. B ♭ & F "New Century" German bore	Large bore, 4 valves. 4th valve for rapid transposition F to B ♭ Alt, comp pistons. Same purpose as double horn	20/11/1935
B4051	French horn, 4 cyl. B ♭ & F "Emperor" German bore	Large bore, 4 rotary valves. In F with extra valve slides in B ♭ alt. Essential for modern symphony/opera orchestra [In workbooks: Cyl. F horns]	06/11/1935

7.iii.b New model numbers for woodwind instruments

The first new woodwind catalogue model number was recorded as ordered 15 November 1933, sn30911 B ♭ Clarionet, HP, b/wd, 1001, Reynolds, SP, all metal. (HM/B&H A227/019)

7.iv Regent model numbers

New number	Old number	Instrument	First date new number is recorded, and notes
R651	B42	French horn F&E ♭	
R652		BB ♭ sousaphone	
R703		Trumpet	14/01/37 Alliance trumpets and Regent Trumpets are R703. Therefore Alliance=Regent 06/10/39 B ♭ Tpt Alliance LP R703
R715		E ♭ sousaphone	17/11/36 E ♭ Sousaphone
R716	B54	B ♭ tenor slide trombone	06/01/38 B ♭ Tromb HP R716 B54 15/02/38 Cheap Tromb HP R716 29/01/35 Trombones B54 – sent as Regent R716
R717	B54	B ♭ tenor slide trombone, medium bore	07/12/37 Ten Tromb Reg Med HP R717 x2 07/12/37 Ten Tromb Reg Med H&L R717 x6 //(30/10/39 B54)
R718	B2	Cornet in B ♭	08/12/36 Cornet Regent R718 x8 21/01/38 ditto B2 pistons x6 (x3 Besson) Regent cornet R718/719
R719	B11	E ♭ soprano cornet	22/09/38 E ♭ Sop R719 B11
R720	B30	Flugel horn in B ♭	Regent Alto R720
R722	B46	Tenor horn	08/12/36 Tenor Regent R722 x2 Regent Tenor R722 (25/11/39 B46)
R723	B49	B ♭ baritone	Regent Baritone R723 (1 marked Empire 23/6/37) B49 Baritone – R723
R724	B56	G bass slide trombone	05/05/38 Reg G Tromb R724
R725	B77	B ♭ euphonium 3v	08/12/36 Eupho Regent R725 x2 Eupho Regent 3v R725 23/11/39 Med Eupho R725

R726	B80	B ♭ euphonium 4v	Eupho Regent 4v R726
R727			09/06/39 Cheap French Horn LP with F crook R727 16/10/39 F&E ♭ Fr Horn LP R727 x2
R728			06/12/38 Tenor Cor R728
R729	B84	E ♭ bass/medium bombardon	E ♭ Bass Regent R729
R730	B88	E ♭ bass 4v cheap	22/09/38 E ♭ 4th Bass [02/11/38 Bombardon, 05/12/38 Med Bom] R730
R732	B92	BB ♭ monster	Monster Regent R732 / BB ♭ bass
R733		Cheap contrabass	B ♭ Reg bass R733 14/8/39 Boys Contrabass R733 Sept 1937 Reg Contrabass R733
R734		E ♭ circular bass	25/4/39 E ♭ Circ bass 3v LP
R735		B ♭ circular bass	30/11/36 148636 B ♭ Circular Regent Bass LP Fairchild [R735 in stamping book] DJB album
R764		Long model cornet	27/4/37 Long model Regent cornets R764 [?sample mezzo cornet Regent 8/1/48]
R800		Trumpet	8/10/37 Regent Trumpet R800 [for Besson]

7.v Notes in the front of ‘Instruments Brass 15’ (A227/059)

“Artist Truline” Trombones

Small has 6 ¼” bell – H&S Artist 5lb

Medium 7 ¼” bell – B&Co. mid 5lb

Both have G.S. insides .45 bore. hard chromium plated

G.S. outside .494 bore

G.S. stockings 2 ½” separate

G.S. Truline tube 11/16 long. 487 in .523-.524 out split .03 cutter

plain G.S. flanges and stays

standard B&Co. bell to slide lock

slide lock to suit deep cups. Standard B&Co. Impl.

small B ♭ balance weight

All A47s [tenor horns] in this book to new model as 137515

page 103 photo book

7.vi Notes in the front of 'Instruments Brass 16' (A227/060)

"Impl Tenor" 147400 / taper m.pipe

2 E ♭ Aida Sop. Trumpets 151184-5

New Shallow Cup MPces

Finger Rings removed

7 B ♭ Sop Trumpets Aida 151499-505

New Shallow Cup MPces (NVA Cap Cut back Depth of Hexagon)

2 B ♭ Tenor Aida Trumpets 151284-5

Tuning slide cut ½" a side

Stud on 1st Valve slides

G Bass Aida Trumpet 151287

Studs on 1st Valve slide

Banner ring for All Aida [?]nat: Standard

Inst. were for Johannesburg. Alterations arranged between

Mr White, Mr Waite a party of KH students. 4th - 6 - 38.

IDC [inter-departmental communication] 02843 & 151867. 67

Piccadilly Zenith Trumpet H. LP.

Nos. 151569-80. 1/8" off 1st valve slide. each side.

This to be standard. Mr AB

2 BB ♭ Basses 151531-2.

Ist V. slide cut ½ each side

2nd " " " ¼ " "

Munn & Feltons Band, per Mr Cooke 19/7/39

Appendix 8. Additional notes on models produced at B&H

(Instrument type listed alphabetically)

8.i Basses

8.i.a Basses offered in the circa 1935/36 catalogues

E ♭ Standard Bass 3 valves (A85) B4037

E ♭ Standard Bass 3 valves, compensating pistons (A86) B4045

E ♭ Standard Bass 4 valves, compensating pistons (A90) B4048

E ♭ /EE ♭ Imperial Bass 3 valves, compensating pistons, monster bore (A87) B4035

E ♭ /EE ♭ Imperial Bass 4 valves, compensating pistons, monster bore (A91) B4036

BB ♭ Bass Imperial 3 valves, compensating pistons (A95a) B4038

BB ♭ Standard Model Bass 3 valves, monster bore (A95) B4041

8.i.b Circular basses

Date ordered	Serial number	Description	Maker	Workbook
26/03/1936	147098	Circular Bass Youth's HP B98	Beardmore	A227/059
17/11/1936	148637	E ♭ circular Regent Bass LP B98	Fairchild	A227/060
25/03/1938	151850	E ♭ circular Bass. Circle bent as B98 A Class. 1 right shoulder [one of pair]	Beardmore/Williams	A227/060
25/03/1938	151851	E ♭ circular Bass Circle bent as B98 A Class. 1 left shoulder [one of pair]	Beardmore/Williams	A227/060
30/11/1936	148636	B ♭ circular Regent Bass LP [R735 in stamping book]	Fairchild	A227/060

Most of the circular basses produced in 1930s were included in DJB's album.

8.i.c Renumbered bass models

Old Boosey number	Renumbered
B84 (E ♭),	R729
B88 (E ♭ 4v)	R730
B92 (monster BB ♭)	R732
	First new Regent model numbers recorded in the workbooks:
	R732, Monster Regent, 17/03/1937
	R733, Reg Contrabass, 13/09/1937
	R734, E ♭ Circ bass 3v LP 25/04/1939
	R735 [in stamping book]
	B ♭ Circular Regent Bass, 30/11/1936.

8.i.d Bass instruments included in DJB's album

02/10/33 143120 [Experiment] BB ♭ Monster, LP, 21" bell forward. see photo A95a Overdyk/Experiment/W Hampton, [B ♭ contrabass recording model] DJB album "Recording Bass o/r 2480 Bell 21ins"
11/04/35 145588 E ♭ Bombardon LP 4v Regent 2 per top caps and button tops B84 Fairchild. "4 Valve E ♭ Bombardon Cheap for Carabott".
15/04/35 145613 BB ♭ Contrabass LP 4V 10lb Bells Heavy caps, stamp as F horn, special caps ? Regent special top caps and button tops, B92a, Beardmore. "4V BB ♭ Bass cheap for Carabott."
14/08/36 147915 E ♭ Bombardon LP B4048/A90.
05/11/36 148469 BB ♭ contrabass A94 Beardmore. "A94 HP".
In workbook: 07/05/37 149631/2 BB ♭ Contrabass HP No.12 Bore B4038 Experimental. Beardmore/Martin, Williams.

8.ii Bassoons

8.ii.a Technical drawings

Bassoons	Date ordered	Description	
Drawing of Heckel bassoon used in design of B&H German model		Heckel Bassoon 7491-4, LP, Taper 1 in 72, May 14th 1934, U28. Heckel literature dating from 1898 exists in the B&H archive.	
Details of advice from Alexandra and Camden on crook design besides an extant plan of a Heckel instrument drawn in May 1934.		Pencil note 05/10/1934. [Notes detailing the advice sought from John Alexandra and Archie Camden for the crook design].	
The Hawkes 'B' model was recorded on a plan: Further development was documented in 1934:	1931 02/03/1934 26/03/1934	Plan: H&S 'B' Model Bassoon, FP, A=439, recorded from eng'd 'Model' Instrument, Mar 1931. The general taper from crook to long is 1 in 75 as B&Co. but there are marked departures especially in Wing and small Double. In pencil: 'Morton also', and note 'see pencil drawing of 21/05/1931 for B&Co. bits as used on B model.' Bassoon, LP, B Model, R/wd, Small bore. Plan: U20, BSN 100, B&H Bassoon, Small Bore, No. 31083. 'Better than standard bore B model. Considered so by Mr Alexandra, Mr M-Myatt and Mr Castledini'.	
B&H German model	14/06/1934	Bassoon model 'H', sycamore, ebonite lined wing.	A227/019
In October 1934 Camden lent the company his Adler crook, which was 'considered by him to greatly improve the B&H H model which he considered very defective as approved by Mr Alexandra,' but ultimately the crook was designed by averaging the Heckel and Adler measurements. It was approved by Alexandra in Nov.	25/10/1934	Notes on plan: 'This is an averaging of Heckel Mr. Alexandra's Choice and Adler Mr. Archie Cambell's [sic. Camden's] do. [ditto] Approved by Mr Alexandra for B&H Heckel model 19/11/1934.' Plan: 27/02/1926 Bassoon Crook tools for Extending Machine. Another sketch dated 12/4/24 'Seamless bassoon crook' has figures added on 21/12/1934 for the Heckel crook. Pencil note on a plan dated 11/01/1935: Bassoon Comparison Adler/ B&H 'H' Model.	
	26/05/1932	sn30055. Contrabassoon, wood, Frost, Heckel altered & stamped. Plan: 26/05/1932 FP Contra Bassoon Heckel. New at this date. going to Siam. No.30055 in bill books. Tried by Mr Alexandra with shorter crook and reported true to pitch.	A227/019
1935 Adler 'Sonora' bassoon bought in.	1935	'Adler' bassoon was bought in to make a comparison with their 'H' model, but it was 'condemned' by Alexandra and sold second hand. (Note on drawing).	

8.ii.b Number and percentage of German model bassoons made

1934, 7, 30%.

1935, 5, 29%.

1936, 1, 9%.

1937, 1, 3%.

1938 none made,

1939, 1, 4%.

1940, 15, 60%.

1941, 13, 100%.

1942-45 none made.

1946, 3.

1947, 1.

8.iii Clarinets

8.iii.a Clarinets offered in circa 1935/36 catalogues

14-keyed (1001,2,3)

Barret (1004,5)

Clinton (1007,8,9)

Clinton Boehm (1013,14)

Boehm (1010,11,12)

Clarinets of Moderate Price: 14 key (1024), Barret (1025), Boehm (1026).

Simple system alto 1016, 1017.

Boehm system alto 1020, 1021

Simple system bass 1018, 1019

Boehm system bass 1022, 1023

other systems, such as Clinton, made to order.

8.iii.b Clarinet models

Clarinet	Date ordered	Serial numbers	Description	Work-book	Notes
Clarinets tuned for Thurston, Clarke and H. Draper.	20/05/1932 13/06/1932 04/07/1932	30037 30085 30135	B ♭ 200, b/wd, Skillin/Gregory, special tuning Thurston and Clarke. B ♭ 200, Skillin, G.H, Tuned for Mr. H. Draper. A 200, G.H. Skillin, Special tuning Thurston and Clarke.	A227/019	
Thurston's clarinets	03/09/1932	30255 30256	A clarinet, B ♭ clarinet LP B/W^{d} 200 G.H. Skillin plated keys.	A227/019	These instruments were subsequently played by his widow, Dame Thea King, and bequeathed to EUCHMI. B ♭ : 5787, A: 5788.
First clarinets with cast keys	23/06/1933 28/07/1933 28/07/1933	30691 30759 30760	B ♭ Boehm clart, LP, N model, eb, mc cast keys. G.H. Skillin. B ♭ Clarionet, LP, m/m, 201, B cast keys. G.H. Skillin. B ♭ Clarionet, LP, b/wd, 200, GH Skillin, B cast keys.	A227/019	
Model numbers 1010 (wood) and 1011 (ebonite) replaced model numbers 200 and 201. The earliest were:	27/11/1933 12/12/1933 12/12/1933	30931 30957 30958	B ♭ Clarionet, LP, m/m, 1011, cast keys. H. Gregory. B ♭ Clarionet, LP, cast keys, b/wd, 1010. Cage. B ♭ Clarionet, LP, cast keys, b/wd, 1010. Lewis.	A227/019	Subsequent 1011s were designated N.M. [new model]. From January 1934 all the new catalogue numbers for clarinets are used: 1010/200, 1011/201, 1001/107, 1002/108. (For January the old numbers were pencilled in).
Improvements: New Century Tuning New C natural connection	09/06/1937 18/06/1937 29/06/1937 01/03/1938 15/07/1937 22/07/1937 12/04/1938		x1 New Century Tuning x1 x2 x1 New Cent. Tuning. Socket 1/8" shorter. x1 New C natural connection x1 x1	A227/019 and /020	Some clarinets were tuned sharper specifically for dance band players; they were advertised as 'The B.&H. New Century Boehm System clarinet' 'Tuned for the Dance Player' and were available in standard model 17k, 6r, and de luxe 20k 6r. 1940-41 Woodwind Yearbook. p.52.

N C Tuning and C natural connection New Rubbers/ Rubber Stops also had c natural connection	08/04/1938 11/04/1938 August 1938		x1 N C Tuning. Socket 1/8" short. C natural connection x1 x6 x3		
Last 'pre-war 1010s'	6/02/1941 23/05/41	35596-8 35857	'1010' B ♭ with fork B ♭ and articulated G#	A227/020	Makers: Hubbard, Skillin G., Lewis. Maker: Mooney F.
"New Century" Boehm System De-Luxe' model: The first instrument made was recorded in July 1936 and only a further six B ♭ clarinets and five pairs were produced between 1936 and 1940. None was produced in 1941, 1942, 1944 and 1945, one pair only in 1943.	27/07/1936	32456	B ♭ Clarionet, LP, plated, b/wd, 1248. Cage.	A227/020	Specification: 20 keys, 7 rings, articulated G#, fork E ♭ /B ♭ , C-G# lever, duplicate A ♭ -E ♭ key, low E ♭ p.A18. No 1249 clarinets (ebonite) were ever made.
Clarinets of Moderate Price 'London and Paris': 14-key (1024), Barret (1025) and Boehm systems (1026) The first allusion made to model 'as 1024'	12/11/1930	29383	B ♭ Clarionet, IP, as 1024, B/wd, C#, 106, Brinson.	A227/018 A227/019 A227/020	

‘Boehm ‘B’ – possibly trial instruments before regular production of 1026	28/11/1939	34652-7	B ♭ clarinet, LP, Bwd, gs, ‘Boehm’ ‘B’, Paul x1, Reynolds x5.		These were followed by four individual instruments before the end of the year (one an A clarinet).
First reference to 1026 in workbooks:	14/10/1939 03/01/1940	34563 34758-61	B ♭ Boehm Clarinet, LP, gs, as 1026. Reynolds BB ♭ clarinet, LP, gs, 1026. Paul x2, Reynolds x2		
The 1026 was further developed: 1026A	05/04/1940 19/04/1940	34771	1026A: B ♭ clarinet, LP, gs, ‘Ebonite bushes, Fancy tips, gs rim, Cork joints, Large bell and socket.’ 17k, 6r, Reynolds x1, Paul x1 +11		Last 1026A made 06/06/40. (Total number produced: 14). (Total number produced: 3)
1026B	17/06/1940	35119	1026B: B ♭ clarinet, LP, gs ‘Thumb rest ½“ lower and corked. E ♭ pipe. Clinton style pipe key. Ebont. thumbhole. lower section. Ebonite bushes. rings.’ Paul		
	18/06/1940	35123/4	Rugless x2		

8.iii.c Clarinets made during the War

Clarinets made during the War	Date ordered	Serial numbers	Description	Workbook	Notes
Regular production of the 1026 Predominant commenced	January 1940			A227/020	
Production of the 1027 commenced	25/10/1940	35328/9	1027: B ♭ clarinet, LP, Nickel plated keys, Ingram x2. 'Ebonite bushes. Cork joints. Special bore. Double pillars for B & C keys. Special S.O.&H. Fancy tips. Special model M/pce & bell. A440	A227/020	Only 26 of this model were made .(+8 by end of year, +16 beginning January 1941).
926 (known as Imperial from 1946) introduced:	18/01/1941	85563	B ♭ Clarinet, LP, B/W, Nickel ptd keys, Hubbard x4.	A227/020	
Two clarinets of a new model with articulated G# and fork B ♭ , the 927, were made in 1944, but then no more were made until 1946	18/07/1944 03/11/1944	36542 36574	B ♭ Clarionet, s/plated, Art G# fork B ♭ , Paul.,	A227/020	(Another five were made 21/05/1946, sn 37189, Skillin. 23/08/1946, sn 37273, Boehm 18Keys, 7 Rings, Skillin. 31/12/1946, sns 37561-3, B ♭ Clart **(?Ebt),** LP, Imp 927, J Smith, 18 Keys, 7 Rings, DC [Die-cast] Keys, NS linings & T slides.)

8.iii.d Metal and bass clarinets

Metal and bass clarinets	Date ordered	Serial numbers	Description	Workbook	Notes
Metal clarinets	08/01/1931	29472-4	Metal model 108: x3	A227/018	After the merger Boosey & Hawkes continued to develop and produce a small number of metal clarinets in different models
	15/01/1931	29486-9	x4		
	04/02/1931	29516	Metal B ♭ clarinet, no model no: Skillin GH, Barret top, Boehm bottom, chrome body, silver plated, l.s B ♭ , all holes covered, art G#. Tested by M Myatt.		
	05/05/1931		Metal model no. 200 cl, - pair. [?] rings + T/rest, chrom bodies, S plated keys.		
	22/11/33	30922-4	Metal B&Co. model: B ♭ Clarionet, HP,14k, Reynolds, chrome keys. Note on plan '15/12/33 HP 30924 adopting B&Co. construction instead of H&S.'	A227/019	
	11/06/1934		Clarinet XXthC B ♭ HP Boehm. Plan U30/CLA298.		
	19/09/1934	14974	Clarinet: B ♭ Boehm – XXC – LP. Plan U30A/CLA 299.		
Clarinet made for Edward Augarde	15/12/1932	30402	Bass Clart Clinton low E ♭ dup E (afterwards removed at Mr. Augarde's request) 8r, B/wd, Skillin Snr + Cage.	A227/019	
Clarinet made for Walter Lear	21/11/1931	29757	Bass boehm Clart, low E ♭ , dup E ♭ , B/wd, G.H. Skillin, S plated metalwork.	A227/018	
	31/07/1934		Plan no. U 33 CLA 301. Bass Clarinet, Boehm, LP, + Mr Lear's (No 29757) B&H. Measurements taken 7/5/34.	A227/019	

8.iv Cornets

Cornet	Date ordered	Serial numbers	Description	Workbook	Notes
Last ‘Clippertone’ recorded	10/04/1932	140622-33	B ♭ Clippertone cornets. Scott.	A227/059	
Last Boosey B2 recorded	13/06/1935	145841-52	B ♭ Cornet LP B2. Sheridan, Streeter.	A227/059	
First mention of new model: Regent	17/08/1931	sns139501-6		A227/058	
Name ‘Regent’ was also applied to E ♭ Soprano B11	22/12/1931				8 instruments out of the batch of 12 were noted ‘Regent/as Regent/Regent spec.’.
New name ‘Piccadilly’ - first applied to B2 cornets	24/12/1931				
Hawkes ‘Empire’ name applied to B2 model	10/10/1934		B ♭ cornets x12.	A227/059	
Piccadilly name was specific to Lafleur	20/10/1938		Experimental B ♭ cornet was made for Lafleur: B ♭ Cornet. Experiment for Lafleur	A227/060	
B2 cornets made for Lafleur	10/10/1934 28/10/1936 21/08/1937		Regent with B2 pistons	A227/060	
B2 cornets made for Besson Examples:	21/08/1937 21/01/1938	153062		A227/060	

8.v Flugel horns

B&H experimental flugel horns [*Instruments Brass 16* A227/060]

B&H Flugel Horns recorded 1930-39	Date ordered	Serial numbers	Description
Recorded in the piston bks as ‘Flugel Horn LP with ballustres NVA’ as ‘H&S’, and in DJB album as ‘Flugel-Biped Carabott’. The entry in the workbook ‘alto horn’ relates to the continuation by Boosey of Distin’s practice of regarding flugel horns as alto saxhorns (part of a family with tenor horns and baritones).	03/10/1935	146255	Alto Horn LP NVA H&S pattern. G. Moore
Noted as ‘including exp time’; recorded in the piston book as ‘Alto LP Biped’ and in DJB album for Carabott.	24/05/1938	152187/8	Flugel Horn NVA Valves. Special order. Crisp/Elkington
The first batch of six purpose-built new model flugel horns	02/06/1939		B4027 (HP) ‘The Contesting Model’

8.vi Horns

First records of specific horn models (*Instruments Brass 15* A227/059)

Horn	Date ordered	Serial numbers	Description
German style bore:	11/02/1935	145374	German horn, 4v comp, LB, Elkington
	13/03/1935	145445-7	German Horn, LP, 3v, Elkington
	12/04/1935	145610-12	French Horn LP, Regent, B42, Heavy bells, German Bore, spec top caps & button tops, Pryor.
	15/04/1935	145623-5	French Horn, LP G Horn bore, spec top caps & button tops, Regent, B42, no crooks. Elkington
	04/06/1935	145828	German bore Horn, 3v Comp. Mr Hyde, Elkington. Included in DJB photo album.
	19/07/1935	146023-4	German Horn, LB, LP, F A Crooks, Laquered (Gold), Elkington.
'Imperial'	15/08/1935	146143	Imperial F Horn, LP, F&E no A valve slide lengths in F no stamping, Elkington
'Emperor' (compensating double rotary) horn	02/08/1935	146094-6	Emperor Fr Horn CAT 4051, Pryor & Elkington. sn146094 Included in DJB photo album.
'New Century'	26/08/1935	146167-9	NC French Horns 4V E ♭ slide. Elkington x1, Pryor x2
Custom built	29/01/1934	143787	Fr Horn, HP, Raoux, Busby model, LP slide, spec L^t, 3½ lb bell, without crooks, H.S. Pistons, Pryor
	30/04/1934	144152-3	Mil Fr Horns, Busby model, LP (converted to mil HP 11/7/35) H.S. Pistons.
	11/07/1935	145994	Mil Fr Horn, HP, Busby Piston. Pryor
	17/06/1935	145853	French Horn No.3 bore LP Mr Philips. 5lb Bell, B ♭ & F Crooks, no finger hook or thumb rest, B ♭ slide lengths etc. Piston converted from A40 LP. ½ tone 9/32" a side longer than A natural. 1 tone 7/16" a side shorter than A natural. 1½ tone 5/8" a side shorter than A natural. Pryor
	20/11/1935	146476	Comp Fr Horn 4v B4050 Mr Marshall, Pryor
	31/12/1935	146670-2	Fr Horn valveless. French Hunting Horn. For Inter-allied Film Prod. Ltd. Elstree. Mr Broadfield. @£6-10-0 each. Elkington x1, Pryor x2

8.vii Oboes

8.vii.a Records of minority models of oboes (*Woodwind and Percussion 8* A227/019)

Oboes - Minority models	Date ordered	Serial numbers	Description	Notes
Oboes with saxophone fingering	14/09/1932	30119	Bought in: Oboe LP Sax System B/wd stamped only.	
	13/10/1932	30279/80	*As above*	
	01/12/1932		AHC, stamped BH.(x3)	
	08/11/1932	30323	Made: Sax Oboe, LP, 5 rings to B ♭ Cage.	
Reynolds Model	24/08/1934	31337	Plan: Oboe-Loree, Reynolds Model, used by Leon Goosens.	
	27/08/1934	31337	Workbook: LP, Bwd, 'Reynolds', Skillin G.H.	
	13/12/1934	31532	RW, LP, Reynolds. M. Skillin G.H.	
B&H bought in a Louis full Barret system oboe before making one.	17/10/1935	31955	LP, Bwd, Full Barret (Louis make)	
Full Barret system oboes made by B&H:	19/12/1935	32089	Barret oboe, LP, ebonite, plated, thin body, 1075. Skillin G.H.	They made a further four between 1938 and 1940.
Whittaker model:	08/10/1940	32694	LP, 1076, G, Dup pipes. Skillin.	Played and recommended by Alec Whittaker. Only one was made.
Metal oboes recorded in workbooks:	05/03/1931	29550	B ♭ Oboe IP 'as H&S HP model and generally as own 229. See also drawing.' Metal. Sotty, L.	
	07/04/1933	30566/7	Oboe, LP, XXCt Morton Chrom. body, SP Keys. Cage, GA Skillin	
	06/11/1933	30892	B ♭ Oboe, LP, XXCt, Chrome, SP Keys. Cage.	
First XXC^{t} Artist 1080	21/02/1934			
Cor anglais	26/10/1933	30871	Cor Anglais, Artist, LP, eb,.	
			G.H. Skillin	

8.vii.b Oboes etc offered in c.1935/36 catalogues

A1070/1 ‘Artist’s Model’

A1072/3 ‘Conservatoire Model’

A1074/5 full Barret system

A1076 oboes with saxophone fingering

A1080 ‘XXth Century Artist’

A1081 cor anglais

A1082 oboe d’amore.

8.vii.c Thumb-plate oboes

Number and percentage of thumb-plate oboes made 1933-1940	
1933, 14, 67%	
1934, 17, 77%	
1935, 30, 65%	
1936, 30, 97%	
1937, 43, 96%	
1938, 28, 70%	
1939, 47, 78%	
1940, 26, 42%	(an average of 74% a year)

An average of only one oboe (thumb-plate system) a year was produced between 1941 and 1945; however after the War, when instrument manufacture resumed, seven were made in 1946 and thirteen (including one conservatoire model) in 1947.

8.vii.d Conservatoire oboes

The first conservatoire oboes produced by B&H
27/04/1934. 31178, LP, Bwd, 1072, G.H. Skillin.
07/09/1934 U35. Oboe, 31313 [sic 31314] LP to Low B ♭, Conservatoire Model. [drawing]
27/07/1934 31314 Oboe, LP, B/wd, G.H. Skillin, Duplicate pipe, Con 1st F, RH, side B ♭.
Number and percentage of conservatoire oboes made 1935-1941
1935, 2, 26%
1936, 9, 20%
1937, 1, 3%
1938, 2, 4%
1939, 11, 28%
1940, 6, 11%
1941, 5, 15%

8.viii Saxophones

8.viii.a The development and introduction of new saxophone models

Model	Date		Description	Notes
				Saxophones made in 1932 included the 'XX Century' alto, soprano and tenor models, an 'Empire' tenor, and an A10 baritone.
Boosey/Hawkes saxophone lines integrated in 1932 with 'B&H "32" Alto', model A1197. First recorded:	18/09/1931	29714-16	Alto Saxophones, IP, N/M [new model], (1932) [in pencil], B&H, Mills	Featured in the *c*.1935 catalogue as 'excellent value, modest expenditure'. p.A55.
The first saxophone recorded BBIC	10/08/1932	30195	Alto Sax, FP, Regent, Mills	1932: 30 saxophones recorded BBIC (including eleven 'Regent' and two '32' instruments). 1933: 124 saxophones recorded BBIC - about 50% of saxophone production. 1934: 39 saxophones recorded BBIC. After this no more were noted BBIC.
It appears that the first 'New Century' models (see next entry) may have been developed in June 1933, but the instruments sold as 'XXth Century'	09/06/1933	30666/7	Alto Sax, 'new Cen^{t}' [crossed out] XXC [added], Richer/Mills.	Sold to Regent St. 20/05/1936, 29/06/1936, 16/06/1933 x1 sold to Regent St. 26/05/1936, 22/06/1933 x1 sold to Regent St. 15/05/1936.
The first recorded '32'XXCt	18/12/1934	31529	Alto Saxop, LP, '32'XXct, Richer.	X4 before end of Dec.
The first recorded 'New Century'	04/06/1935	31800	Tenor Saxophone, Smith FC	
Rebranding of '32' as 'Predominant'. First recorded:	03/07/1939 x2			Alto saxophones documented as '32' [crossed out] Predominant. Thereafter the '32' model is not noted, only the 'Predominant'.

8.viii.b Saxophones offered in c.1935/36 catalogues

'Artist': Nos. 6-11, B ♭ and C sopranos, alto, tenor, melody, baritone, bass.

Hawkes: C and B ♭ soprano – straight and curved models, alto, C melody and tenor.

'XXth Century':	A1190-2	B ♭ Soprano.
	A1193-5	E ♭ Alto - described as 'the choice of majority of service bands and soloists'.
	A1199-1201	B ♭ Tenor.
	A1202-4	C Melody - described as 'most popular for home and solo use'.
	A1205-7	E ♭ Baritone.

8.ix Sousaphones

DJB album Instruments included in DJB's album:

17/11/1936 148540 E ♭ Sousaphone LP R715 Beardmore DJB album

30/11/1936 148644 BB ♭ Sousaphone [LP] R652 Beardmore

8.x Tenor Horns

Tenor horn	Date ordered	Serial numbers	Description	Workbook	Notes
The new model 'Tenortone' Tenor Horn in E ♭ which had been introduced by Boosey a few months before the merger, was given new style pistons	11/04/1936	147400	E ♭ tenor new style pistons B4029/ A47. DJB album "Impl model HP".	A227/059	This is also noted in the front of Workbook A227/060; see Appendix 7v. Some of the old style models were also made with new pistons.
A lower grade 'Regent' model tenor cor was developed, with a few stamped 'Piccadilly' for Lafleur	12/07/1933		E ♭ tenor, B46 x6 [x4 Piccadilly] Lafleur.	A227/059	One of a batch of two Regent bell-forward E ♭ tenor horns ordered on 11/04/1935 was included in DJB's album 'E ♭ B46 bell for^{d} LP': sn145586 E ♭ Tenor Bell Forward LP Regent B46. Stamped as F Horn Scott x2.

8.xi Trombones

8.xi.a Trombone Models

In B&H Ltd. *The Boosey & Hawkes Bulletin. Supplement to the Melody Maker*. (March 1932). p.xiv.

Origin	Model No.	Model name	Bore/bell sizes		Price
Hawkes	G 7a	'Cabaret'	Medium bore: 6 ¼" bell	Two weights. For dance band use.	£12.15.0
Hawkes	42a	'Artists Perfected'	Small bore: 6" bell Medium bore: 7" bell	Weight: 2lbs 4oz for army or general band use. For band and orchestral playing.	
Hawkes	42f	Featherweight 'Artists Perfected'	Small bore: 6" bell	Weight: 1lb 15oz for concert and professional use.	£10.17.6
Boosey	43a	'Perfecta Truline'	Small bore: 6" bell Medium bore: 7" bell	The 'Perfecta Truline' has a special device at the top so you can take the slide off. The stocking is in segments so you can slide a ring, and segments open up like leaves on a tree and slide can be taken off.This model was later simplified and produced as the 'Artist Truline' [see below] which has a short stocking at the bottom of the slide and a stocking at the top.	£10.2.6
Boosey		'Imperial'	Medium bore: 6 ¾" bell Large bore: 7 ¼" bell	For dance band use	£9.0.0
Hawkes	45a	'Empire' models	Small bore: 6" bell		£6.0.0
Boosey	BB 44	'Regent'	Small bore: 6" bell	By 1935 the 'Regent' was renumbered B54 (R716/R717)	£4.0.0

8.xi.b Trombone models offered in circa 1935/36 catalogues

'Artist's Perfected No.1': B4039

'Featherweight No.2': B4040

G bass: B4042

B ♭ and G bass valve trombones: B4043, B4044. (Recommended for use in mounted bands and for young performers).

8.xi.c Examples of small batches of trombones based on a previous prototype instrument

(HM/B&H A227/059)

21/07/1932	141227	Imperial trombone, S, 5lb bell// small bore, Art bell 6 ¼, same instr as L bore Imperl. Wide slides, GS mounts, GS inside slides. ([in red ink] deld as Artist Truline 6 ¼" bell. H& LP. Bell only) Sold to Reg St 12/10/34.
23/09/1932	141427- 454	Artist Cabaret Truline Trombone, s bore, 6¼ " bell, 5lb brass, LP slides, as 141227: x14 Pryor, 7 ¼" and x14 Downing.
21/07/1932	141228	Imperial – [crossed out] trombone, L bore, H.LP, with bell to slide lock. L/F. Brass outside slides, Boosey Large bore. [?] Wide slides, GS mounts, GS inside slides.[crossed out] - ?Truline/Trombone, ?incl ?& small balance weight, chrom plated inside, [?]in & out, GS, [?] lb bell, stamp Art. Truline. Sold to Reg St 20/10/39. 2nd hand. Mr ?Masell/Moore.
26/09/1932	141396-407	B ♭ Art. Cabaret Truline Trombones, 7 ¼" bell, 5lb brass, LP slide, slides and fittings as 141228, B&Com. x12 Martin
07/07/1933	142667	B ♭ Tromb. LP, sn 142667, m, 6 ¼ bell rim, 6lb bell, transposing cyl to F, wire guard at bottom of bell section, lock to slides & bell, standard weight, NS slides, ?chrom inside, fancy caps to T/slide bow. Martin/Downing/Overdyk.
15/12/1933	143559/60	B ♭ tromb, m, LP, as 142667, but bell as B.Co ?ord 6lb med. [in pencil]: ??Ditonar. 2nd hand dept 30/12/38.

8.xi.d Examples of ‘special’ trombones

(HM/B&H A227/059)

for Ted Heath	02/03/1933	142186	B ♭ Tromb. LP, BC med bore, 5lb brass bell, to sketch, spec mpce, Mr Heath, 7 ½” rim, Overdyk/Martin.
	14/02/1933		Olds Trombone left by Mr Heath for us to copy lengths on a new one but new to be B&Co. M 5lb bell.
	17/07/1934	144548-50.	Med Tenor Tromb, 8lb bells, spec mpces. BC med bore, 6 ½” rim, GS slides, 45 in & out, Mr Heath, all LP.
for Tony Thorpe	19/07/1933		B ♭ Tromb, LP, L/B, cyl to F, 6lb bell, 8 ¼ rim from G tromb bell, bell lock, all; GS ferrules & flanges, GS in & out slides, [?]Comm patt, chrome [?]plated, GS cap to bell and slides, tube detail
	7/09/1933	142737	Racket [crossed out] ?scrap [in pencil] to T/slide. [in pencil] :(Tony Thorpe) Martin/spoilt work/Overdyk. [Included in DJB photo album]
	27/07/1933		Tony Thorpe patt. [in pencil + ‘sketch’] B ♭ Truline Tromb, sn 142787, med, LP, cyl to F. Sold to 2nd hand dept 30/12/38, Martin/Pryor/Overdyk ?Artists or Perfecta Truline
	22/12/1933		B ♭ Trombone, LP, Tony Thorpe, Cyl to F tubing etc. Same as 142737, 2nd hand 30/12/38, Martin/alterations/Overdyk
	26/04/1935		Sketch: Olds Trombone 8310 V. Lent by Mr Tony Thorpe
	14/05/1935		Art Trul Tromb Med LP Tony Thorpe, chrome plated slides, lengths & bending as drawing of Olds. No. 8310, v.55, 26 4, 35
	19/03/1936		Tromb Tony Thorpe LP x4, Martin, spiral slides – [lots of alterations]
	27/04/1936		Tromb Tony Thorpe/New Century balance weight, spiral slides [lots of alterations] x6
‘Betty’ model	07/03/1933	142191	G Tromb Betty bore, slides to instruct[ion], 6lb bell, 8” rim, generally as A57, Overdyk/Downing.
	15/05/1933	142448	G. Trombone .527, LP with extension for D and A slide to C, 7lb bell, 8in rim, special cylinder, Mr AB [no mod no] Overdyk/Martin.
	23/06/1933	142628	G Trombone, as 142448, (bore .527 Betty cyl to D) slide to C [DJB Album] Made for Mr F Taylor KH. This is the earliest surviving Betty trombone.
	28/09/1933	143115	[Experimental] Bass Trombone, LP, w/extension in bell for C.D, LB. w/bal weight, T/device, Ex: as Mr Taylor’s. Overdyk/Experiment/Martin.
	17/11/1933	143448	Betty Trombone LP, Martin [DJB Album ‘G “Betty” Trombone LP cyl to D ex slide for C’].

8.xi.e Trombone models

Trombone	Date ordered	Serial numbers	Description	Notes
New developments: a tenor, bass and contra-bass were made with an additional fourth valve	26/04/1935	03/02/1933	Note: 'L B B ♭ Tromb. Conn. With cyl. 4th below. HW. This inst. was very free in spite of the poor stocking fit indicated by dimensions.' 14/02/1933 'Olds Trombone left by Mr. Heath for us to copy lengths on a new one but new to be B&Co. M 5lb bell.' Sketch: 'Olds Trombone 8310 V. Lent by Mr. Tony Thorpe.'	
First Piccadilly Zenith trombone Last PZ Trombone	25/06/1935 19/08/1937	145912	PZ Tenor Trombone, LP, Martin/Experiment/Overdjik	
Valve Trombone	03/10/1934 26/04/1935 07/04/1935	144914 145666 145729	Ten tromb 4v, 4th valve to F, B65, G. Vilfranc. Bass Tromb in F 4V LP, spec top caps & button tops, Regent Model B71 Vilfranc A Contra Bass Valve Trombone 4V LP. Regent spec top caps & button tops. Elkington.	Photographs of all these instruments are included in DJB's photo album.
Experimental trombone	15/01/1944	160596	B ♭ Trombone, Experiment, Downing.	

8.xii Trumpets

8.xii.a Note in front of B&H. "Instruments Brass 15." HM/B&H A227/059.

> **N.V.A "Clippertone" Trumpets 14.10.32**
>
> No 3 bore, standard B&Co. No 3 or med bell, mouthpipe off mandril marked "Cousins" mouthpiece stamped N.V.A. as made for Mr. Cousins & recorded on drawing, narrow hand made No 3 bow, short pistons, angular knurl top & bottom caps, pearl buttons American type, w'key to 3rd v. slide, complete set of L.P. slides American water keys.
>
Model	"A"	Rising Valve	cylinder
	"B"	do	shunt
	"C"	ordinary	cylinder
	"D"	do	shunt

Earliest workbook entries for the new models

27/09/1932 12 'Clippertone' trumpets with NVA, 'C' and 'D' med bore, ord [ordinary] valves, rotary'

30/09/1932 12 'A' and 'B' models.

The earliest extant instrument sn142164 was given out 01/03/1933. (Personal communication with Arnold Myers.).

8.xii.b Trumpet models

(HM/B&H A227/060)

Trumpet	Date ordered	Serial numbers	Description	Notes
Alliance	22/01/1932	140220	B ♭ Trumpet NM (cheap) BH, Elkington.	Alliance was a 'cheap' model that had previously been produced by Hawkes & Son for Lafleur from at least 1923, first appeared in the workbook as a 'new model' in January 1932
Alliance: regular production started	26/02/1932	First batch of six from 1403366	'Alliance' trumpets	48 instruments were ordered between 26/02/1932 and 09/03/1932. Ibid.
Earliest extant trumpet stamped Regent but it was recorded as Alliance Trumpet	07/03/1932	140397		Stamped: 'Light Valve / ... / The Regent'.
Alliance and Regent: increased production	04/05/1932	from 140680	'Regent' trumpets Batches of 'Alliance' and 'Regent'	Made in 2 batches of 25. Ibid.
New low price model developed for America: 'Piccadilly'	21/11/1934	145081-3 145164	'Piccadilly' trumpets, Overdijk.	
?Design developed for Piccadilly Zenith	19/02/1935	145398	B ♭ trumpet chrome ?pumps?, Piccadilly bore and length, ordinary stays, lacquered, Scott.	There is an extant plan: U46/TRU136 Piccadilly Zenith Dance Trumpet 14/12/1934. The first trumpet noted Piccadilly Zenith was: 16/05/1935 PZ Trumpet LP, sn145728, Scott. A photograph of sn145081 was included in Blaikley's Album.
Jack Raine trumpet model	06/03/1935	133440	B ♭ Trumpet, JR Mod bell 10lb, A18b converted to J Raine model 10lb bell & no 145430. Overdijk	In 1935, a 1928 B ♭ trumpet was recorded in the workbooks as converted to a Jack Raine model.
	1928 [July-Dec] 1929 [Jan-June]		J.R. new bell. Model A18b: new bell JR less cylinder x12. Engraved for J Raine x12.	Previous trumpets customised for Jack Raine [Brass 14 A227/058] As jazz and dance band music was usually in flat keys, players often considered a cylinder change unnecessary

'Narrow Regent Trumpet' – new model, but at first it was recorded under the names of 'Piccadilly' and 'Alliance'	17/06/1935 01/08/1935 From 13/08/1935		Regent Trumpet [Piccadilly - crossed out] Narrow Model LP no cyl. X2. Scott [Alliance – crossed out] Narrow Regent Trumpet LP [x11 with a shunt, x23. Bauwens. Narrow Regent Trumpets.	
Regent trumpet listed with new model number	20/11/1936		Regent Trumpet R703.	
Regent-type trumpets	02/02/1937 05/02/1937 14/04/1937 29/05/1937 08/10/1937	148972-4 149013 149443-66 149743-54 150750-53 etc.	Regent [crossed out] Besson Trpt H&LP w/Cyls. Reg Tpt A18B, Special for Mr. Blundell, but 3/8 a side, 20/04/1937. Alliance trumpets R703. Reg Trpt H&LP w/cyl, R703. Some 'Empire'. Regent Trumpet w/shunts, R800 [for Besson]	
Adjustments made to 'Piccadilly Zenith'	21/02/1937	151569-80	Piccadilly Zenith Trumpet H.LP,	A note in the front of *Brass 16* A227/060 (see Appendix 7.vi) details: 'Piccadilly Zenith Trumpet H.LP, Nos.151569-80. 1/8" off 1st valve slide. each side. This to be standard. Mr. A.B. [Arthur Blaikley].' The sns correspond to the order made on 21/02/1937.
Last batch 'PZ' trumpets	22/11/1938		x24	A227/060
Experimental 'PZ'	23/12/1938	153425		No trumpets were made subsequently with 'PZ' name.
Utility Trumpets	31/08/1942	159655	6 Utility Trumpets & LP slides x2	
	31/09/1942	159712	Utility [crossed out] Class A Trumpets & LP slides, brass.	
Regent Long Model cornets	16/03/1938 08/04/1938 11/04/1938 09/11/1938	151764-75 x12, x12 x12	Cornets R764	Many of the cheaper Regent cornets (R718), and from 1938 a number of Regent Long Model Cornets (R764) were manufactured mainly for export to North America where they were more popular than in Britain.

8.xii.c Bach/Heralds/Coronation Trumpets

Bach/Heralds trumpets	Date ordered	Serial numbers	Description	Notes
First trumpets ordered since the merger	27/07/1934 27/07/1934	144598/9 144600/1	Aida Trumpet Ab LP No. 4. Aida Trumpet B nat LP No.4..	A227/059
Developments:	30/05/1935 03/06/1935 04/06/1935 01/11/1937	145777-9 145780 145806-9 150855-66	B ♭ Tenor Aida Trumpet LP (ie B ♭ Trombone) Scott/Martin x3. Bass or G Aida Trumpet (ie G Trombone) LP Elkington x1. Photographs of sns145777 and 145780 are included in DJB's album. B ♭ Aida Trumpet LP (cornet length) Hawkes Patt, Scott/Martin x4. A batch of twelve B ♭ Aida trumpets were ordered according to the same pattern. B ♭ Aida Trumpet, LP, # cornet length to Pattern No. 145807.	A227/059 Bach trumpets in D and E ♭ (4017), B ♭ and A (4018), Heralds trumpets (D3101) were offered in c.1935/36 catalogue.
Higher pitch E ♭ instrument introduced:	04/03/1937	149176-9	Batch of four E ♭ Aida Trumpets.	A227/060
New 'family' of instruments: E ♭ soprano, B ♭ melody, B ♭ tenor and G bass was approved as standard by Kneller Hall	02/06/1938 08/07/1938 08/07/1938	152232 152237 152491 152492	Bass. Tenor . E ♭ Coronation Sop Trpt. B ♭ Melody Coron Trpt: 'approved by KH as standard model 11/10/1938'. A note in the front of Workbook A227/060 shows previous collaboration between B&H representatives for military bands, Mr White and Mr Waite [George Waite] and Kneller Hall students on the design of these instruments in June 1938. See Appendix 7.vi.	A227/060 Up to 1959 B&H made 49 E ♭ soprano, 234 B ♭ melody, 146 B ♭ tenor and 63 G bass fanfare trumpets.

Latterly the G bass was replaced with a B ♭ +F instead. Richard Smith later re-designed them. The British army and RAF bands use 4 B ♭ trumpets, 2 B ♭ tenor fanfares (similar to tenor trombones) and a bass fanfare pitched in B ♭ / F, like a modern bass trombone. The Royal Marine Bands (and some foreign bands) use the addition of a soprano fanfare to give a brighter sound. These bands often use 14 or more instruments at one time. In order to create a symmetrical effect, all the trumpets are the same length from mouthpiece to the rim of the bell regardless of the pitch. (http://www.smithwatkins.com/ Accessed 23/09/2012).

8.xiii Output of reed and brass instruments during the War

Year	Number in workforce	Clarinets produced	Number of reed instruments produced
1941	20	‘926’ model: 64.2% reed production, 72.9% of clarinets	742
1942	3	56 (models: 926 x7, 1001 x33, 1004 x1, 1007 x2, 1024 x6, 1026 x7)	62 6 saxophones, 56 clarinets. No bassoons or oboes were made
1943	10	Simple system - model 1001 accounted for 54% of reed production, no doubt for band use	118 13 different reed models were produced
1944		‘926’ reintroduced: 83% of reed production, 95.8% of clarinets	165 9 different reed models were produced
			Number of brass instruments
1941			1,530
1942			630
1943			660
1944			810
1945			Mass production
1946-1955			An average of 3,292 brass instruments a year

Appendix 9. Besson & Co. share acquisitions

Boosey & Hawkes shareholding in Besson through nominees with B&H given as shareholders' addresses. [B&H Archive, A227/196, A227/197, A227/198]

Ordinary	Number	% of Total Shares	Preference	Number
1943				
Beare, W B (address blank)	*500		Beare, W B (address blank)	50
Beare, J W (address blank)	*500			
Beare, W B and J W (address blank)	*12,048	In joint names 46.5* Total holding 50.3	Beare, W B and J W (address blank)	12,195
Blackney, Miss W B (private address)	3,094		Blackney, Miss W B (address blank)	1,305
			Guyatt, (address blank)	1,015
Hawkes, G (address: Belle Vue, Edgware)	37		Hawkes, G (Belle Vue, Deansbrook Rd)	95
Maurice, F (private address)	357		Maurice, F (address blank)	202
	16,356	**63.1**		**14,862**
June 1944				
Beare, W B	500		Beare, W B	50
Beare, J W	500			
Beare, W B and J W	12,048		Beare, W B and J W	12,195
Blackney, Miss W B	3094		Blackney, Miss W B	1,305
			Guyatt, L W	1,015
Hawkes, G	37		Hawkes, G	95
Maurice, F	357		Maurice, F	202
	16,356	**63.1**		**14,862**
Dec 1944				
Beare, W B	500		Beare, W B	50
Beare, J W	500			
Beare, W B and J W	12,048		Beare, W B and J W	12,195
Blackney, Miss W B	2,214			
			Guyatt, L W	1,015
Hawkes, G	37		Hawkes, G **blank**	95
			Howard, J R	1,305
Maurice, F	1,237		Maurice, F	202
Timms, C E	625		Timms, C E	675
	17,161	**66.1**		**15,537**

No dividends recorded 1945-49

Ordinary	Number	% of Total Shares	Preference	Number
Dec 1949				
No dividends recorded			Beare, W B	50
			Beare, W B and J W	12,195
			Guyatt, L W	1,015
			Hawkes, G	95
			Howard, J R	1,305
			Maurice, F	202
			Timms, C E	675
			Trent, G H	10
				15,547
1950				
Beare, W B	500		Beare, W B	50
Beare, J W	500			
Beare, W B and J W	12,048		Beare, W B and J W	12,195
Blackney, Miss W B	1,954			
Culley, W C	1,577		Culley, W C	212
			Guyatt, L W	1,015
Hawkes, G	37		Hawkes, G	95
			Howard, J R	1,305
Timms, C E	625		Timms, C E	675
	17,241	**66.5%**		**15,547**
1951				
Beare, W B	500		Beare, W B	50
Beare, J W	500		Beare, W B and J W	12,195
Beare, W B and J W	12,048			
Blackney, Miss W B	1954			
Culley, W C	1577		Culley, W C	212
			Guyatt, L W	1015
Hawkes, G	37		Hawkes, G	95
			Howard, J R	1305
Timms, C E	625		Timms, C E	675
	17,241	**66.5%**		**15,547**
1952				
Beare, W B	500		Beare, W B	50
Beare, J W	500		Beare, W B and J W	12,195
Beare, W B and J W	12,048			
Blackney, Miss W B	1,954			
Culley, W C	1,577		Culley, W C	212
			Guyatt, L W	1,015
Hawkes, G	37		Hawkes, G	95
			Howard, J R	1,305
Timms, C E	625		Timms, C E	675
	17,241	**66.5%**		**15,547**

Ordinary	Number	% of Total Shares	Preference	Number
1953				
Beare, W B	500		Beare, W B	50
Beare, J W	500			
Beare, W B and J W	12,048		Beare, W B and J W	12,195
Blackney, Miss W B	1,954			
Culley, W C	1,577		Culley, W C	212
			Guyatt, L W	1,015
Hawkes, G	37		Hawkes, G	95
			Howard, J R	1,305
Timms, C E	625		Timms, C E	675
	17,241	**66.5%**		**15,547**
1954				
Beare, W B	500		Beare, W B	50
Beare, J W	500			
Beare, W B and J W	12,048		Beare, W B and J W	12,195
Blackney, Miss W B	1954			
Culley, W C	1,577		Culley, W C	212
			Guyatt, L W	1015
Hawkes, G	37		Hawkes, G	95
			Howard, J R	1305
Timms, C E	625		Timms, C E	675
	17,241	**66.5%**		**15,547**
1955				
Beare, W B	500		Beare, W B	50
Beare, J W	500			
Beare, W B and J W	12,048		Beare, W B and J W	12,195
Blackney, Miss W B	1,954			
Boosey & Hawkes	190	0.7%	**Boosey & Hawkes**	165
Culley, W C	1,577		Culley, W C	212
			Guyatt, L W	1,015
Hawkes, G	37		Hawkes, G	95
			Howard, J R	1,305
Timms, C E	625		Timms, C E	675
	17,431	**67.2%**		**15,712**

Ordinary	Number	% of Total Shares	Preference	Number
1956				
Beare, W B	500		Beare, W B	50
Beare, J W	500			
Beare, W B and J W	12,048		Beare, W B and J W	12,195
Blackney, Miss W B	1,954			
Boosey & Hawkes	190	0.7%	Boosey & Hawkes	550
Culley, W C	1,577		Culley, W C	212
			Guyatt, L W	1,015
Hawkes, G	37		Hawkes, G	95
			Howard, J R	1,305
Timms, C E	625		Timms, C E	675
	17,431	**67.2%**		**16,097**
1957				
Blackney, Miss W B	1,954			
Boosey & Hawkes	13,238	51.1%	Boosey & Hawkes	12,795
Culley, W C	1,577		Culley, W C	212
Hawkes, G	37		Hawkes, G	95
			Howard, J R	1,305
Little, J S	2,137		Little, J S	1,668
Timms, C E	625		Timms, C E	675
	19,568	**75.5%**		**16,750**
1958				
Blackney, Miss W B	1,954			
Boosey & Hawkes	13,238	51.1%	Boosey & Hawkes	12,795
Culley, W C	1,577		Culley, W C	212
Hawkes, G	37		Hawkes, G	95
			Howard, J R	1,305
Little, J S	2,362		Little, J S	1,868
Timms, C E	625		Timms, C E	675
	19,793	**76.3%**		**16,750**
1959				
Blackney, Miss W B	1,954			
Boosey & Hawkes	13,238	51.1%	Boosey & Hawkes	12,795
Culley, W C	1,577		Culley, W C	212
Hawkes, G	37		Hawkes, G	95
			Howard, J R	1,305
Little, J S	2,362		Little, J S	2,615
Timms, C E	625		Timms, C E	675
	19,793	**76.3%**		**17,697**

Ordinary	Number	% of Total Shares	Preference	Number
1960				
Blackney, Miss W B	1,954			
Boosey & Hawkes	13,238	51.1%	Boosey & Hawkes	12,795
Culley, W C	1,577		Culley, W C	212
Hawkes, G decd	37		Hawkes, G decd	95
			Howard, J R	1,305
Little, J S	2,537		Little, J S	2,989
Timms, C E	625		Timms, C E	675
	19,968	**77.0%**		**18,071**
1961				
Blackney, Miss W B	1,954			
Boosey & Hawkes	13,238	51.1%	Boosey & Hawkes	12,795
Culley, W C	1,577		Culley, W C	212
Hawkes, G died	37		Hawkes, G decd	95
			Howard, J R	1,305
Little, J S	2,612		Little, J S	3,209
Timms, C E	625		Timms, C E	675
	20,043	**77.3%**		**18,291**
1962				
Blackney, Miss W B	1,954			
Boosey & Hawkes	13,275	51.2%	Boosey & Hawkes	12,890
Culley, W C	1,577		Culley, W C	212
			Howard, J R	1,305
Little, J S	3,099		Little, J S	3,466
Timms, C E	625		Timms, C E	675
	20, 530	**79.2%**		**18,548**
1963				
Blackney, Miss W B	1,954			
Boosey & Hawkes	13,275	51.2%	Boosey & Hawkes	12,890
Clapham, A R	625		Clapham, A R	675
Culley, W E	1,577		Culley, W C	212
			Howard, J R	1,305
Little, J S	3,807		Little, J S	4,109
	21,238	**81.9%**		**19,191**

Ordinary	Number	% of Total Shares	Preference	Number
1964				
Blackney, Miss W B	1,954			
Boosey & Hawkes	13,525	52.2%	Boosey & Hawkes	12,990
Clapham, A R	625		Clapham, A R	675
Culley, W C	1,577		Culley, W C	212
			Howard, J R	1305
Little, J S	3,807		Little, J S	4109
	21,488	**82.9%**		**19,291**
1965				
Blackney, Miss W B	1,954			
Boosey & Hawkes	13,525	52.2%	Boosey & Hawkes	12,990
Clapham, A R	625		Clapham, A R	675
Culley, W C	1,577		Culley, W C	212
			Howard, J R	1305
Little, J S	3,807		Little, J S	4109
	21,488	**82.9%**		**19,291**
1966				
Blackney, Miss W B	1,954		Boosey & Hawkes	13,090
Boosey & Hawkes	13,685	52.8%	Clapham, A R	675
Clapham, A R	625			
Culley, W C	1,577		Culley, W C	212
			Howard, J R	1,305
Little, J S	3,807		Little, J S	4,109
	21,648	**83.5%**		**19,391**
1967				
Boosey & Hawkes Ltd. and Nominees	**21,648**	**83.5%**	Boosey & Hawkes Ltd. and Nominees	**19,391**

Appendix 10. Post-war

10.i Earliest line-produced brass instruments

Instrument	First date of manufacture	Serial numbers	Description	Workbook
Trumpet: Standard	23/10/1945	162428-162527	Standard Trumpet LP Sheridan Line Production.	HM/B&H A227/062
B ♭ trombone: American Position Imperial	28/06/1946	164081-6	American Position B ♭ Trombone LP Imperial Downing Line Production	HM/B&H A227/061
B ♭ cornet: B4012	05/03/1950	175622-645	B4012 B ♭ Cornet FVA LP Sheridan Line Production	HM/B&H A227/063
EE ♭ bass: 4036	05/03/1953	183195-218	EE ♭ Bass LP 4036 Kent Line Production.	HM/B&H A227/063
BB ♭ bass: 4038	25/03/1953	183466-505	BB ♭ Bass HP 4038 Kent Line Production.	HM/B&H A227/063

10.ii Earliest dates that hydraulic forming processes were recorded in the workbooks.

(HM/B&H A227/063)

Instrument	First date	Serial numbers	Description
BB ♭ bass: B4038	20/09/1950 26/09/1950	177111-14 177181-2	3V Contra LP B4038 Chapman
EE ♭ bass: B4036	01/11/1950 06/12/1950	177311-4 177484-7	EE ♭ Bass B4036 EE ♭ Bass B4036. 1st Issue with Hydraulic Branches
B ♭ euphonium: B4033	23/11/1950	177402-5	B ♭ Euphonium B4033 Hydraulic 1st Branch
E ♭ bass: R729	13/04/1951	178540-3	E ♭ Bass R729. Hydraulic 1st & 2nd Branches
B ♭ euphonium: R725	15/05/1951	178797-802	B ♭ Euphonium R725. 1st & 2nd Branches

10.iii Line produced and experimental standard, utility and Regent-type trumpets and trombones

In 1945 and 1946 the cheaper range of trumpet models was developed based on the basic standard and utility trumpets. A standard trumpet was in B ♭ with three valves and probably no trigger.

Instrument	First date	Serial numbers	Description	Workbook
Standard trumpet	23/10/1945	162428-527	Standard Trpt LP, Sheridan. Line Production	HM/B&H A227/061
Mark III standard trumpet	10/10/1945	162783-94, 162796, 162808-19.	Mk III was first recorded within a batch of standard trumpets.	HM/B&H A227/061
Standard trumpet	03/12/1945	162826-29	Standard Trumpet Experimental No makers name.	HM/B&H A227/061
Standard trumpet	21/12/1945	162939	Trumpet Standard Exp LP Experimental to Conn sample, American position, Sheridan. ['American position' - the valves closer to or further from the player's face.]	HM/B&H A227/061
Standard trumpet Mark III	30/01/1946	163101	Trumpet Standard Mark III LP Exp Sheridan.	HM/B&H A227/061
Standard trumpet Mark IV	06/02/1946	163127	Trumpet Standard Mark IV LP Exp Sheridan.	HM/B&H A227/061
Utility trumpet: Mark II	22/03/1946	163309-333	Trumpet Utility LP Mark II, Sheridan. Line Production.	HM/B&H A227/061
Regent trumpet R703	09/04/1946	163468	B ♭ Trumpet Regent LP Exp R703 Sheridan Line Production.	HM/B&H A227/061
Utility trumpet: Mark III	23/04/1946	163521-163620	B ♭ Trumpet Utility Mark III Sheridan Line Production.	HM/B&H A227/061
Regent type trumpet R703/4 Westminster	29/04/1946	163646-51	B ♭ Trumpet, LP, Engraved: Westminster, Model: R703/4, Sheridan Line Produced. [Westminster was a Besson model]	HM/B&H A227/061
Regent type trumpet	15/06/1948	170972	Experimental Regent Type Trumpet LP, Sheridan. Line Production.	HM/B&H A227/062

Regent trumpet [?]R350	19/12/1950	178262-3	Regent B ♭ Trumpet Experimental LP [?]R350 Sheridan.	HM/B&H A227/062
Regent trumpet R703	22/09/1952	182349	B ♭ Trumpet ‘Supr. Reg’ LP R703 Experimental, Sheridan.	HM/B&H A227/063
‘Supr’ Regent trumpet R703	17/10/1952	182567	Supr Regent Trumpet LP R703 Experimental Sheridan.	HM/B&H A227/063
New Regent trumpet 1703	06/06/1953	184076-184099	B ♭ Trumpet New Regent LP 1703.	HM/B&H A227/063
Oxford trumpet 1703	12/02/1954	185367-409	B ♭ Trumpet LP ‘Oxford’ [some less m/p’ce] 1703 Sheridan. [Some Regent type trumpets branded ‘Oxford’. Possibly for export.]	HM/B&H A227/064
Oxford trumpet 1703	17/05/1954	186413->	B ♭ Trumpet LP 1703 ‘Oxford’	HM/B&H A227/064
Hüttl ‘869’ model trumpets New Regent trumpet 1703	31/03/1955	198218	From October 1954 many Hüttl ‘869’ model trumpets were recorded, and in 1955 these were also noted with this number. B ♭ Trumpet LP (Hüttl) 869 (1703) (New Regent) Sheridan.	HM/B&H A227/065

Post-war ‘Regent’ trombones were developed from 1948 with a number of experimental models made leading to the new model 1717.

Instrument	**First date**	**Serial number(s)**	**Description**	**Workbook**
B ♭ trombone Regent type	15/06/1948	170973	Experimental Regent Type Trombone LP, Downing.	HM/B&H A227/062
B ♭ trombone Regent type	17/10/1949	174329	Experimental B ♭ Trombone SB Rgt H-LP, Downing.	HM/B&H A227/062
B ♭ trombone R716A	20/04/1950	176060	B ♭ Tenor Trombone SB HP New Model R716A Downing Line Prod.	HM/B&H A227/063
B ♭ trombone 1717	06/08/1953	184318-20	B ♭ Trombone Regent LP 1717 Sheridan	HM/B&H A227/064
B ♭ trombone 1717	02/09/1953	183231- 42	B ♭ Trombone 1717, Sheridan.	HM/B&H A227/064

10.iv Early mass-produced clarinets

The ‘Regent’ clarinet (made with die-cast keys) was developed for mass production with the first references in the workbooks to trial 14-key and 1026 model Regents in August 1946.

(HM/B&H A227/020)

Instrument	First date	Serial number(s)	Description
B ♭ Regent clarinet	14/08/1946 23/08/1946	37259 37270	B ♭ Clart, 14k, (part) Die Cast Keys, LP, Regent Wood, Cage & Lewis. B ♭ Clart (Regent), Die Cast Keys, 1026, Enfield Mass P, Regent 176.
B ♭ Regent clarinet	23/08/1946	37272	B ♭ Clart (Regent) Die-Cast keys, 1026, Enfield, Mass P, Regent 176[Trial instrument]
B ♭ Regent clarinet: first batch of 100 clarinets made at the Enfield factory	02/10/1946	From 37300	B ♭ Clart Boehm, 17key 6 Rings, D Cast Keys, 1026/B Enfield. M Prod. [Regent 176 - crossed out in pencil].

10.v Dates that B&H overseas companies were established

(Information taken from corporate catalogues and letterheads)

Date established	B&H overseas companies
1930s	Boosey & Hawkes (Canada Ltd.) Toronto. Boosey & Hawkes (Australia Ltd.) Sydney. Boosey, Hawkes, Belwin, Inc., New York.
1946	Boosey & Hawkes Incorporated, New York and Boosey & Hawkes (Canada) Ltd, Toronto
By 1949	Boosey & Hawkes Inc. Chicago and Los Angeles. Boosey & Hawkes (USA) Ltd. New York. Boosey & Hawkes (South Africa) (Pty.), Ltd. Cape Town.
1949	Boosey & Hawkes G.m.b.h. Germany, Bonn (when the ban on trading with Germany was lifted)
1952	American distributing agents with branches in New York and San Antonio, Texas were appointed. An agreement was drawn up between Boosey & Hawkes Ltd. and Musical Imports Incorporated appointing M.I. as 'the exclusive importer and distributer of the musical instruments made by Boosey and its controlled subsidiaries such as Besson, A.K. Huttl, and Drumcraft in the British Isles, France and elsewhere, under the trademarks 'Boosey & Hawkes', 'Oxford', 'Ajax', 'Edgware', 'Westminster', 'Besson', 'Imperial', 'Stratford' or any other marks or trade names which are or may be used by Boosey. Signed for Boosey & Hawkes Ltd. by Leslie A Boosey, Geoffrey Hawkes, Little. For Musical Imports, Incorporated by Edwin C. Sonfield, VP.
By 1955	Boosey & Hawkes (India) Ltd. Madras.

10.vi Mass-produced clarinets and flutes for export to North America

10.vi.a Clarinets

Date		
1947	Over 2,500 clarinets were mass produced, of which over 800 were sent unassembled to New York. [Recorded in a separate workbook with a different serial number system]	HM/B&H A227/021
1948	600 instruments were sent to New York at ‘Stage 1’ completion. [Recorded as above]	HM/B&H A227/021
1955	The ‘77’ (a cheap model) was introduced for export. Keys were made of Mazak - an inexpensive zinc alloy with a low melting point that was easy to cast. Some mass produced Besson and Regent wood clarinets are also recorded as having mazak keys from sn103943 onwards, preceding the ‘77’. However, from sn115790 very many more ‘unnamed’ and ‘77’ models had mazak keys.	HM/B&H A227/027
1956	118950-51 two clarinets were recorded in the workbook as ‘Mark II To New York’ (It is not noted which model was being developed)	HM/B&H A227/028

10.vi.b Flutes

Date		
1948-50	42799-42835, 49800-49999: The first small batches of ‘Regent’ flutes were recorded, followed by a batch of 200 flutes stamped ‘Regent’, ‘Lafleur’ and ‘Edgware’	HM/B&H A227/023
04/05/1951	61551-62550: 1,000 one-keyed ‘Regent’ flutes were manufactured, probably for band use abroad.	HM/B&H A227/024
1952-53	86000- 86874: 875 one-keyed B ♭ flutes in 1952-3, most of which were sent to Canada.	HM/B&H A227/026

10.vii Examples of brass instruments developed for export to America

During the late 1940s and early 1950s only a small number of brass instruments in very small batches were recorded for America and Canada.

Instrument	**First date**	**Serial numbers**	**Description**	HM/B&H A227/063
BB ♭ Recording Bass	11/12/1951	180491	BB ♭ Recording Bass 3v LP E1149/R, Chapman.	HM/B&H A227/063
B ♭ Recording Euphonium	11/12/1951	180492	B ♭ Rec. Eupho. 4v. Comp LP E1164/R Experimental, Hampton.	HM/B&H A227/063
EE ♭ Recording Bass	09/06/1952	181779-80	EE ♭ Rec Bass LP E1148, R Booth.	HM/B&H A227/063
B ♭ Euphonium	19/09/1952	182339	B ♭ Eupho 3V Comp LP B4034 To American Specification Hampton W.	HM/B&H A227/064
B ♭ Euphonium		184307	B ♭ Euph B/F E1164 Bell Fwd Recording Model American Engraving, Hampton.	HM/B&H A227/063
E ♭ Tenor Horn	19/11/1952	182700-5	E ♭ Tenor Horn LP B4029 American Engraving, Elkington Export.	HM/B&H A227/063
E ♭ Tenor Horn	01/12/1952	182754	E ♭ Tenor Horn B4029 T American Specification, Saunders.	HM/B&H A227/063
B ♭ Euphonium	02/12/1952	182760	B ♭ Euphonium 4V LP E1147 Bell Fwd, Hampton.	HM/B&H A227/063
	08/01/1953	182875-7	E ♭ Tenor Horn B4029 Abbott. To USA 27/05/1954	HM/B&H A227/063
B ♭ Cornet	03/01/1956	215897	B ♭ Cornet LP Experimental 1141.	HM/B&H A227/065
B ♭ Cornet	19/07/1956	229540-3	B ♭ Cornet LP EXP Experimental Models to New York 27/08/1956.	HM/B&H A227/066
B ♭ Cornet	08/04/1957	253539	B ♭ Cornet LP Model 1010 Super Besson 1182B. Tungum Bells, Red Brass Bells for USA. (Tungum is a strong, light-weight, non-corrosive alloy of nickel, aluminium, silicon and brass which when polished looks like gold).	HM/B&H A227/067
B ♭ Cornet	18/09/1957	263611-710	B ♭ Cornet Besson Super LP 1182 To USA with Red Brass Bells.	HM/B&H A227/067
Piston bugles	From June 1956	various	Made in tin/nickel alloy for the widespread N. American ‘drum corps’ movement, and a range of instruments designed with the bell pointing forward that were based on the ‘recording’ bass for the flourishing American high-school and college marching band s.	HM/B&H A227/066 and A227/067

10.viii ‘Starline’ instruments: marketed under the Rudall Carte name

Instrument	First date	First serial number(s)	Description/Destination, dealer	Workbook
B♭ Trumpet: Starline No.2	22/05/1956	224999	Experimental. To Sweden	HM/B&H A227/066
B♭ Trumpet: Starline No.1	22/05/1956	225000	Experimental. To Sweden	HM/B&H A227/066
B♭ Trumpet: Starline No.1	20/06/1956	226905-11	Experimental. To Belgium, Germany, Sweden, Barnes & Mullins.	HM/B&H A227/066
B♭ Trumpet: Starline No.2	20/06/1956	226913-17	Experimental. To Belgium, Germany, Sweden, Barnes & Mullins.	HM/B&H A227/066
Clarinet: Starline No.1	June 1956	126750-57	To dealers in: Germany: Jorgensen ; Belgium; Sweden: Herman Levin in Gothenberg Switzerland: Jost Heer	HM/B&H A227/028
Clarinet: Starline No.1 Blue	August 1956	128425		HM/B&H A227/028
	1957		To Norway: CM Iverson, Oslo	HM/B&H A227/029
	1958		To Holland: Serlin	HM/B&H A227/029, A227/030
Clarinets: Starline	1956	Many	Barnes & Mullins	HM/B&H A227/028
	Dec. 1956 to 1958		Australia: B&H, S Johnson and EMI	HM/B&H A227/028, A227/029, A227/030
Clarinet: Starline Blue No.2	29/01/1957	131032-131043 (single batch)	Germany: Jorgensen	HM/B&H A227/028
B♭ Trombone: 102 Starline No.1	06/07/1956	227818/19/20	EXP: To Germany, Belgium, Sweden	HM/B&H A227/066
B♭ Trombone: 102 Starline No.1 Blue	10/07/1956	228206-256	To Barnes & Mullins, Sweden, Denmark, Switzerland, Australia. Germany: Jorgensen; Brussels: Cohen; Holland: Serlui; Norway: Iversen; Canada: B&H	HM/B&H A227/066
Flutes metal: Starline	October 1958	165175	To Barnes & Mullins	HM/B&H A227/030

10.ix Exports: 8-10 and 623 clarinets, student model flutes

Instrument	First date	First serial number(s)	Description/Destination, dealer	Workbook
8-10: first batch of nine instruments stamped ‘Stratford’	1957	150300-8 163475-666	Stratford Small Bore 28/10/1957 of which six are recorded ‘New Stratford Wood. To Canada’. Eric McGavin detailed in his notes on the development of the new model that the new model clarinets should be stamped ‘Stratford’. However, the very many subsequent instruments of this new model were recorded as ‘8-10’. B♭ Clarinets LP 8-10 Wood for USA, New York, Canada, (Provincial Americans). The first consignments were sent to USA in July and August. Charged to Regent St from June 1958.	HM/B&H/McG. HM/B&H A227/029, A227/030
Flutes: metal, Edgware		165150-174	to New York, South Africa, Canada, W. Germany and Sweden	HM/B&H A227/030
Flutes: metal	Sept. 1958		Edgware To New York	HM/B&H A227/029
Edgware 8092		167805-167866	Metal flutes Edgware 8092 to SA, Canada, W Germany, Sweden.	HM/B&H A227/030
Hüttl ‘623’	1958		Six Hüttl ‘623’ design clarinets to Sweden	HM/B&H A227/030
B♭ Clarinets ‘623’	20/10/1958	163701-6	Sweden	HM/B&H A227/030

10.x Exports of ‘Imperial’ instruments

Instrument	Date	First sns	Description/Destination, dealer	Workbook
4 oboes, 2 cors anglais and 1 bass clarinet for the Bulgarian Symphony Orchestra	1949	49240-43 49275-6 49060	Conservatoire model oboes: Oboe Imperial LP Conservatoire BW Skillin. Conservatoire cors anglais: Cor Anglais Imperial LP Conservatoire BW J Smith Extra Bell for Low B ♭ . B ♭ Bass Clarinet Boehm Imperial Wood (Bulgaria) G Skillin £169.	HM/B&H A227/023
Clarinets and bassoons sent to Canada	1950	49146-57 49164-72 49179-81	1010s ‘Canadian Spec.’	HM/B&H A227/023
Clarinets sent to New York	1951	49631	B ♭ Clarinet Boehm Imperial Special J Smith Special for Mr Ed Reed USA.	HM/B&H A227/023
Clarinets: line-produced to NY	1954	80781-92	12 line-produced Imperial B ♭ clarinets sent to New York	HM/B&H A227/025
	1954	87318-25 87272-3 87286-91	B ♭ Imperial clarinets 1011 Bassoons: Bassoon Heckel LP Maplewood 1171 J Reynolds, To Canada. B ♭ ‘Symphony 1010’ New York	HM/B&H A227/026
Imperial clarinets dispatched to Reginald Kell for use by some of his students	1956	120155-9 120271 120276-8	A Clarinets: A Clarinet Imperial Wood Boehm 1539 A. Lewis, For Mr Kell, New York, charged to Regent St. 19/03/1956 and 28/03/1956. B ♭ Clarinets: Boehm Imperial LP Wood 1540 J. Smith, charged to Regent St. 19/03/1956, 22/3/56 and 28/03/1956, For Mr Kell, New York.	HM/B&H A227/028 Kell Interviews
Increasing export of clarinets to Canada: Beginning of US sales of a number of handmade woodwind instruments	From 1956	120280-3	Batches of 4 bass clarinets Boehm Imperial; 6 conservatoire oboes; bassoons, cors anglais, Imperial and Symphony A , B ♭ , E ♭ , bass and alto clarinets (120749-50 and more: Ebonite, Imperial, J Smith: the first alto clarinets made for many years)	HM/B&H A227/028
First Imperial clarinet recorded for Bonn	Aug 1957	120958	B ♭ Imperial Clarinet Wood J Smith.	HM/B&H A227/028
‘Imperial clarinets sent to B&H South Africa.	12/03/58	150166/171-5	Imperial B ♭ clarinets 8010E. First batch sent to B&H South Africa.	HM/B&H A227/029

10.xi Home market/ Professional instruments

10.xi.a Clarinets

	First date	Serial number	Description	Workbook
Developmental 926 clarinet	04/06/1945	36698-700	B ♭ Clarionet, 926, Skillin, (Mr B M-M's pattern) [sn 36698 not sold to Reg St until 13/6/50, £20].	HM/B&H A227/020
Mass production of 'handmade clarinets	1945		58 '926' and 198 '1026' clarinets were made in 1945. The 926 accounted for 15.9%, and the 1026 for 54.4% of reed production. However, mass production of what were described as 'handmade' clarinets was not continued.	HM/B&H A227/020
Almost exclusive production of the '1026B' (mass produced)	from February 1946			HM/B&H A227/020
Line production trialled for manufacturing Imperial clarinets:	1953	80500-80805	1540 (wood), SON 1596 (ebonite) Most had nickel forged keys, some silver plated keys. (306 Imperial clarinets were made in 1953).	HM/B&H A227/025
1010 clarinet reintroduced	18/12/1947	39477-8 ?+	A Boehm clarinet, Imperial, LP, Wood, 1010. [1955 catalogue: model numbers: B ♭ 8013, A 8014, pair 8016.]]	HM/B&H A227/023
Bass clarinet reintroduced	06/05/1946 17/06/1946	37181 37212	Bass clarinet Boehm, Art G#,Dup pipe, New E ♭ , Reynolds. Bass clart. New E ♭ . Art G#. Dup pipe, ex E ♭ Reynolds. Only a few were made for some years after the war: 2 in 1946, 1 in 1949, 2 in 1951: thereafter made in small numbers.	HM/B&H A227/020
	01/12/1949	49060	B ♭ Bass Clarinet Boehm Imperial Wood (Bulgaria) G Skillin £169.	HM/B&H A227/023
	1951	49468-9	Bass Clarinets Imperial LP Skillin.	HM/B&H A227/023
	From 1951		Bass and alto clarinets were promoted as having heavily silver-plated keys and automatic speaker-key action instead of the heavily sprung dual thumb key.	*Woodwind by Boosey & Hawkes* (1951): HM/B&H.p.W11, p.PL16.

10.xi.b Cornets

Instrument	First date	Serial numbers	Description	Workbook
Cornet B4012	01/06/1948	170810	B ♭ Cornet FVA HP Plated B4012.	HM/B&H A227/062
Cornet B4012	05/03/1950	175622-45	B4012 B ♭ Cornet FVA LP Sheridan line prod	HM/B&H A227/063
Cornet Regent R718	30/03/1950	175786-833	R718 B ♭ Cornet Regent LP Sheridan line prod.	HM/B&H A227/063
Cornet Regent	21/02/1951	178075	Regent B ♭ Cornet Taquet Screw Action, Cornet Bell LP Experiment Sheridan.	HM/B&H A227/063
Cornet Imperial	21/02/1951	178076	Imperial B ♭ Cornet 2 Short Action, Cornet Bell LP Experiment Sheridan.	HM/B&H A227/063
Cornet Regent-type	04/12/1953	185126	B ♭ Cornet Experimental LP Sheridan Regent Cornet Huttl Bell, Fixed m/pipe, Bored Piston.	HM/B&H A227/064

Long Model/Mezzo Cornet - Experimental models

During the late 1940s and early 1950s some experiments were made on the long model cornet which was only really used in dance and traditional jazz bands in Britain. From 1948 Boosey & Hawkes renamed it the mezzo-cornet, and it was offered in ‘Imperial’ 4014 and ‘Regent’ 764 models until about 1953; after this it was only available in the latter.

Instrument	First date	Serial number(s)	Description	Workbook
Long model cornet	29/04/1946	163639	Long Model Cornet LP Exp, Sheridan.	HM/B&H A227/061
Mezzo cornet Regent R764	08/01/1948	169519	Sample Mezzo Cornet Regent LP R764, Sheridan.	HM/B&H A227/062
Mezzo cornet Imperial	20/04/1950	176049-51	Mezzo Cornet Imp Exp LP Sheridan.	HM/B&H A227/063
Mezzo cornet B4014	18/05/1951	178870-87	B ♭ Mezzo Cornet HPx6 LPx12 B4014 Sheridan.	HM/B&H A227/063
Mezzo cornet R764	12/06/1951	179142-49	R764 B ♭ Mezzo Cornet LP Sheridan.	HM/B&H A227/063
Mezzo cornet R764 and 1720	20/06/1953	184175-80	Mezzo cornets 764 and 1720.	HM/B&H A227/064

10.xi.c Horns

Post-war B&H further developed their ‘Imperial’ double horn to keep up with the increasing popularity of Alexander horns.

First date	Serial number(s)	Description	Workbook
17/01/1947	165739-40	Rotary Horn Lever Action LP Red Brass/Brass Exp B4051.	HM/B&H A227/062
11/03/1947	166268-71	Rotary Horn Lever Action LP B4051 Elkington, ‘First instruments for New M/Pipes. Extra 3¾” each side. Small F Slide’.	HM/B&H A227/062
14/04/1947	166613	Exp Rotary Horn Corded Valves LP B4051, Elkington.	HM/B&H A227/062
26/06/1947	167488-9	Rotary Horn Corded Action LP B4051 Elkington ‘New TS 7/8” longer each side’.	HM/B&H A227/062
02/10/1947	168455	Rotary Horn Lever Action LP B4051 New M/Pipe for Mr Langley.	HM/B&H A227/062
01/04/1953	183525-6	Rotary French Horn LP 4051 Abbott Outside Pistons.	HM/B&H A227/063
03/06/1953	184048-51	Rotary Horns 4051 Outside Pistons Corded Action.	HM/B&H A227/063
01/03/1954	185674-9	Fr Horn 4046 With Modified Spindles & Top Caps.	HM/B&H A227/064
31/01/1955	195130	Comp Horn Experimental.	HM/B&H A227/064

10.xi.d Trombones

Dance band trombones

Dance band trombones were recorded in the workbooks without a model number, as B4039 (the old ‘Artist’ model, now described as ‘Imperial’) or R717A which was the Regent model of similar design. For example:

Instrument	First date	Serial number(s)	Description	Workbook
B ♭ trombone B4039	05/07/1945	162203-162227	B ♭ trombones LP Dance Band m/b B4039 Downing.	HM/B&H A227/061
B ♭ trombone R717A	07/07/1945	162228-52	B ♭ trombones LP Dance Band m/b R717A Downing.	HM/B&H A227/061
B ♭ trombone	18/08/1945	162307-331	B ♭ trombones LP Dance Band m/b no model number, Downing	HM/B&H A227/061

A number of experimental instruments were made including a ‘Mark III Regent’ and a ‘Cabaret’ - the once fashionable old Hawkes & Son model; the ‘Cabaret’ was not developed further to production. Two batches of six ‘American Position’ trombones were made. It is probable that they were trial models for the export market.

Instrument	First date	Serial number(s)	Description	Workbook
B ♭ trombone	21/12/1945	162940	Trombone Exp, Downing.	HM/B&H A227/061
B ♭ trombone Mk III R717A	14/01/1946	163011-060	B ♭ Trombone Mark III Dance Band LP R717A , Downing.	HM/B&H A227/061
B ♭ trombone	18/01/1946	163073	B ♭ Tromb Exp LP Brass Cabaret Model Exp Downing	HM/B&H A227/061
B ♭ trombone Imperial American Position	28/06/1946	164081-6	American Position B ♭ Trombone Imperial LP Downing Line Production.	HM/B&H A227/061
B ♭ trombone Regent American Position	28/06/1946	164087-92	American Position B ♭ Trombone Regent LP Downing Line Production.	HM/B&H A227/061

Experimental trombone models

Modifications continued to be made to and various experimental trombone models were made, including developments of the 'Imperial 4040' model and Besson's W1134 and W1135 models.

Instrument	First date	Sns	Description	Workbook
B ♭ trombone	31/05/1948	170803	Experimental B ♭ Cylinder change to F LP, Downing.	HM/B&H A227/062
B ♭ trombone Imperial	17/10/1949	174328	Experimental B ♭ Trombone SB Imp H-LP, Downing.	HM/B&H A227/062
B ♭ trombone B4040	17/10/1949	174330	Experimental B ♭ Trombone SB (as B4040) LP, Downing	HM/B&H A227/062
B ♭ trombone W1135	21/03/1950	175700-3	W1135 B ♭ Trombone with rotary extension to F LP Besson Model, James.	HM/B&H A227/063
B ♭ trombone W1134	20/04/1950	176046-8	B ♭ Trombone Imp Exp LP W1134 [Besson model], Downing.	HM/B&H A227/063
B ♭ trombone B4040	05/06/1951	179057-68	B ♭ Trombone LP 4040 Non-ground slides. Downing.	HM/B&H A227/063
B ♭ trombone B4040	15/04/1952	181155	B ♭ Trombone HP B4040 1st instrument to be fitted with Brass Slides & new locking nut, Downing.	HM/B&H A227/063
B ♭ trombone B4040	22/09/1952	182347	B ♭ Trombone LP B4040 With light bell Experimental Sheridan.	HM/B&H A227/063
B ♭ trombone B4040	21/11/1952	182738-9	B ♭ Trombone B4040 Downing Experimental New [?]curly Bell 7 ¾" Bell. [Sold] To Canada 08/11/1954.	HM/B&H A227/063
B ♭ & F trombone	13/04/1954	186259	B ♭ & F Trombone Experimental 8¼" Bell (As per Conn) Downing.	HM/B&H A227/064

The 'Betty' bass trombone continued to be popular for orchestral use in Britain and the Empire, and instruments were often slightly remodelled.

Instrument	First date	Serial number(s)	Description	Workbook
Bass trombone: Imperial	07/10/1947		Imperial Bass Trombone in G with Cylinder change to D. With Chrome Slides & Deep Cups. James.	HM/B&H A227/062
Bass trombone	29/01/1948	169804	Bass Trombone with Cylinder change to D with C slide. James. Cut TS Bow ½". Mr Howell.	HM/B&H A227/062

10.xi.e Trumpets

Instrument	First date	Serial number(s)	Description	Workbook
B♭ trumpet 4015	29/04/1946	163640-45	B♭ trumpet, LP, Engraved: Edgware, Model: Imperial 4015 Sheridan Line Produced.	HM/B&H A227/061
Trumpet Imperial 4015	30/04/1946	163697	Trumpet Imp “Experimental” LP B4015 Sheridan.	HM/B&H A227/061
Trumpet NVA Imperial	15/06/1946	164017	NVA Trumpet Imperial Exp LP.	HM/B&H A227/061
B♭ trumpet NVA B4015	30/04/1947	166753-786	B♭ trumpet NVA LP B4015, Sheridan Line Production.	HM/B&H A227/062

1948 a new model trumpet in B♭ and A was developed, mainly for orchestral use.

Instrument	First date	Serial number(s)	Description	Workbook
B♭ and A trumpet	07/01/1948	169518	Experimental B♭ & A Trumpet, Imperial LP, (Imp 147), Sheridan.	HM/B&H A227/062
B♭ and A trumpet	25/02/1948	170140	B♭ and A Trumpet Exp LP Sheridan.	HM/B&H A227/062
B♭ and A trumpet Mk II	14/09/1948	171437-442	Experimental MkII LB B♭ & A Imperial Trumpet LP (Mk II) 12 sided caps Sheridan Line Production.	HM/B&H A227/062
B♭ and A trumpet Mk II	03/02/1950	175360-410	B♭ & A Trumpet FVA Mk II LP Sheridan.	HM/B&H A227/063
B♭ and A trumpet Mk II 23, B4017	05/06/1951	179007-8	Mk II 23 Trumpet With Top Spring Action LP Experimental Sheridan.	HM/B&H A227/063
B♭ and A trumpet 23, B4017	18/01/1952	180618	B♭ & A Trpt Model 23 LP B4017 Sheridan.	HM/B&H A227/063
B♭ trumpet Mk III B4017	17/10/1952	182566	B♭ & A Mk III LP B4017 Experimental Sheridan.	HM/B&H A227/063
B♭ trumpet Mk III B4017	10/04/1953	183555	B♭ Trumpet Mk III LP 4017 Sheridan.	HM/B&H A227/063
B♭ trumpet Mk IV B4017	22/04/1953	183677-724	B♭ Trumpet Mk VI 4017 Sheridan [more 28/05/1953].	HM/B&H A227/063

10.xi.f Saxophones

Instrument	Date	First serial number(s)	Description/Destination, dealer	Workbook
New Century Alto Saxophone: First Mass Produced	16/05/1945	36661	X100. 'Makers name':CRC	HM/B&H A227/020
	23/08/1946	37283	Name Imperial name first noted against New Century Alto Saxophone	HM/B&H A227/020
	1946		205 NC and Imperial altos and 1 Imperial tenor documented.	HM/B&H A227/020
New Century Tenor Saxophone	18/01/1945	36614	NC^{t} Tenor Saxo, prototype, Pryor finished by CRC, Straps, s/pl keys, ?bell hole. [Not denoted CRC. No other tenor saxophones recorded until October 1947.]	HM/B&H A227/020
New Century Tenor Saxophone	1948	42756-8, 42769-98	First batches of 3 and 30 instruments	HM/B&H A227/023

10.xii Emperor trumpets and trombones

B ♭ trumpet Emperor	23/03/1953	183465	B ♭ Trumpet Emperor LP Experimental, Sheridan.	HM/B&H A227/063
B ♭ trumpet Emperor	22/09/1953	183267-316	B ♭ Trumpet Emperor LP, Fogelman.	HM/B&H A227/063
B ♭ trumpet Emperor 4306	16/08/1953	184400->	B ♭ Trumpet Emperor 4306.	HM/B&H A227/064
B ♭ trombone Emperor 4324	06/08/1953	184315-7	B ♭ Trombone Emperor LP 4324, Sheridan.	HM/B&H A227/064
B ♭ trumpet Emperor 4306	29/02/1956	219028- 090	B ♭ Trumpet 4306 – some ‘Oxford de Luxe. [In 1956 some were branded ‘Oxford de Luxe’ and with the Besson ‘Stratford’ name, probably for export.]	HM/B&H A227/066
B ♭ trumpet Emperor 4306	18/04/1956	222769	B ♭ Trumpet LP 4306 Stratford, Kent.	HM/B&H A227/066

10.xiii Trombone bore sizes

Comparative bore sizes. (List provided by Arnold Myers).

Maker	Serial number	Bore size
Besson	(c.1880)	11.05
Boosey Perfecta	130958	11.05
Artists' Perfected	47579	11.2
Artists' Perfected	163108	11.2
Imperial	174981	11.3
Excelsior	49066	11.4
Excelsior Sonorous	13848	11.4
Besson	12768	11.45
Cabaret	57994	11.9
Cabaret	140987	12.0
Boosey Solbron (American Model)	114792	12.3
Imperial '4040'	208589	12.3
Boosey Large Bore	126548	12.35
Sovereign '547'	528369	13.7

10.xiv Annual reed instrument output

	Annual number of reed instruments mass produced	Annual number of reed instruments hand produced
1944		165
1945	100 (saxophones only)	264
1946	406	248
1947	1,672	126

Over the next five years production increased significantly:

	Number of clarinets manufactured a week	References and notes
1952	200	A draft of company literature states that 'Clarinets take shape at the rate of over two hundred per week, and each instrument is tuned and tested. The moulded mouthpieces [...] are made at the rate of three every five minutes by a large machine, vulcanite powder and one operator.' *A Visit to the Musical Instrument Factory and Music Publishing Company of B&H Ltd, Edgware, Middlx.* (September 1952):HM/B&H.
1953	250	B&H Ltd., "Hydraulic Forming Techniques Applied to the Manufacture of Musical Instruments". Reprinted from *Machinery* (12 and 26 June): HM/B&H. p.3.
1957	Over 400	*From Log to Finished Clarinet* in Royal Festival Hall: 17 Sept-3 Nov 1957 'Private Musicke' Arranged by the Galpin Society (1957): UOBC. p.6.

Appendix 11. 1960s and 1970s

11.i 1961 new clarinet and flute models for North America

Model numbers:‘2000’=818, ‘4-20’=815, ‘1-10’=860

Model	Charged to Regent St.	First serial number(s)	Description
2000	17/04/1961	192022-4	Prototype ‘B&H Series 2000’ B♭ Clarinets. Integral wooden tone holes, S/P keys, ‘Taylor’ action. Reginald Kell bore and setting-out.
4-20	17/04/1961	192025-7	Prototype ‘B&H Series 4-20’ B♭ Clarinets. Integral wooden tone holes, R.K. bore & setting-out.
2-20	15/06/1961		B♭ Clarinet NS New Bore 2-20.
1-10	20/10/1961	198384-408	B♭ Clarinet Plastic 1-10.

(HM/B&H A227/032)

Model	First serial number	Description
3-20	197243	Many made. First entry noted: Model 1957, Flute/Sil, 42 off B&H 3-30, 8 off Rommilly [sic].
2-20	198421	Many made. First entry noted: Model 1951 03/11/1961 N/P Flute 2-20.

(HM/B&H A227/032)

11.ii Long model cornets

Model	Description	Reference
Long model cornet: Besson American 10-10	Designed for the traditional jazz band	Best Play Besson 1963. p.7.
Long model cornet: Imperial 4014	Medium-large bore, ‘ideal for concert or orchestral work’, also promoted as suitable for use in the modern jazz ensemble. It had dual water keys and adjustable 3rd valve slide.	Finest Musical Merchandise 1963. p.3.
Long model cornet: B&H Emperor 4304: same as Besson ‘Stratford’ 1156	New model: described by Besson as ‘the newest development of the Trumpet-Cornet (or Mezzo Trumpet)’ and by Boosey & Hawkes ‘as an instrument of great versatility, built for all types of playing.’ Mobile 3rd valve slide, 2 water keys.	Finest Musical Merchandise 1963. p.3. Best Play Besson 1963. p.7.
B&H Trumpet cornet ‘78’	low-priced model	Best Play Besson 1963. p.7.
Besson ‘35’ B♭ cornet long model	low-priced model	

11.iii New Besson International B ♭ tenor trombone. Model 1195

Date	Serial numbers	Description	Workbook
17/07/1964	375943	First record	HM/B&H A227/072
	392377->	LP 1195 Besson International. x80. [Many of the instruments were scrapped in this and following batches.]	HM/B&H A227/072
26/10/1967	443578->	6 of a batch of 10 had ‘new length T/Slide’	HM/B&H A227/075

11.iv Comparative list of B&H and Besson brass instrument models by A. Myers

		'Brass & Woodwind by Boosey & Hawkes'. 1968		**'Besson for Brass. Choice of leading bands throughout the world' 1969**
B ♭ Trumpets	4018	Sessionair	250	International
	4306	Emperor	1108	Stratford
	1703	Regent	1500	Westminster
B ♭ Long model cornets	4014	Imperial	270	Academy
	4304	Emperor	1156	Stratford
E ♭ Soprano cornets	4026	Imperial	180	New Standard
B ♭ Cornets	-	-	255	International
	4012	Imperial	181	New Standard
	1718	Regent	2112	Westminster
B ♭ Trombones	-	-	265	International
	4040	Imperial	402	Academy
	4324	Emperor	1400	Stratford
	1717	Regent	1150	Westminster
B ♭ +F Trombones	4041	Imperial tenor	275	International tenor
	1185	Emperor	1410	Stratford tenor
	4043	Imperial bass	285	International bass
G Trombones	4042	Imperial	410	New Standard
Double horns	-	-	210	Academy F+B ♭
	4053	Imperial	-	-
Flugel horns	4027	Imperial	201	New Standard
	1721	Regent	2115	Westminster
Tenor horns	4029	Imperial	203	New Standard
	1722	Regent	2116	Westminster
Baritones	4031	Imperial	205	New Standard
	1723	Regent	2117	Westminster
Euphoniums	4033	Imperial 4v	301	New Standard 4v
	4034	Imperial 3v	300	New Standard 3v
	1725	Regent 3v	2120	Westminster 3v
EE ♭ basses	4036	Imperial 4v	501	New Standard 4v
	4035	Imperial 3v	500	New Standard 3v
	1729	Regent 3v	2121	Westminster 3v
BB ♭ basses	4037	Imperial 4v	506	New Standard 4v
	4038	Imperial 3v	505	New Standard 3v
	-	-	2125	Westminster 4v
	1732	Regent 3v	2122	Westminster 3v
EE ♭ Sousaphones	4098		2185	
BB ♭ Sousaphones	4099		1200	

11.v Sovereign range of instruments

Instrument	First date of manufacture	Serial numbers	Notes	Reference
Sovereign B ♭ tenor trombone 4044 (later renumbered 4105)	July 1971 29/06/1971	510420- 510826-850	Curiously, in two batches some instruments were stamped ‘Sovereign’ [x8] and the others ‘International’ [x17]).	A227/077
Sovereign E ♭ tenor horn 4030 (4109)	08/07/1971 20/06/1972	511511-15	The tenor horn’s bore was increased from .434” to .466”/11.8mm and bell diameter from 7”to 8”/203mm. In some batches some instruments were stamped ‘Sovereign’ and some ‘International’.	A227/077, 078 B&H (Sales) Ltd. B&H Sovereign Brass. c.1972. AMPC
Sovereign flugel horn 4028 (4108)	08/07/1971 17/02/1972	511486-95	In some batches some instruments were stamped ‘Sovereign’ and some ‘International’.	A227/077
Sovereign B ♭ cornet (4107)	15/09/1971	514977		A227/077
Sovereign bass trombone in B ♭ and F with pull to E (4106).	23/08/1972	531669-71	2V T/B Issued 01/12/1972.	A227/078
Sovereign bass trombone in B ♭ F G and E ♭ . (4110)			2-valve design. Both valves led from the main tube and were controlled with the thumb and index finger. The thumb valve was the conventional F, and index finger G. Used together they produced E ♭ . This enabled many new alternative positions in the middle and low registers, and facilitated production of the low C and B ♭ .	B&H (Sales) Ltd. B&H Sovereign Brass. c.1972. AMPC.

11.vi Sovereign brass instrument model numbering

New	Old	
906		‘Studio’ B ♭ Trumpet
907		‘Symphonic’ B ♭ Trumpet
920	4107	B ♭ Cornet, medium bore
921		B ♭ Cornet, large bore
925		E ♭ Soprano cornet
945	4108	Flugel horn
950	4107	E ♭ Tenor horn
930/932	4105	B ♭ Tenor Trombone/ +F attachment
939	4106	Bass trombone in B ♭ and F
940	4110	B ♭ F, G & E ♭ ‘Double Trigger’ Bass trombone
955		B ♭ Baritone
960		B ♭ Euphonium 3v
967		B ♭ Euphonium 4v

11.vii Factory plans

	Some existing plans were used as a base for new overlays. Extant plans showing redesigned layouts include:
30/09/1965	First Floor Plan PLA 508, E98.779 Hammond organ, stores and accounts dept.
18/11/1971	PLA 500 Upper floors.
22/04/1972	PLA 463 overlay on PLA 500 Reed Layout. Used to redraw in 1976 PLA 506 Plan of the factory.
19/03/1975 21/05/1975	Plans of layout of production area for 563 flute. PLA 524/527/528, E98.791/788;
28/03/1975	PLA 525 Proposed layout for technical development and production control areas.
(no date)	Enclosed Flute Assembly Area PLA 527, E98.795;
04/03/1976 redrawn 20/04/1976	Upper floor over polish dept.
07/08/1979	Proposed layout for case making department. PLA 614, E98.789.

(HM/B&H)

Appendix 12.

12.i Imported instruments 1980s

Made in Germany	437 B♭ trumpet
Made in Germany	438 B♭ and C trumpet
Made in Taiwan by KHS Stencils of Jupiter models	B&H 400 Series: 455 B♭ trumpet 457 B♭ tenor trombone 458 B♭ cornet
Made in France Available until 1982	Regent compensating double horn in B♭ and F
Made in Czech Republic 1981 Lidl French horn	414 B♭ & F (rotary) compensating 416 B♭ & F full double (rotary) with separate E♭ slide 417 B♭ & F full double symphonic horn
Made in Germany 1981 Gerhard Scheider	418 double horn B♭ & F
Made in Czech Republic from 1982 Lidl French horn	415 B♭ and F full double (rotary) compensating 416 B♭ & F full double (rotary) with separate E♭ slide
Made in Germany 1982 Gerhard Scheider	418 double horn B♭ & F
Made in Pakistan Bugles	B♭ bugle (2-429 B♭ bugle, tuneable, copper or silverplate)
Made in USA	600 Series: 609 B♭ trumpet 637 B♭ tenor trombone
Made in USA	F. Besson Meha and Brevette ranges of trumpet and flugel horn

(Information taken from various catalogues)

12.ii Regent/Westminster models

Late 1970s Regent/Westminster models: available until *c.*1984 but by August 1981 were being phased out	By May 1982, a whole new range of Regent II instruments had been developed and all mid range Emperor/Concord instruments discontinued. Regent II models:
602 trumpet 615 cornet 620 long model cornet 645 flugel horn 630 trombone 650 tenor horn 655 baritone 660 euphonium 675 E ♭ bass 680 B ♭ bass 685 BB ♭ bass	612 trumpets 622 cornet (623 discontinued) 632 B ♭ Tenor Trombone 652 Tenor Horn 657 Baritone 662 Euphonium 662, 664 (bell forward) 677 E ♭ bass 3v 678 B ♭ bass 3v 682 B ♭ bass with large mouthpipe 683 B ♭ bass 3v interchangeable mouthpipe (included in catalogues from 15/05/1982 to *c.*1984.
Concord (discontinued by May 1982 607 trumpet 636 trombone	Concord was replaced with: 610 Emperor trumpet (foreign-made with an American case) 606 Besson ‘Crescendo’ 606 trumpet (large bore) 623 Regent cornet

12.iii Interview between Arnold Myers and Sandy Blair

Notes supplied by Arnold Myers, taken from interview with Sandy Blair 10/09/2003.

In 1977 Brighouse & Rastrick band had a funding boost with the success of 'Floral Dance' in the charts. They decided to replace their basses. Boosey & Hawkes asked if B&R would be interested in going for the new models. John Fletcher and Sandy Blair were invited to try 5 EE♭ and 2 BB♭ basses. At this time they were unfinished and didn't have the stays or trim. They found one EE-flat to be the best, so B&R asked B&H to make two like that one. These were ready in 1978. They were marked 'Imperial' although of 'Sovereign' design in most respects. They did have the heavier metal of the 'Imperial'. They also had a different angle of the mouthpiece receiver from previous and subsequent standard models. 19-inch bells had already been an option with 'Imperial' basses.

Players were tending to use larger mouthpieces than those supplied with the instruments so 'Imperials' sometimes had part of the tubing excised to correct flatness in pitch. In the 'Sovereign' this was designed in, and the third largest bow is higher on the instrument than it had been with the 'Imperial'. The valve cluster was substantially the same, and of the same bore.

Additional notes supplied by A. Myers, taken from a personal communication from Sandy Blair 07/01/2015.

The basses purchase was through Barratts of Manchester, the MD Adrian Barratt accompanied us, that is myself and Les Beevers (BB♭ bass B&R [Brighouse and Rastrick Band]) a player with great ability and experience, a B&R stalwart not to mention Chairman at the time - together with John Fletcher was the lead designer - the alteration to the third bow was brought about between the designer and Fletch and had been adopted on his orchestral tuba as had the mouthpipe lower position, the idea being to give clearer vision and posture and later used on the 981 model, but the change to the higher positioned mouthpipe was Fletch's the idea being to give clear vision past the bell and be a suitable position whilst 'on the march' - I mentioned two further issues to the designer :-1) I thought the mouthpiece DW2A was not an all-round good tuba mp and perhaps they should consider developing another to add to the range, as at the time I was

using a Bach 24W and 2) I asked why the lower mp mouthpipe position that I knew B&H supplied on their Swiss model BB ♭ couldn't be available in the UK as for instance my upper body was a too short to make it comfortable. Later on in time I was invited to attend a meeting at B&H along with Derek Jackson from Black Dyke where again we talked about the new developments to become the Sovereign range.

Sandy Blair's bass, which had the original metal keys replaced with the plastic keys later used on the 'Sovereign' after about five years of use, now belongs to Arnold Myers, who currently uses it for orchestral playing.[289]

[289] EUCHMI (4278), tuba in E-flat, 4-valve compensating, sn621901 made by Boosey & Hawkes, London in 1978. According to the firm's workbooks the instrument was: M/A J/C no.66008; Model EE-flat 19'' bell special; complete; date delivered: 13.1.78; D.O.S. sheet no. B145.

12.iv Communication between Garry Ray and John Webb

Fax 6 April 1994 from Gary L. Ray, Wichita Band Instrument Co., Inc.

Dear Mr Webb,

I own a musical instrument shop in the States. We've 17 employees and have been in business since 1953. I've been here since 1961 and am the sole shareholder, together with my nice Lancashire wife. Yes, she is British.
I also own one-quarter of Paxman Musical, having bought Dick Merewether's shares some years ago.[290] The ownership of the shares has been somewhat amusing to us. We were in the UK two weeks ago, in an attempt to stop the sale of Paxman to Boosey-Hawkes. We are now selling 30 to 40 Paxman horns a year and I'm concerned that the B-H/Paxman horns will not be built to the standards demanded by my customers.

I've spoken with Andy Taylor recently about the Paxman problem and in the conversation, your name has come up. He speaks very highly of you.

Letter 18 April 1994 from John Webb to Gary Ray

Dear Mr Ray,

Thanks for the FAX; the vicissitudes of the Boosey/Paxman thing has entertained me, too, over the last few years. The latest I've heard from Boosey is that it's not going ahead. But that was a few days ago; anything could have happened since then.

(Paxman, B&H: Glasgow, John Webb Archive)

[290] Ray bought Mereweather's shares after his death in 1985.

Bibliography

See Volume 1.