From Design to Decline: Boosey & Hawkes and Clarinet Manufacturing in Britain, 1879-1986

Jennifer May Brand

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Volume 1 of 2

Declaration

I declare that the work presented here is my own.

Jennifer May Brand

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Abstract

Current literature agrees that British clarinet playing between c. 1930 and c. 1980 was linked to a particular clarinet manufacturer: Boosey & Hawkes. The unusually wide-bored 1010 clarinet is represented as particularly iconic of this period but scholars have not provided details of why this is so nor explored the impact of other B&H clarinets. This thesis presents an empirical overview of all clarinet manufacturing which took place at B&H (and Boosey & Co). Every clarinet model manufactured by B&H is discussed and the first and last serial numbers and total outputs of all individually-crafted clarinets are given. Developments in organology are also highlighted, emphasising changing preferences among British – and other – clarinettists, as reflected by manufacturing trends at B&H. Connections are made between the socio-economic climate in Britain and the design, advertising and popularity of clarinet models. The empirical evidence is taken from Boosey & Hawkes' archival records, most notably the Workshop Order Books which present a nearly-complete record of every B&H woodwind instrument.

This thesis provides the date upon which the first 1010 was manufactured and demonstrates that the initial popularity of the model was a result of developments in British orchestral playing in the 1920s and early 1930s. World War II is shown to have been a catalyst for mass production, enabling B&H's influence to reach a greater proportion of British society. The thesis argues that post-war consumerism facilitated the continued popularity of B&H clarinets, but the drive to provide ever-cheaper student clarinets created dramatic reductions in profit margins and rendered clarinet manufacturing financially unviable. Ultimately this thesis presents B&H as having become inextricably linked to British clarinet playing by constantly responding to the changing demands of British musicians with new designs and brandings which captured the zeitgeist of musical Britain throughout the century.

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Abbreviations used

B&Co.	**Boosey & Company**
B&H	**Boosey & Hawkes**
B&HA	**Boosey & Hawkes Archive**
B&HC	**Boosey & Hawkes Collection**
BBC SO	**BBC Symphony Orchestra**
EUCHMI	**Edinburgh University Collection of Historic Musical Instruments**
GB HM	**Horniman Museum**
H&S	**Hawkes & Son**
LPO	**London Philharmonic Orchestra**
McGA	**McGavin Archive**
RAM	**Royal Academy of Music**
R&H	**Rivière & Hawkes**
WOB	**Workshop Order Book**
WWII	**World War Two**

Explanatory notes

The system of pitch notation used is Scientific Pitch Notation, in which C_4 is middle C, C_5 the octave above, C_3 the octave below. Pitches referred to are written clarinet pitches, as opposed to sounding ones. Where two pitches are given thus: E3/B4, the first pitch is of a note without the speaker key depressed, the second is a pitch of the same fingering but with the speaker key depressed, therefore a twelfth above the first pitch. When fingerings are referred to the acronyms LT and RT are used to indicate left- and right-hand thumbs, with the fingers numbered either L or R 1-4, from index finger to little finger on each hand.

B&Co. and B&H both used the spelling 'clarionet' for many years. This has been used throughout the thesis – where appropriate – interchangeably with the modern spelling: clarinet.

Cataloguing of B&H materials at the Horniman museum is an ongoing process. When archival documents have been referenced in the thesis, they have been shown with a museum or accession number when one has been allocated. Some items had not been allocated a number at the time of writing.

All calculations of proportion etc. have been rounded to two decimal places.

Large tables have been presented in a separate volume – Volume 2 – so that they can be consulted alongside the main text.

1 Studying Clarinet Manufacturing at Boosey & Hawkes: Objectives, background, methodology and existing scholarship

Boosey & Hawkes was the biggest British musical instrument manufacturing company in the twentieth century, and held a monopoly not only on British clarinet manufacturing but on British clarinet playing too. B&H's flagship model, the 1010, became inextricably linked to a certain kind of 'English' clarinet sound and style of playing, and was championed by such high-profile players as Jack Brymer, Frederick Thurston and Gervase de Peyer. Boosey & Co. (B&Co.) and B&H did not only cater for the professional market, however, and at least one generation of clarinet students virtually all played on B&H's leading student models, the Regent and Edgware.[1]

When instruments were first being manufactured under the name of B&Co. in the latter half of the nineteenth century, the company was a small, craft-based operation. During these early years Boosey was experimenting with new ideas in design and construction, and working closely with customers to meet their requests. Between 1879 and 1930 – the years during which B&Co. manufactured clarinets – the average yearly output of clarinets was c. 363. As the twentieth century progressed, B&H acted as a juggernaut, absorbing many of the other instrument manufacturing companies in Britain. By the mid 1960s the company was a mass producer of clarinets, and average yearly output had increased to c. 6000. By 1986, however, financial difficulties within the company forced management to come to the controversial decision to cease manufacturing clarinets. This signalled the end of large-scale clarinet manufacture in Britain.

[1] The author included.

This extraordinary journey in British clarinet making has not previously been documented or analysed, and this thesis aims to rectify this.

1.1 Research Objectives

The thesis aims firstly to establish a detailed account of the manufacturing of all clarinet models at B&H, showing changing patterns in production figures throughout the company's existence. Where possible this will also be linked to information on the organological development of each instrument. Particular focus in this area will be applied to those models which were marketed as 'flagship' instruments or those which have become well known.

One clarinet – the 1010 – is the model that B&H became most renowned for in terms of clarinet manufacturing. This thesis aims to establish for the first time a history of this 1010 model, empirically tracing production figures throughout its lifespan and linking these to its changing customer base, organological developments and the influence of additional factors – such as those relating to musical performance and socio-economic situations.

The thesis also identifies the degree to which B&H acted as trendsetters or followers of fashion; whether the company was driving public taste and effecting change in instrument design and manufacture or simply reflecting public taste and following recent changes in instrument manufacturing practice. There is perhaps a temptation to assume that companies who produce iconic products – such as the 1010 – are the ones who drive innovation. However, it may be equally likely that in responding to public demand a company may produce something that is largely derivative, but marketed and timed appropriately in order for it to appear to be a radical development.

An assessment will be made of the link between the 1010's prominence and the notion of a 'British' school or style of clarinet playing. The impact (if any) of the 1010, and instruments in general, upon playing style and sound production, will be examined. Through this assessment suggestions will be made about why and how the 1010 developed its significance.

Although sales figures throughout the time frame are not always available, the thesis will use other forms of evidence, including marketing and production records, to provide an overview of the changing customer base of B&H, tracing the trajectory from the initial craft-based manufacturer which catered for individual customers, to the large mass-producing company which B&H had become by the 1960s. Much is already known about a very small proportion of B&H's high-profile customers, such as the erstwhile principal of the Royal Philharmonic Orchestra, Jack Brymer. Though 'celebrity' performers such as Brymer and Thurston were undoubtedly important to B&H, clarinet production was really driven by the demands of much larger customer groups. In the days of B&Co. the largest proportion of instruments were aimed at the military market, and, in the latter days of B&H, educational instruments accounted for the majority of production. These large customer groups were the chief consumers of B&H's most commonly made instruments.

The thesis also aims to show the relationships between political, social and economic events that were happening in the world, developments that were taking place in music making and the music business both in the UK and abroad, and the changing patterns of production at B&H. It will show how not only changing

production figures but also alterations to design and the development of new models grew out of a much broader context than simply the factory floor and design offices.

The final objective of this research is to illuminate the place of the 1010 in the eventual demise of B&H, and the extent to which the company's concentration on this flagship model may – or may not – have contributed to the end of large-scale clarinet manufacturing in Britain.

1.2 The Early History of Boosey & Hawkes

The beginnings of B&H can be traced back to 1792, when Mr Thomas Boosey opened a bookshop at number 4, Old Bond Street in London. This business continued until 1832, and became known as Boosey & Sons, or T. & T. Boosey. During this time the company moved from Bond Street to premises at 28 Holles Street, just off Oxford Street. In 1816, Boosey's son Thomas Jr. established a separate music-publishing side of the business. When Boosey Sr. died, control of the whole operation was left to his son. Initially Boosey's music publishing had dealt solely with importing foreign music, and he was one of a small number of people engaged in this trade. He went on to become the English publisher for composers such as Hummel, Mercadante, Romberg, Rossini, and other well-known individuals of the time. The firm later became associated with Italian operas by Bellini, Donizetti and Verdi, until 1854 when a decision of the House of Lords deprived it – along with other music publishers – of many of its foreign copyrights.[2] This decision forced the company to change its focus, and, writing in 1904, Blaikley states that 'it has since devoted its attention to the publication of popular English music, and to the

[2] David James Blaikley, "Boosey & Co.," in *Groves Dictionary of Music and Musicians*, ed. J. A. Fuller Maitland (London: Macmillan and Co. Limited, 1904). p. 361.

production of cheap and standard musical works'.[3] When Thomas Jr. died, the firm was left to his son, John Boosey, who was the first to pioneer this shift in emphasis.[4] This was done through issuing cheap editions of the classics, and also through publishing a number of important English choral works. John Boosey's most significant work during the latter part of the nineteenth century was the promotion of the ballad. In 1867, he established a series of concerts to heighten public awareness and demand for these popular songs. The concerts took place at St James's Hall and the new Queen's Hall, and attracted various high-profile artists.[5] Helen Wallace claims that these events were 'the most successful musical formula on the market', as Boosey both presented the artists and published the music they were singing.[6] This idea was not exclusive to Boosey, as other publishers had similar schemes. The company was able to add another dimension to this winning marketing technique however: the development of the ballad horn in 1869. Myers reinforces the idea that these were deliberately linked to the ballad concerts, their purpose being to play the vocal line of the popular songs performed at these events.[7] Rather than being a transposing instrument as most horns are, the ballad horn was in C, so that the player could read the melody line straight from the vocal score and be accompanied by a pianist reading from the same copy. Thus not only did the public have an opportunity to play these tunes in their own home, but they were also able to purchase sheet music of works performed at the ballad concerts. In addition, the ballad horn provided a domestic outlet for amateur brass playing that was not being served by

[3] Blaikley, "Boosey & Co." p. 361.
[4] Helen Wallace, *Boosey & Hawkes: The Publishing Story* (London: Boosey & Hawkes, 2007). p. 3.
[5] David James Blaikley, William C. Smith, and Peter Ward Jones, "Boosey & Hawkes," in *New Grove Dictionary of Music & Musicians*, ed. Stanley Sadie (London: Macmillan Reference, 2000). p. 885.
[6] Wallace, *Boosey & Hawkes: The Publishing Story*. p. 3.
[7] John Webb, "Notes on the Ballad Horn," *The Galpin Society Journal* 37 (1984). pp. 57-61.

brass band instruments, thus answering the demands from the growing market of amateur brass players who needed an instrument better suited to such settings.

Figure 1-1 Ballad horn. Distin, London, 1869. GB HM, 2005.1.1. Photo by permission of the Horniman Museum, London.

In 1851, in addition to their publishing activity, B&Co. began to sell musical instruments through collaboration with the German clarinettist and bandleader Carl Boosé. The first Langwill *Index of Musical Wind-Instrument Makers* indicates that Boosé made band arrangements and tested instruments for Boosey, but publications from the time advertise a full range of 'military musical instruments' as being made by C. Boosé.[8] These included 13-keyed clarinets, flutes, piccolos, fifes, bassoons, cornets, trumpets, euphoniums, bombardons, ophicleides and horns.[9]

[8] Lyndesay Graham Langwill, *An Index of Musical Wind-Instrument Makers* (Lyndesay G. Langwill: Edinburgh, 1960)., and *The Musical World* (16 December 1854). p. 832.
[9] *The Musical World* (16 December 1854). p. 832.

In 1845 Boosé began his influential publication *Boosé*'s *Military Band Journal,* which was the first of its kind to be seen in Britain.[10] This was acquired by B&Co., and issued under the name *Boosey's Military Band Journal.* Carl Boosé was retained as editor of the journal until his death in 1868. The journal continued until 1883.[11] Through his journal and the range of military instruments, Boosé was in essence shaping and standardising military band instrumentation before the advent of Kneller Hall, the Military School of Music, which was opened on 3 March 1957. Boosé's contribution to military music-making ensured that B&Co. went on to secure the position of musical instrument makers for the British Army, which provided the company with its primary source of custom for several decades.

It was not just at B&Co. that military music making was receiving a great deal of attention in the latter part of the nineteenth century. Under the directorship of ex-bandmaster H. Schallen, the 'Military Music Class' at the newly-opened Kneller Hall aimed to address the problems hitherto found in military bands, namely that 'bandmasters in the British army were mostly civilians, with no guarantee for their competence for the post'.[12] During the Crimean war the need to standardise military band practice became apparent, and Kneller Hall was established to serve this purpose.

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[10] Both the 1993 Langwill index and 1954 editions of Grove cite 1845 as the date when Boosé established this journal. The *New Grove Dictionary of Music & Musicians.* 2nd edn. (London: Macmillan Reference, 2000) gives the date as 1946. The 1954 version has been selected as most accurate, as it is based on text written by Blaikley, who would have been involved with the journal and knew Boosé. H. G. Farmer and Trevor Herbert, "Carl Boosé" in Stanley Sadie (ed). *New Grove Dictionary of Music & Musicians*, Vol. 3. (London: Macmillan Reference, 2000). p. 811.
[11] Farmer and Herbert, "Carl Boosé." pp. 884-885.
[12] "Kneller Hall." in J. A. Fuller Maitland (ed). *Grove's Dictionary of Music and Musicians,* Vol. 2. (London: Macmillan and Co. Limited, 1906). pp. 589-590.

Another notable early collaboration was with flautist Robert Sydney Pratten in 1856.[13] The collaboration between Boosey and Pratten resulted in the release of 'Pratten's Perfected Flute'. This model was essentially an old eight-keyed flute redesigned with a cylindrical bore and finger-plates.[14] Early editions of Grove's *Dictionary of Music and Musicians* indicate that this was an important instrument for B&Co., as Blaikley describes some of the instruments that Boosey were making 'in addition to' the Pratten flutes.[15] In 1893 Boosey appears to have been releasing a new fingering chart for the Pratten flute, as many drafts and proofs dated from this year are contained in the B&H archive. This indicates that nearly forty years after they first began making the instrument they were still producing new material relating to it and it was still in wide use. B&Co.'s 1929 catalogue reveals that all flutes made by them at this time were 'modelled either on the system of Pratten or that of Boehm', and that the Pratten flutes were supplied with both conical and cylindrical bores.[16]

In 1868 B&Co. purchased Henry Distin & Co.'s factory and plant for £9,700, and an agreement was made that Distin was not to manufacture instruments under his own name within 100 miles of London.[17] The purchase of Distin signified B&Co. becoming an important brasswind instrument manufacturer. At first the two companies were not immediately integrated, instead operating as two separate businesses for six years. This is reflected clearly in the respective companies' stock

[13] Blaikley, Smith, and Jones, "Boosey & Hawkes." p. 885.
[14] Anthony Baines, *Woodwind Instruments and Their History*, 3rd ed. (New York: Dover Publ, 1991). p 69. (A 1929 Boosey & Co. trade catalogue indicates that the flute could be made with either a cylindrical or a conical bore).
[15] Blaikley, "Boosey & Co."
[16] Boosey & Co., *Woodwind Instruments by Boosey & Co., Ltd.* (London: Boosey & Co., c. 1929). B&HA, GB HM, p 3. E83.239.
[17] William Waterhouse and Lyndesay G. Langwill, *The New Langwill Index: A Dictionary of Musical Wind-Instrument Makers and Inventors* (London: Tony Bingham, 1993). s.v. "Distin, Henry".

books, which were kept separately for some time. From 1868 the Distin Band Instrument Stock Book lists several instruments as having been sold to B&Co.[18] The first of these in the extant records is a cornet with serial number 9146, which was sold to B&Co. on 21 December 1868. Several instruments were also sold to B&Co. New York. A similar practice can be seen in the B&Co. Band Instrument Stock Account book, where instruments are listed as being sold to Distin & Co.[19] The first of these entries is a group of three bass drums, serial numbers 11374-5 and 11381, sold to Distin & Co. on 1 October 1868. This stops in 1874, when the Distin stock books cease altogether. The final entries in the – largely empty – last Distin & Co. Band Instrument Stock Book were made in September 1874. In the last days of Distin & Co. the majority of instruments in stock were being sold to B&Co., until eventually all of Distin's instruments were fully absorbed into Boosey's system. Between pages nine and nineteen of the Boosey Band Instrument Stock Account book from 1874 a number of Distin instruments are listed with Boosey serial numbers, though a pencilled Distin number is also included with each entry.[20] Similarly in the last Distin Stock Book the corresponding instruments also show the allocated Boosey serial number, in red ink rather than pencil, however.[21] The use of red ink implies that these numbers were the more important, permanent ones attached to the instruments rather than the less important Distin number. At this point the firm moved from Holles Street, Cavendish Square to new premises in 295 Regent Street. The name of Distin & Co.

[18] Distin Band Instrument Stock Book, B&HA, GB HM, A227/008.
[19] B&Co. Band Instrument Stock Account Book, B&HA, A227/115.
[20] B&Co. Band Instrument Stock Account Book, B&HA, A227/116.
[21] Distin Band Instrument Stock Book, B&HA, GB HM, A227/009. pp. 12-23.

was given up completely and the company continued to operate as Boosey & Co. only.[22]

Following the purchase of Distin, B&Co. began to produce some innovative ideas in terms of brass instrument manufacture, perhaps most importantly D. J. Blaikley's system for compensating valves, which was developed in 1874.[23] This was not, as is often thought, Blaikley's own invention. Parisian instrument maker Gautrot had in fact previously patented the idea in 1865 as the *système equitonique.*[24] This system was also patented in Britain the following year.[25] Blaikley's patent (G.B. Patent No. 4618) was for a specific three-valve system, whereas the Gautrot system had four. Blaikley's compensating pistons were a significant success for B&Co. and later B&H, and are still used today.[26] In 1876 the former Distin factory moved from Great Newport Street to Frederick Mews, Stanhope Place near Marble Arch.[27] In 1879 B&Co. added the production of clarinets and other reed instruments to their flute and brass departments. The first reed entry in the B&Co. Workshop Order Books (WOB) was for class 108 B♭ clarinet, number 5968. The order for this instrument to be made was given out on 13 August 1879. The next reed instrument to be ordered after clarinet production began does not appear until 2 May 1881, and is an order for five bagpipes. The first oboe – class A118 – was ordered on 11 May 1881 and the first bassoon – class A120 – on 11 July, also in 1881. The first

[22] Blaikley, "Boosey & Co."
[23] Blaikley, Smith, and Jones, "Boosey & Hawkes."
[24] Arnold Myers, "Brasswind Innovation and Output of Boosey & Co. in the Blaikley Era," *Historic Brass Society Journal* 14 (2002). p. 403.
[25] GB patent No. 741.
[26] Myers, "Brasswind Innovation and Output of Boosey & Co. in the Blaikley Era." p. 403.
[27] Kelly White and Arnold Myers, "Woodwind Instruments of Boosey & Company," *Galpin Society Journal* Vol. 57 (2004). p. 72.

saxophone entry in the WOBs is for an alto made by Boosey workman Bloomfield.[28] Production of all instruments began to increase steadily after their introduction.[29]

It is likely that many of the designs for Boosey's earliest instruments were influenced by the acoustician David James Blaikley, who was Factory Works Manager during this period. His signature appears on many of the extant technical drawings from the period, such as an 1892 drawing of clarinet mouthpieces for E♭, B♭, C, Alto and Bass clarinets, and a drawing showing comparative dimensions of A, B♭, C and E♭ clarinets from 1886.[30]

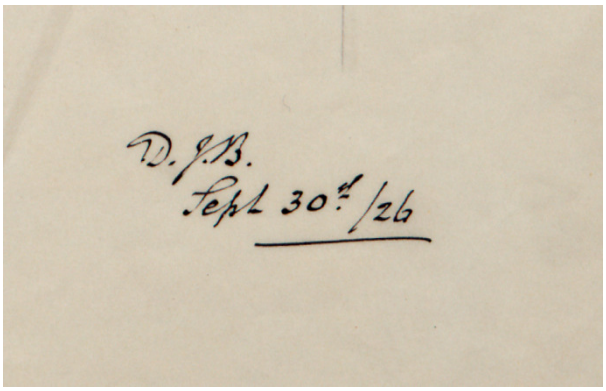

Figure 1-2 D. J. Blaikley's initials, on a technical drawing of a clarinet loaned to B&Co. by Mr Rendall. B&HA, GB HM, E91.123.24.

This demonstrates that Blaikley was closely involved with the woodwind design process. Other influences were coming from established makers and designers, such as Pratten with his flute innovations, and Albert who was employed as an instructor by Boosey in 1880. The company clearly felt that in order to begin producing instruments which people would buy, they would need to seek expert advice.

[28] White and Myers, "Woodwind Instruments of Boosey & Company." p. 72.
[29] For a detailed overview of woodwind production at Boosey & Co. during this period see "Woodwind Instruments of Boosey & Company."
[30] Technical Drawings. B&HA, GB HM E91.122.11 and E91.122.9.

1.3 Boosey & Hawkes and the Clarinet

One of the important reasons for looking at the influence of Boosey & Hawkes on English clarinet playing is the diversity of their customer base. During the twentieth century it seems that Boosey & Hawkes supplied musical instruments to virtually all areas of British music making. Though sales figures and destinations for this whole period cannot be traced exactly, there is much evidence that confirms that the aim of Boosey & Hawkes was to sell their instruments to many different types of musician. This was true in the days of Boosey & Co.: the introduction to a 1929 catalogue entitled 'Military & Orchestral Band Instruments by Boosey & Co., Ltd.' boasts that the models have all been designed 'to meet the average requirements of Orchestral and Military Bands, and are susceptible of modifications in details to suit the individual requirement of solo players'.[31]

B&Co.'s strong military connections are reinforced by pictures in B&Co. catalogues of musicians proudly displaying their Boosey & Co. instruments – particularly notable are the photos which display 'all the Clarionet players of the band of H. M. Royal Air Force' and 'Clarionet players of the band of H. M. Irish Guards', both with their 'complete sets of Boosey's Clarionets'.[32] Representing the orchestral market is '[Mr] G. W. Anderson, A.R.C.M. Solo Clarionet, London Symphony Orchestra and Royal Opera House' who 'plays on Boosey's Clarionets'.[33] Written endorsements from high-profile players in both fields are also used:

[31] Boosey & Co. *Woodwind Instruments by Boosey & Co. Ltd.* c. 1929. B&HA, GB HM, E83.239. p. 3.
[32] Ibid. p. 22.
[33] Ibid. p. 13.

> Allow me to express my great satisfaction with the two Clarionets you have made for me. I consider the workmanship, tone and intonation perfect. I prefer these Clarionets to any I have used, and you can understand how pleased I am to be suited at once when I tell you that I have known good players thoroughly upset at having to change from their old Clarionets to new ones, and hardly ever getting satisfied. I shall have much pleasure in recommending your instruments most highly.
>
> Alec Smith,
>
> Principal Clarionet London Military Band and Royal Lyceum Theatre.[34]

Later on the educational and amateur markets become more important. This can be seen in Boosey catalogues, where by c.1950 'Clarinets of moderate price' appear in addition to the more expensive ranges.[35]

Further evidence for this wide-ranging customer base is found in Boosey production records and technical drawings. In the late 1920s there are strong links to Military Music Training school Kneller Hall, as evidenced by the WOBs. An E♭ clarinet was altered to meet Kneller Hall requirements on 27.02.23, and another two instruments are labelled 'altered 21.11.23 to meet Kneller Hall students' requirements'. Many instruments listed in the WOBs are described as having been 'passed by KH', usually accompanied by a date, such as clarinet 30961 which 'passed KH 12/02/34'. Though KH could have been the initials of somebody employed to undertake quality control, the fact that it is the only set of initials used in the records in this context makes it likely that it in fact stands for 'Kneller Hall'. This would indicate a strong link to military musicians, bands, and training. In a different field, some WOB entries make mention of professional orchestral players who had specifically ordered or tested instruments. Well-known English clarinettist Reginald Kell's name appears

[34] Boosey & Co. Catalogue c. 1895. B&HA, GB HM.
[35] Boosey & Hawkes Music Publishers, *The Clarinet* (London: Boosey & Hawkes). GB BL, YA.2000.b.417.

in the 'model' column of four clarinets in the workshop order books.[36] This is reinforced by some of the technical drawings, which have many notes referring to players who tested instruments or who had requested certain modifications: two 1900-1 drawings show a pair of flat pitch clarionets 'made for Mr G. A. Clinton'.[37] Clarinets in the B&H museum collection include clarinets which previously belonged to Clinton, Gomez and Lazarus.[38] Various other written and anecdotal sources confirm the presence of Boosey & Hawkes instruments in a variety of musical settings. Many of these reinforce the importance of the orchestral customers, especially in reference to the clarinet, as the 1010 is mentioned in many different sources.

1.4 The Boosey & Hawkes Archive and Collection

Boosey & Hawkes left behind a large amount of archival material, which provides much useful information to the researcher. During their years of production, the company developed an instrument collection that was housed in their factory. The collection was probably begun during the period 1873-1918, when acoustician David James Blaikley was factory manager at Boosey & Co.[39] Many instruments were collected during Blaikley's time at Boosey. After the merger with Hawkes & Son the collection was moved to the Sonorous Works factory in Edgware, and is

[36] Clarinets 80266 and 80267 B♭ Boehm Imperial instruments and 80268 and 80269 A (also Boehm and Imperial) have "R Kell" written in the model column.
[37] Technical Drawings, B&HA, GB HM, E91.123.13 and E91.123.8.
[38] A Clarinet, Clinton Boehm System. Ex-G. Clinton. B&Co. c. 1905. London. SN 16315GB HM, 2004.968.
B♭ Clarinet, Full Boehm System. Ex-M. Gomez. B&Co. c. 1908. London. SN 17534. GB HM, 2004.849.
Clarinet in A, Boehm. Buffet, Paris, 1872. Ex-H. Lazarus. (n.s.n.) GB HM, 2004.850.
Basset Horn in F, Boehm System. Pask, London (n.d.). Ex-H. Lazarus. (n.s.n.) GB HM, 2004.1124.
[39] Bradley Strauchen-Scherer and Arnold Myers, "A Manufacturer's Museum: The Collection of Boosey & Hawkes," *Musique-images-instruments: revue francaise d'organologie at d'iconographie musicale.* 9 (2007). p. 151.

believed to have been on display in the dedicated museum area by 1935.[40] As well as being a showcase for visitors to the factory, the museum served to provide 'possible guidance' to the firm's instrument designers.[41] Therefore the instruments in the collection reflected the interests of its curators and the design interests and priorities of the period during which they collected. The collection was not, however, intended to showcase the range of instruments made by Boosey & Hawkes, as many important models were not included. The collection continued to evolve, and remained an integral part of factory tours until Sonorous Works closed in 2001. Though it was taken to the new premises in Watford it remained in storage until 2004, when the collection was acquired by the Horniman museum, where it is housed today.[42] A full account of the development of the collection can be found in Bradley Stauchen-Scherer and Arnold Myers' article "A Manufacturer's Museum: The Collection of Boosey & Hawkes".[43] The collection in its current state provides an insight into the interests of the curators throughout the twentieth century, and gives some idea of the kinds of influences that might have affected designs produced by those Boosey & Hawkes designers who worked with the collection. It also offers further opportunity to explore the history of both instrument production and reception at B&H throughout the twentieth century.

The earliest sign of any Boosey involvement with the instrument-making world is in fact found in the instrument collection. Though Boosey & Co. did not make clarinets until 1879, clarinets from before this date appear in the factory's instrument collection. The earliest of these is a thirteen-key boxwood clarinet with

[40] Strauchen-Scherer and Myers, "A Manufacturer's Museum: The Collection of Boosey & Hawkes." p. 153.
[41] "A Manufacturer's Museum: The Collection of Boosey & Hawkes." p. 154.
[42] "A Manufacturer's Museum: The Collection of Boosey & Hawkes." p. 161.
[43] "A Manufacturer's Museum: The Collection of Boosey & Hawkes." pp. 146-164.

ornately embossed silver keys and mounts, which is marked C Boosé/London. This was made for the 1851 Crystal Palace exhibition.[44]

[44] 13-key boxwood clarinet, stamped C. Boosé. B&HC, GB HM, 2004.846.

Figure 1-3 A 13-key boxwood clarinet by Boosé. Photo by permission of the Horniman Museum, London.

The instrument collection contains forty-three clarinets, representing not only the manufacturing but also the collecting interests of the company, and some of the significant developments in clarinet manufacturing during the period. Many of these instruments were acquired whilst clarinettist Eric McGavin was curator of the factory museum. Some instruments reveal collaborations with leading players, such as the Gomez-Boehm system instrument.[45] This clarinet was the result of Manuel Gomez and David Blaikley working together to design an instrument on which both B♭ and A parts could be played, due to the addition of an extra keys for R4 to play the low (written) E♭3, equivalent to E3 on the A clarinet, as well as additional keys to facilitate turns and trills in all keys as illustrated in Figure 1-4. The resulting clarinet had twenty-one keys and seven rings.

[45] Gomez-Boehm clarinet. B&HC, GB HM, 2004.849.

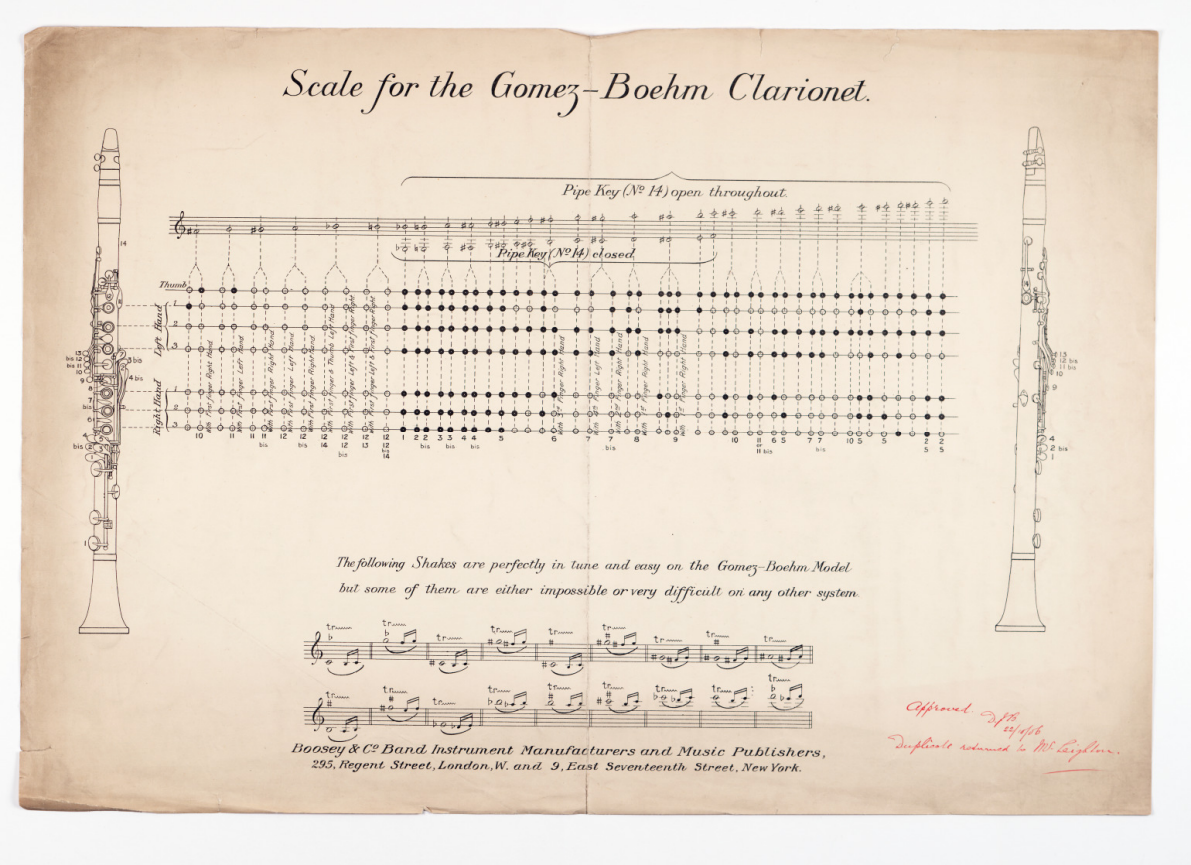

Figure 1-4 Fingering chart for the Gomez-Boehm clarinet, approved by D. J. Blaikley. B&HA, GB HM, London. E91.119AA. Photo by permission of the Horniman Museum, London.

There is also a matched pair of Clinton-Boehm system clarinets, the B♭ of which bears a label stating that it belonged to and was used by A.G. Clinton.[46] Eric McGavin claims that this was the first example of the Clinton-Boehm system.[47] Another famous player represented by the collection is Henry Lazarus; there are four clarinets that were owned and used by him at various points during his career. One of these instruments is a twelve-key B♭ clarinet made by pre-Boosey English clarinet maker Thomas Key in 1825.[48]

[46] B♭ Clarinet, Clinton-Boehm system. Boosey & Co., London c. 1890. SN 16314. GB HM, 2004.967.
[47] Eric McGavin, "The Evolution of Wind and Brass Instruments" (Unpublished Typescript, McGA, GB HM, n.d.). p. 19.
[48] 12-key B♭ Clarinet, Thomas Key, London, 1825. B&HC, GB HM, 2004.848.

In addition to the collection of instruments, the Horniman museum also acquired an extensive archive of production records, which had been kept by Boosey & Hawkes and many of the smaller companies who had been absorbed by the merged firm. The archive contains a complete record of every brasswind instrument made by Boosey between 1868 and 1985, and some later brasswind records too. There is a nearly-complete record of every woodwind instrument given a Boosey serial number between 1857 and 1986, again with some later records. These are contained in two series of Instrument Books, which tracked the orders sent from B&Co. or B&H offices to the workshops. They show the date on which the instrument was ordered, the date received (when the instrument was completed), the serial number it was allocated, a brief description of the instrument, the model number of the instrument, usually a workman's name, and a date on which the instrument was charged to Regent Street – thought to be an accounting operation rather than physical movement of the instrument.[49] The WOBs become less detailed in later years, particularly after the onset of mass production, which took place after WWII. Changes to the amount and type of data included in the WOBs are demonstrated throughout this thesis. In addition to the instrument WOBs are pricing books, which show the breakdown of production costs for some instruments, and a small number of stock books, which cover the period 1868-1899.[50] The stock books are of particular interest, as they often show customers' names, which are not usually

[49] Arnold Myers and Adeline van Roon, "Boosey & Hawkes: The Archive" (Unpublished Handlist, B&HA, GB HM. 2002-2005). n.p.n.
[50] B&Co. Stock Books and Pricing Books. B&HA, GB HM, A227/115-118.

present in other records kept by Boosey. There are also business records, ledgers, pistons books, bought and sold journals and sales catalogues.[51]

Hawkes & Son (H&S), who merged with B&Co. in 1930 to form B&H, is less well-represented in the archive. However, two journals covering the period 1921-1931 give an important insight into B&Co.'s rival firm, and what it was producing.[52] These journals, in addition to the WOBs from B&Co. and B&H, which cover Boosey's woodwind output, have provided much of the empirical information for this study.[53]

A number of Distin WOBs and stock books are also held in the archive, from the six-year period between 1868 and 1874 during which Boosey & Hawkes gradually absorbed Distin. Similarly there are records from Rudall Carte – which were kept separately even after Boosey bought the company. These include work books and stock books, and cover the period 1863-1985. Besson records are also held in the archive, again particularly representing the period during which their stock was gradually absorbed into the Boosey system. The Besson records cover the period 1868-1986, and include stock books, stamping books, and various business records, including minute books and financial books.[54]

As well as the production records, the archive also contains many technical drawings. These date from the period 1872-1999, and include drawings and plans of instruments and instrument parts, technical drawings of instrument making equipment and machine tools, tools for specific instruments and components such as mandrels, jigs

[51] The pistons book continued a pistons section found in the Distin Workshop Order Books. Pistons were often 'made up' independently of the instrument which they were used for, so were recorded with a separate number, and the number of the instrument.
[52] H&S journals, B&HA, GB HM, A227/138 and 139.
[53] B&H WOBs, B&HA, GB HM, A227/013-A227/043.
[54] Myers and van Roon, "Boosey & Hawkes: The Archive." n.p.n.

and dies. There are also a number of factory plans showing developments to the Edgware plant. Other paper sources include drafts and proofs of fingering charts, and various examples of correspondence between the factory and its customers and testers. Some of the earlier drawings are the work of acoustician and factory manager David James Blaikley – including several clarinet drawings from the 1920s – and show clearly that his involvement with design went beyond the development of 'Boosey's compensating valves' for which he has become so renowned. The drawings represent many instruments made by Boosey & Hawkes, and illustrate earlier instruments made by Boosey & Co. and Hawkes & Son. There are also a number of items in the collection that indicate that Boosey designers and makers had an interest in instruments produced by other companies. Some drawings reveal that instruments were borrowed from players so that they could be examined and measured, such as a drawing dated 1926, which shows a clarinet stamped "Fritz Hoesch" and lent by Mr Rendall.[55] Other drawings show comparisons between Boosey & Hawkes instruments and other – often foreign – models, showing another way in which the company was clearly interested in getting ideas and inspiration from other makers. There are also drawings from the late 1940s and early 1950s by German instrument maker Hüttl, who worked with Boosey & Hawkes in the early 1950s. Other items in the archive include a small number of trade catalogues, some financial records, stock books, tools, video footage, photographs and a selection of press cuttings.

The clarinet is very well represented in the archive, and here the sheer number of technical drawings devoted to it further demonstrates that the instrument

[55] Technical Drawing, B&HA, GB HM, E91.123.24.

was a particularly important aspect of Boosey manufacturing.[56] There are some four hundred and thirty four plans and drawings of clarinets or clarinet parts, compared with around sixty flute drawings, one hundred for the bassoon, and even the clarinet's nearest competitor – the saxophone – only has around two hundred and ten. Instruments and archival material related to Boosey & Hawkes remain an ongoing collecting imperative at the Horniman. Important additions to the collection since the acquisition of the Boosey & Hawkes Collection and Archive include the McGavin Archive – a collection of papers, typescripts and other ephemera collected by Eric McGavin and passed to the Horniman by his son, Kim McGavin – and an early pair of matched 1010 clarinets that were played by professional orchestral clarinettists Wilfred Hambleton and his son Hale Hambleton.[57]

1.4.1 Methodology

In order to produce empirical data to give a detailed account of clarinet manufacturing at Boosey & Hawkes, information from the WOBs was inserted into a database, with separate datasheets representing different periods of manufacturing history.

[56] A detailed overview of clarinet-related items can be found in Bradley Strauchen-Scherer, *Resources for Clarinet Research in the Boosey & Hawkes Collection and Archive*, ed. Arnold Myers, Eleanor Smith, and Heike Fricke, Proceedings of the Clarinet and Woodwind Colloquium 2007 (Edinburgh: Edinburgh University Collection of Historic Musical Instruments, 2012).
[57] Pair of matched A and B♭ Clarinets, Ex-Hale and Wilfred Hambleton. B&HA, GB HM 2006.465.

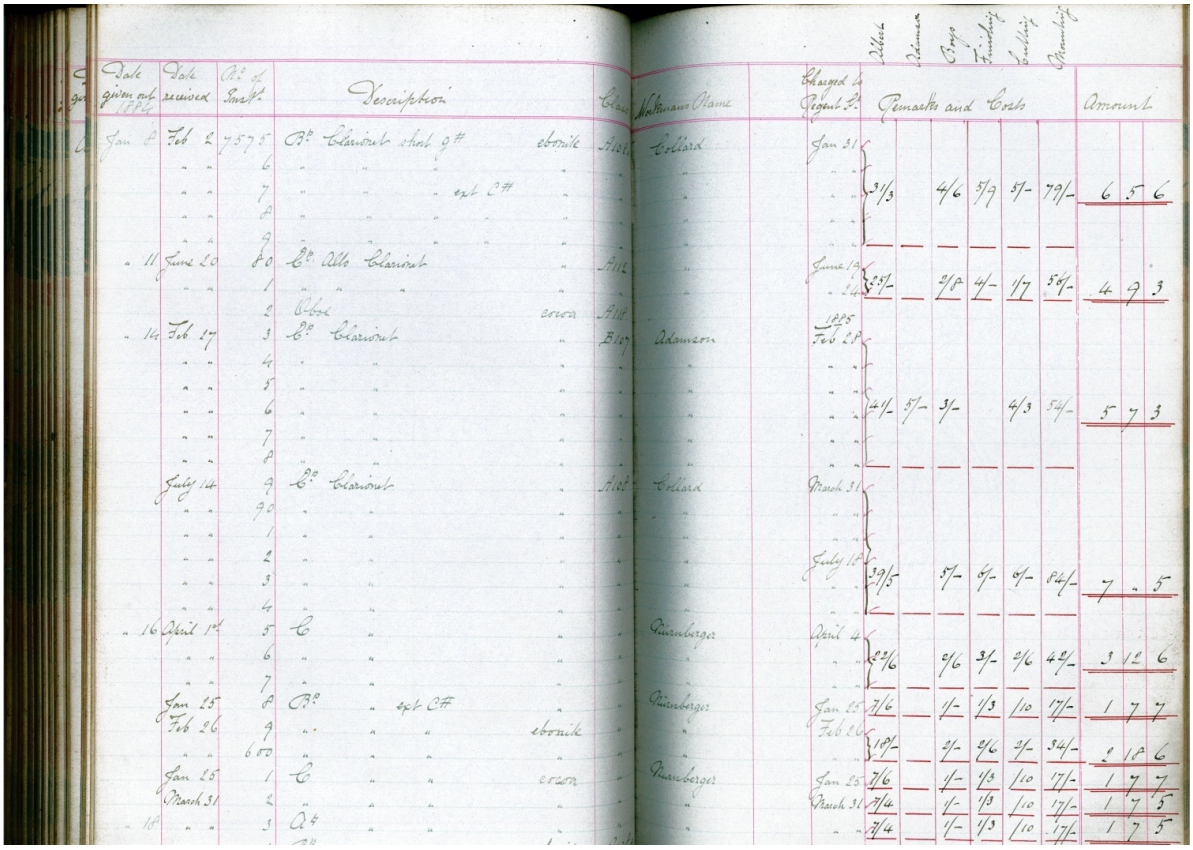

Figure 1-5 A double page spread from a workshop order book.

All data relating to top-range clarinets from the original records was entered into the database, and where possible was sorted by the same headings present in the WOBs. In the case of mass-produced instruments, clarinets were recorded in tables batch by batch, showing the first and last serial numbers of each batch, all the model numbers manufactured in the batch and any dates present in the records.

Table 1-1 Example of record-keeping for mass produced clarinets.

Date Given Out	First and Last Serial Numbers	Instrument Description	Charged to Regent Street	Any additional information present	Total in Batch
1950	50000-52872	B flat Clarinet. 17 Key 6 Ring. DC Keys. LP	25/1/50 19/1/50 28/12/49 5/1/49 20/3/50 30/1/50 1/2/50 20/2/50 12/1/50 18/1/50 13/1/50 6/3/50 13/3/50 15/2/50 5/6/50 7/2/50 4/4/50 11/4/50 2/5/50 18/4/50 13/3/50 20/3/50 4/4/50 6/3/50 28/4/50 25/5/50 3/5/50 29/3/50 1/5/50 26/5/50 27/6/50 6/6/50 9/6/50	Edgware – 7.16.9. - 10.0.0 - 7.3.0 Ebonite No name. Ebonite Bell & Socket. – 7.8.6 Regent – 7.16.9 Westminster. Ebonite Westminster. Edgware Ebonite. Marlborough – 7.8.6. No name 2nd Grade Keys – 6.12.0. Most are Edgware. Quite a few Regent. Edgware Wood. Besson.	2873

The decision to record the two ranges separately was largely due to the differences in the ways that these clarinets are recorded in the WOBs, as there is usually considerably more information about the top range instruments than those which were mass produced. The research objectives of this thesis further swayed the decision, as there is an emphasis on producing detailed information about the manufacturing of particular top range models such as the 1010 and Imperial

clarinets, and this information was readily available. Because there is less information about the mass-produced clarinets it would have been impossible to extract the same amount of detail. Once collected in the database, this information was then sorted by instrument or model in order to demonstrate how many of each model were made, the first and last serial numbers of each top-range model made throughout B&H's history, and to give a description of which features each instrument had (when this information was available). These results have been presented in a series of tables.

The next step was to corroborate this information with other archival sources available, such as the limited number of catalogues, the range of technical drawings, and in some cases musical instruments.[58] This enabled further details to be added to the tables described above: in the case of instruments which are listed in the WOBs without any information about design features, a catalogue has sometimes provided a link between a model number and a picture or detailed description of the instrument. Other sources in the archive, such as correspondence between players and makers, or draft versions of catalogues, have been used to enhance this research where available.

Having identified trends and patterns in the manufacturing of clarinets at B&H, the next step was to link these to developments in the history of the company as a whole. This has been achieved by using catalogues, correspondence and drawings/WOBs relating to other instruments, in order to place clarinet manufacturing in a broader context. Secondary source information about the history of the company and about the history of performance practice in Britain has also

[58] See p. 38 for further information on the use of musical instruments in this thesis.

been consulted. Links have been made with socio-economic events in the wider world, in order to offer explanations of the influences upon B&H and the impact that these had on clarinet design and manufacture.

Although the B&H archive is a wonderfully rich resource, and has successfully provided much of the source material for this thesis, it does have a number of limitations. First, all of the records and drawings have been completed by human hands, and there is therefore always the capacity for human error. There have been occasional anomalies – for instance a model number which appears only once and is very similar to a commonly-used model number – where it is hard to tell if this was a one-off instrument, or a simple mis-recording of a familiar model. Due to the number of records analysed for this thesis, it is probable that such errors will have occurred on multiple occasions.

Another problem with the archive is that it does not provide a complete set of any type of record. The most complete set is the WOBs, which is why they have been selected as the main source of evidence. There is, however, one early WOB missing from the archive, which covered the period 1904-1912. Though the WOBs contain a great deal of information, they do not usually contain the customers' name, so it is not possible to state specifically who may have used or purchased each instrument. The technical drawings are not such a complete set, and it is difficult to know how representative the extant drawings are of the total collection that would have been held by B&H. Many models that are mentioned in the WOBs are not evident in any technical drawings, but it is clear these drawings must have existed at some point. The drawings were very much 'working drawings', and as such, some have sustained damage over the years which makes them difficult to read. Other

items such as catalogues were not retained systematically, so it has only been possible to consult a few – especially from the early years of the company – for this research.

The systematic measuring of several instruments in order to draw conclusions about design and manufacture has not been used. This was partly due to the availability of instruments: as this thesis covers a wide time span and a large range of clarinet models, it would have been necessary to find several examples of each instrument from each period to measure in order to make any meaningful comparisons between models and years. In the case of the later years this might have been possible, but certainly with the early years there are not enough extant examples of each model in good enough condition. Another problem with using instruments is the issue of shrinkage and damage: clarinets – especially those made from wood – are prone to a degree of shrinkage over time. Other types of wear and damage may also be evident, especially in older models. This would mean that measuring in order to detect fairly small changes in bore profile over time – from 15.24mm to 15.3mm for instance – would not be a reliable method as different instruments with different playing histories will have aged in very different ways. The third difficulty is the discrepancy between designs and final products: though B&H may have aimed for all examples of each model to be finished with exactly the same bore width, it is almost certain that, because of the input of individual craftsmen and the final tuning process, different examples of clarinets of exactly the same model will not necessarily have equal dimensions. Conversations with certain players have elicited anecdotal accounts of last-minute alterations to clarinets taking

place at the B&H factory.[59] Therefore measuring instruments to draw conclusions about design ideas, or even about a particular model's dimensions, will not necessarily provide consistent results.

Some of the organological work on B&H clarinets which has been carried out for other studies has been referred to at several points throughout this thesis, notably the doctoral theses of Adrian Greenham and Edward Pillinger.[60] There are also many occasions throughout this study where specific instruments are referred to or have been used to glean additional information. The 'Taylor Action', a key mechanisation applied to some B&H clarinets during the 1960s, is not written about in any extant clarinet literature, but has been illustrated in this thesis by examining an instrument which bears this device.[61] Instruments have also been used to consolidate information found in production records and catalogues, demonstrating exactly what design features an instrument had. A group of late 'Rudall Carte' Clarinets appear in the WOBs to have been made abroad, but extant instruments have shown that they were in fact stamped 'made in England'. Though a systematic instrument examination has not been possible for the whole time-frame covered by this thesis, instruments have played a part in enriching the information provided by the paper archives.

Though it is common for people to refer to an 'English' school of clarinet playing or sound, 'British' has been used in the title of this thesis, instead of 'English'. B&H was styled as a British manufacturer, providing instruments to the

[59] Colin Bradbury, in conversation with the author. 20 May 2011.
[60] Adrian C Greenham, "Clarinet Toneholes: A Study of Undercutting and Its Effects" (London Metropolitan University, 2003), and Edward Pillinger, "The Effects of Design on the Tone and Response of Clarinet Mouthpieces" (London Guildhall University, 2000).
[61] See p. 228 for further information on the Taylor Action.

British Army both at home and across the Empire. At times the company operated under a range of names, including the British Band Instrument Company. Although most clarinet production took place at the Edgware plant, B&H had factories in Wales during the twentieth century. Therefore it seemed more appropriate to present B&H in this light as a British, rather than English, manufacturer. Recent scholarship on the notion of British clarinet playing has also started to adopt British, not English, as a truer reflection of practice.[62]

1.5 The Clarinet

The following section provides a brief explanation of key aspects of clarinet design and history. There is an overview of clarinet acoustics, covering the areas relevant to the ensuing discussion about bore profiles, tonehole undercutting, and questions about the influence an instrument has over the sound produced by a performer. This is followed by a summary of developments in the design of the clarinet up to 1879 (the year in which B&Co. first began to manufacture clarinets), which also describes the main key mechanisation systems that will be referred to throughout the thesis. There is then a section exploring some of the materials and methods of construction which will be referred to at various points in later discussions. None of these sections aims to provide a comprehensive guide to each area: within each section the key texts which do serve this function are referenced. Instead the aim of this section is simply to explain many of the key aspects of

[62] Colin Lawson, "The British Clarinet School: Legacy and Legend," *International Symposium on Performance Science* (2011). http://www.legacyweb.rcm.ac.uk/cache/fl0026812.pdf (accessed 31.07.12).

clarinet acoustics, design, history and construction which will inform the arguments throughout the thesis.

1.5.1 Acoustics

The clarinet is classified by Hornbostel and Sachs as a single-reed cylindrical bore aerophone.[63] The sound of the clarinet is produced by the reed exciting the column of air held within the cylindrical cavity of the clarinet. The reed, which is activated by breath of the player, alternately snaps shut against the mouthpiece and springs back to its open position. It is this action which sends a series of bursts of air into the clarinet itself, and causes the air to vibrate. The rate at which the reed opens and closes the gap between itself and the mouthpiece, in conjunction with the sounding length of the tube, determines the pitch and timbre which will be produced. This can be altered by subtle changes in the player's embouchure, and this, in turn, affects the tone quality. Because these three factors – reed, mouthpiece and embouchure – together provide the sound generation mechanism for the clarinet, they have the greatest effect on the tonal quality of the sound. Many other factors can also contribute towards timbre, but the closer they are to the initial sound generation the more effect upon the sound they will have.

Once the reed has been set in motion, the air column inside the clarinet begins to vibrate, which brings us to one of the most unusual acoustical features of the clarinet. This feature sets the clarinet apart from all the other orchestral woodwind instruments, and has also provided designers and makers with great challenges – and opportunities – over the years. Rather than overblowing at the

[63] Erich M. von Hornbostel and Curt Sachs, "Classification of Musical Instruments: Translated from the Original German by Anthony Baines and Klaus P. Wachsmann," *The Galpin Society Journal* 14 (1961). pp. 24 and 29.

octave, as do the flute, oboe, bassoon and saxophone, the clarinet overblows at the twelfth. The reason for this is that the clarinet has the acoustical properties of a 'stopped pipe', because a) the majority of its bore is cylindrical, and b) when it is blown the reed meets with the surface of the mouthpiece, creating a chamber which is essentially stopped at one end. This effectively doubles the length of the tube in which the sound vibrates, as a node is created inside the mouthpiece, the stopped end, though there is still an antinode in the bell as would be expected at a point where the air column is open to the outer air.[64] On an instrument such as the flute, though the bore is cylindrical, the node is in the middle of the tube, with antinodes at both ends, as the air stream from the mouth excites the air column inside the flute at the headjoint end, and outside air disturbs the column at the foot end of the instrument. The oboe has an expanding conical bore, so has a different set of acoustic properties. This is what is being referred to when writers or players talk about the twelfths of the clarinet – i.e. the interval between two notes with the same fingering, one in the chalumeau register and the higher note in the clarino with the application of the 'speaker key' with LT – which are often referred to in terms of tuning. Twelfths are problematic because the speaker key and its tonehole are not positioned 'correctly' for the speaker key function. This is because the speaker key and tonehole also act as the key and tonehole for 'throat' B♭4, meaning that both hole and key serve two purposes, and are not entirely fit for either. Throat B♭ is a very unsatisfactory note in terms of tone quality because the tonehole is not large enough, but the twelfths across the instrument pose a problem for intonation because,

[64] Node – point at which there is the least movement of air particles, caused by interference between opposite waves. Antinode – point at which there is the most movement of air particles, caused by disturbing/exciting of the air column. See Baines, *Woodwind Instruments and Their History*, pp. 34-36 for an explanation of the 'stopped pipe' acoustic properties in relation to the clarinet.

to truly function as a speaker hole, the tonehole should be smaller, and closer to the mouthpiece.[65]

Intricacies within the bore of the clarinet also have an effect on the tone quality of the instrument and tuning of various notes. The importance of the shape of the bore – i.e. cylindrical or conical – has already been discussed, but the width of the bore also has a significant effect on sound quality and tuning. Bore width is an oft-discussed feature of clarinet design, thought to have much impact on sound quality. Brymer characterises four general bore-types as follows:

> The small French bore with its tight sound, the medium American-French with its versatile characteristics, the large German with its wide sound, small mouthpiece and hand-made reed, or the large English bore with its French mouthpiece, its flexibility and its characteristic ability to take on the personality of the player.[66]

However, Brymer overlooks the fact that much of this difference in sound is more to do with the difference in mouthpiece and reed style, and with local playing styles and preferences, than the differences in bore width. Very small alterations to the clarinet's essentially cylindrical bore can have a significant effect on the instrument's tuning, and such alterations are often carried out in order to compensate for awkwardly-placed toneholes, or attempt to eradicate tuning issues in 'problem' areas such as the 'throat' register. The process of tonehole undercutting is another way that designers have found to alter the tuning and timbre of different notes on the clarinet. Adrian Greenham's detailed thesis on tonehole undercutting demonstrates how makers have used undercutting at various points in clarinet design history, and what effect they have been aiming to achieve. He concludes that undercutting in early clarinets was primarily used to improve tone quality, but that in later clarinet

[65] See for example Jack Brymer, *Clarinet*, Yehudi Menuhin Music Guides (London: Macdonald and Jane's, 1976). p. 76.
[66] Brymer, *Clarinet*. pp. 98-99.

manufacture the reasons are less clear. His study proved that many players preferred the 'feel' of an undercut clarinet, as opposed to one with totally straight tonehole edges, or one where the edges had been rounded and smoothed.[67] However, he points out that few listeners would be able to tell whether a clarinet was undercut or not, and he suspects it is 'probable that differences between players using identical instruments may be greater than those brought about by undercutting'.[68]

As mentioned above, the most important factors in determining tone quality are those closest to the point at which the sound is generated, i.e. the mouthpiece, reed and embouchure of the player. Gibson identifies two clear schools of mouthpiece design: the French and German. The German mouthpiece is typically slightly longer and narrower than the French, and usually has grooves on the outside for the cord which binds the reed to the face of the mouthpiece.[69] Coupled with the French mouthpiece would usually be a reed averaging 66mm long, and one which is 68mm long with the German mouthpiece. The German mouthpiece has a narrower tip, so the reed would be narrower than the French: 12.7mm at the tip compared with 13.05mm. The German reed is also generally thicker than the French.[70] Jack Brymer discusses the mouthpiece and reed from a practical perspective, emphasising that 'it is quite impossible to over-stress the importance of the choice, design and maintenance of the clarinet mouthpiece'.[71] The most thorough analysis of mouthpiece design and its effect on tone is Edward Pillinger's doctoral thesis "The Effects of Design on the Tone and Response of Clarinet Mouthpieces".[72] Pillinger

[67] Greenham, "Clarinet Toneholes: A Study of Undercutting and Its Effects". pp. 215-216.
[68] "Clarinet Toneholes: A Study of Undercutting and Its Effects". p. 217.
[69] O. Lee Gibson, *Clarinet Acoustics* (Bloomington: Indiana University Press, 1994). p. 51.
[70] Gibson, *Clarinet Acoustics*. pp. 58-59.
[71] Brymer, *Clarinet*. p. 110.
[72] Pillinger, "The Effects of Design on the Tone and Response of Clarinet Mouthpieces".

reinforces the importance of mouthpiece design on clarinet sound, explains varying mouthpiece design styles, and draws many conclusions about how each aspect of mouthpiece design affects the resulting sound.[73]

1.5.2 A history of key mechanisation design developments preceding 1879

The clarinet of the mid-eighteenth century was a five- (or sometimes six-) keyed instrument, usually made from boxwood. The five keys were spread as follows: on the left hand joint the speaker key and the key for A4; on the bottom joint were keys for A♭3/E♭5, F♯3/C♯5, and E3/B4. The French clarinet virtuoso Jean Xavier Lefèvre is the person most commonly associated with adding a sixth key to these five – a L4 C♯4/G♯5.[74] Lawson claims that these clarinets had an 'extraordinarily long time-span of service' – especially in Britain, where he reveals that they were used by amateur players and military bandsmen well into the nineteenth century.[75] The eminent soloist Henry Lazarus (1815-95) used simple system clarinets during the last thirty years of his career, even though he was recommending Boehm system clarinets to his students. Even in 1938, the simple system clarinet was the model illustrated in *The Oxford Companion to Music.*[76]

Significant developments were made in clarinet design during the nineteenth century, notably the development of the thirteen-keyed clarinet by Ivan Müller. Most other nineteenth-century clarinets were heavily influenced by this design.[77] Rendall argues that 'the priority of Müller's invention is an academic question', and Lawson states that it was not so much the actual mechanism that was significant but the way

[73] "The Effects of Design on the Tone and Response of Clarinet Mouthpieces". pp. 207-214.
[74] Oskar Kroll, *The Clarinet* (Batsford, 1968). p. 22.
[75] Colin Lawson, *The Early Clarinet: A Practical Guide* (Cambridge, UK ; New York: Cambridge University Press, 2000). p. 23.
[76] Colin Lawson, liner notes to "100 Years of the Simple System Clarinet." (Clarinet Classics; CC0044). p. 6.
[77] Lawson, *The Early Clarinet: A Practical Guide*. pp. 25-6.

in which his keys were constructed, disposed, vented and padded.[78] Müller established for the first time that the placement of toneholes was of central importance, and that the keys had to be made to fit around the holes, rather than the holes being placed at the fingers' convenience. The 'improvements' and additions made by Müller were as follows: repositioning the F3/C5 hole and adding a new key to open and close this – operated by R4, a cross key for R3 for B♭3/F5, a long B3/F♯5 key for R4, an E♭4/B♭5 cross-key for L3, an F4/C6 key for L1, a G♯4 key for L1, a long A4-B4 trill key for R1, and alternative right-hand touch pieces to the L4 A♭3/E♭5 key and the L4 F♯3/C♯5 key, which were both operated by RT.[79] The speaker key was operated by LT. In Belgium, a derivative of this system was developed by Eugène Albert, and became known as the Albert System. This was the most popular system in England. In addition to the keys found on the Müller clarinet, the Albert system incorporated two *brille* rings, or the 'spectacle key' as it was often known. This consisted of two rings around the holes for R2 and R3, improving the notes B♭3/F5 and B3/F♯5. This mechanism had first been patented by Adolphe Sax in 1840, but Albert had much more success in popularising it. His models were most popular in England, where they were distributed by Louis Jullien and Samuel Arthur Chappell. When Boosey & Co. first began to manufacture clarinets Albert visited the factory to assist them, evidently a wise business decision on Boosey's part as Albert's clarinets were already so popular in England.[80] Another characteristic feature of the Albert clarinet was the long G♯ key on the top joint of the instrument, to be operated by L1. A later addition to the Albert system instruments was the

[78] F. Geoffrey Rendall, *The Clarinet: Some Notes Upon Its History and Construction*, 2nd revised ed. (London: Ernest Benn, 1957). p. 94, and Lawson, *The Early Clarinet: A Practical Guide*. p. 26.
[79] Kroll, *The Clarinet*. pp. 26-27.
[80] Nicholas Shackelton, "Eugène Albert" in *The New Grove Dictionary of Music & Musicians*, 2nd edn, ed. Stanley Sadie (London: Macmillan Reference, 2000). Vol 1, p. 300.

'patent C♯', which was also added to subsequent key systems such as the Oehler and Boehm systems. This enabled F♯3 and its twelfth (C♯5) to be played by L4 alone. When Boosey & Co. first began to manufacture clarinets, Albert was used as a consultant, and the first clarinets that were made often used the Albert – or simple – system.

Another significant key mechanism in use around this time was the German Oehler system. This is a complex system of keys and toneholes, which was designed to improve intonation across the range of the clarinet. The Boehm system has 17 keys and 6 rings, the standard Oehler clarinet has 22 keys but just 5 rings. It does not have the connection between the keys for R4 and L4, instead there is a roller to slide between the two keys for R4. There is sometimes a G♯3/D♯5 key and a B♭3/F5 key for L4, situated just underneath the F♯3/C♯5 and C♯4/G♯5 keys. On the top joint there is an additional sliver key for L2, which raises E4 and B5 by a semitone to produce F4 and C6. On the bottom joint there is an alternate key which is not covered by the player's fingers, but closes when R2 or R3 are pressed. This key is used for quartertone fingerings. There is a sliver key for R3 as there is on the Boehm clarinet, but on the Oehler instrument it has a different function, raising the pitch of A3 and E5 by a semitone to produce B♭3 and F5. Over time, improvements have been made to the basic system, and some models with the *Voll-Oehler* (full Oehler) can have up to 27 keys. Another feature of German clarinet design and playing is the choice of reed and mouthpiece: the usual arrangement consists of a small narrow-bored mouthpiece with a very hard reed which is tied to the mouthpiece with cord. This is a marked contrast with practice in most other European countries, and is one of the defining features of what is thought of as 'German' clarinet sound.

1.5.3 Materials and manufacturing methods.

Another aspect of design and construction is of course the choice of material for the main body of the clarinet. Though this is sometimes mistakenly thought to have a significant impact on the sound of the instrument, it is in fact the case that materials with similar density will sound much the same when coupled with the same sound-generating mechanism. It is not the cylindrical tube of the clarinet which vibrates, but the air column inside it. Therefore, the material has little impact on the sound.[81] During the eighteenth and early nineteenth centuries, before tropical hardwoods were widely available, clarinets were usually made from boxwood – *buxus sempervirens*. It is a reasonably hard wood, resonant, and easy to work with, but had one major disadvantage: susceptibility to atmospheric humidity and temperature changes. Cocuswood (*byra ebenus)* was another popular choice, especially in England. The current preferred material for clarinets is African Blackwood (*dalbergia melanoxylon*); B&H sourced this from Tanzania.

Figure 1-6 A group of workers sawing logs of African Blackwood in Tanzania.

This hardwood is ideal for clarinet manufacture: it is not generally prone to cracking; it is easy to work with; it takes a high polish; it is resistant to atmosphere and moisture and is very durable. The disadvantages are that it is very heavy, and

[81] *The Clarinet*. p. 30.

inhalation of the dust is toxic. Tropical woods, including African Blackwood, have to be imported. This adds to manufacturing costs.

Figure 1-7 A Boosey & Hawkes workman protects himself from the toxic dust produced when sawing African blackwood.

Other materials for clarinet manufacture have included ebonite. This is advantageous because it preserves bore dimensions precisely and is not at all affected by changes in temperature or moisture, but it is very fragile, discolours easily and deteriorates over time. There are also many musicians who feel that it does not allow for the same expressiveness of tone as wood, though there is little acoustical evidence to support this.[82] Metal has been used for clarinet manufacture, and has been popular with military musicians. Like ebonite, it preserves bore dimensions with great accuracy, and it is also lighter than wood. Metal's popularity with military clarinettists can be attributed to the fact that it is robust, and cheap.

[82] Rendall, *The Clarinet: Some Notes Upon Its History and Construction*. p. 14.

Metal has the disadvantage of being highly susceptible to changes of temperature, which causes problems with intonation, and is also a difficult material to make small adjustments to – for example resizing toneholes – once the instrument has been finished. Metal is also thought to have less attractive tonal qualities than wood.[83] Choice of materials is generally influenced by cost, durability and suitability for playing circumstances (e.g. ebonite clarinets for army use in hot climates) more than sound; though there are many players who would claim that different materials do make a difference, scientific tests have shown that there is little noticeable acoustic difference.

The traditional method of woodworking for clarinets as used by B&Co. and B&H until WWII included the following steps: the logs were first 'seasoned' in the open air in order to ensure that the resultant instrument did not warp and crack after use; they were then sawn across to make shorter billets of the correct length for joints. The logs were then split with an axe to produce rough joints – the axe-splitting technique was used to ensure that the joint followed the natural grain of the wood, and would therefore be less prone to cracking. Joints were then trimmed, and roughly turned and bored by hand on a lathe. Once this was completed, the rough bored joint went through another period of seasoning, was reduced to its finished size and immersed in a tank of oil for several months, again in order to prevent cracking. The toneholes and holes for pillars were then drilled by an extremely skilled craftsman, all by hand.[84] When mass production was introduced after WWII,

[83] *The Clarinet: Some Notes Upon Its History and Construction*. pp. 14-15.
[84] *The Clarinet: Some Notes Upon Its History and Construction*. p. 13., and (n.a.) Unpublished Typescript, B&HA, GB HM E1095.7.

a great deal of time was saved by replacing some of these lengthy processes with new automated ones. Mass production methods are discussed in Chapter 4.[85]

The earliest clarinet keys were made from either brass or silver, with brass being used more commonly as it was a cheaper material. Over time, German silver became more popular, and was usually the material of choice for Boosey & Hawkes clarinets in the early days. This is actually an alloy of copper, nickel and zinc, usually 60% copper, 20% zinc and 20% nickel, and does not contain any actual silver. Rendall explains that this material was ideal for clarinet key manufacture, as it is 'tough and hard, and lends itself well to forging and brazing. It takes and maintains a very high polish and is easily plated'.[86] It was first used for the manufacture of clarinet keys in the 1830s. Sterling silver is occasionally used for keys on very high-range clarinets, and occasionally keys are gold plated. At various points in the twentieth century other materials have been used for the manufacture of keys, notably the alloy known as Mazak. This was a zinc-based alloy with magnesium, aluminium and copper. Clarinet keys made from Mazak were not thought to be of very high quality, and were prone to breaking.

Early clarinet keys were manufactured by the laborious process of hand forging. In 1954 Rendall stated that this method was 'too exacting for the modern age', and accurately predicted that 'if not already dead, [hand forging] will soon be discarded'.[87] Later, more satisfactory, methods of key manufacture included drop forging and casting. Drop forging requires a heavy weight to fall on a block of metal, forcing it into a hardened steel die. The method of casting known as die-casting was

[85] See p. 184.
[86] *The Clarinet: Some Notes Upon Its History and Construction*. p. 19.
[87] *The Clarinet: Some Notes Upon Its History and Construction*. p. 19.

one used extensively by B&H, and was one of the advances which enabled the company to produce clarinets at a far greater rate than they had done previously. In this method, a molten alloy is forced into a split steel die under high pressure, and allowed to solidify.

1.6 Existing Scholarship

Existing scholarship covering or related to Boosey & Hawkes and clarinet manufacturing and playing in England reveals that there is some general consensus on a number of points. It is clear that Boosey & Hawkes was of great importance to British music-making and had a wide-reaching influence nationally and globally, though there is still considerably more known about the publishing work of the company than the instrument-making. A thorough account of the publishing activity of the company is provided by Helen Wallace's book *Boosey & Hawkes: The Publishing Story*.[88] Wallace describes many of the key events in the company's history, from the very early efforts of Thomas Boosey, who developed the publishing interests of the company, through the merger with Hawkes & Son of 1930, and up to the financial difficulties experienced by the company during the latter years of its life. Information on the publishing side is very thorough, but there is very little mention of the instrument manufacturing work of the company. This is only mentioned when it has had a direct impact on the overall corporate development, and is generally referred to fleetingly. Further research has revealed that there are also a number of inaccuracies in Wallace's brief descriptions of

[88] Wallace, *Boosey & Hawkes: The Publishing Story*.

instrument manufacturing, such as her assertion that the 1010 clarinet was developed in the early 1960s.[89]

Since the Boosey & Hawkes archive has become available to researchers, a number of articles have been published which use results gleaned from this corpus. One of these is Bradley Strauchen-Scherer and Arnold Myers' *A Manufacturer's Museum: The Collection of Boosey & Hawkes,* which supplies an introduction to the instrument collection that was housed in the Boosey factory, as well as to the archive of documentation.[90] It gives a useful insight into the collecting rationale of the curators of the collection, and suggests how instrument designers may have used these resources. This article also helps to reveal something of Boosey's position as an important manufacturer by highlighting some of the key acquisitions and mergers that took place during the company's history.

A detailed overview of woodwind manufacturing at Boosey & Co. from the beginnings of production through to the merger with Hawkes & Son in 1930 is provided by Kelly White and Arnold Myers' article *Woodwind Instruments of Boosey & Company.*[91] Much empirical evidence taken from the Boosey & Hawkes archive is used to reveal a number of things about clarinet production. White & Myers demonstrate that various key mechanisms were in use, yet make no evaluative statements about which were more common, or how this might relate to a national, or even global, approach to clarinet playing and design. They also highlight what they believe to be the first instance of a Boehm clarinet being produced by Boosey, and summarise the development of this system. However, they make no thorough

[89] *Boosey & Hawkes: The Publishing Story*. p. 105.
[90] Strauchen-Scherer and Myers, "A Manufacturer's Museum: The Collection of Boosey & Hawkes."
[91] White and Myers, "Woodwind Instruments of Boosey & Company."

survey of the model numbers/class marks of individual instruments and therefore admit that some information regarding key mechanisms may be inaccurate. Some description is made of other information found in the archive, for instance evidence of the diverse customer base held by Boosey at this time, with customers identified in education, the military, private dealers and leading orchestral contexts. Again this information is not put into any broader context. In spite of these areas where further research could be done this is an informative article. However, its scope does not extend beyond 1930, so there is another half-century of woodwind manufacturing at Boosey still to be explored.

Clarinet resources in the B&H archive are discussed in detail in Bradley Strauchen-Scherer's *Resources for Clarinet Research in the Boosey & Hawkes Collection and Archive*.[92] This article discusses many of the clarinets held in the B&H museum collection, now at the Horniman museum, and their significance in terms of design, manufacture and corporate history. All of the production records are described in detail, as are the technical drawings. Other items of ephemera are also mentioned. Strauchen-Scherer highlights areas of particular interest, such as the connections evident between Boosey designers and clarinettists, including the clarinets owned by Clinton, the Clinton system clarinets kept in the museum which were designed through collaboration between D. J. Blaikely and George Clinton, and the technical drawings which bear Blaikley's initials. As an overview it is very detailed, and provides some insight into changing patterns of manufacture and key moments in clarinet design at Boosey. The paper is intended to highlight the possibilities for further research.

[92] Strauchen-Scherer, *Resources for Clarinet Research in the Boosey & Hawkes Collection and Archive*.

Arnold Myers has also contributed a further two articles to the literature about Boosey & Hawkes and Boosey & Co., this time focusing on the production of brasswind instruments. These two articles are *Brasswind Innovation and Output of Boosey & Co. in the Blaikley Era* and *Brasswind Manufacturing at Boosey & Hawkes, 1930-1959*.[93] Clearly these are both centred on brasswind, rather than woodwind production, but give some detailed information about important innovations that took place during the specified time. David James Blaikley's highly renowned system of 'Compensating pistons' is discussed in this article. The article gives some information on manufacturing processes that were used, although with a focus on brass production. Some more general issues are also discussed, such as changing pitch standards, and also details of events in Boosey's corporate history, which are relevant to any study of Boosey instrument-production during this time.

Another important point of consensus among scholars is the view that the early twentieth century was a period of change in British orchestral music making. It is recognised that the problem of increased awareness of 'foreign competition' – largely due to the increased ease of foreign travel and subsequent continental orchestral visits, and the advent of recording technology – led those involved with British orchestras to make some significant changes.

The social history of music making in England is summed up well by Reginald Nettel, in *The Orchestra in England: A Social History*, and Eric Mackerness, in *A Social History of English Music.*[94] Both of these texts cover a wide

[93] Myers, "Brasswind Innovation and Output of Boosey & Co. in the Blaikley Era." Arnold Myers, "Brasswind Manufacturing at Boosey & Hawkes, 1930-1959," *Historic Brass Society Journal* 15 (2003). pp. 55-72.
[94] Reginald Nettel, *The Orchestra in England: A Social History* (London: Jonathan Cape, 1946). Eric David Mackerness, *A Social History of English Music.* [Studies in Social History.] (Routledge & Kegan Paul: London; University of Toronto Press: Toronto, 1964).

time-span, which is useful in terms of establishing the background to some of the events mentioned. The majority of information directly related to this thesis is towards the end of each text. Both authors identify certain trends in British music making, notably the concept of 'foreign competition' (as Mackerness describes it) towards the end of the nineteenth century. Nettel in particular suggests that this led to a need for British orchestras to find a style and sound of their own, which could be compared favourably with their foreign counterparts. Cyril Ehrlich's *The Music Profession in Britain* deals more with the business side of the music profession, looking at changing approaches to employment and the place of music within society.[95] He further supports the notion that the first few decades of the twentieth century were a period of great change for orchestral playing, and relates this to other contemporary events.

More personal accounts of the time also help to give an insight into the *Zeitgeist* of English musical life. Memoirs of musicians can show what sorts of changes were taking place, how these were implemented, and how they affected individuals. They also give an idea of how performers felt about certain events. Jack Brymer's *From Where I Sit* and *In the Orchestra* describe many of his own experiences of English orchestral playing, and describe how he felt about the idea of 'foreign competition'.[96] Archie Camden's *Blow by Blow* is a similarly personal account, which contains accounts of Camden's influential role as the first British player of German bassoons.[97] A major musical event that took place in Britain in the

[95] Cyril Ehrlich, *The Music Profession in Britain since the Eighteenth Century: A Social History* (Oxford: Clarendon, 1985).
[96] Jack Brymer, *From Where I Sit* (London: Cassell, 1979). *In the Orchestra* (London: Hutchinson, 1987).
[97] Archie Camden, *Blow by Blow: Memoirs of a Musical Rogue and Vagabond* (Sonoma, California, USA: Thames Publishing, 1982).

early twentieth century was the establishment of the BBC Symphony Orchestra, and this is thoroughly documented in Nicholas Kenyon's *The BBC Symphony Orchestra: The First 50 Years.*[98] This explores the 'foreign competition' idea, and also describes in detail the steps that were taken to address this problem. It goes on to further explore events in social history and their impact on the BBC SO, and British music making in general. A more recent account of musical life in Britain over the twentieth century is Basil (Nick) Tschaikov's *The Music Goes Round and Around.*[99] This is a very personal biography detailing Tschaikov's long career in the music business, and offers an insider's account of many aspects of musical life, from music education, to orchestral tours, to the continual raising of standards that took place during the twentieth century. Though the book offers a broad scope and a lot of detail, it is one man's perspective of events rather than an objective account.

Clarinet scholars identify that the Boosey & Hawkes 1010 model clarinets were of great importance to clarinet playing in England, and provide much information about usage of clarinets in Britain and abroad throughout the time frame covered by this thesis. An early, but important, book which details clarinet design and use both in Britain and abroad is Anthony Baines' *Woodwind Instruments and their History,* which contains a great deal of information about all orchestral woodwind instruments. Baines describes different key mechanisation systems, including the Albert and Boehm, and talks about how and why these increased/decreased in popularity.[100] He makes clear distinctions between national schools of playing, citing the two extremes as the German and French schools. Some

[98] Nicholas Kenyon, *The BBC Symphony Orchestra: The First Fifty Years 1930-1980* (London: British Broadcasting Corporation, 1981).
[99] Basil Tschaikov, *The Music Goes Round and Around* (Peterborough: Fastprint Publishing, 2009).
[100] Baines, *Woodwind Instruments and Their History*.

organological features of these different approaches are given. There are, however, instances where Baines makes generalisations about clarinet makes and models – including Boosey & Hawkes models – without giving any real empirical evidence. Another useful book from this time is F G Rendall's *The Clarinet: Some Notes upon its History and Construction,* which adds to Baines' book by giving more information on the development of clarinet manufacturing processes.[101] Oskar Kroll's *The Clarinet* gives an insider's perspective on the German clarinet school with more detail than Baines was able to give in this area.[102] Jack Brymer has also contributed to the literature about the clarinet from an organological perspective, describing differences again between French, German, and also English clarinet designs and playing styles. The early history of the clarinet is well documented by Albert Rice, who has published books on the clarinet in both Baroque and Classical periods, and history of the larger clarinets.[103]

Another recent publication on the subject of the clarinet is *The Cambridge Companion to the Clarinet*, edited by Colin Lawson.[104] Here a collection of respected clarinet players and scholars contribute a wide range of chapters on the history of the clarinet, clarinet pedagogy, the clarinet on record and other related topics. Particularly relevant is Nicholas Shackleton's chapter on the development of the clarinet, which sets out some empirical data about one of the most important aspects of clarinet design in terms of tone production: bore width. He indicates that

[101] Rendall, *The Clarinet: Some Notes Upon Its History and Construction*.
[102] Kroll, *The Clarinet*.
[103] Albert R. Rice, *The Baroque Clarinet* (Oxford: Clarendon, 1991) , *The Clarinet in the Classical Period* (Oxford; New York, N.Y.: Oxford University Press, 2003) , and *From the Clarinet D'amour to the Contra Bass: A History of Large Size Clarinets, 1740-1860* (New York; Oxford: Oxford University Press, 2009).
[104] Colin Lawson, *The Cambridge Companion to the Clarinet* (Cambridge: Cambridge University Press, 1995).

Boosey & Hawkes clarinets had an unusually wide bore, and shows how this may have compared to instruments from around the globe. Lawson's *The Early Clarinet: A Practical Guide*, while being primarily aimed at the historical performer, has some very clearly presented information on early clarinet design features.[105] The most recent monograph to examine the clarinet in detail is Eric Hoeprich's *The Clarinet.*[106] Hoeprich makes a broad summary of clarinet makers and design styles from around the world. His index of clarinet makers is very detailed, and lists manufacturers with dates and locations. However, in presenting such a broad summary Hoeprich has been unable to give much detail at all about any of these makers, or make much in the way of evaluative comments about the impact they may have had.

Clarinet acoustics and design are discussed in greater depth in Lee O. Gibson's *Clarinet Acoustics*, which discusses design features such as materials, bore width and profile, mouthpiece design, and tonehole design.[107] In each case he explores how a particular feature affects tone or pitch, and often gives examples of specific clarinet models to exploit certain characteristics. He often refers to the Boosey & Hawkes 1010 clarinets, and makes several assertions about them. His comments are generally derogatory and unsubstantiated, though he posits some interesting ideas, such as the suggestion that later 1010 models were quite different in design to the early ones which were popular with high-profile players. Gibson is not the only author to allude to a decline in standards in 1010 manufacture; the idea is also mentioned in Adrian Greenahm's thesis on tonehole undercutting, during

[105] *The Early Clarinet: A Practical Guide* (Cambridge, UK; New York: Cambridge University Press, 2000).
[106] Eric Hoeprich, *The Clarinet*, The Yale Musical Instrument Series (New Haven, Conn.; London: Yale University Press, 2008).
[107] Gibson, *Clarinet Acoustics*.

which Greenham reveals a degree of inconsistency in the undercutting applied to post-war 1010s.[108] I shall return to this idea in later chapters. Another detailed acoustical study – this time of clarinet mouthpieces – is Edward Pillinger's doctoral thesis, *The Effects of Design on the Tone and Response of Clarinet Mouthpieces.*[109] Pillinger presents results of acoustical experiments on the effect of mouthpiece design on clarinet timbre, and makes some observations about the mouthpieces used for B&H's 1010 clarinets.

Other writers have focussed on more practical aspects of clarinet playing, and on clarinet players. Pamela Weston's *Clarinet Virtuosi of the Past* and other similar books give information about many historical players.[110] Of particular use are the player biographies, which often mention which type of clarinet each musician used. She highlights some of the key figures that played on Boosey & Hawkes instruments – such as Thurston and Brymer – whilst pointing out players such as Charles Draper who in fact played on French instruments. She also lists players by position, so that it is possible to see who was playing in which orchestras at certain times. Spencer Pitfield's doctoral thesis *British Music for Clarinet and Piano 1880-1945: repertory and performance practice* provides the most thorough analysis of British clarinet playing during this period.[111] Inevitably he discusses the Boosey & Hawkes clarinets in some detail. However, some of his statements appear to be based more on hearsay than empirical evidence. He suggests that the first 1010 clarinets to be manufactured were a pair that went on to be owned by Frederick Thurston, serial numbers 30255

[108] Greenham, "Clarinet Toneholes: A Study of Undercutting and Its Effects". pp. 98-102.
[109] Pillinger, "The Effects of Design on the Tone and Response of Clarinet Mouthpieces".
[110] Pamela Weston, *Clarinet Virtuosi of the Past* (London: Hale, 1971), and *More Clarinet Virtuosi of the Past* (London (1 Rockland Rd, SW15 2LN): The author, 1977).
[111] Spencer Simpson Pitfield, "British Music for Clarinet and Piano 1880-1945: Repertory and Performance Practice" PhD. Dissertation. (University of Sheffield, 2000).

and 30256, but no evidence for this assertion is given. He also makes little reference to other types of clarinets made by Boosey. He does not enter into any evaluation of the potential impact of Boosey & Hawkes on British clarinet playing; in this area he takes a purely descriptive role.

This existing scholarship surrounding Boosey & Hawkes, and the clarinet in Britain, leaves a number of avenues still to be explored. In particular, the relationship between the musical climate in Britain and organological developments could be analysed further, with a view to determining if there were clear links between these events. Clearly there is also much work to be done in terms of producing empirical data about clarinet production at Boosey & Hawkes, specifically the period after the merger in 1930, which is where the White and Myers article stops. This will involve producing some more concrete facts about the 1010's production, consumption and design, as well as analysing other models of clarinets produced by Boosey – as is suggested by White and Myers in their article.

2 A product of British Musical Renaissance: Clarinets of Boosey & Co., 1879-1930

Introduction

When Boosey & Co. first started producing musical instruments, British music making was undergoing transformation and expansion. The changes which took place in music making, and the reasons behind them, all impacted upon clarinet manufacturing and design at B&Co., so they are discussed below in order to put the start of B&Co.'s clarinet manufacturing in context. A wide range of clarinets was manufactured by B&Co., and this chapter discusses each model in some detail, with analysis of model numbers and other empirical data. This period was of great importance in terms of B&Co. establishing itself as an instrument manufacturer, with the British army as its most significant customer group. Many design innovations were made during the B&Co. years, and some of these developments had significant influence on later B&H designs – including the 1010 clarinet.

2.1 'Musical Renaissance' in Nineteenth-Century Britain

The period 1700-c.1850 is often described as the 'dark age' of British music.[112] Though Temperley is referring to composition, rather than performance, attempts to move out of this dark age influenced all areas of music making, including instrument design and manufacture at B&H, as will be shown later in this chapter. A variety of factors resulted in the nineteenth century being a period of expansion in musical culture both in Britain and abroad, eventually resulting in a British 'musical renaissance' towards the end of the century.[113] Though there is often a difference of

[112] Nicholas Temperley "Xenophilia in British Musical History" in ed. Bennett Zon, *Nineteenth-Century British Music Studies. Vol.1*, Music in Nineteenth-Century Britain (Aldershot: Ashgate, 1999). p. 7.
[113] Zon, *Nineteenth-Century British Music Studies. Vol.1*. pp. 3-9.

opinion about the exact dates of the period of darkness and rebirth, there is a consensus amongst musicologists that the transition took place during the latter part of the nineteenth century. The driving forces behind this rebirth were changes in socio-economic circumstances. An increasing proportion of the population had a higher income and greater amount of leisure time than ever before. The middle-classes therefore not only had the economic wherewithal to pay for goods and services which were superfluous to the necessities of life, but had an increased amount of free time to fill with leisure activities. The widespread development of transport links, as well as the extensive growth of urban areas, increased potential audience numbers for musical events and made available a greater number of performance spaces, such as the Crystal Palace in Sydenham. All these factors led to an increased demand for musical 'services' and musical businesses had to meet these new requirements.

The 1830s and '40s are often described as a period of 'cultural explosion'.[114] During the 1830s a number of new models of musical activity originated, including the amateur choral movement, cheap promenade concerts and subscription concerts – the latter comprised of chamber music in particular.[115] Earlier attempts to instigate these concert series had identified an audience for the performance of these types of musical performances, but concerts were only offered sporadically.[116] Later efforts began to attract audiences who were 'conversant with the higher branches of instrumental music', and went on to become established London events by the

[114] William Weber, *Music and the Middle Class: The Social Structure of Concert Life in London, Paris and Vienna* (London: Croom Helm, 1975). p. 16.
[115] Simon McVeigh, "The Society of British Musicians (1834-1865) and the Campaign for Native Talent" in eds. Christina Bashford and Leanne Langley, *Music and British Culture, 1785-1914: Essays in Honour of Cyril Ehrlich* (Oxford: Oxford University Press, 2000). p. 146.
[116] For instance the Bach-Abel subscription series of the 1760s and 1770s. See Cyril Ehrlich, *First Philharmonic: A History of the Royal Philharmonic Society* (Oxford: Clarendon Press, 1995). p. 1.

1840s.[117] Subscription concerts and other performance series were often organised by concert societies or other musical institutions. One which has received much scholarly attention is the Crystal Palace, which was rebuilt at Penge Place, Sydenham, after having first been constructed for The Great Exhibition of The Works of Industry of all Nations held at Hyde Park from May to September 1851.[118] In its new setting, the Crystal Palace was not a trade or industrial fair, but a permanent exhibition for leisured culture. Opened in 1854, it soon began to play an important part in the burgeoning musical scene in London.[119] Musgrave goes so far as to say it 'became the focus of developing orchestral music in Britain' and claims that the orchestral playing was international standard within the decade.[120] The Philharmonic Society, founded in 1813, also promoted concerts, as did John Ella's Musical Union.[121] The explosion of musical activity created increased opportunities for performances, and therefore a greater demand for published sheet music and musical instrument manufacturing over the next few years. This increased demand would have influenced Boosey's establishment of the music publishing business in 1816, and Boosey and Boosé's later decision to commence experiments in instrument making and selling.

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[117] Christina Bashford, "John Ella and the Musical Union" in eds. Bashford and Langley, *Music and British Culture, 1785-1914: Essays in Honour of Cyril Ehrlich*. p. 195.
[118] The beginnings of instrument manufacturing at B&H can be traced to this exhibition, as Carl Boosé's 13-keyed boxwood clarinet was built to be displayed there. See p. 26 for details and an illustration of Boosé's clarinet.
[119] For a detailed account of music making at the Crystal Palace see Michael Musgrave, *The Musical Life of the Crystal Palace.* (Cambridge: Cambridge University Press, 1995).
[120] Ed. Michael Musgrave, *George Grove, Music and Victorian Culture* (Basingstoke: Palgrave Macmillan, 2003). p. 14.
[121] A thorough account of the activity of the Royal Philharmonic Society is given in Ehrlich, *First Philharmonic: A History of the Royal Philharmonic Society*. The Musical Union is discussed at greater length in Christina Bashford, "John Ella and the Musical Union" in eds. Bashford and Langley, *Music and British Culture, 1785-1914: Essays in Honour of Cyril Ehrlich*. pp. 193-214. Also in Christina Bashford, *The Pursuit of High Culture: John Ella and Chamber Music in Victorian London*, Music in Britain, 1600-1900 (Woodbridge: Boydell & Brewer, 2007). pp. 115-163 and 177-187.

Foreign influences affected many areas of British music making during this period, and this, too, was reflected by instrument manufacturing at B&Co, where instruments made by foreign competitors were collected and scrutinised by Boosey designers. Foreign practices affected musical performance too: the famous London Promenade concerts, which opened on 10 August 1895, were based on a French concert series organised by Philippe Musard, and advertised at the Lyceum Theatre as 'Promenade Concerts *à la Musard*'.[122]

A distinctive national school of playing had begun to emerge in Paris in the early nineteenth century, largely a result of the establishment of the Paris Conservatoire in 1793. During the early 1800s the Conservatoire educated most of the best orchestral players in Paris, and emerged as the leading model for other music training institutions.[123] The influence the training model established by the Paris Conservatoire led to other countries developing distinct national styles, and sounds. The growing awareness of national playing styles influenced the future success of B&H clarinets, as British musicians strove to find their own individual 'sound' set apart from those established in France, and later in Germany.

Both French and Belgian instrument manufacturing activity during the mid 19th century went on to have a significant impact on practice at B&H. Clarinets made by the Belgian maker Eugène Albert were particularly popular with British clarinettists, and it was these models that Boosey & Co.'s first clarinet designs were based upon. Albert's clarinets were distributed in Britain by Louis Antoine Jullien, a

[122] David Vassall Cox, *The Henry Wood Proms* (London: British Broadcasting Corporation, 1980). pp. 9-13.
[123] *The New Grove Dictionary of Music and Musicians,* 2nd edn, ed. Stanley Sadie. s.v. "Conservatories" p. 314.

French musician and conductor working in England.[124] The Distin Family Quintet visited the Parisian workshop of influential wind and brass instrument maker Adolphe Sax in 1844, and subsequently promoted his saxhorns in Britain. Saxhorns became the backbone of the British brass band, and were a major product line in the early days of B&Co.'s brass instrument manufacturing following the acquisition of the Distin business in 1868.[125] French instruments such as Godfroy flutes, Buffet clarinets and Triébert oboes were well respected; writing his *Report on Musical Instruments* after the 1851 Crystal Palace Exhibition, Berlioz argued that:

> The number of prize medals given to French makers of musical instruments compared to those obtained by foreign makers demonstrates officially the superiority of the former.[126]

This does, of course, exude a sense of national pride. However, the Great Exhibition clearly exposed B&Co. to these French manufacturers' designs. In the following decades it is apparent that foreign influences affected production at B&Co.: they went on to manufacture oboes along the same lines as Triébert, and examined Buffet clarinets around the same time that they were developing their Boehm system clarinets. In terms of Brass manufacturing, Blaikley's compensating pistons were an improvement on the system already in use by brass manufacturer Gautrot in Paris.

Direct foreign influences also had an effect on perceptions of British orchestral ability and training. Louis Antoine Jullien (who was the English agent for

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[124] Waterhouse and Langwill, *The New Langwill Index: A Dictionary of Musical Wind-Instrument Makers and Inventors*. s.v. Albert, E. p. 4, and Jullien, Louis, p. 197.
[125] Arnold Myers, "Instruments and Instrumentation" in Trevor Herbert, *The British Brass Band: A Musical and Social History* (Oxford: Clarendon Press; New York: Oxford University Press, 2000). p. 169 .
[126] Hector Berlioz, "Rapport sur les instruments de msuique." *Paris: l'Imprimerie Impériale, 1854*. Translated by Michel Austin at http://www.hberlioz.com/London/Berlioz1851E.html (accessed 08.05.2009).

Albert's clarinets, as discussed above) was a flamboyant French composer and conductor who came from Paris to England at some point between 1838 and 1840.[127] He was involved in some sensational performances, assembling 'huge masses of instrumentalists, regardless of anything like proportion, and creating, in fact, "monster concerts" '.[128] The prominence of such foreign artists meant that English musicians lived in the shadow of performers from France, Italy, and particularly Germany.[129] In 1849, a contributor to *The Musical Times* lamented this situation, claiming that 'the English have now been so long accustomed to view themselves as a nation not as producers, but merely as judges and patrons of music.'[130] He goes on to discuss the pre-eminence of the German school, especially with regards to composition. In a different article the same author refers to English vocal composers, 'whose names are getting paler in the distance of history.'[131] German orchestras, too, were regarded as superior to those in Britain, with some people believing Germany's thorough systems of musical training to be of finer quality.[132,133] Comparisons such as this caused musicians in England to question their own systems: in the 1860s the Musical Union's founder John Ella began to campaign consistently for standards of

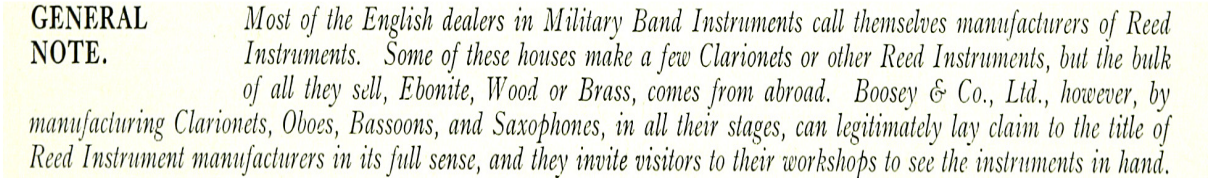
[127] There is some controversy about why, and when, Jullien came to London. Rivière claims that Jullien was fleeing after trouble with the French police stemming from complaints about the raucous performances held at the *Casino.* Other sources imply that Jullien was suffering from financial difficulties, and fled to England to escape being imprisoned for debt. See Adam Carse, *The Life of Jullien: Adventurer, Showman-Conductor and Establisher of the Promenade Concerts in England, Together with a History of Those Concerts up to1895* (Cambridge: Heffer, 1951). pp. 34-7, and Jules Rivière, *My Musical Life and Recollections* ([S.l.]: [s.n.], 1893). pp. 44-5 for further details.
[128] Henry C. Lunn, "An Autumn Gossip on Music," *The Musical Times and Singing Class Circular* 11, no. 248 (Oct. 1, 1863). p. 134.
[129] Many German musicians were present in England until the onset of WWI.
[130] E. Holmes, "Curiosities of Musical History. No. I," *The Musical Times and Singing Class Circular* 3, no. 67 (Dec. 1, 1849). pp. 237.
[131] ———, "English Glee & Madrigal Composers. No. Vii," *The Musical Times and Singing Class Circular* 5, no. 98 (Jul. 1, 1852). pp. 22.
[132] n.a. "Orchestral Details. Crystal Palace Opening," *The Musical Times and Singing Class Circular* 6, no. 126 (Jun. 15, 1854). pp. 101.
[133] Ward Jackson, author of Edwin Ward Jackson, *Jackson's Gymnastics for the Fingers and Wrist, Being a System of Gymnastics Based on Anatomical Principles, for Developing and Strengthening the Muscles of the Hand. With Diagrams* (London) , took his daughters to Germany for their musical education, implying that he felt it superior to what was available in England.

performance and musical education to be brought into line with those in Europe, after witnessing what was achievable during foreign visits.[134] With the turn of the twentieth century, awareness of the style and standard of foreign orchestras significantly affected orchestral practice in Britain, and created demand for B&Co, and B&H, to manufacture new and improved orchestral instruments.[135]

Increased awareness of 'foreign competition' – as well as broader political factors – led to a quest for developing a greater sense of national identity in British music, particularly in terms of composition. Nicholas Temperley describes what he conceives as a lack of confidence in English music before the musical 'renaissance.'[136] He argues that although early Victorian Britain was confident in many of its achievements, it played down its musical ability. A popular myth amongst English, and foreign, people was that England was a 'land without music.'[137] This myth of inadequacy was spread globally and through time, affecting international perceptions as well as the work of early twentieth-century music historians. An extension of this belief was that England had no folk music or song of its own.[138] There were, of course, those who sought to change these preconceptions. The Society of British Musicians was established in 1834 with the aim of encouraging and advancing British musical talent, and membership was open

[134] Christina Bashford, "John Ella and the Musical Union", in eds. Bashford and Langley, *Music and British Culture, 1785-1914: Essays in Honour of Cyril Ehrlich*. p. 213.
[135] This is documented in detail in the following chapter. See p. 116.
[136] Nicholas Temperley, "Xenophilia in British Musical History", in ed. Zon, *Nineteenth-Century British Music Studies. Vol.1*. pp. 4-9.
[137] It seems this idea was first raised by Carl Engel, a German music scholar residing in England. It appeared in his book *An Introduction to the Study of Nationalist Music,* (1886). The German phrase 'Das Land ohne Music' was the title of a very anti-English book by Oskar Adolf Hermann Schmitz published in 1904.
[138] Nicholas Temperley, "Xenophilia in British Musical History", in ed. Zon, *Nineteenth-Century British Music Studies. Vol.1*. p. 5.

exclusively to British-born musicians.[139] Many of the efforts in this area were made in an attempt to develop a musical 'voice' for Britain that could be seen as comparable with those of continental European countries, who held long-established traditions of performance and composition. Jeffrey Richards notes that military bands engaged to play at exhibitions were urged to play an increasing amount of British music towards the late nineteenth, and especially early twentieth, centuries.[140] This desire for a greater sense of 'Britishness' in music making is reflected in B&Co.'s later publicity, demonstrating that B&Co. instruments were the only ones that could be considered of true British manufacture:


GENERAL NOTE.

Most of the English dealers in Military Band Instruments call themselves manufacturers of Reed Instruments. Some of these houses make a few Clarionets or other Reed Instruments, but the bulk of all they sell, Ebonite, Wood or Brass, comes from abroad. Boosey & Co., Ltd., however, by manufacturing Clarionets, Oboes, Bassoons, and Saxophones, in all their stages, can legitimately lay claim to the title of Reed Instrument manufacturers in its full sense, and they invite visitors to their workshops to see the instruments in hand.

Figure 2-1 "General Note" from a B&Co. Woodwind Catalogue, c. 1929. B&HA, GB HM, E82.239. p. 3.

The desire for a more uniquely British musical voice in composition, but also in other areas of music making, was also one of the reasons that B&H's flagship clarinet – the 1010 – became as successful as it did.

Musical expansion was also demonstrated by the establishment of a large number of firms trading in music: sellers and repairers of instruments; 'professors' of music; and music publishers.[141] Novello was established as a publishing house with a

[139] Simon McVeigh, "The Society of British Musicians (1834-1865) and the Campaign for Native Talent", in eds. Bashford and Langley, *Music and British Culture, 1785-1914: Essays in Honour of Cyril Ehrlich*. p. 150.
[140] Jeffrey Richards, *Imperialism and Music: Britain, 1876-1953* (Manchester: Manchester University Press, 2001). p. 179.
[141] Judith Blezzard, "What Choirs Also Sang: Aspects of Provincial Music Publishing in Late-nineteenth-century England", in ed. Michael Talbot, *The Business of Music*, Liverpool Music Symposium (Liverpool: Liverpool University Press, 2002). p. 62.

special interest in music in 1810, Chappell in 1811, and Boosey & Co. in c.1816.[142] Clearly the growing market for music-related consumer goods provided enough business to sustain these three independent companies. It was also in this climate of increased commercialism that B&Co. was able to expand its activity to include instrument retailing, and later manufacturing, in the mid-nineteenth century. Increased consumerism and the growing emphasis placed on entrepreneurialism during this time were reflected by musical activity.[143] Music publishers embraced this culture, as demonstrated by the readiness with which certain firms undertook to popularise music further by sponsoring concerts. Examples of this included Novello's Oratorio Concerts, Chappell's Monday Popular Concerts, and the famous Boosey Ballad Concerts.[144] These concerts were all used as an opportunity to promote the music in the catalogues of the various publishing houses, by linking popular artists to pieces of music. Boosey even managed to use the concerts to promote sales of the ballad horn.[145] Helen Wallace claims that these events were 'the most successful musical formula on the market', as Boosey was providing a cleverly joined up business model.[146] People would pay to come to the concerts, and hear music that they enjoyed. They could then purchase the sheet music of pieces that they had heard – published by Boosey of course. There was also the opportunity to purchase an instrument – manufactured by Boosey – to play the vocal line of the songs.

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[142] B&Sons, the bookshop opened by Thomas Boosey, had been in operation since 1792. It was Thomas Boosey's son, Thomas Boosey Jr. who established the separate music publishing side of the business. See Chapter 1, p. 14 for an early history of Boosey.
[143] McVeigh and Ehrlich, "The Modernisation of London Concert Life", in ed. Talbot, *The Business of Music*. pp. 96-120.
[144] Mackerness, *A Social History of English Music.* p. 177.
[145] See Chapter 1, p. 15 for details of the Ballad Horn and Ballad Concerts.
[146] Wallace, *Boosey & Hawkes: The Publishing Story*. p. 3.

The spirit of expansion unfortunately also had some negative effects on the lives of professional musicians, and therefore on the music that they provided. Ehrlich argues that these less positive aspects of musical life have often been obscured by talk of 'renaissance', and by attempts to challenge the perception of England as 'the land without music'. Ehrlich states that one of the largest problems facing the profession was overcrowding.[147] This was largely due to the abundance of inexpensive tuition available, and increased opportunities for engaging with music on different levels.[148] Ehrlich describes a sense amongst professional musicians of 'livelihoods being threatened and incomes being continually depressed by the ceaseless inflow of players and teachers.'[149] With ever-growing numbers of musicians trying to find work, morale began to decline towards the end of the nineteenth century. This was partly exacerbated by the 'popular' nature of many musical engagements – in dance halls and musical theatre – which were not seen as musically sophisticated or challenging compared with performing orchestral, solo or chamber repertoire.[150]

The turn of the century, and particularly the years after the end of WWI, saw improvements in some of these areas, however, and a rejuvenated interest in some of the goals of the early nineteenth century. English musicians found they were less 'overcrowded' at the onset of war, not least because many of the foreign – especially German – musicians who had been present in England until this point had left the country.[151] Entry-level musicians also found themselves at an advantage, as some

[147] Ehrlich, *The Music Profession in Britain since the Eighteenth Century: A Social History*. p. 123.
[148] For more details of the availability of inexpensive tuition see *The Music Profession in Britain since the Eighteenth Century: A Social History*. p. 104-107.
[149] *The Music Profession in Britain since the Eighteenth Century: A Social History*. p. 124.
[150] *The Music Profession in Britain since the Eighteenth Century: A Social History*. p. 74.
[151] Mackerness, *A Social History of English Music.* p. 220.

native musicians had been called up for service, which created new opportunities for employment.[152] Huberman highlights another interesting consequence of war in a 1921 article in *Music and Letters* – what he describes as 'musical chauvinism.'[153] This was the heightened sense of national identity that led to people demanding that musicians prioritise the playing of native music. He goes on to say that the cry for this native music was most insistent in England and in France.[154]

The sense of 'foreign competition' was still ever-present, however, as was confirmed by visits from overseas orchestras. By the early 1930s, it was becoming increasingly apparent that higher standards of discipline and management resulted in higher standards of performance. Henry Welsh's contribution to *Music and Letters* in 1931 claims 'that the playing of the best British orchestras is vastly inferior to that of world-famous organisations such as the Vienna Philharmonic, the New York Philharmonic, and various others.'[155] Welsh goes on to point out that the reasons for this were closely linked to the ways that orchestras were managed, and the standards of discipline enforced in those foreign ensembles: 'mishaps in the wood wind section of the Vienna Orchestra are of the very rarest occurrence. Three slips a month would be enough to cost a man his job.'[156] Growing awareness of comparisons between continental and British orchestras led to significant changes in orchestral practice in

[152] Ehrlich, *The Music Profession in Britain since the Eighteenth Century: A Social History*. p. 186.
[153] Bronislaw Huberman and A. H. F. S, "Artists and Concert Life: As Affected by the War," *Music & Letters* 2, no. 2 (1921). p. 123.
[154] Huberman, "Artists and Concert Life: As Affected by the War." p. 123. Huberman is clearly discussing compositions, as opposed to approaches to sound or performance practice. One could argue, however, that this initial drive for a school of English composition later led to a desire for a truly English school of sound as well.
[155] Henry Welsh, "Orchestral Reform," *Music & Letters* 12, no. 1 (1931). p. 21.
[156] Welsh, "Orchestral Reform." p. 24.

twentieth-century Britain, and was perhaps the most significant factor in creating a demand for higher-quality instruments to be manufactured by B&H.[157]

In summary, it is evident that British musical expansion during the nineteenth century paved the way for B&Co. becoming established first as a music-publishing house, and then as an instrument maker. Moves that were being made elsewhere in British music making – the modernisation of concert life, new concert series, the increasing commercialisation of music and musical events – were creating a greater demand for musical services of all sorts, including published music and musical instruments.

Attempts to create more of an 'English' school of composition, and the encouragement of British talent, created an opportunity for a British instrument-manufacturing company to step forward, advertising its instruments as British made, instead of from abroad. The development of national playing styles – as evident at the Paris Conservatoire – also heightened the need for a 'British' sound and style. This provided B&Co. with an opportunity to create instruments which would be perceived to create a unique British sound, which was, as is argued later in this thesis, achieved with the release of the 1010 model.

Foreign influences on British music making were another common theme throughout the nineteenth century, and again this is reflected by practice at Boosey, not least through the employment of Belgian clarinet manufacturer Albert – whose clarinets were already popular in Britain – as instructor to the clarinet designers.

[157] See Chapter 3 p. 116 for discussion of the orchestral reforms which took place in Britain, and their influence on design and manufacturing at B&H.

2.2 English Clarinet Manufacturing outside the Boosey Factory

2.2.1 Pre-Boosey Manufacturers

There were a number of British firms engaged in selling and manufacturing clarinets before Boosey also began this line of trade.[158] The table below is far from an exhaustive list of nineteenth-century English makers, but shows those English-made clarinets which were exhibited at the 1900 Crystal Palace Exhibition.[159] Most of the clarinets shown below were lent to the exhibition by F.W. Galpin or by Rudall Carte & Co.. Boosey & Co. also lent a number of clarinets to the exhibition from the Boosey factory museum.[160]

Table 2-1 English Clarinets exhibited at the 1900 Crystal Palace exhibition.

Company Name	Dates in Operation	Clarinets Manufactured
Astor (George)	c.1778-1831	6-key boxwood, 6-key boxwood E♭
Goulding	1786-1834	5- and 6-key boxwood, 6-key ebony, 10-key boxwood
Bland & Weller	1792-c.1818	5-key boxwood
Key (Thomas)	1805-1858	7-key boxwood, 8-key boxwood, 13-key boxwood, Tenor in F
Otten	1820-1836	6-key boxwood in C
D'Almaine & Co.	1834-1867	6-key boxwood
Cramer	c.1790-1820	6-key boxwood

It is difficult to establish the scale on which these companies were operating. Many also had relatively short trading lives, perhaps having initially been caught up in the expansionist period during the early nineteenth century, but finding themselves unable to sustain production beyond this.

[158] For further information on any of these makers, see Waterhouse and Langwill, *The New Langwill Index: A Dictionary of Musical Wind-Instrument Makers and Inventors*.
[159] Exhibitions, *Crystal Palace. International Loan Exhibition of Musical Instruments, July to October, 1900. Official Catalogue, Etc.* (Sydenham, 1900). p. 55.
[160] See below, p. 104 for specific details.

2.2.2 Rivière & Hawkes

There was a relatively brief partnership between William H. Hawkes and Jules Prudence Rivière between 1865 and 1876. This was known as Rivière & Hawkes (R&H). Clarinets were manufactured under this label, though there are no known surviving production records. An advertisement in the front of the R&H publication of Klosé's tutor shows five clarinets made by R&H, four of which are variations on the simple system, one of which is a standard seventeen-key, six-ring Boehm instrument.[161] An extant example of an R&H 12-key + brille cocus B♭ clarinet is held in the Bate collection.[162]

2.2.3 Hawkes & Son

In order to be seen as serious rivals to Boosey & Co., Hawkes & Son must have been producing wind instruments on a similarly large scale to Boosey. There are very few known extant records of H&S production though, so there is much less scope for a thorough analysis of the H&S instruments and production. There are two H&S journals in the Boosey & Hawkes archive, both from the period 1921-1931, and a number of H&S technical drawings from this period.[163] One of these covers woodwind production, the other brasswinds**.** Information in the H&S records is organised quite simply, with just one date, instrument (with some description), class and serial number. Descriptions of instruments are also simple, with materials being listed as either 'wood' or 'ebonite', without going into the details of all the different

[161] Hyacinthe Eleonore Klosé and F. Clayton, *Complete Method for the Clarinet ... Adapted for the Ordinary Clarinet as Well as Those on the Albert and Boehm Principles, Etc. English Adaption by F. Clayton.* (London: E. Gerard and Co.: Paris: Hawkes and Co, 1874). (n. p.n.) Interestingly in the subsequent descriptions of these instruments the Boehm clarinet is not mentioned at all, though the 'Excelsior' model – clearly the superior of the ones shown – has a separate section for the ebonite and the cocoa-wood versions.

[162] 12-key B♭ + Brille clarinet, cocus., London, Rivière and Hawkes, 19th Century. Bate Collection, University of Oxford. 469.

[163] See Chapter 1, p. 31 for details of H&S materials in the B&H Archive.

woods that were being used. Instruments are often marked as 'makers' or 'not makers', presumably distinguishing those that were made by H&S from those that were bought in. During this time H&S was importing and producing 13- and 14-key clarinets, and Boehm clarinets. The 13- and 14-key clarinets, and Boehm clarinets after 1925, appear to have been made by H&S; the earlier Buffet clarinets were imported. Clarinettist Charles Draper tuned clarinets for H&S, and it was quite probably through his influence that they decided to import Boehm instruments made by Martel from 1900-1915.[164]

2.2.4 Rudall Carte & Co.

Rudall Carte was an important nineteenth-century British flute manufacturer that also manufactured some clarinets. The company existed first as Rudall & Rose, then Rudall Rose Carte & Co., and finally Rudall Carte & Co. Some extant sales books are held in the B&H archive, and give information about the instruments that were made by Rudall Carte & Co., along with the customers to whom they were sold. They also show instruments by other makers that Rudall Carte sold. It is usually apparent whether individual names are those of dealers or players, and indeed what sort of player they were. There appears to be a broad range of customers for clarinets. Many military ensembles are listed, including the Royal Marines, the Royal Artillery, and the 1st Royal Dragoons. Individual names include A. A. Horlock, of Cambridge, G. H. Hill of Malmesbury, and Hamilton Clarke of London. Boehm clarinets appear regularly in these records, as do many 13- and 14-key instruments. Materials used for clarinets at Rudall Carte included ebonite and cocus. Extant examples of Rudall Carte simple, enhanced simple, Albert and Boehm system

[164] Weston, *More Clarinet Virtuosi of the Past*. pp. 87-88.

clarinets can be found in the Bate collection in Oxford, the Edinburgh University Collection of Historic Musical Instruments and at the Horniman museum.

2.2.5 Louis

Charles Draper, the eminent early twentieth-century clarinettist, played on wide-bored French Boehm system clarinets made by the French maker Martel, and in doing so was an early advocate of the Boehm system in England.[165] In 1923 he established a British manufacturing company called Louis Musical Instrument Co. which made Boehm system clarinets modelled along the same lines as those made by Martel. Most of these were inscribed 'Approved by Chas. Draper'. Louis clarinets were made until 1940.[166] Lafleur, too, was supplying players with Boehm system instruments from a relatively early date. In Lazarus' 1881 *Method* a note from the editor reveals that Lafleur had supplied sets of five (E♭, D, C B♭ and A) to several American players.[167] Instruments manufactured abroad were imported and sold by British agents such as Alfred Hays, who claimed to be the 'Sole Agent for the Celebrated "Buffet" Military Band Instruments'.[168] Hays sold Buffet woodwind and brass instruments, though it is hard to determine the exact scale of operation.

2.2.6 Other English Makers

The following makers also manufactured clarinets. Extant examples can be found at the Horniman museum.

Besson: 1858-1950.

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[165] *More Clarinet Virtuosi of the Past*. p. 87.
[166] Hoeprich, *The Clarinet*. p. 213.
[167] Henry Lazarus et al., *New and Modern Method for the Albert and Boehm System, Clarinet, by Berr, Müller and Neerman, Approved, Revised and Corrected with Additions by H. Lazarus*, Alliance Musicale. With an Appendix of Seven Unnumbered Leaves Containing Pieces for Clarinet Composed or Arranged by H. Lazarus (London: J. R. Lafleur & Son, 1881). p. 15.
[168] Advertisement found inside Exhibitions, Exhibitions, *Crystal Palace. International Loan Exhibition of Musical Instruments, July to October, 1900. Official Catalogue, Etc*.

Bilton: 1826-1856.

Dawkins: 1851-1925.

Distin: 1850-1868.

Higham 1842-1850.

Metzler: 1833-1936.

Milhouse: 1787-1840.

Monzani: c. 1807-1829.

Otten: 1820-1836.

Payne: 1835-1841.

Potter: 1806-1837.

Quilter (whose grandson worked for Louis Musical Instrument co. and later for B&H): 1883-1925.

Wheatstone: 1823-mid-twentieth century. [169]

2.3 Clarinet Manufacturing at Boosey & Co.

The primary source material for the information in this section comes from the instrument books which represent the period 1879-1930.[170] The earliest clarinets in the Boosey instrument books are listed in order of allocated serial numbers. Generally these run concurrently with the date on which the instrument was first ordered – 'date given out' – though there are exceptions to this. This ordering practice continues throughout the records. On each double page in the books the

[169] For further information on any of these makers, see Waterhouse and Langwill, *The New Langwill Index: A Dictionary of Musical Wind-Instrument Makers and Inventors*.
[170] Instrument books, B&HA, GB HM, E82.142-E82.147. See Chapter 1, p. 24 for further information on the Boosey & Hawkes Archive.

other information given about each instrument comes under the headings of: 'date received' – when the order was received by the factory; 'description' – a very basic description of what instrument it was, whether it was tuned to low or high pitch, which key it was in and any significant design features including the material the clarinet was made from; 'class' – the factory-given model number of the instrument; 'workmans [sic] name' – the surname of the worker who had responsibility for the instrument; 'charged to Regent Street' – (where the B&Co head offices were); 'remarks and costs'; and 'amount'. There are various exceptions to this pattern: at the very beginning of the records, an individual workman's name is not given for each instrument. Here, in the 'remarks and costs' column, instruments are instead shown in groups made by a number of workmen, all being assigned different production tasks. The division of labour is shown, with workmen being recorded as having worked in 'Setting out and Finishing', or 'Keys (Line-work).'[171] The amount of money written by each worker's name appears to show how much he was paid. Some instruments at this stage are listed with no manufacturer's details at all, other than the mention of Regent Street in the model column. In some cases it clearly says 'From Regent Street', possibly suggesting that some of these instruments were bought in. They were all assigned Boosey serial numbers though – and therefore were presumably sold as Boosey instruments – so have been counted in with Boosey production.

Other primary sources used here have included the small number of extant B&Co. catalogues, which give concise but clear descriptions of the different instruments on offer to customers at various times. These have clarified some of the

[171] 'Setting out' is the term given to the drilling of holes in the bored joint.

more ambiguous descriptions in the instrument books. Further observations have then been made using the technical drawings and other miscellaneous items in the archive, and some surviving instruments.

2.3.1 The first Boosey clarinets.

Flute manufacturing was the oldest strand of Boosey's instrument making business, and brasswinds had also been made for several years before the company added reed instruments to their production.[172] According to B&Co. publicity material 'this was virtually the introduction of a new industry into this country', as clarinets made in the Boosey factory were 'significant improvements' on anything previously manufactured in Britain.[173] The first clarinet made by B&Co. was a class A108 B♭ clarinet with the serial number 5968. The order for this instrument to be made was given out on 13 August 1879.[174] A catalogue description indicates that a 108 model was a clarinet made of ebonite 'with thirteen German silver keys on pillars, rings, very superior finish and model of keys.'[175] Corroboration between the catalogues and the workshop books supports this description, as does the extant 108 clarinet in the Bate collection.[176]

2.3.2 Overview of period

During the period between the first reed instruments at B&Co. being produced and the merger with H&S, B&Co. manufactured clarinets with a total of

[172] Instruments had previously been made by Carl Boosé and sold by Boosey, but flutes were the first instruments to be made and sold solely under the name of Boosey. See Chapter 1, p. 26 for further information on Boosé.
[173] Boosey & Co. Trade Catalogue, c. 1894. B&HA, GB HM.
[174] Instrument Book. B&HA, GB HM, A227/013.
[175] 1894 re-release of Boosey & Co. Trade Catalogue, 1891. B&HA, GB HM.
[176] B♭ Clarinet, Ebonite. S.N. 12415. London, B&Co.1895. Bate Collection, University of Oxford, 461.

thirty-six different model numbers.[177] These are all shown in large table 2.[178] Each of the model numbers that appear in the model columns of the instrument books during this period are shown, even those models of which only one or two examples are listed. Where models have been sub-classified in some way – such as the 108 and the 108a – they have been listed separately for the purposes of this table. The serial number and date of the first example of each model are shown. The date given for each instrument is that date on which the order for the clarinet was first given out. Also shown is a description of the instrument based on information from records and catalogues. The heading 'likely description' has been used, as very often instruments are listed without much information, or there are conflicting pieces of evidence about the description of some clarinets.

It is possible to condense the groupings of the different models in the table slightly in order to see a clearer picture of the general practices and preferences during the period. For instance, there are a total of six different class marks that all include the number 108 prefixed by 'A'. Descriptions of these instruments reveal that the addition of an A to a model number would have referred to slight changes in design – such as the addition of one extra key – rather than different acoustic profiles or sounding pitch. Due to the small quantities in which some of these particular variants were manufactured, there is little to be gained by regarding them as separate models in their own right. This is true in the case of the A108a/2, of which only six were made – serial numbers 7656-7661 – during April 1884. Perhaps this was because the A108 was an important model, to the extent it was felt that any modified

[177] This includes one generic category marked by the author as 'Unlabelled'.
[178] See Volume Two.

versions should be turned into a sub-class of their own, rather than just being listed as an instrument with an extra key, for example.

Large table 2 also demonstrates that after the introduction of many class marks between 1879 and 1881, new models appear only occasionally over the next couple of years, such as the 'Clinton' – this is the name of its key mechanism rather than a distinct model name such as those used much later on at B&H – which makes one solitary appearance in 1883, and the A108a/2, mentioned above. It is therefore interesting to note that in 1886 a significant number of new class marks appear, and some class marks previously given to other instruments are applied to the clarinet. For example, class marks A117 and A118 are both used to indicate bass clarinets from 1886 onwards, whereas previously they had been used for oboes. Perhaps this could have been a result of the increasing awareness and popularity of B&Co. as a clarinet manufacturer since its beginnings in 1879, leading to a public demand for a greater range of instruments. One of the earliest extant B&Co. drawings is also from 1886, and shows the overall dimensions of clarinets in A, B♭, C and E♭.[179] This could also indicate a new or revived interest in the clarinet this year. A note on this drawing reads 'the red figures to bells and sockets show alterations made after trials by Mr Spencer on 23 August 1886 and December 9th 1886', revealing that these designs were being tested and accordingly revised, again giving further weight to the idea that these were new designs being produced for the first time. The drawing is annotated with notes and measurements in red ink and pencil, which show that it was a 'working drawing', possibly informing a new phase of design ideas. Large table 2 gives the impression that many new models were introduced in January 1912. This is

[179] Technical Drawing, B&HA, GB HM, E91.122.9.

almost certainly not the case, however; it is simply a consequence of the records from 1905-11 having been lost; the models would have been added to production throughout that period, but make their first appearance in the extant records at the start of 1912.

Large table 2 gives some insight into the numbering processes that were in place at the factory. It is clear that one model number could refer to clarinets of different pitches, as many model numbers are applied to clarinets in A, B♭, C and E♭.[180] Alto and bass instruments always have separate model numbers. Model numbers did, however, make the distinction between ebonite and wooden instruments. Often these have been allocated model numbers in pairs, as can be seen in the catalogues. Two instruments with descriptions that are identical apart from material will be listed with consecutive model numbers: the 107 and 108, the 109 and 110 etc. The only other apparent difference between the two is the cost, with the ebonite instruments generally being slightly more expensive than their wooden counterparts. The other area of interest in the numbering system is the use of an A, B or C as a prefix to the model number. These do not appear in the catalogues, only in the instrument books. Many of the instruments that have a B or C prefix are listed as being of 'foreign manufacture' or 'from Regent Street'. This would suggest that some instruments with a B or C prefix were bought in and stamped with Boosey serial numbers. Myers indicates that the same practice is applied to brass instruments, where the use of A, B, or C reveals the quality of an instrument – A

[180] Though this was common practice amongst instrument manufacturers, some people have suggested that model numbers from around this time were used to differentiate the key of an instrument. This has not been supported by archival evidence.

being the best quality and C the worst.[181] The practice of using the prefix of an A, B or C before each model number stops suddenly on 30 September 1912, when model numbers appear simply as 107, 108 etc. Some are still occasionally listed with the prefix, but very infrequently after this point. This implies that Boosey was importing, or buying in, fewer instruments, therefore removing the need to make this distinction. This practice appears to stop altogether in 1917, as though records are still very detailed by this point, A, B, or C prefixes are not used again.

2.3.3 B&Co. Clarinets

106

The 106 was available in A, B♭, C and E♭. It was made from wood – usually cocoa. It was a 13-keyed clarinet at the start of the time frame, though by 1929 had 14 keys as the 'extra C♯ key' had been added. The 106 was the cheapest clarinet available from Boosey: in 1929 its retail price was £13.5.0. As of 1929 it had a tuning slide to the socket, which was not a feature of other B&H clarinets at this point. The 106 was available in high or low pitch.

107/108

Both the 107 and 108 models were available in A, B♭, C and E♭. The 107 was made from wood – usually listed as cocus, cocoa or blackwood. The 108 was made from ebonite. As with the 106, when these models were first manufactured they had 13 keys, but had the extra C♯ added by 1929. Both models are described as being of 'superior workmanship' in the 1929 catalogue – this description does not appear next to any other clarinet model in this catalogue, indicating that these were the flagship clarinets of the period. This is borne out by production figures: 2,100 [A]107

[181] Myers and van Roon, "Boosey & Hawkes: The Archive." (Unpublished handlist, B&HA, GB HM).

models, and 6,844 [A]108, as there were far more of these models made than any otherse. As with other models in the catalogue, the ebonite version of this model – i.e. the 108 – is more expensive than the wooden one. The 107 retailed at £15.19.0 and the 108 at £17.0.0. The ebonite version of this model appears to have been the most popular choice for material, as there were more than three times as many ebonite 108s as wooden 107s. Both models could be bought in high or low pitch.[182]

111/112/113

These numbers all referred to different kinds of clarinets throughout the time frame. When the 112 and 113 first appeared, they were alto clarinets, but by the end of the period the 112 was an ebonite Barrett system instrument, and the 111 was the wooden version of this. The 113 was not manufactured after 1914. In their guise as Barrett system clarinets, the 111 retailed at £19.2.0 and the 112 at £20.3.0. The Barrett action was adapted from the oboe, and consisted of a side key for R1 which enabled F and E♭ (or C and B♭) to be played with just the one key, facilitating the sorts of passages demonstrated below.

[182] See Chapter 1, p. 49 for a description of the advantages of ebonite.

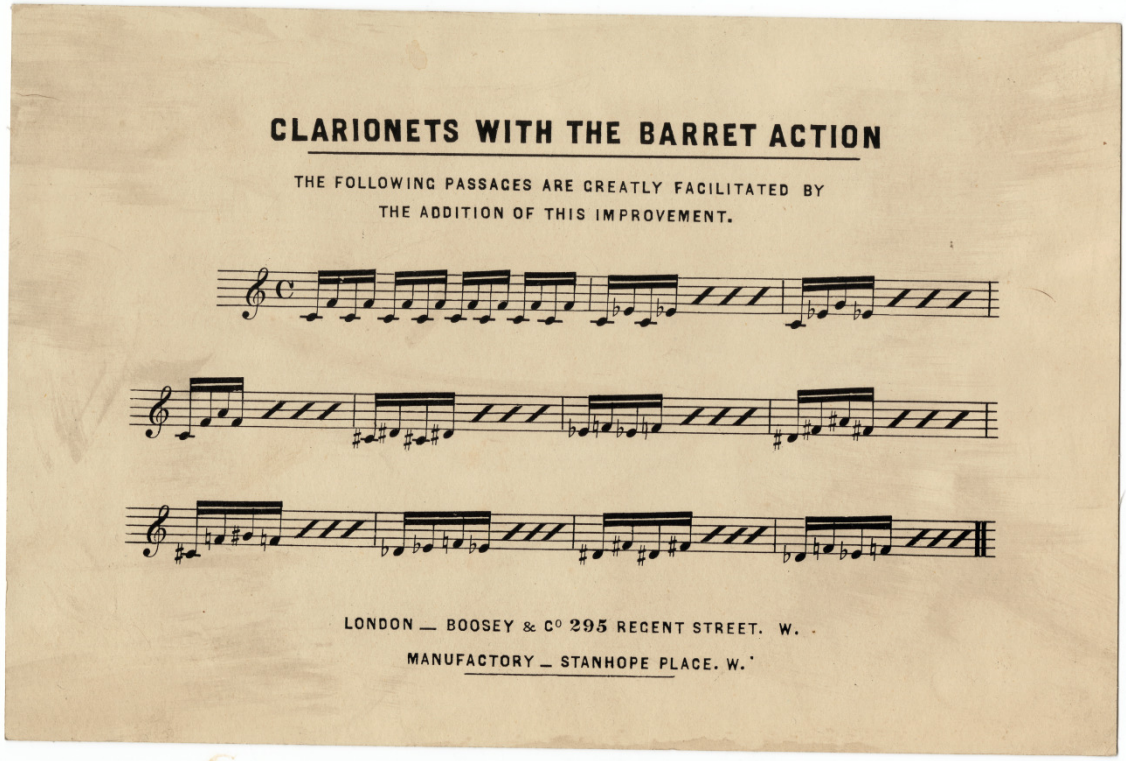

Figure 2-2 Advantages of the Barret System. B&HA, GB HM E91.119A. Photo by permission of the Horniman Museum, London.

115/116

When these clarinets were first manufactured they were bass clarinets, the 115 made from wood and the 116 from ebonite. By the end of the period the number referred to alto clarinets, again in wood and ebonite respectively. Neither instrument appears in the 1929 catalogue, but production figures for both were low – just 51 for the 115 and 125 for the 116 – indicating that they were possibly only built to request.

117/118

These were bass clarinets, the 117 made from wood, and the 118 from ebonite. Both were manufactured throughout this time frame, from the late 1880s until the end of the 1920s. There are no instances of these numbers ever having been

associated with a different type of clarinet. However, neither model appears in the 1929 catalogue.

200/201

These were the first Boehm system clarinets to be manufactured by B&H in any quantity at all. The 200 was the wooden version of their Boehm model, the 201 the ebonite version. Both clarinets were only available in A or B♭. As with other models, the wooden version is slightly cheaper, at £30.0.0, while the ebonite version was £31.0.0. The 200 first appeared in October of 1912, and the 201 in June 1913.[183] It is thought that these early Boehm B&H clarinets were the predecessors of the 1010 model. Unfortunately there are no drawings from the B&Co. period of the 200 in the archive, nor any known extant examples of the 200 model from this time, which can support this theory. As information about the 1010 clarinet unfolds in later chapters there is more evidence to explain the relationship of the 200 to the later iconic model.

203/204

These clarinets both used the Clinton system of keywork, developed by the English virtuoso clarinettist George Clinton (1850-1913). They were available in A or B♭, and in low or high pitch. The 203 was made from wood, and the 204 from ebonite. The wooden version cost £25.0.0 and the ebonite £26.0.0. This system included a vent F mechanism on the lower joint, which improves the venting of the fork fingering x x x | x o x for B♭3; a re-positioned C♯4/G♯5 key, whereby the tonehole is drilled through the tenon and socket which connect the two main joints;

[183] It is possible that these models may have been manufactured during the 1905-1911 period not covered by the books. However, the fact that they did not appear in January 1912, as was the case with the 203 and 204 models, makes it more likely that they had not been manufactured until the first recorded instance.

the ‘Barret action’ which uses a single side key for R1 to produce E♭4/B♭5 and F4/C6 in order to aid trills and tremolos using these notes; and a lengthened A♭4 touch key so that this can be played with either L1 or L2.

205

This was the most expensive clarinet manufactured by B&H in 1929, retailing at £40.0.0. It consisted of one main joint (rather than the usual two) and included a number of features found on Clinton clarinets – such as the Barrett action and vent F – as well as some features of the Boehm system, especially the arrangement of keys for L4 and R4. Only five Clinton-Boehm models were manufactured during this time frame, and they did not appear until 1928.

Clarinet Mouthpieces

A technical drawing from 1892 reveals that B&Co.’s clarinet mouthpieces were designed with parallel internal walls, and with a wide bore – of 0.600” in the case of the B♭. This is of particular interest, as two of the defining features of B&H’s later 1010 model are that it had to be played with a mouthpiece with a cylindrical bore (instead of the more common conical bore), and that it had an unusually wide bore of 0.600” throughout the instrument – starting in the chamber of the mouthpiece. This drawing shows the earliest known link to the 1010 clarinet, indicating that some of its design features may actually originate from the late nineteenth century, even though the first 1010 was not made until 1933.

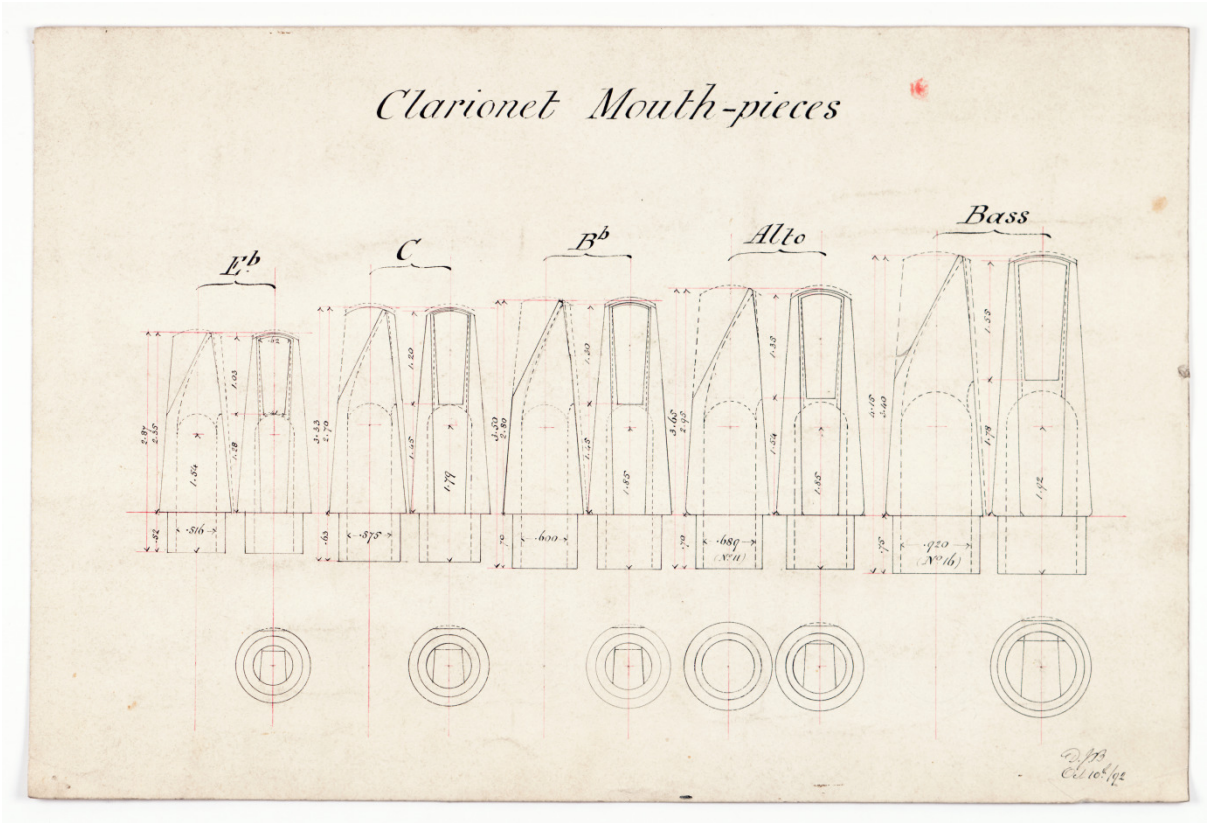

Figure 2-3 Clarinet mouthpieces, from 1892. B&HA, GB HM, E91.122. Photo by permission of the Horniman Museum, London.

2.4 Manufacturing Trends

2.4.1 Materials for Manufacture

During this period, the most common material for clarinet manufacture was ebonite. In the case of all models where there was both a wooden and an ebonite version, the latter was always made in larger quantities. This indicates that customer preference was for ebonite, which is undoubtedly linked to B&Co.'s role of supplying instruments to military bands as ebonite is the most suitable material for clarinets for this purpose.[184]

[184] See Chapter 1, p. 49 for information on the advantages of ebonite.

Table 2-2 Showing proportion of wood and ebonite clarinets of each model.

Clarinet	Wood	Ebonite
107/108	2100 (23.5%)	6844 (76.5%)
200/201	65 (42.5%)	88 (57.5%)
111/112	226 (28%)	592 (72%)
203/204	314 (43%)	409 (57%)

A very small number of brass and unspecified metal clarinets are also shown: nineteen brass clarinets in 1881 and ten metal ones in 1929. These would most probably have been used by military musicians, as metal was suited to the rougher conditions of military playing.[185] Many clarinets during this period were manufactured from wood, usually cocoa, cocus or blackwood. The first recorded usage of blackwood for clarinets is for a batch of twelve 'A108' clarinets ordered on 28 November 1884, serial numbers 7905-7916.

2.4.2 Key Mechanisation

The majority of clarinets manufactured by Boosey & Co. were 13-keyed Albert system instruments. The Albert system was the most popular key mechanisation system when B&Co. began clarinet manufacture, as evidenced by British clarinettist Henry Lazarus' *New and Modern Method for the Albert and Boehm System Clarinet* in 1881: 'the Clarinet now generally used in England has 13 keys and 2 rings.'[186]

Also mentioned is the Clinton model, which had a more intricate system of keys than the Albert system clarinets, and was popular with some professional

[185] Rendall, *The Clarinet: Some Notes Upon Its History and Construction*. p. 14.
[186] Lazarus et al., *New and Modern Method for the Albert and Boehm System, Clarinet, by Berr, Müller and Neerman, Approved, Revised and Corrected with Additions by H. Lazarus*. See p. 46 for a description of the Albert system.

players.[187] The date of the first Clinton clarinet has been thought to be around 1885, though archival evidence confirms that the first Clinton model – serial number 7381 – was ordered on 23 February 1883.[188] According to the c. 1929 catalogue, models 203 and 204 were both Clinton models.[189] In total there were 723 of these made between 1912 and 1930, indicating that it was a reasonably popular model.[190] A model that appears a few times before the end of this period is the 'Clinton-Boehm' model, number 205.[191]

Though Boehm flutes and some Boehm oboes appear in the B&Co. production records at an earlier stage, examples of Boehm clarinets seem to have been much more rare. It took a long time for this system to be widely adopted in Britain, in spite of its advantages to the player: 'the Boehm system Clarinet is certainly easier to learn for a beginner, and we much regret to see it so neglected by the profession'.[192] Scepticism about Boehm clarinets is evident in *A Dictionary of Music and Musicians:*

> it may, however, be remarked here, that Boehm or Klosé's fingering is hardly so well adjusted to this [the clarinet] as to the octave-scaled instruments. It certainly removes some difficulties, but at the expense of greatly increased complication of mechanism, and liability to get out of order.[193]

These beliefs contributed to the delayed adoption of the Boehm system in Britain. White and Myers previously reported that they only found evidence of seventeen Boehm clarinets in the records covering the Boosey & Co. period, but acknowledged

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[187] See p. 89 for description of the system of keys.
[188] Baines, *Woodwind Instruments and Their History*. p. 137.
[189] Boosey and Co, *Woodwind Instruments of Boosey & Co. Ltd.* (London: Boosey & Co. Ltd., 1929). B&HA, GB HM E82.239.
[190] Due to the missing instrument book prior to 1912 it is likely that more of these models were made previously.
[191] See p. 29 for information on the Clinton-Boehm system.
[192] Lazarus et al., *New and Modern Method for the Albert and Boehm System, Clarinet, by Berr, Müller and Neerman, Approved, Revised and Corrected with Additions by H. Lazarus*. p. 4.
[193] George Grove (ed). "Clarinet." *A Dictionary of Music and Musicians.* 4 vols. (London: Macmillan and Co. Limited, 1878-1889). p. 361.

that further understanding of the class marks from this period would perhaps alter this view.[194] The 200 and 201 models are now known to be Boehm system clarinets, and as there were a total of 153 examples of these models, it is clear that Boehm clarinets were made more often by B&Co. than White & Myers have previously suggested. The first mention of the Boehm system in the clarinet records is on 30 July 1895, and applied to an ebonite B♭ clarinet, number 12345.[195] The class mark given to this was A94/1. There is no further sign of the Boehm system until 31 August 1900, when a Boehm system model appears to have been made for Mr Gomez. Unfortunately the records do not give Gomez's first name, but it is likely this was one of either Francesco or Manuel Gomez, the Spanish brothers who both brought their clarinet playing to England in the late 1880s. Francesco particularly is often associated with introducing the Boehm system to England, and he certainly took credit for persuading Charles Draper and George Anderson to adopt it.[196] Later on in the records appearances of the Boehm system models begin to occur slightly more frequently. If the 200 and 201 were indeed all made as Boehm models, then in total there were 158 Boehm system clarinets stamped as Boosey instruments during this period, which is rather more than previously thought. As most of these appear during the latter part of this period – from 1912 onwards – Boosey appears to have been responding to a growing demand in England for Boehm clarinets. This does not in any way contradict the idea that it took a long time for the Boehm system to be accepted by English players: compared to the quantities of other models it was relatively rare at B&H prior to 1930.

[194] White and Myers, "Woodwind Instruments of Boosey & Company." p. 71.
[195] White and Myers give the date as 1882, but this has not been borne out by detailed study of the archival records. "Woodwind Instruments of Boosey & Company." p. 71.
[196] Eric Halfpenny, "The Boehm Clarinet in England," *The Galpin Society Journal* 30 (1977). p. 3.

2.4.3 Pitch Standards

The majority of clarinets during this period were available in both high and low pitch. High pitch instruments would have been predominantly for military band use, as these ensembles did not change their pitch standard until much later than orchestras. In 1878 the British Army regulation pitch for woodwinds was A=452Hz, and this was officially maintained until 1929.[197] Military bands continued to use higher pitched instruments for some time after this. Low pitch instruments are most likely to have been used by orchestral musicians, as orchestras were faster to make the transition to lower pitch due to concerns raised by a Dr Cathcart about the health of opera singers' voices when performing at high pitch.[198] Obviously in order for a whole orchestra to perform at the new pitch, new sets of brass and wind instruments were required. For the first Promenade concerts, Henry Wood purchased the instruments himself (using money donated by Cathcart), and loaned them to the players, who eventually bought them themselves. Opera companies followed a similar example by buying sets of low pitch wind instruments – evidenced by instruments such as a Rudall Carte Low Pitch C clarinet, stamped 'Royal Italian Opera'.[199]

2.4.4 Sounding Pitch

In terms of sounding pitches of clarinets, most models were available in A, B♭, C and E♭. There were also a number of alto and bass clarinets manufactured during this period. Some models were only available in A and B♭: the Boehm system clarinets (200 and 201), the Clinton models (203 and 204) and the Clinton Boehm

[197] Bruce Haynes, *A History of Performing Pitch: The Story Of "A"* (Lanham, Md.; Oxford: Scarecrow Press, 2002). p. 356.
[198] Webb, "Notes on the Ballad Horn." p. 207.
[199] Clarinet in C, Rudall, Carte & Co, London, 1872-1878. GB, HM, 13.8.63/1.

(205). This is partly because these instruments were less popular at the time – all were manufactured in much smaller quantities than the Albert system models, but is also a reflection of the declining usage of the C clarinet. George Grove's first *Dictionary of Music and Musicians* stated in 1878 that 'the C clarinet is not very extensively used in the orchestra or military band,' and that composers would do well 'to write as little for it as would be practicable.'[200]

2.4.5 Workmen

Eugène Albert, the Belgian instrument maker who first developed the 'Albert system' clarinet, worked as an 'instructor' – presumably instructing other craftsmen – at the Boosey factory during this time.[201] His name appears alongside many instrument entries from the first clarinets of 1879 through to 1885. This slightly contradicts the entry about him in the Langwill index, which claims that Albert worked at Boosey from 1880.[202] He was one of the workmen associated with the first group of Boosey clarinets, along with Vanderhaeghen, Gouilliere, and Dezaduleere. Often work is shown as being divided between Albert, one other workman and 'Boys'. The setting out of the clarinet – drilling the holes in the joint – would have been completed by experienced workmen including Albert. Other jobs such as mounting keys could be left to less experienced workers.

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[200] George Grove (ed). "Clarinet." *A Dictionary of Music and Musicians.* 4 vols. (London: Macmillan and Co. Limited, 1878-1889). pp. 361-364.
[201] See Chapter 1, p. 46 for a detailed description of the Albert system.
[202] Waterhouse and Langwill, *The New Langwill Index: A Dictionary of Musical Wind-Instrument Makers and Inventors*. p. 4.

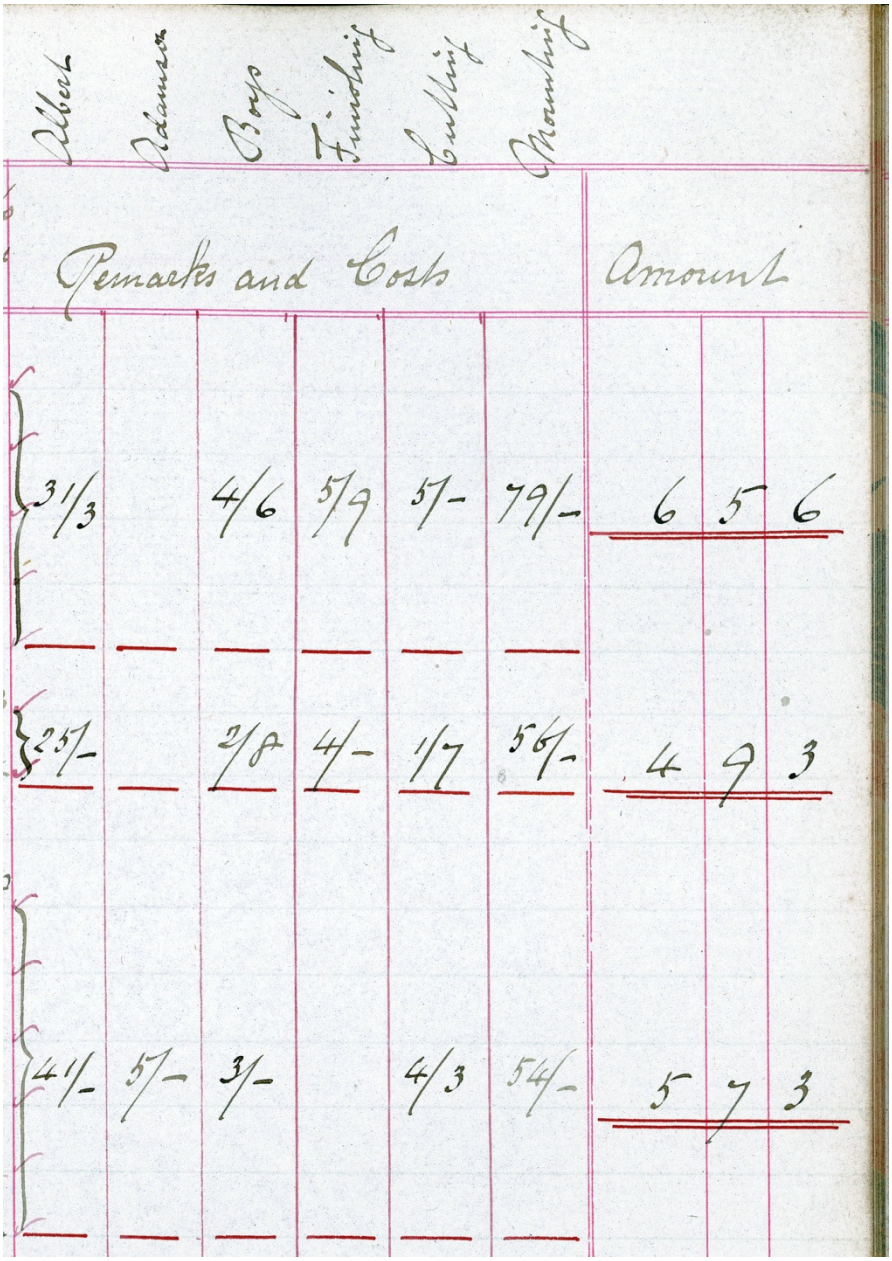

Figure 2-4 Extract from a WOB showing the division of labour between workmen.

On 8 February 1881 a new practice of recording workmen's contributions begins in the workshop books, as single instruments – or batches of instruments – are accredited to one particular workman. The workman in question in the first entry of this kind is Albert, who is shown to have contributed the most hours to the batch of six clarinets linked to his name. This practice is not displayed consistently from this

point, however; it is unclear exactly what constituted an instrument that could be linked to one person and one that could not.

2.4.6 David James Blaikley and the Clarinet.

Acoustician David James Blaikley was factory manager at Boosey & Co. from 1873.[203] He was an important figure for the company, being a key player in some of its major innovations and also in documenting and publicising what Boosey was doing. He is generally best known for his work with brass instruments, particularly his system of 'compensating pistons'.[204] Less is known about Blaikley's involvement with woodwind production, however. It is clear from the archive that Blaikley was closely linked to this aspect of the business, as revealed by the number of drawings that have been checked and signed by him. There is evidence that he was involved in carrying out various clarinet-related tests as well, as demonstrated by a 1928 drawing that shows the results of testing different material clarinets for alterations in measurements at various temperatures.[205] These tests were apparently performed 'by Mr Anderson and DJB, on clarinets 28087 and 28132'. The instrument books also reveal that he tested some woodwind instruments – notably bass clarinets. There are other items in the archive – such as the 'graphs showing results of testing reeds under different amounts of pressure' – which also seem to be closely linked to Blaikley. It is clear that Blaikley was in communication with

[203] Jack H. Smith, "David James Who?: Some Notes on David James Blaikley," *Galpin Society Journal* Vol. 41 (2003). p. 219.
[204] See Chapter 1, p. 20 for more detail on Blaikley's compensating pistons. A fuller account of Blaikley's influence on brasswind making at Boosey can be found in Myers, "Brasswind Innovation and Output of Boosey & Co. in the Blaikley Era."
[205] Technical Drawing, B&HA, GB HM, E91.123.28.

important clarinettists of the time: his signature appears on drawings of clarinets tested by players such as Walter Lear, bass clarinettist with the London Symphony Orchestra.[206]

Despite the obvious links Blaikley had with clarinet manufacturing at Boosey, he only has one clarinet patent to his name, which is for his improvement to the 'throat' B♭ (B♭4) mechanism. This operates by opening an extra tone-hole when this note is played, thus – supposedly – improving the timbre of this troublesome note. However, it was never universally adopted. The workshop books only list a relatively small number of clarinets as having been made with this design. The first appearance of the 'Patent B♭', as it is referred to in the records, was on 30 March 1885, on a blackwood clarinet, class A108. From then on it appears sporadically in the workshop books, and is actually listed as the 'patent B♭' a total of seventy-five times**.** It appears only three times in 1893, but twenty-six appearances occur in 1894, implying increasing use from this point. It appears twenty-five times in the first few months of 1895, but then is not mentioned again. From this point in the records, however, the number 94 suffixes a number of instruments' model numbers, while the phrase 'patent B♭' disappears from the records completely. It seems quite possible that the '94' suffix indicated an instrument with an added patent B♭. An early B&Co. trade catalogue was revised and re-released in July 1894, with an added insert that included some information about 'Boosey & Co.'s New Clarionet, the " '94"'. The catalogue claims that the 'leading feature and advantage in this Clarionet is the arrangement of keys for producing the note B flat'. The description goes on to explain Blaikley's patent. Though the workshop books show no sign of an individual

[206] Technical Drawing, 10/03/1925: B&HA GB HM, E91.122.5.

model known as the " '94", the use of this next to a model number would seem to indicate the addition of the new B♭ mechanism. If this was indeed the case, then considerably more were actually made. Though the new mechanism was used by many, and could have been a welcome addition to the instrument, records clearly show that it was not adopted for general use. Three known extant examples can be found, one in Oxford at the Bate collection and two in Edinburgh in the Shackleton collection.[207]

2.4.7 International Relations

During this period a number of instruments are listed as being of 'foreign manufacture'. Although this was a small minority of instruments, the practice of importing foreign instruments is still referred to in a Boosey & Co. catalogue from c. 1891. The imported models were sold at much cheaper prices than those made in England, and descriptions in the catalogues indicate that there was perhaps something of a suspicion towards foreign manufacture. In the description of the 105 models the catalogue seeks to reassure that the clarinets are 'of good foreign manufacture'.[208] However, elsewhere in the catalogue customers are reminded of the faults of foreign manufacturers, and the superiority of British models. The catalogue further reinforces this suspicion of foreign manufacture, by suggesting that all other British companies who called themselves instrument makers during this period could not accurately lay claim to this title, as they were in fact buying the

[207] B♭ Clarinet , London, Boosey & Co., SN 12415. 1895. Bate Collection, University of Oxford, 461.The examples in the Shackleton Collection are B♭ Clarinets, London, Boosey & Co., 1904. SNs 15891 and 16485. Shackleton Collection, EUCHMI 4704 and 5045.
[208] Boosey & Co. trade catalogue, c. 1894, B&HA, GB HM. p. 14.

majority of their instruments from abroad, probably from France where significant numbers of clarinets were manufactured during this time.

Technical drawings reveal that during this period B&Co. was interested in the instruments made by foreign competitors.[209] Not all British players at the time were using British-made clarinets, and so it is likely that B&Co. might have been looking abroad in order to see what it was that drew some British players to foreign instruments. A drawing dated 1926 shows measurements of the overall dimensions of clarinet, length, bore and hole placements taken from a B♭ clarinet stamped Fritz Hoesch Altona-Hamburg.[210] Mr Rendall apparently lent this to B&Co.. Boehm clarinets and a Boehm basset horn – all bearing the name of Henry Lazarus – were kept in the B&Co. museum collection. This illustrates that B&Co. designers were particularly interested in looking at these models partly because they belonged to a high-profile performer, but also partly because they used the Boehm system, the new key mechanisation that was slowly gaining popularity during this period.[211]

2.4.8 Customers

There are four extant stock books from this period, covering the years 1868-1899. These show to whom various instruments were sold. The stock books cannot be used to give a comprehensive picture of who made up the typical customer base of B&Co. during this time, as it is often unclear from the records whether instruments were being sold to individual customers for private use, or if the names that appear were actually instrument dealers. Some information can be extracted about the instruments' destinations, though. Many of the clarinets recorded in these

[209] This was by no means the only period when B&Co. displayed this interest in foreign designs.
[210] Technical Drawing, B&HA, GB HM, E91.123.24.
[211] 12-key B♭ Clarinet, ex-Henry Lazarus, Thomas Key, London 1825. B&HC, GB HM, 2004.848. Boehm A Clarinet, stamped LAZARUS, Buffet Crampon, Paris, n.d. B&HC, GB HM, 2004.850. Boehm Basset Horn, Cocus, Pask, London c. 1860. B&HC, GB HM, 2004.1124.

books were sold to military ensembles such as the Royal Marines, and to various regiments, listed as Yorkshire Regiment, 69th Regiment and so on. Some were sold to respected educational institutions, such as the [Royal] College of Music. Some were sold to colonial governmental bodies, including a number in India. Other instruments were sold to dealers either in the UK or abroad.

The stock books demonstrate that a large part of the Boosey & Co. customer base was the military. Therefore B&Co. would have focused efforts particularly on designing instruments suitable for military use, and also in promoting themselves as providers of instruments to the military. Certainly since the earlier days of Boosey & Sons, great emphasis had been placed on a sense of national, and perhaps imperial, allegiance: on the title page of a c. 1857 tutor book, under the name Boosey & Sons, the caption 'Musical Instrument Manufacturers to Her Majesty's Army' has been added, and the folding tables of fingerings both have a footer reading 'Boosey & Sons. Military Instrument Manufacturers.'[212] It seems fitting that military ensembles representing the British Empire would play – in some cases almost exclusively – British-made instruments. Though Boosey clearly made efforts to satisfy the demands of prominent orchestral players, it is clear that their main source of custom was in fact the military. It could perhaps be suggested that while the military customers provided Boosey with much of its income and work at this stage, their efforts in other fields – such as the orchestral one – were made on a more specialised level, rather than being the main substance of the company.

[212] Klosé and Clayton, *Complete Method for the Clarinet ... Adapted for the Ordinary Clarinet as Well as Those on the Albert and Boehm Principles, Etc. English Adaption by F. Clayton.*

CLARIONET PLAYERS OF THE BAND OF H.M. IRISH GUARDS *with their complete Set of Boosey's Clarionets*

Figure 2-5 'Clarionet players of the band of H.M. Irish Guards with their complete set of Boosey's Clarionets'. B&Co. Woodwind Catalogue, c. 1929. B&HA, GB HM. E82.239. p. 2.

2.4.9 Endorsements and Professional Influence

Outside influence also came in the form of customers and professional clarinettists who either collaborated with Boosey staff, or made bespoke requests for certain instruments. This is evidenced in the archive a number of times: one technical drawing shows 'Flat Pitch Clarts 14375 + 6 made for Mr G.A. Collins'.[213] Another shows 'E♭ clarionet A 108 No. 16934 as approved by Mr Ocean Hill'; Hill was the Coldstream Guards' Principal Clarinettist from the mid 1880s to 1904.[214] Another shows a 'B♭ Clarinet Mouthpiece Considered very good by Mr Browne';[215] and another 'Mr Wood's Corno de Bassetto by Buffet lent by Mr Gomez'.[216] All these indicate that Boosey fostered strong working relationships with customers, listened

[213] Technical drawing, November 1900, B&HA, GB HM, E91.123.17.
[214] Technical Drawing, 18/07/1907, B&HA, GB HM, E91.123.42.
[215] Technical Drawing, 19/12/1903, B&HA, GB HM, E91.123.29.
[216] Technical Drawing, 11/01/1910, B&HA, GB HM, E91.123.22.

to their needs, and sometimes produced instruments to customers' exact requirements, such as in the case of the low pitch clarinets for Mr Collins mentioned above. During the B&Co. era, collaborations between Boosey's designers and high-profile clarinettists took place. The results of these were the Clinton and Clinton-Boehm system clarinets, and the Gomez-Boehm clarinet.[217] Examples of these clarinets can be found in the Horniman museum.[218]

2.4.10 B&Co. at the Crystal Palace.

When the Crystal Palace first opened in Sydenham in 1854, there was only one permanent music exhibition. This included busts of composers, as well as some pianos, harps, drums and stringed instruments.[219] Later exhibitions included some musical items, but tended to prioritise autograph scores, composer correspondence and such like. Musgrave feels that these 'only hinted at the musical connections of the Palace', which were much better reflected by the materials loaned for the 'International Loan Exhibition of Musical Instruments' held at the Crystal Palace from July-October 1900.[220] The official catalogue reveals that a number of clarinets were lent by B&Co. It is not stipulated whether these clarinets were Boosey-manufactured, or simply ones that were in the company's collection. There were a total of thirty clarinets (or clarinet-type exhibits): Boosey lent eleven of these to the exhibition, Rev F. W. Galpin fourteen, and Rudall, Carte & Co just five.[221] Many of the clarinets lent by Boosey certainly could have been their own models. There were some 13-key examples of the type manufactured by Boosey, and variations on these,

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[217] See Chapter 1, p. 29 for a description of the Gomez-Boehm system.
[218] 21-key, 7-ring Gomez-Boehm Clarinet, B&Co., c. 1908, London. B&HC, GB HM, 2004.849. Pair of Clinton-Boehm clarinets, B&Co. London,1890 (B♭) 1905 (A). B&HC, GB HM, 2004.967 and 968.
[219] Musgrave, *The Musical Life of the Crystal Palace*. p. 162.
[220] *The Musical Life of the Crystal Palace*. p.163.
[221] Exhibitions, *Crystal Palace. International Loan Exhibition of Musical Instruments, July to October, 1900. Official Catalogue, Etc*. p. 17-18.

which included one or two extra keys. Exhibit 123 in the 'Wind Instruments' section is listed as 'Clarinet, cocuswood, Barret action, B♭ ex' C♯ and patent B♭ on the top joint'.[222] This would have been an example of D. J. Blaikley's 'patent B♭', described above. This suggests it was an important enough innovation to warrant public exhibition. Other clarinets are clearly not Boosey's own models, but items from the factory collection. These include exhibit 115: 'Clarinet, boxwood, C, 6 keys, by Otten, London'. Here the mention of the manufacturer's name shows clearly that it was a collection item, and suggests that those instruments where another manufacturer has not been specified could indeed be Boosey instruments. Two further points of interest can be drawn from this catalogue. One is that the quantities in which Rudall, Carte & Co. and Boosey & Co. respectively have lent items to the exhibition could give some indication of the scale of Boosey & Co. and its influence by 1900 compared with that of the smaller firm. Rev Galpin's introduction to this catalogue states that the purpose of the exhibition is to 'illustrate the progress and advance of Musical Art' during the nineteenth century.[223] He goes on to discuss the example of the clarinet, describing its evolution from 'the Chalumeau of mediaeval times' to 'the perfect instrument of the present day.'[224] It could therefore be assumed that the B&Co. clarinets displayed were considered to be examples of that 'perfect instrument' as they are by far the latest of all the models listed.

[222] *Crystal Palace. International Loan Exhibition of Musical Instruments, July to October, 1900. Official Catalogue, Etc*. p. 18.
[223] Rev F. W. Galpin, Introduction to *Crystal Palace. International Loan Exhibition of Musical Instruments, July to October, 1900. Official Catalogue, Etc*. p. 9.
[224] *Crystal Palace. International Loan Exhibition of Musical Instruments, July to October, 1900. Official Catalogue, Etc*. pp. 9-10.

2.5 Conclusions

Nineteenth-century expansion in British musical culture enabled Boosey & Co. first to develop its music publishing interest, and later its focus on trading in and manufacturing musical instruments. The increased emphasis on music making in Britain, with growing demands for musicians and performances, created a market for instruments which Boosey was able to supply. The British army was heavily involved with music making on a large scale, which meant that there was a growing demand for instruments that was well established by the time that B&Co. started to manufacture instruments. This provided opportunities for Boosey to continue exploiting the link between music publishing and instrument manufacturing that they created through their collaboration with Carl Boosé and through their later purchase and publication of Boosé's journal, which becomes the eponymous Boosey's Military Band Journal. As with the ballad horn and ballad concerts observed earlier in the century, Boosey published the music and sold the instruments needed to play it – again demonstrating a joined-up business model.

In terms of the clarinet, Boosey began by producing Albert system models that were already well established in British use. This clearly shows the company responding to public taste and guaranteeing that there would be interest in the clarinets that were being manufactured. A large part of the company's initial role was supplying instruments to military ensembles, and early collaborations with military bandsman and clarinettist Carl Boosé were clearly very influential upon product design. This indicates that Boosey was intending to set out to manufacture instruments that would be bought in large quantities by military musicians and ensembles, and so commenced production of clarinets that were based on designs in

contemporary use. In this respect it seems that Boosey was being directly influenced by the market, and was not in any way making efforts to drive taste or preference. This would have been a safe – and clearly effective – strategy for ensuring that the first Boosey clarinets had sufficient numbers of buyers.

Towards the end of the period Boosey began to follow the increasing demand for Boehm system instruments. This seems to be further evidence that Boosey was being directly influenced by the market, as it was as early as 1881 that Lazarus wrote in his *Method* of the advantages of the Boehm system, yet most of the Boehm models made by Boosey were manufactured in the period from 1912 onwards.[225] Even after 1912, Boehm clarinets were made in very small numbers in comparison to other models: they accounted for just 0.96% of Boosey & Co.'s total clarinet output from 1879-1930. However, Boosey's considerable interest in Boehm instruments during this time is evidenced by the presence of Lazarus' Boehm instruments in the collection.

A common – and increasing – theme in British music making throughout the period is that of increasing perception of foreign competition. The result of this was the feeling that British musicians needed to raise their standards in order to match those set abroad. There was also a growing desire for a more uniquely English musical voice in general, to equal those of countries such as France and Germany. Foreign competition was clearly felt to some degree at B&Co., as evidenced by the technical drawings of foreign clarinets from this time that are in the archive. There was clearly a strong degree of foreign influence too, with specialist craftsmen from abroad being selected to work in the Boosey factory. This mirrors much of what was

[225] Lazarus et al., *New and Modern Method for the Albert and Boehm System, Clarinet, by Berr, Müller and Neerman, Approved, Revised and Corrected with Additions by H. Lazarus*. p. 4.

happening in the British music world, where ideas from abroad were being used to shape and influence the development of Britain's own musical scene, for instance the London Promenade concerts based on Philippe Musard's Paris concerts.

B&Co.'s primary role was that of provider of musical instruments to the British Army. The majority of instruments manufactured during this time by B&Co. were clearly destined for use in military ensembles both at home and abroad. Without this responsibility for the empire's military music making, B&Co. would not have been able to become established as instrument manufacturers of note. Though the military was by far the largest customer group for B&Co. instruments, there were other, smaller groups purchasing B&Co. instruments. Links to high-profile orchestral players such as Gomez and Clinton show that B&Co. also had a strong relationship with players in this area of British music making, and was perhaps attempting to strengthen and improve relations with the orchestral market. Stock books reveal instruments being sold directly to music education establishments such as the Royal College of Music, which displays some connection between B&Co. and the developing music education scene in Britain.

It is clear that in the 200 model, many of the foundations for what were to become the 1010 were being laid. The amount of fine detail applied to the hand tuning of the Thurston clarinets indicates a strong possibility that Boosey craftsmen were working on improvements to the design of the Boehm clarinets. As the system had become more popular in Britain during the early decades of the twentieth century, Boosey designers must have realised that these newer models were going to account for an increasingly large proportion of their output, and would therefore have wanted to ensure that the Boehm models they were going to be selling would

meet with public approval. How far back in the life of the 200 these improvements may have started is unknown, as there are not many known extant examples of earlier 200s: it could be that the 200 from the Boosey & Co. period was quite a different clarinet. Some later examples of the 200 model were certainly very similar to the 1010, if not identical, and this may have been true of some of the earlier 200s as well.

By 1930 B&Co. had established itself as an instrument manufacturing company of some distinction, already providing musical instruments to many professional musicians in both military and orchestral ensembles. Boosey designs were proving popular with a variety of musicians. The company was clearly aiming to go from strength to strength, and this desire to grow manifested itself in the merger with Hawkes and Son in 1930, which is discussed in the following chapter.

3 The 1010 in the 1930s: Birth of an Icon or a Marketing Coup?

Introduction

The previous chapter demonstrated how moves were being made in Britain to develop a stronger sense of national identity in English compositions and performances towards the end the 1920s. This feeling, coupled with the rise of audio recording, evolved into a drive to bring standards of music making in Britain in line with those of continental European countries, especially in terms of orchestral playing. It was in the early 1930s that the practical results of these ideas materialised in various areas of musical life, notably orchestral management, concert life, and instrument manufacturing. It was also at the beginning of this period that instrument-makers Hawkes & Son and Boosey & Co. joined forces to become one firm, and went on to produce their famous 1010 clarinet model.[226] This chapter will begin by providing a brief overview of the musical climate at the beginning of the 1930s, highlighting the culture of reform and changing attitudes of both the public and performers during this period. A general summary of some organological developments in British instrument making and orchestral playing will be given. This summary will be followed by a detailed description of clarinet manufacturing at Boosey & Hawkes throughout the 1930s, with particular focus on the 1010 clarinet and closely related instruments. Conclusions will then be drawn about how cultural influences shaped design and manufacture of clarinets at B&H during this period, and how they may have led to the conception and initial popularity of the 1010.

[226] See p. 129 for information on the merger between H&S and B&Co.

3.1 Music Making in Britain in the 1930s

Many developments in British music-making took place in the decades before 1930, and the momentum of these advances continued into the 1930s. On the whole, changes were positive, leading to ever-increasing standards of performance and training, and a heightened level of professionalism for musicians. However, there were also some negative consequences of late nineteenth and early twentieth century changes in British music-making, which provoked a 1931 *Music and Letters* article, entitled 'Some Social Causes of the Present Musical Crisis.'[227] The article suggests that along with the increased consumption of music came a lowering of public taste, and also standards of performance. 'It should be remembered that music, especially the instrumental variety, was developed in the higher strata of society.'[228] The authors go on to claim that as the 'masses' had become interested in music, there had been a 'deterioration in quality.'[229] This is by no means a universally applicable picture of music-making in Britain during the 1930s; this period was largely one of growth and prosperity. The reasons behind the idea of a 'musical crisis' are given below, before a discussion of the more positive and long-lasting changes which were taking place in the early 1930s. Developments in music making in general during this period impacted strongly upon instrument choices made by musicians, and therefore on instrument manufacture and design both in Britain and abroad. B&H manufacturing trends during the 1930s reflect this spirit of change in British music making, as will be discussed in the following sections.

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[227] Leonid Sabaneev and S. W. Pring, "Some Social Causes of the Present Musical Crisis," *Music & Letters* 13, no. 1 (1932). p. 75.
[228] Leonid Sabaneev and S. W. Pring, "Some Social Causes of the Present Musical Crisis," *Music & Letters* 13, no. 1 (1932). p. 75.
[229] Leonid Sabaneev and S. W. Pring, "Some Social Causes of the Present Musical Crisis," *Music & Letters* 13, no. 1 (1932). p. 77.

3.1.1 Musicians in Crisis

For some musicians, the early 1930s were indeed a time of crisis. This applied particularly to two groups of musicians: those who were employed in cinemas and music halls, and piano teachers who were not capable of teaching at a high level. Cinema-going had become an increasingly popular pastime during the 1920s, and the sharp rise in demand for picture houses concurrently raised demand for musicians able to play in these settings.[230] The rapid introduction of new audio technology in cinemas precipitated the advent of 'talkies' – films which included recorded sound. The first of these was *The Jazz Singer*, released in 1927. Talkies had completely taken over from silent films by 1932.[231] It was often less capable, or older, musicians who worked in cinema settings, and it was therefore almost impossible for many of them to find alternative musical employment in the new, improved symphony orchestras which began to transform the London music scene in the early 1930s.[232] The impact of developing technologies resulted in high levels of unemployment amongst musicians: in the 1931 census 7,458 of c. 19,600 male musicians were unemployed, and 6,300 of 24,000 female musicians were unemployed – 38% and 30% of the total number of musicians respectively.[233]

In the late nineteenth century many musicians were employed as private piano teachers. Demand for piano tuition at beginner level was high; this was largely because of growing numbers of people who owned pianos.[234] Playing the piano, even at a relatively low level, was seen as a desirable social skill and perceived as a

[230] Ehrlich, *The Music Profession in Britain since the Eighteenth Century: A Social History*. p. 199.
[231] *The Music Profession in Britain since the Eighteenth Century: A Social History*. p. 210.
[232] See p. 116 for details of the orchestral reforms that took place.
[233] *The Music Profession in Britain since the Eighteenth Century: A Social History*. p. 210 and Table 1, p. 235. These statistics do not include musicians who were registered as music teachers rather than performing musicians.
[234] *The Music Profession in Britain since the Eighteenth Century: A Social History*. p. 211.

vehicle of upward social mobility. By the 1930s, piano ownership was in decline, a result of the widespread economic recession. This meant that there were fewer opportunities for teachers to find employment in this field of work. The introduction of gramophone records also had an impact on private music teaching, largely because of the opportunities recorded music provided for developing 'music appreciation' skills. Though music appreciation had begun on a smaller scale as a pre-1930s phenomenon, the capacity to listen to music critically was soon something that many wished to develop. This began to replace the late-nineteenth-century demand for low-level instrumental tuition, the emphasis changing from developing technical musical ability, to acquiring listening skills. This inevitably created further decline in demand for private instrumental teachers.

3.1.2 The Advent of Electrical Recording

In 1925, electrical recording succeeded the problematic acoustic techniques that had been used in the late-nineteenth and early-twentieth centuries.[235] The use of microphones, rather than a diaphragm and cutting needle, meant that large numbers of musicians could be recorded at the same time, without the problems created by finding the appropriate proximity to the horn in acoustic recording. Because microphones could capture a much wider frequency range than the acoustic process, for the first time people were able to claim that: 'an orchestra really sounds like an orchestra'.[236] As this increased the ease of orchestral recording, activity in this field increased considerably during the late 1920s. However, at this point the technology still relied upon the performance being cut directly to the recording medium, so any

[235] Timothy Day, *A Century of Recorded Music: Listening to Musical History* (New Haven [Conn.]: Yale University Press, 2000). p. 9.
[236] Ernest Newman, *The Sunday Times,* 11 July, 1926. Quoted in Roland Gelatt, *The Fabulous Phonograph. From Tin Foil to High Fidelity.* (J. B. Lippincott Co.: Philadelphia & New York, 1955). p. 177.

mistakes made during a performance rendered the take unusable. For this reason, orchestral musicians needed instruments which could guarantee them greater levels of security and accuracy, so that such mistakes were made less frequently. This had enormous ramifications for instrument choices and manufacturing in Britain, as is discussed later in this chapter.[237]

The increasing popularity of the gramophone – and later the radio – brought about changes in the relationship between the British public and the Symphony Orchestra. The new trend for music appreciation meant that people were now enjoying orchestral recordings at home, and seeking to listen to them critically. There was a change in people's listening aesthetic: rather than simply listening to the overall shape and narrative of a piece of music performed only once in a given setting, people were beginning to listen to nuances of orchestral colouring and interpretation, and expecting a 'perfect' performance which would withstand repeated performance and scrutiny. Thus the public became better acquainted with the repertory, and developed a greater understanding of the abilities – and limitations – of the symphony orchestra. This began to increase the demand for orchestral recordings, even among people who had never seen a live orchestra. Much of this served to raise public expectations of music and musicians, eventually resulting in musicians needing new instruments capable of meeting these raised expectations, in

[237] With the introduction of magnetic tape for audio recording in the 1940s, producers of classical records were able to take advantage of splicing – where sections of tape from two or more recordings could be joined together in order to create a more 'perfect' performance, that had never actually taken place. This created a need for homogeneity in orchestral sections, so that every performance sounded similar enough that several takes could be joined together and sound like one. This also required musical instruments capable of repeatedly delivering the same sound. See Mark Katz, *Capturing Sound: How Technology Has Changed Music* (Berkeley, Calif.; London: University of California Press, 2004), p. 41 for further information.

terms of increased security and accuracy. This provided opportunities for instrument manufacturers such as B&H to design, manufacture, and sell improved instruments.

One of the most important consequences of advances in technology and changing patterns of consumption was that the orchestra took on something of a new status. Previously, English taste had been inclined towards choral singing, opera, and to some extent chamber music, but from the late 1920s a shift towards a preference for orchestral music took place. In the early 1940s, *The Times*' music critic Frank Howes reflected upon this shift, and attributed it to two factors: firstly, the advent of the gramophone; secondly, the improvements made in orchestral playing in England during the early 1930s.[238]

The availability of foreign orchestral recordings and the increased ease of foreign travel both gave British musicians and audiences more opportunities to listen to orchestras from other countries by the early 1930s. Inevitably, comparisons were drawn, and generally presented British musicians in an unfavourable light. This is highlighted in Henry Welsh's contribution to *Music and Letters* in 1931, mentioned above.[239] Welsh goes on to point out that the reasons behind the lower standards apparent in Britain were closely linked to the ways that orchestras were managed, and the standards of discipline enforced in those foreign ensembles: 'mishaps in the wood wind section of the Vienna Orchestra are of the very rarest occurrence. Three slips a month would be enough to cost a man his job.'[240] Another problem often associated with British orchestral playing at this time was the deputising system: this meant that a musician could arrange to substitute himself with another player at the

[238] Frank Stewart Howes, *Full Orchestra*, 3rd. ed. ed. ([S.l.]: Secker and Warburg, 1942). pp. 2-3.
[239] See p. 74.
[240] "Orchestral Reform." p. 24.

last minute before an engagement, without any consultation with the conductor or other musicians. Subsequently, at a performance there could be a number of musicians who were not used to playing under a particular conductor, who had not rehearsed sufficiently with the orchestra, and who may have upset the balance of the section.

The general sense of displeasure with British orchestral playing was heightened by a catalyst in 1927: the Berlin Philharmonic's first visit to London. This was the first time that many English listeners had heard live the disciplined precision which could, or – as was thought by some at the time – perhaps should, be achieved by an orchestra.[241] Reginald Nettel, some years later, refers to the 1927 visit by the Berlin Philharmonic Orchestra which 'put our orchestras to shame'.[242] The visit sparked off a chain of events that was to change orchestral music making in Britain dramatically which, in turn, had a dramatic effect upon instrument making at Boosey & Hawkes.

3.2 Orchestral Reform

From the end of 1927, rumours that conductor Thomas Beecham intended to raise standards of orchestral playing by forming a permanent opera company with an associated orchestra began to circulate. These soon started to be linked to the BBC's desire for a permanent orchestra in London, and proposals for such an orchestra were drawn up. Beecham felt that a joint 'first rate permanent orchestra' could be achieved by collaborations between the BBC and Royal Philharmonic Society, with the new orchestra operating as the 'Royal Philharmonic Orchestra'.[243] Negotiations

[241] Howes, *Full Orchestra*. p. 4.
[242] Nettel, *The Orchestra in England: A Social History*. p. 278.
[243] Kenyon, *The BBC Symphony Orchestra: The First Fifty Years 1930-1980*. p. 27.

were long and complex, and Beecham eventually retreated from the scheme in May 1929. He did not abandon his vision of creating a new full-time permanent symphony orchestra however, and he went on to establish the London Philharmonic Orchestra in 1932.[244]

The BBC did continue to work towards forming their own permanent orchestra, and these plans came to fruition when the BBC Symphony Orchestra was founded in 1930 under the musical directorship of Adrian Boult.[245] This was the first time there had been a full-time, permanent, salaried symphony orchestra in London.[246] The orchestra's primary objective was to serve as a recording and broadcasting orchestra. For the first time in British music making, considerable attention was paid to details of contracts, conditions of employment and rehearsal schedules. After much thought and negotiation, 114 musicians were recruited on a full-time, fully salaried basis. Players were bound to 144 hours in every four weeks, with the salary catering for four weeks' holiday and four weeks' sick leave. Principals and some others were offered three-year contracts.[247] When drawing up the contracts for members of the BBC SO, attempts were made to reduce the problem of deputising, though how successful these attempts were is doubtful.[248] Increased rehearsal time and more organised schedules were also a part of the new, more efficient management, as lack of sufficient preparation was seen as another area in which English orchestras let themselves down. The security and commitment to high standards implicit in these terms and conditions were so appealing to

[244] See p. 119 for information on the establishment of the LPO.
[245] Beecham retreated from this scheme by 1930.
[246] Humphrey Proctor-Gregg, *Beecham Remembered*, New ed. (London: Duckworth, 1976). p. 15. Previously the only full-time orchestra in Britain had been the Bournemouth Municipal Orchestra.
[247] Kenyon, *The BBC Symphony Orchestra: The First Fifty Years 1930-1980*. p. 44.
[248] *The BBC Symphony Orchestra: The First Fifty Years 1930-1980*. p. 12.

musicians that Boult was able to recruit an orchestra of excellent players.[249] All these factors made the BBC SO a great success, and foreign tours from 1936 onwards suggested that Boult had succeeded in producing an orchestra capable of matching foreign standards, and raising the profile of British music making abroad.

By the late 1920s, directors of the London Symphony Orchestra also began to develop concerns about falling standards of playing. In response to the Berlin Philharmonic's 1927 visit, the LSO invited Dutch conductor Willem Mengelberg to take on a permanent conductorship for a season – though previously the orchestra had worked with a number of different conductors throughout each season.[250] Deputising was also a problem for the LSO: gramophone companies were beginning to request that the personnel of the orchestra should remain the same for each session, with principal players being present whenever possible. They also felt the orchestra should perform under the same conductor each time, but this was not easy to achieve. Competition from the BBC SO was also a growing concern. Beecham's plans to form a new permanent contracted orchestra were an additional threat to the security of the LSO, and so its directors set out to ensure a pattern of work which would ensure some protection from Beecham's endeavours. These took the form of guaranteed engagements with the Royal Opera Syndicate, the Gramophone Company and the agent Lionel Powell.[251] After several meetings it was decided that the LSO should form a permanent orchestra of 75 players, taken from their current members but also with additions of players from outside the LSO where necessary. This caused some discontent amongst members of the LSO who were not offered

[249] Reginald Nettel, *The Orchestra in England: A Social History* (London: Jonathan Cape, 1946). p. 279.
[250] Howes, *Full Orchestra*. p. 5.
[251] Maurice Pearton, *The LSO at 70: A History of the Orchestra* (London: Gollancz, 1974). p. 78.

contracts, and who were upset that players from outside were being offered better conditions. Though there was clearly a sense of unhappiness amongst musicians, the orchestra entered into its new regime in May 1929.

Having retreated from his plans for a 'Royal Philharmonic Orchestra', Thomas Beecham boldly set out to form a new orchestra which would fit his ideals. With help from a group of sympathetic wealthy friends, Beecham was able to form the London Philharmonic Orchestra.[252] The LPO's first performance, given in October 1932, met with very positive critical acclaim. The LPO undertook a number of foreign tours, to Brussels in 1935, Germany in 1936 and Paris in 1937. These tours proved that Beecham had succeeded in his goal of creating more favourable impressions of British musicians across Europe.

Clearly many of these developments in orchestral management and playing in Britain were strongly influenced by practice abroad. There is even a suggestion that Beecham's use of the name 'Philharmonic' for his orchestra was an attempt to be seen as equal to the great philharmonic orchestras of Berlin and Vienna. Many things evident in continental music making were seen as influential, including elements found in German orchestral playing. This may seem unusual, during a time when relationships between Britain and Germany were not particularly strong, in the aftermath of the First World War. Prior to WWI it had been common practice to employ many foreign – particularly German – musicians, in Britain; a consequence of WWI was that many of these foreign players had left British orchestras and not returned. The post-war nationalist sensibilities were reinforced by the Musician's Union, who effectively banned foreign rank-and-file players from working in

[252] Thomas Russell, *London Philharmonic: A Brief History*, [L.P.O. Booklet. No. 2.] (pp. 14. London, 1944). p. 1.

Britain.[253] However, though foreign musicians were banned, and there was clearly a strong sense of nationalism in Britain, British musicians were still clearly aiming to emulate standards and practices in place in Germany and other European countries. This not only influenced orchestral management, but also the instruments which were used in the new and improved London orchestras.

3.2.1 Winds of Change

Another area of British musical life which was highlighted by some critics was English players' choice of instruments – many of them manufactured in Britain. Henry Welsh's *Music and Letters* article suggested that many of the faults in British woodwind sections were a result of the poorly made and tuned instruments that were used:[254]

> When one pays between twenty and thirty pounds for a B flat clarinet of the best British manufacture, and one is given an instrument in which there are at least seven or eight notes out of tune – either sharp, or flat, or both – then one begins to wonder whether these makers are capable of taking their business seriously, or expect the musicians to make up for these deficiencies in pitch by increasing or decreasing the pressure of their lips on the reed whenever the necessity may arise. Needless to say this is a very unsatisfactory state of affairs, and one not met with on the Continent. There, the instrument is tested for accuracy of pitch by a musician of unquestionable capability before ever it leaves the factory.[255]

Geoffrey Rendall responded to this article by hotly defending British manufacturers, claiming that in some respects they were equal to – if not better than – their European competitors. Rendall did concede, however, that British orchestras were 'not as good as they could be', and seemed to agree that reforms needed to take place.[256] Many changes were made to instruments used in orchestras in England

[253] And also foreign bands.
[254] Welsh, "Orchestral Reform." p. 22.
[255] "Orchestral Reform." p. 26.
[256] F. G. Rendall, "English and Foreign Wood-Wind Players and Makers," *Music & Letters* 12, no. 2 (1931). pp. 149-55.

during the early 1930s, and a summary of some of the most important of these changes is given below. The influence of foreign performers and music-making practices during the early twentieth century has already been mentioned many times, as has the potential influence of foreign instrument manufacturers. These ideas continued into the 1930s, but were – in some instances – adopted in a more uniform manner. This could be partly related to the desire to emulate sound qualities of European orchestras, and partly to the desire for homogeneity and security in a recording-focused environment.

Flute playing in England at the beginning of the twentieth century was linked to wooden cylindrical flutes. By this point the common instrument in France was a metal flute, but English players disliked the French school of playing in general, and remained loyal to the use of wooden flutes for some time.[257] However, globalisation began to affect British flute players, with Geoffrey Gilbert (principal flute of Beecham's London Philharmonic Orchestra) noting that London recording companies were importing French flautists for concerto recordings.[258] His English colleague, oboist Leon Goossens, said 'if you want to be regarded as an international artist you'll have to change your style of playing; you'll have to change your instrument and you will have to learn to play the same as everyone else does'.[259] Changes in flute design were clearly of interest to B&Co., as there are many fingering charts for Boosey's Boehm flute dated around the end of the nineteenth century – the attention given to producing instructional fingering charts indicates that this was a new system and design for Boosey. Correspondence between DJ Blaikley

[257] Ardal Powell, *The Flute*, The Yale Musical Instrument Series (New Haven; London: Yale University Press, 2002). p. 236.
[258] Powell, *The Flute*. p. 236.
[259] Eugene Goossens, quoted in *The Flute*. p. 236.

and Max Schwedler about Schwedler's Kruspe-reform flute reveals Blaikley taking an interest in alternative designs. B&Co. also, though, continued manufacture of the conical wooden Pratten flutes that were already popular in England.

In 1902 Boosey and Co. acquired the tools of established British-based oboe maker Alfred Morton. Morton had supplied professional oboists in Britain with oboes based largely on the French system designed by Triébert. When Boosey bought Morton's tooling, they manufactured oboes along the same lines. H&S also manufactured oboes based on French designs.[260] In the archives are some items relating to German Heckel oboes: a drawing of a Heckel oboe model 1905, and a fingering chart for the Heckel oboe. Again this shows Boosey scrutinizing the work of all competitors, and exploring different design options.

During the 1930s, German bassoons began to replace the French models previously used in British orchestras.[261] For example, in 1920 Edwin F. James, a leading London bassoonist, claimed 'There are only three players in London using 'Heckel' which is a German maker. Most of the London artists pay on 'Buffet'.'[262] Baines – a professional bassoonist for much of his life – gives a description of both instruments. He describes the French bassoon as being 'sensitive to the reed, making it possible but difficult to produce an even tone quality'. He points out that the French tone is more subtle and vocal than the German, and never without interest,

[260] Geoffrey Burgess and Bruce Haynes, *The Oboe*, The Yale Musical Instrument Series (New Haven, Conn.; London: Yale University Press, 2004). p. 182.
[261] Baines, *Woodwind Instruments and Their History*. p. 153, Lyndesay G. Langwill, *The Bassoon and Contra Bassoon* (Benn; Norton, 1965). p. 69. Langwill claims that the German bassoon had ousted the French type in Britain by 1930.
[262] Robin Chatwin, quoted in Eric Halfpenny and Edwin F. James, "French and German Bassoons in London," *The Galpin Society Journal* 21(1968). p. 187.

whereas the Heckel tone was uniformly effective throughout the compass and across the dynamic range.[263]

William Heckel's German bassoon, which was developed in the early nineteenth century, was first introduced to England during Hans Richter's conductorship of the Hallé Orchestra between 1899 and 1912. Richter was initially unhappy with the bassoon playing in the orchestra, and in 1903 he persuaded Otto Schieder to travel from Vienna and join the Hallé.[264] Schieder also became professor of bassoon at the Royal Manchester College of Music (RMCM). Richter decided to fund a bassoon scholarship at the RMCM, in an attempt to establish an English school of playing based on the sound of the German bassoon, rather than having to send abroad for the sound that he liked. The scholarship was advertised as being for a 'beginner on the bassoon', and given by 'a Gentleman interested in the bassoon'.[265] A keen 14-year-old pianist by the name of Archie Camden read the advertisement, and decided to audition for the scholarship. He quickly acquired a bassoon, having never played one before, and taught himself to play a scale of F 'but with a B♮ instead of a B♭. I later learned that a special key had to be used to get B♭.'[266] In spite of his obvious limited ability on the bassoon Camden was given the award on the basis of his innate musicianship.[267] Richter wanted a blank canvas to work with, a player who did not already have a fixed idea about their own sound and instrument preference.[268] The other scholarship was awarded to Maurice Whittaker. After his second year at the RMCM, Richter appointed Camden as fourth bassoon in the Hallé

[263] Baines, *Woodwind Instruments and Their History*. pp. 154-55.
[264] Christopher Fifield, *True Artist and True Friend: A Biography of Hans Richter* (Oxford: Clarendon Press, 1993). p. 394.
[265] Camden, *Blow by Blow: Memoirs of a Musical Rogue and Vagabond*. p. 19.
[266] *Blow by Blow: Memoirs of a Musical Rogue and Vagabond*. p. 20.
[267] Fifield, *True Artist and True Friend: A Biography of Hans Richter*. p. 394.
[268] Camden, *Blow by Blow: Memoirs of a Musical Rogue and Vagabond*. pp. 20-21.

orchestra. From this post, Camden went on to become a well-known bassoon soloist. Camden's performances on the German bassoon displayed the clear, easy tone of these instruments, and inspired many other players to make the switch from French to German. Later on in his career, Camden himself promoted his belief that the German system was superior:

> I think I can safely say that the German system predominates. ... I know many first-class players of the French system – men whose work is unrivalled in any sphere. But to my mind their outstanding ability is a triumph over inherent difficulties rather than to the utilisation of inherent advantages.[269]

The BBC in particular was strongly in favour of this move.[270] Baines reinforces that it was the early 1930s during which this transformation took place, referring to the 'sweeping German invasion' that occurred in bassoon sections during this time.[271]

Though some were much in favour of adopting the German instruments as a result of hearing them played not only by visiting musicians but by English players too, there were many who still preferred the sound of the French instruments traditionally used in Britain. In 1965, Langwill reflected on the debates that this caused:

> From time to time in the past thirty years heated argument has appeared in the musical and even in the national press as to the relative merits of the French and German bassoon. The supporters of the former described the German bassoon as a 'wooden horn' while its supporters accuse the French instrument of sounding like the buzzing of angry bees. The truth, of course, is that there are great artists on each type and it is a matter of the personal choice of the listener.[272]

Eric Halfpenny responds to this by recalling the following:

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[269] Archie Camden. "The Bassoon: German or French System? " in *Boosey & Hawkes Woodwind Book*, 77-79. (England: Boosey & Hawkes, 1957-58). p. 37.
[270] Langwill, *The Bassoon and Contra Bassoon*. pp. 69-70.
[271] Baines, *Woodwind Instruments and Their History*. p. 153.
[272] Langwill, *The Bassoon and Contra Bassoon*. p. 69.

> One of the Heckel pioneers must have been the late Thomas Dickie, who found so much prejudice against the instrument in early days that he was obliged to have its appearance camouflaged with a special bell section of Buffet outline, without the ivory ring. Did conductors ever spot this deception? It is highly improbable.[273]

It is evident that these changing preferences were of interest to Boosey & Hawkes. Blaikley acquired a number of press articles, catalogues and instrument prospectuses regarding the Heckel bassoon which are contained in the archives. Production records reveal that German-style bassoons began to be manufactured by Boosey & Hawkes during the 1920s, eventually taking over from the French-style models. Production of French bassoons had ceased completely by the middle of the twentieth century, though there were still some English players using French instruments.[274] As there were many different factors which led to the adoption of these bassoons, it would appear that Boosey's role was simply to reflect current preferences among musicians, rather than to be one of the influencing factors.

[273] Halfpenny and James, "French and German Bassoons in London." p. 188.
[274] Baines, *Woodwind Instruments and Their History*. p. 153.

Figure 3-1 Prospectus for Heckel Bassoons. B&HA, GB HM, E91.116A. Photo by permission of the Horniman Museum, London.

A shift in preference for orchestral horns also began during the 1930s. Prior to this, the choice for most professional English players was a French type of horn. This was a single horn pitched in F with detachable crooks and piston valves, which

had a relatively narrow bore (between 10.8 mm. and 11 mm.), and a light, poised musical quality.[275] In the 1930s however, German horns – which had a larger bore of 12.1 mm. – were very gradually adopted by professional players, instigated perhaps by Alan Hyde.[276] The advantage of the double or compensating instruments was that they allowed a greater level of security in higher registers, as the player had the option of switching between the 12ft horn in F, or the 7ft horn in B♭ at the press of a single valve. Using the shorter length of tubing makes reaching higher notes more secure as the shorter length naturally has a higher fundamental. This means that partials which would be very close together in the harmonic series of the 12ft horn are further apart when using the 7ft horn, and therefore easier to 'hit' securely when playing. This met the demand for greater security and homogeneity in British orchestral playing during this period.

Hyde played on an Alexander 103, an early type of double horn patented in 1909. Though Blaikley patented his own compensating horn in 1911, he was interested in the Alexander horn, as it appears in an album of brass instrument photos compiled by B&H and dated 1932. B&H began to manufacture double horns, which were essentially a copy of the Alexander 103, and continued to do this into the second half of the twentieth century. The 1930s was of great importance to the adoption of the German style horns in Britain. Hyde was playing with Beecham's

[275] Anthony Baines, *Brass Instruments: Their History and Development* (New York: Dover Publications, 1993). p. 221.
[276] Baines, *Brass Instruments: Their History and Development*. p. 225.

LPO, and Beecham – who was very interested in the work of German orchestras – bought a set of Alexander horns for the LPO's horn section to use.[277]

Another orchestral instrument that was directly affected by foreign influences and changing ideas of sound was the trombone. For many years British players had favoured an instrument with a narrow bore, often referred to as the 'pea-shooter'. German players tended to use instruments – trumpets, trombones and horns – which had a more flared bell and a wider bore. These produced a darker, less brilliant sound than the narrower English instruments. There is some controversy over when Britain began to move towards using trombones with a medium or large bore size, though it is clear this shift in pattern did happen. Philip Bate states that 'by 1923 it could be safely said that all the notable British symphony players had adopted the 'medium' or 'large' bore'.[278] Trevor Herbert later suggests that 'peashooters' were still in common use until the middle of the twentieth century.[279] Baines again gives 1930 as the year of change: 'Every first and second player of a British orchestra played these French-model instruments up to 1930'.[280] At this point, the German instruments began to be used in British orchestras. Herbert's research has been borne out by

[277] Bradley Strauchen-Scherer, "Picturing the Art of Instrument Design: A Manufacturer's Photo Album", paper presented at *41st annual meeting of the American Musical Instrument Society (AMIS), held jointly with the International Committee of Musical Instrument Museums and Collections (CIMCIM)* (The Metropolitan Museum of Art and The Manhattan School of Music, New York, 2012).
[278] Philip Bate, *The Trumpet and Trombone: An Outline of Their History, Development and Construction* (Benn; Norton, 1966). p. 60.
[279] Trevor Herbert, *The Trombone*, The Yale Musical Instrument Series (New Haven, Conn.; London: Yale University Press, 2006). p. 255.
[280] Baines, *Brass Instruments: Their History and Development*. p. 243.

subsequent work using the B&H archive, which shows that brass bands used narrow bore G bass trombones into the 1960s.[281]

This shows, regardless of exact year in which these instruments may have been adopted by British players, that orchestras in England were making efforts to emulate the darker, heavier sound of German orchestras, through adopting features of German instrument design – notably wider bores. Another major reason to adopt new instruments was the growing desire for increased accuracy, homogeneity and security – this was particularly important for the adoption of the double horn and the B♭ trumpet. It was this desire to increase all these areas of instrumental performance that led British instrument manufacturers such as B&H to design instruments that would provide the higher levels of security and precision that British musicians in the 1930s were starting to aspire to.

3.3 Clarinet Manufacturing at Boosey & Hawkes: The Early Years

3.3.1 B&Co. and H&S Merger

In 1930 Boosey & Co. merged with their biggest rivals, wind instrument makers Hawkes & Son of Denman Street, to form Boosey & Hawkes. Hawkes & Son was founded in 1865 by William Henry Hawkes, and was started as a retailer of orchestral sheet music. In 1874 Geoffrey and Ralph Hawkes inherited the firm from their father. They split the responsibilities between them, with Ralph taking on the publishing and Geoffrey the instrument manufacturing. Both had an interest in supplying military bands not just with printed music but also with instruments,

[281] Gavin Dixon, "Farewell to the Kidshifter: The Decline of the G Bass Trombone in the UK 1950-1980," *The Historic Brass Society Journal* 22 (2010). pp.75-89.

fittings and reeds.[282] In 1902 Hawkes & Son purchased the tools and trade of Alfred W. Morton who was a London woodwind maker from 1874-1902.[283] Morton was known particularly for the manufacture of oboes and bassoons, and Hawkes & Son planned to continue 'the manufacture of oboes on his principles'.[284] There are a number of H&S blueprints from c. 1920s for 'Morton model' H&S oboes and bassoons in the B&H archive.

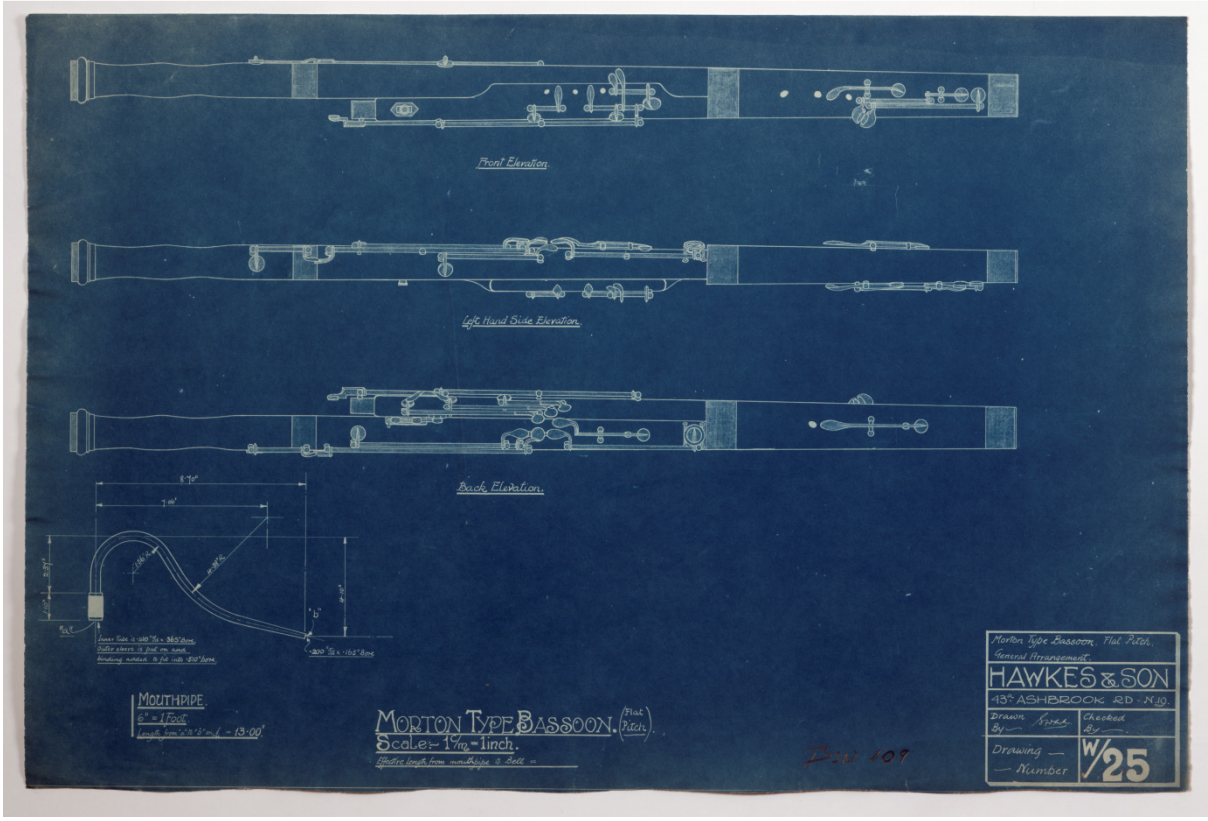

Figure 3-2 H&S Blueprint for a Morton type bassoon. B&HA, GB HM. E91.41. Photo by permission of the Horniman Museum, London.

In 1924 Hawkes & Son had established an instrument factory in Edgware, North London. They had become a prosperous company by the late twenties, though

[282] Wallace, *Boosey & Hawkes: The Publishing Story*. p. 5.
[283] White and Myers, "Woodwind Instruments of Boosey & Company." pp. 62-80. Morton's name is associated with both oboes and bassoons in Adam Carse, *Musical Wind Instruments: A History of the Wind Instruments Used in European Orchestras and Wind-Bands from the Later Middle Ages to the Present Time* (London: Macmillan, 1939) , and Baines, *Woodwind Instruments and Their History*.
[284] William Waterhouse and Lyndesay G. Langwill, *The New Langwill Index: A Dictionary of Musical Wind-Instrument Makers and Inventors* (London: Tony Bingham, 1993).

they did not at this stage represent any notably significant composer. During the 1920s, however, Ralph focused on widening the catalogue, acquiring works by composers such as John Ireland, Frank Bridge and Peter Warlock. Ralph Hawkes and Leslie Boosey were both members of the board of the Performing Rights Society, and it was this that gave them the opportunity to assess each other's business strengths.[285] They both recognised the advantages of a merger: Leslie Boosey is said to have declared 'We can work together or cut each other's throats discounting instruments'.[286] Thus in October 1930 – after six months of negotiation – the merger of Boosey & Co. and Hawkes & Son was completed, and the company became known as Boosey & Hawkes.

[285] Wallace, *Boosey & Hawkes: The Publishing Story*. p. 8.
[286] *Boosey & Hawkes: The Publishing Story*. p 3.

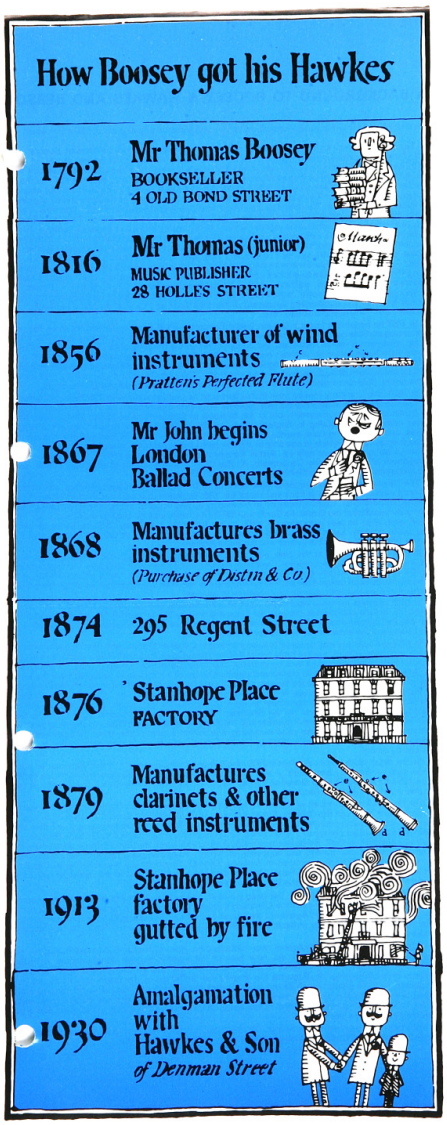

Figure 3-3 'How Boosey got his Hawkes'. GB HM, E82.207.0003. Photo by permission of the Horniman Museum, London.

Two significant decisions were made at the initial joint board meeting. The first was that the company would concentrate its efforts into developing the serious music catalogue. This resulted in the addition of works by many British composers such as Benjamin Britten, as well as many foreign composers including Stravinsky,

Prokofiev, Copland and Mahler.[287] The second decision related to the Hawkes & Son factory at Deansbrook Road, Edgware, which had been built in 1924-5. The meeting decided that this would become the main plant of Boosey & Hawkes, and it remained so – becoming known as the 'Sonorous Works' factory – until its closure in 2001. Boosey & Hawkes moved all former instrument production from Frederick Mews to Edgware in 1931-2.

3.3.2 Clarinets Manufactured by Boosey & Hawkes, 1930-1939.

Some dramatic changes in patterns of clarinet production at Boosey & Hawkes took place during the early 1930s. These were influenced to some extent by the merger of Hawkes & Son with Boosey & Co., but also, it seems, by developments taking place in the broader musical world. Large table 3 shows an overview of all the different clarinet models manufactured by Boosey & Hawkes in the period between the 1930 merger and 1939. Descriptions are based on a corroboration of the descriptions recorded in production records, and those in trade catalogues.

The complete list of models shown in large table 3 is rather more complicated than that provided by an extant catalogue from the time. Catalogue descriptions present a much clearer-cut picture of the range of models, but do not account for the variations found in the production records. A 1003 model is described in the catalogue as a metal simple system instrument with fourteen keys. However, the production records reveal that a number of clarinets listed as 1003 models were in fact made of ebonite. The 1001, listed in the catalogue as a wooden

[287] David James Blaikley, "Boosey & Hawkes," in *Grove's Dictionary of Music and Musicians*, ed. Eric Blom (London: Macmillan and Co. Limited, 1954) , and Blaikley, Smith, and Jones, "Boosey & Hawkes."

simple system instrument, makes one appearance in the records as a Boehm system clarinet. Particularly in this latter case, these anomalies could of course be attributed to human error: a simple inaccuracy in the recording of a model number. More likely, perhaps, is that models may have been through several different incarnations in the early or experimental stages, before being standardised. The previous chapter revealed that model numbers were sometimes applied to more than one kind of instrument over a period of time, indicating that perhaps the numbering process was more fluid than one might think. As with clarinets from the period 1879-1930, it is evident that model numbers refer primarily to the keywork system and material, rather than sounding pitch.

As in the previous chapter, analysis of production records demonstrates that there were a small number of models that were made in relatively large quantities. At least 100 of the following models were manufactured during this period: 1001, 1002, 1003, 1008, 1010, 1011, 107, 108 and 1024. Many others appear in smaller quantities – batches of between ten and ninety. There are, as before, a few models that have fewer than ten examples listed.

1001, 1002, and 1003

These were all simple system (by this point in history 14-key) clarinets, available in B♭, A, E♭ and C.[288] The 1001 was made from wood, the 1002 from ebonite and the 1003 from metal. All retailed at £20. The wood and ebonite versions were made in larger quantities – 388 in wood and 386 ebonite. Only 237 metal 1003s were made. There are – as mentioned above – some discrepancies in the different descriptions given in the production records relating to each individual model.

[288] The 1003 – the metal version – was not available in C.

1004 and 1005

These were Barret system clarinets in wood (1004) and ebonite (1005). They were available in B♭, A, E♭ and C. Both were made in fairly small quantities, forty wood and sixty ebonite. Both versions retailed at £24.

1007, 1008 and 1009

These were Clinton system clarinets in wood (1007), ebonite (1008) and metal (1009). They were available in B♭, A, E♭ and C.[289] The Clinton models all cost £30. The ebonite version was by far the most frequently made, with a total of 210 manufactured during this period. There were fifty wooden examples manufactured, and just three metal ones.

1010, 1011 and 1012

These were Boehm system clarinets in wood (1010), ebonite (1011) and metal (1012). Each model was available in B♭, A, C and E♭.[290] These Boehm models cost £32, making them the most expensive soprano clarinets available apart from the Clinton Boehm model, the 1014. The 1010 went on to become B&H's flagship clarinet, and for this reason it is discussed in much greater detail later in this chapter.

1018, 1019 and 1023

These models were bass clarinets. They were all made in fairly small quantities, revealing that there was less demand for these than for soprano instruments. The 1018 and 1019 were simple system bass clarinets in wood (1018) and ebonite (1019). Both instruments retailed at £44. The 1023 was a Boehm system bass, and cost £74, making it the most expensive of all B&H clarinets available at the time.

[289] The 1009 – the metal version – was not available in C.
[290] Apart from the 1012, which was not available in C.

1014

This was possibly a Clinton Boehm model, which appeared only eight times between 1935 and 1938. Low production figures could be because the 1014 was the most expensive of the soprano clarinets, retailing at £48. They would also indicate that this complex keywork mechanism was not very popular amongst players, even though the catalogue claims that this system would eradicate common fingering difficulties.

H&S, H.S, L412a, L413 and 402.

These models are all listed in the production records as Hawkes & Son instruments, which would have been taken from old H&S stock. These clarinets were all reassigned a Boosey & Hawkes serial number, despite being taken directly from old stock. There is only one 402 model listed in the records, and it is not described as being a H&S model. However, other H&S models had numbers in the region 4xx, so it may well have been part of their sequence. The description reveals that it was quite unusual, as it was made partly from ivory, most probably for ferrules used to strengthen the tenon-socket connections between joints. Ivory ferrules were common in the nineteenth century. Most of these models appeared in 1931 and 1932, immediately following the merger of B&Co. and H&S. This would have been the period during which the H&S models were absorbed into the existing range of B&Co. instruments to form the new B&H range.

1024, 1025 and 1026

These were listed as ‘clarinets of moderate price’. The 1024 was a 14-key simple system clarinet, the 1025 used the Barrett system, and the 1026 was a Boehm clarinet. Although the 1026 appeared just once during the time frame in question in

this chapter, this system model went on to become one of the most commonly made Boosey instruments as will be seen in later chapters.[291]

The Regent

The three Regent clarinets manufactured in 1937 are the first instance of a model having a name rather than a number.[292] However, the name is not used as explicitly as it is in later periods of B&H's history: it appears in the 'description' column rather than in the model one.

107, 108, 200, 201

These were all models that were made extensively during the B&Co. era. They appear in the first few years of B&H's manufacturing, but most ceased to be used by the mid-1930s. The records show that this was in fact because most models were re-numbered during the early-mid 1930s. In 1934, clarinet 30988 is listed as a 108 model, but the '108' is written in pencil in the model column (though the rest of the entry is written in ink), and the number '1002' is written in the description of the instrument. Several other clarinets similarly have both of these numbers recorded in their entries. Both the 108 and 1002 models were ebonite simple system clarinets, indicating strongly that the 1002 was a 108 clarinet with a new model number. The same thing happens with both the 200 and 201 models, which are later labelled 1010 and 1011, and the 107, which became known as the 1001.[293]

[291] See Chapter 4, p. 169 for more detail on the 1026 clarinet.
[292] In the previous chapter, one model – the Clinton – is listed by the name of its key mechanisation; however this does not represent the same idea as a model which has a specific name.
[293] Clarinets 30996 and 30998 were listed as models 200/1010 and 201/1011, clarinet 31019 was listed as 107/1001. See later discussion of the 1010 on p. 138 for more about this renumbering.

3.3.3 The 1010 Model: A 'supreme all-British' clarinet

The release of the first 1010 clarinet was in many ways the most significant event to take place at B&H during the 1930s. The first 1010 is recorded in the Boosey production records as follows:

Table 3-1 The first 1010 clarinet as entered in the WOB.

Date Given Out	Number of instrument	Description	Model	Workman's Name	Keys polished	Charged to Regent Street
12/12/1933	30957	B flat Clarionet L.P. cast keys b/w'd	1010	Cage	20/12/1933	16/02/1934

A B&H catalogue from the time offers some explanations about how and why this model was conceived. A page of the clarinet section of the catalogue is headed 'How the new "B & H" Boehm Clarinet originated'. We are told that towards the end of 1930, the directors at B&H began to notice the steady increase in numbers of customers using Boehm system instruments. As a result of this the decision was taken to create entirely new models, which should 'embody the results of minute and rigorous investigation of the theories of the greatest authorities on acoustical science up to the present day.'[294] It is highly probable that one of these authorities was David Blaikley.[295]

3.3.4 Relationship to the 200

The first recorded use of the model number 1010 is in the records as shown above. However, a number of older clarinets have previously been classified by scholars as 1010s. At least four extant 200 models – constituting two pairs of clarinets owned and used by prestigious clarinettists – have been described as 1010s.

[294] Boosey and Hawkes, Trade Catalogue, *The Clarinet* c. 1950. p. A12. BL YA.2000 b.417.
[295] Blaikley's connection with the 1010 is discussed in Makers and Designers, on p. 146.

Clarinets 30058 (B♭, 1932) and 30702 (A, 1933) were previously owned and used by the late Alan Hacker, and now belong to professional player Jonathon Sage who uses them regularly. Clarinets 30255 (A, 1932) and 30256 (B♭) were used by Frederick Thurston, and later bequeathed to the Edinburgh Collection of Historic Instruments by Dame Thea King.[296]

Table 3-2 Thurston's Clarinets as shown in the WOBs.

Date Given Out	Number of instrument	Description	Model	Workman's Name	Keys polished	Charged to Regent Street
30/09/1932	30255	A-natural Clarinet B/wd plated keys	200	G. H. Skillin	10/10/1932	31/10/1932
30/09/1932	30256	B-flat Clarinet B/wd plated keys	200	G.H. Skillin	10/10/1932	31/10/1932

All these clarinets were believed to be 1010 models. They all display the same outward design features as the 1010: the long flat tenon rings, the double grooved bell, and the same general bore width of 15.2mm (0.60") and cylindrical-bored mouthpieces. Keith Puddy and Nicholas Shackleton have claimed that the Thurston instruments were among the first 1010 clarinets ever made.[297] Adrian Greenham also assumed the pair to be 1010s, and refers to them in his thesis. He found that there was an unusual pattern of undercutting to the toneholes on this clarinet, and claims that:

> This is probably one of the earliest of the '1010s' produced. It is highly likely that great attention was given to the final adjustment of this instrument and the slight hole enlargements through the wall thickness are probably the result of careful hand-tuning, as this pattern of undercutting is not found elsewhere.[298]

[296] Pair of B♭ and A Clarinets: London, B&Co., 1932. EUCHMI, 5788.
[297] Arnold Myers, email to Jennifer Brand, 30 January, 2009.
[298] Greenham, "Clarinet Toneholes: A Study of Undercutting and Its Effects". p. 99.

However, the records clearly show that they were 200, not 1010 models.[299] This could lead to a number of conclusions about the 200 model: that it was the 1010 but under a different model number; that the 1010 was in the design stage during 1932 and 1933 and some examples of the new model were released as 200s; that the 200 was so similar in design to the 1010 that the two models are virtually indistinguishable.

It has been demonstrated above that many B&H models were renumbered during this period, and subsequent records clearly show that the 200 model became the 1010, and the 201 became the 1011. This is evidenced by entries in the instrument books, such as those for clarinets 30996 and 30998. The numbers in the model column for these instruments are 201 and 200, but in the descriptions the numbers 1011 and 1010 are used instead. This happens several other times throughout the next few months of records. This certainly demonstrates that the 1010 was a renumbered 200 clarinet, but does not necessarily lead to the conclusion that the 200 was identical to the 1010 in terms of design.

B&H's own publicity from the time describes the detailed processes involved in redesigning the Boehm system clarinets. The instrument books show three 200 model clarinets which were tuned specially; clarinets 30037 and 30135 are both described as having 'Special Tuning Thurston & Clarke', and clarinet 30135 was 'tuned for Mr H Draper'. These clarinets were all made in 1932, so could possibly have been examples of experimental instruments, which were given to players to be put through the 'stringent tests by independent artists' to which the catalogue refers. It is possible that these clarinets were carefully prepared for high-profile players, in

[299] See table 3-2.

order to showcase the new designs and also to ensure the most positive response from the performer. Greenham's comments would certainly support the idea that the Thurston instruments (30255 and 30256) may have been prototype 1010s: he claims that the attention to detail paid to the contouring of the bore is much greater than on other 1010s he examined, implying that special care was taken over these instrument as they were going to be tested by such a high-profile performer.[300] This could mean that some of the later 200 clarinets incorporated the improvements and innovations taking place in relation to the design of Boehm system clarinets, which were eventually consolidated in the 1010 model.

3.3.5 Design features

The 1010, certainly in its 1930s version, was a Boehm system clarinet made of African Blackwood. It had silver plated cast keys, a rimless grooved bell, and the long flat tenon rings that gave Boosey clarinets a distinctive appearance. Organologically speaking, one of the most important features of the 1010 was that it had an unusually wide bore of 15.2mm, or 0.600". This measurement is confirmed by Greenham, who measured the bores of a number of 1010s from this period, and claimed that they were all quite close to the specified 15.2mm. It is thought that this was the widest bore ever to have been created by an English manufacturer until this point. Bores of approximately this dimension were used in Germany, while French instruments tended to be narrower. The general widening of bores had been a trend in clarinet manufacture for several decades, and Lee O. Gibson claims that with the 1010, Boosey ended a 'cycle of excess' with the radically wide bore.[301] This was, in many ways, the key feature of this instrument that set it apart from other contemporary models. Other

[300] "Clarinet Toneholes: A Study of Undercutting and Its Effects". p. 99.
[301] Gibson, *Clarinet Acoustics*. p. 29.

clarinets made by Boosey had relatively wide bores when compared with those in France, but the 1010 was the widest of them all.

Examination of the extant technical drawings from this period suggests that another important design feature of the 1010 was its mouthpiece. Today most players use their own mouthpieces, and the ones sold with new clarinets are generally very basic mass-produced models, as manufacturers do not expect discerning players to use them. However, it is apparent that the 1010 mouthpiece was given some careful thought, and was initially the only part of this model to have the number 1010 as the root of its 'part number'. As has been mentioned above, Pitfield's statement that these mouthpieces were imported from French makers Chédeville appears not to apply to clarinets manufactured during the 1930s. The unusual feature of the 1010 mouthpiece was that its internal chamber was cylindrical, whereas most clarinet mouthpieces have a conical bore. The shape of the mouthpiece bore, along with the fact that it was wide enough to connect smoothly to the bore of the clarinet, was a significant factor in creating the distinctive sound of the 1010.

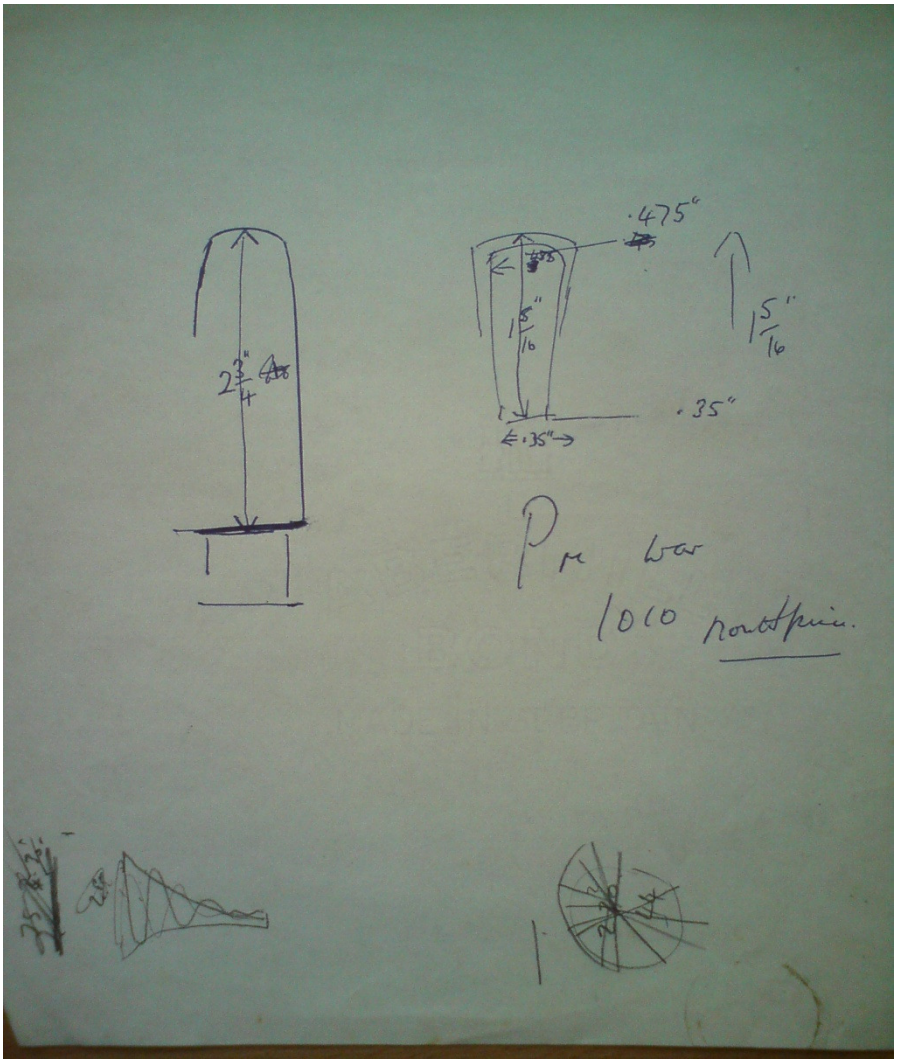

Figure 3-4 Sketch of a pre-war 1010 mouthpiece. McGA, GB HM.

3.3.6 Initial Uptake

The proportion of Boosey clarinet manufacture accounted for by 1010s in the model's first five years is shown in the table below.

Table 3-3 Percentage of total clarinet output each year taken up by the 1010.

Dates (December-November inc.)	1933-34	1934-35	1935-36	1936-37	1937-38
Percentage of total clarinet production (%)	15.73	15.82	21.34	11.36	18.09

This shows that from its first appearance in 1933, the 1010 accounted for a significant proportion of production each year. This is perhaps surprising for an instrument that was quite revolutionary in design terms, where one might expect the company to have made fewer models initially. This can, to some extent, be explained by the link with the 200 model, which appeared in 1912 and had a very slow, steady increase over the years. From the early 1930s a huge leap in the proportion of the 200 model took place, suggesting that some of the improvements which led to the apparent sudden popularity of the 1010 had already been applied to the design of the 200, as the 200 (the previous incarnation of B&H's Boehm instrument) had also been increasing in numbers. This reflects the growing popularity of the Boehm system in England, but also demonstrates that with the improvements made by B&H there was significant enough public interest in the new 1010 models to allow an average of 16.5% of B&H's manufacturing to be focused on the 1010.

One of the reasons that the 1010 was adopted so readily by players is that it had a number of features very similar to the Albert clarinets which were popular amongst British clarinet players in the late nineteenth and early twentieth centuries.[302] Albert clarinets had a wide bore of around 15mm, not dissimilar to the 15.2mm usually found with late 200/early 1010 clarinets.[303] Albert's years at B&H as instructor to clarinet designers and makers would have been a guiding influence in this all-important area of design. In terms of external design features, the 1010 had the long, flat tenon rings that were also used on Albert instruments. Albert's likely

[302] See Chapter 1, p. 46 for information about Albert clarinets and their popularity amongst British players.
[303] Pitfield, "British Music for Clarinet and Piano 1880-1945: Repertory and Performance Practice". Footnote 19, pp. 47-48.

direct influence on the design of the 1010 was therefore a key factor in helping the model to become quickly accepted by British players.

Boosey's own feelings about the 1010 and its success are revealed in a trade catalogue from around 1940. The description of how the new B&H Boehm clarinets originated begins by referring to the 'widespread comment created by these new and remarkable instruments, and their enthusiastic reception by the leaders of the profession and of the Military Band world alike'. It goes on to describe the testing process that was used, and then claims that the instruments produced were 'in excess of the most sanguine expectations; indeed it is but the bare truth to describe these Clarinets as standing in a class by themselves, so completely do they render obsolete any others hitherto obtainable.' The article concludes: 'this all-British production is supreme, unapproached, and unapproachable.'[304]

3.3.7 Other instruments in the 1010 family – the 1011 and 1012.

The previous chapter demonstrated that models with consecutive numbers were often essentially the same instrument, but with one made of wood and one made of ebonite. This was true of the 1010 and 1011; the 1011 being the ebonite version of the wooden 1010. This contradicts the idea held by some players that the 1010 was an instrument in B flat, and the 1011 an instrument in A.[305] In fact both models regularly appear as clarinets in B flat, A and sometimes E flat, and the 1010 occasionally in C.[306] The 1011 appears in the workshop order books slightly earlier than the 1010, with its first entry being as follows:

[304] Boosey & Hawkes, *The Clarinet* (London: Boosey & Hawkes). p. A12.
[305] Much later on different numbers *were* used to differentiate sounding pitches of instruments, but the 1010/1011 B♭/A link has never occurred.
[306] Both 1010 and 1011 models were available in C, according to extant catalogues from the time.

Table 3-4 The first 1011 clarinet, as entered in the WOB.

Date Given Out	Number of instrument	Description	Model	Workman's Name	Keys polished	Charged to Regent Street
27/11/1933	30931	B flat Clarionet. L.P. M/M	1011	H. Gregory	01/12/1933	15/12/1933

The 1011 is often listed in the production records with the abbreviation 'M.M' in the description column. Boosey catalogue descriptions from the time reveal this to be their 'special Military Model', which was designed to withstand hard wear. It was made of ebonite, and had two metal-lined tenons. 154 of these 1011 military models were made; nearly half of the total number of 1011 clarinets, which was 361. This high proportion reveals a continued emphasis on the military band market. The 1012 was the metal version of the 1010. It was made in fairly small numbers, just thirty-four during the 1930s, and only appears from 1937 onwards.

Greenham's research refers to an 'ebonite 1010' from this period.[307] However, production records clearly show that any model listed as a 1010 was made from wood. Most are listed as being of blackwood, and a small number of cocus. It could be that this was simply a case of a Boehm system clarinet from this period in Boosey's history being automatically assumed to be a 1010, as the two instruments had very similar design features. It could perhaps also be the case that though the model number 1010 was only actually assigned to the wooden versions of the instrument, the catchier name was applied to more instruments in the range.

3.3.8 Makers and Designers

The instrument books indicate that 1010 clarinets during this period were made by the following workmen:

[307] Greenham, "Clarinet Toneholes: A Study of Undercutting and Its Effects". p. 99.

Cage	**Lewis**	**Rugless**
H. Gregory	**F. Mooney**	**G.H. Skillin**
Hubbard	**Reynolds**	**J. Smith**

These were by no means all the clarinet manufacturers; it appears that there was some degree of specialisation regarding which makers were associated with which models. A workman's first listing in the production records would always be linked to a cheaper model; it seems that a progressive approach was taken in allowing people to move on to working on the more expensive models. Little is known about many of these men.

In terms of the designers behind the 1010, two key names can be linked to the early examples of this model. One of these is Eugène Albert, whose connection with the 1010 is discussed above. Albert would have had a direct influence on the bore width of the 1010, and also on the long, flat tenon rings that were used on 1010 clarinets. The other, perhaps less predictable, name that can be linked to early clarinet design at B&H is David James Blaikley. Blaikley's connection to clarinet design was discussed in the previous chapter, and, corroborated with his own descriptions of his involvement with clarinet design, leads to the conclusion that he, too, had a guiding hand in the design of the 1010. In 1886, Blaikley gave a paper entitled 'The Development of Modern Wind Instruments', in which he described how he had tested clarinet bell measurements to one hundredth of an inch.[308] Though D.J. Blaikley retired from his post as Factory Works Manager in 1930, he continued to be involved with the company until his death in 1936. However, much of his influence on the 1010 design may have happened even earlier than this, as suggested

[308] David James Blaikley, "The Development of Modern Wind Instruments" (1885-6). Richard Morley Pegge archive, Bate Collection, Oxford. RMP 6/2/1.

by the number of clarinet mouthpiece and bell drawings which were signed by him. In addition to the wide bore, the other defining features of the 1010 clarinet are the mouthpiece and bell: Blaikley's signature on these drawings further supports the theory that he had a significant influence on these aspects of the 1010's design.

3.4 Manufacturing Trends

3.4.1 Key Mechanisation

One of the most significant trends revealed by large table 3 is the sudden rise in the proportion of Boehm system clarinets manufactured by Boosey. Production records reveal that Boehm system instruments accounted for somewhere in the region of 3.8% of clarinets produced in the years 1925-1930. A similar proportion is found in 1931 – 3.3% – but in 1932 the number increases to 22.6%. Such a dramatic increase in proportion would indicate that at this point B&Co. made a decision to commence production of Boehm clarinets in earnest, and therefore equipped the factory for production of large numbers of Boehm clarinets. Equipping the factory would have included purchasing appropriate tooling and training enough craftsmen to manufacture the newer models. Previously, Boehm clarinets were only made in very small numbers as bespoke orders, so would not have previously accounted for any significant amount of tooling, space or labour within the factory. As Boehm clarinets had been growing steadily in popularity in Britain, B&Co. was faced with no option but to re-organise production lines so that Boehm clarinets could be made in significant enough numbers to satisfy demand.

From 1932 onwards the percentage of Boehm clarinets manufactured per year is similar, with a gradual steady increase. The adoption of this system both by

the British public and by B&Co. could be linked to the trend towards adopting foreign ideas about instruments, as the Boehm system was already well established in France by this point. Leading players and teachers such as Charles Draper and Manuel Gomez had begun to introduce the system to conservatoires as well; this would have been an important factor in raising demand for the instruments. Conversely, this of course meant that there was a significant decrease in the proportion of the 'simple' system instruments which had dominated production at Boosey & Co. These clarinets continued to be made in large quantities, though proportionally speaking they became much less significant during the course of the 1930s.

3.4.2 Materials

Large table 3 demonstrates a largely prevalent preference for ebonite, rather than wooden instruments. This was also observed in the period 1879-1930. However, there is one significant case where this rule does not apply, which is with the Boehm system instruments. Looking specifically at the 1010 and 1011 – the new B & H Boehm models that appeared in the 1930s – it is evident that the wooden model was made in much larger quantities than the ebonite, with 421 wood and 275 ebonite being manufactured. This would indicate that the Boehm system instruments were used more widely by orchestral or chamber players than those from the military band world, as ebonite was generally the preferred material for military musicians.[309] This is also true of the earlier Boehm system models that appear at the beginning of this period – the 200 and 201. Here ninety-seven wooden and forty-three ebonite Boehm system instruments were manufactured between 1931 and 1934.

[309] See Chapter 1, p. 48 for information on choice of wood/ebonite clarinets.

In terms of the woods used for clarinet manufacture, it is clear that African blackwood continued to be a popular choice for instruments, especially the more expensive models. Many clarinets were also manufactured from the softer cocus wood.[310] As well as wood and ebonite clarinets, there are a number of models which were offered in metal, and many metal instruments are listed in the production records. Models which were often made from metal were the 1003, the 108 metal, and various unlabelled instruments.

3.4.3 Importation

The previous chapter demonstrated that the importation of instruments seemed to be a declining trend. While this may have been the case, it is apparent that the cheaper 'London and Paris' models which began to appear by the end of the 1930s – the 1024 and 1026 – were manufactured from many imported components. Boosey was keen to reassure that the 'essentials' of these instruments were still '100 per cent British'.[311] Parts such as rough key machinery and rough wooden joints (blanks) were imported to save costs, but 'tuning and all other work on which tuning depends is carried out in our own factory under the same supervision as our more expensive models.'[312] Many of these models are described as 'cheap' when listed in production records. It is worth mentioning here the theory espoused by some including Edward Pillinger, that Boosey 1010 mouthpieces were at least partly made by Chédeville in France.[313] No evidence has been found to indicate that this was the case for the earlier models: there are very few 1010 drawings in the archive, but there are a couple of detailed plans for the manufacture of 1010 mouthpieces from

[310] See Chapter 1, p. 48 for discussion of woods used for clarinet manufacture.
[311] Boosey and Hawkes Music Publishers, *The Clarinet* (London: Boosey & Hawkes). p. A15.
[312] Boosey and Hawkes Music Publishers, *The Clarinet*. p. A15.
[313] Pillinger, "The Effects of Design on the Tone and Response of Clarinet Mouthpieces". p. 7.

the 1940s, 50s and 60s which would in fact suggest that they were at some point manufactured by B&H.[314] However, there is evidence that from the late 1950s many mouthpieces were imported. This will be discussed in later chapters.

3.4.4 Pitch Standards

Clarinets manufactured during this period were tuned to a variety of pitch standards, and we see quite a range of methods of referring to these standards. F.P. generally seems to refer to 'French pitch' or 'flat pitch', which at the time would have been A=439Hz.[315] L.P. generally seems to refer to an instrument of low pitch, which would have been the same as flat pitch. This low pitch was supposedly the new standardised pitch for continental Europe, but it took some time for this standardisation to take effect. High pitch instruments are plentiful in the records, and often seem to be those more commonly linked to military bands: the metal clarinets and the ebonite models. This is not surprising, as it was the military ensembles who tended to stick to the older pitch of A= c.452Hz for some time.[316] Conversely, it is very rare that an expensive wooden Boehm or Clinton Boehm system instrument would have been made to a high pitch specification, reinforcing the idea that these instruments were used much more for orchestral playing, where pitch was more uniformly low.

[314] Technical Drawing of 1010 Clarinet Mouthpiece, B&HA, 20.06.1943. GB HM, E98.339., and Technical Drawing of 1010 Clarinet Mouthpiece, B&H, 29.05.1962.GB HM, [No museum number].
[315] Haynes, *A History of Performing Pitch: The Story Of "A"*. p. 349.
[316] *A History of Performing Pitch: The Story Of "A"*. p. 360. A=452 was officially maintained by the British Army until 1929, and would presumably have still been used unofficially by some bands for some time after this due to the practicalities of purchasing large sets of new instruments. Wind bands playing at A=452 were still found well into the 1950s.

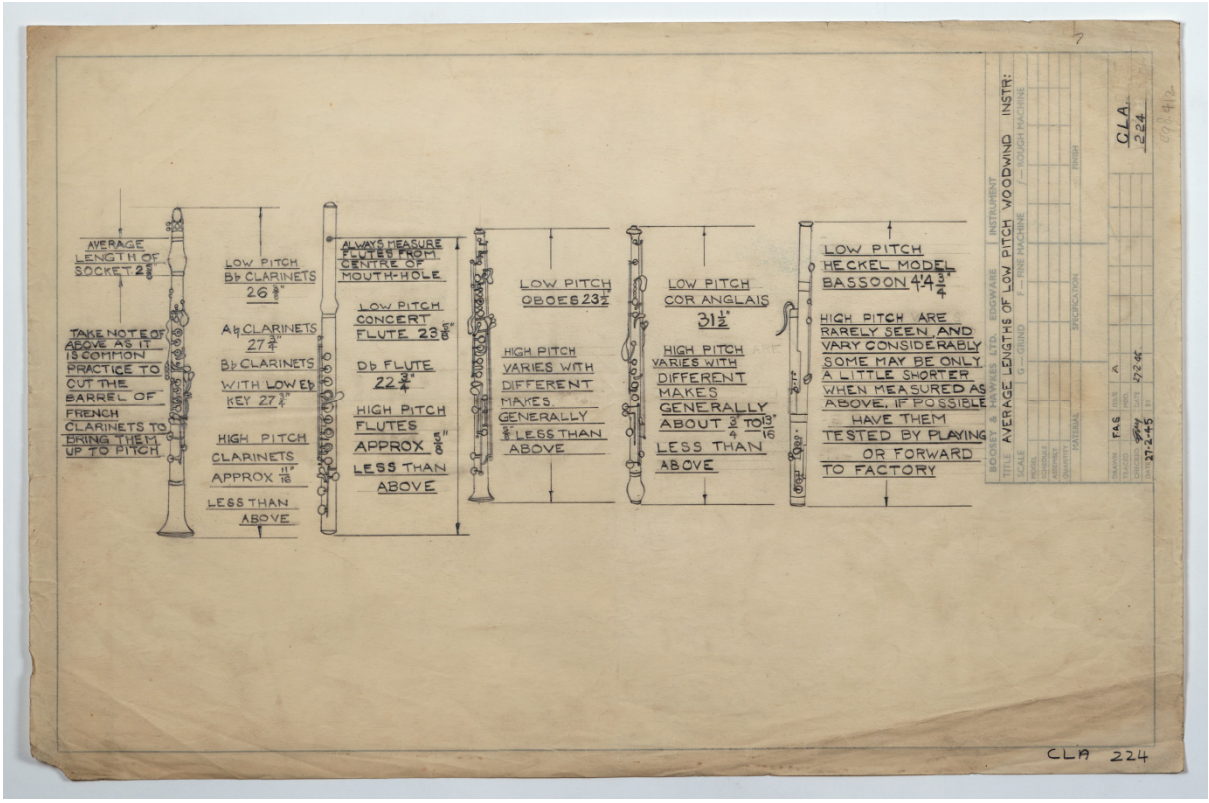

Figure 3-5 Overall lengths of low pitch woodwind instruments. Photo by permission of the Horniman Museum, London.

Also evident from drawings, catalogues and production records is that clarinets were almost invariably sold with two barrels, one short and one long, in order to deal with different pitch standards which might be encountered. Many instruments were also built with an internal tuning ‘slide’ between the barrel and top joint. The purpose of both these approaches to tuning was to enable the player to alter the sounding pitch of an instrument slightly, at the same time causing as little difference as possible to relational pitches throughout the range of the instrument. Simply ‘pulling out’ the barrel or other joints soon begins to disrupt the intonation throughout the compass. While it is still quite usual for players today to carry two barrels as part of their regular ‘kit’, instruments are not automatically sold with two

as seems to have been the case during the 1930s. The tuning slide, though seemingly a very sensible idea, is no longer used, though it can be seen on a number of extant older instruments.

3.4.5 Customers

It is clear that during the 1930s, many instruments manufactured by B&H were destined for military use. This is evidenced by the large numbers of high-pitched instruments, and by the development of the 1011 MM, or Military Model. The 1011 was made from ebonite, and according the catalogue at the time was designed 'to withstand the hardest wear'.[317] Military musicians' needs were understood by William Goldbourn, the manager of B&H's military department during the 1930s. His article 'Military Band Woodwind' describes the trials faced by musicians in the armed forces: playing in gales at home one month, in a hot climate the next, in snow the next and finding dust settling on his instrument. Goldbourn explains that in order to meet these needs, Boosey's military instruments are specially adapted in order to withstand military life.[318] This reveals that supplying the military was still an important part of B&H's business, as new models were being designed specifically for military use.

In addition to the military market, it is clear that during the 1930s B&H instruments were used by professional classical musicians. There are mentions of both Haydn Draper and Frederick Thurston in the instrument books during this period. The growing number of Boehm instruments, and the fact that more wooden

[317] B&H Trade Catalogue, c. 1930s. B&HA, GB HM, [n.m.n.].
[318] William Goldbourn, "Military Band Woodwind: The handicaps of the service musician" in in "Woodwind Year Book." (England: Boosey & Hawkes, 1939-41). p. 93.

Boehm clarinets were manufactured than ebonite, also indicates a significant number of classical musicians purchasing instruments.

3.5 Conclusions

One of the main themes identified in the music world during this period was the growing interest in national identity in British composition, and the desire to raise the profile of British music making. This was something that was also identified towards the end of the nineteenth century, with musicians and music lovers striving to raise the profile of English composers and other aspects of musical life, trying to find a musical voice for England which would be comparable with that of the continental European musical countries. Nationalism was by no means confined to the music world; it was especially prevalent in Britain during the 1930s, along with a policy of economic protectionism which placed a 10% tax on imports from all countries apart from members of the British Empire.[319] The fact that Britain needed to take these measures in order to aid recovery after the economic depression meant that it was important to have quality British products which would compete with foreign ones. In the 1930s, there is evidence of Boosey & Hawkes attempting to reinforce both nationalist pride and protectionist economic measures, by promoting itself as a truly British manufacturer. A catalogue from the time reassures customers that the 'essentials' of clarinets which were partly manufactured abroad were still '100 per cent British.'[320] The 1010 clarinet, though clearly influenced largely by foreign designs from Albert, was a real innovation in terms of the combination of wide bore, cylindrical mouthpiece and Boehm system keys. This could be seen as

[319] Tim Rooth, *British protectionism and the international economy: overseas commercial policy in the 1930s.* (Cambridge: Cambridge University Press, 1993). p. 65.
[320] Boosey & Hawkes, Trade Catalogue, *The Clarinet*. c. 1939-40. p. A15.

B&H attempting to design a clarinet that would be uniquely British, both in terms of design, but also in sound. This is paralleled by the notion of developing a British musical voice in composition, one of the main themes identified in the music world during this time.

The growing popularity of the Boehm system in England – partly a result of the example set by leading players such as Charles Draper – created increased demand for Boehm system instruments to be manufactured in larger numbers. This demand led Boosey & Hawkes to focus a great deal of attention on the design of Boehm clarinets. In this sense, B&H was following the fashions being set by leading players during this period, as was the case in the previous chapter. The resultant design was an innovation, however, showing B&H leading clarinet design in Britain.

Comparisons between British orchestras and those from abroad invariably reflected badly on British musicians and orchestral management. Musicians were under increased pressure to perform to incredibly high standards, and needed higher-quality instruments in order to achieve the accuracy and security that was required of players, especially in orchestras which worked in the field of live broadcast or recording. Demand from musicians would have been another factor which moved B&H to examine the design of their orchestral clarinets, and provided an opportunity for them to market the new Boehm models as uniquely British, and a significant improvement on instruments previously made in Britain.

The army was still a very important source of custom throughout the early 1930s for B&H. Models such as the 1011 MM made from ebonite were clearly designed with military use in mind. The large numbers of high-pitched instruments used throughout this period would also have been used by military musicians, though

by this time most orchestral musicians would have been using French pitch instruments. This clearly shows that B&H was still heavily reliant upon the military for custom, and that many models were being manufactured specifically for military use.

However, after the merger with Hawkes & Son, B&H sought to increase custom from the top end of the orchestral market. This was undoubtedly related to the developments that were taking place in British orchestral playing during the 1930s, which required musicians to have instruments capable of delivering accuracy and security. The desire to appeal to the orchestral market resulted in the development of the B&H Boehm system clarinets, which then materialised as the 1010 model. The fact that leading classical soloists such as Frederick Thurston and Haydn Draper were chosen as the musicians to test these new instruments illustrates B&H shifting towards the classical and orchestral markets, as previously instruments were generally tested at Kneller Hall and by military musicians.

This period of B&H's history is of utmost importance in terms of the development of the 1010, as it was in 1933 that the first model which is referred to as a 1010 appears in the instrument books. Boehm clarinets had previously been manufactured at B&Co. and H&S, but had been referred to as 200 models in B&Co. catalogues. During the 1930s, a re-numbering of instruments took place, and the Boehm model became known as the 200. It is clear from B&H publicity that improvements were made to the Boehm models in addition to the re-numbering. Just how similar the 200 and 1010 were is still unknown, as the known extant instruments from the period are very late 200 models. However, 1933 is the definitive date when a 1010 was first recorded in B&H instrument books. It is unlikely that at this early

stage the 1010 was referred to – at least by players – by its model number. All clarinets in the catalogue had different numbers, which were used to differentiate between instruments in technical drawings, and presumably throughout the factory. However, extant instruments from this period were not stamped with a model number or name. The phenomenon of assigning individual identities to instruments became more commonplace with the rise of consumerism in the 1950s, when individual models took on separate product images.

The conception of the 1010 seems to have occurred as a result of three main factors: the growing popularity of the Boehm system in Britain; the need for high-quality instruments to meet new demands on orchestral musicians; the desire for B&H to expand its customer base. These factors all clearly created something of a gap in the market in Britain, and indicated to B&H that in order to keep in touch with the British clarinet-playing market a new, top-quality Boehm instrument would need to be produced. It also seems that the new merged company had ambitions to expand the customer base beyond the military ensembles that had hitherto provided B&Co. and H&S with a constant demand for new instruments.

Production figures indicate that the 1010 soon became well established after it was first manufactured, as it was made in similar numbers for the next five years. Had the model been unpopular production would not have been sustained at a high level for so long. One of the reasons that the 1010 was able to quickly attain such popularity was that B&H had designed and released this model at a point where there was a gap in the market for a high-quality British-made Boehm clarinet, for the reasons stated above. The other main reason is linked to the perceived need for a more prominent British musical voice during this period. This generally referred to

British composition, and was reflected in the desire to increase standards of orchestral playing in Britain to deliver performances comparable to those of continental ensembles. The 1010, with its unusually wide bore and cylindrical-bored mouthpiece, provided British players with an opportunity to create a unique 'voice' for British clarinet playing, which became inextricably linked with the 1010 model. It is largely this reason, the timing of its release in conjunction with the musical mood of Britain at the time, that led to the 1010 becoming a musical icon.

The design features that are normally associated with the iconic pre-war 1010 clarinet were all established during this period. The wide bore of 0.600" (15.24mm) is likely to have been partly influenced by German clarinet designs. A sketch of a German clarinet with this exact bore width, dating from 1926, is held in the B&H archive. This correlates with the general move in Britain at the time to emulate the sound of German orchestras, as reflected in the switch from French to German Heckel Bassoons during the early 1930s. The mouthpieces used with 1010s at this time were not at all like those used on German clarinets, instead they were designed more along the general principles of French clarinet mouthpieces, though with a cylindrical bore rather than the more common conical. It was this combination that helped to create the unique sound of the 1010. The long, flat tenon rings were a distinctive external design feature, quite possibly influenced by Eugène Albert in earlier decades of B&Co. clarinet making. Albert's own clarinets generally used the same design of tenon rings. In spite of these different foreign influences, the 1010 was clearly accepted as a new British clarinet, which facilitated the development of the British clarinet sound associated with the middle decades of the twentieth century.

The 1010 was initially a great success, as it was an innovative response to various changes in British clarinet playing. B&H was beginning to establish itself as an instrument manufacturer capable of supplying the new and improved London symphony orchestras. With the onset of WWII in 1939, however, the company was faced with a number of new challenges, but also opportunities, as will be shown in the next chapter.

4 Weapons and Mass Production: 1939-1950

Introduction

Towards the end of the 1930s, increasing political unrest in Germany and beyond meant that Europe was on the brink of major conflict. When war was declared in Britain on 1 September 1939 it was not long before every aspect of British society was affected, including the music business. This chapter begins by illustrating the effect that WWII had on music making in Britain. It then discusses in detail the clarinet manufacturing that took place at Boosey & Hawkes during this period, and how this was influenced by, and reflected, the wartime musical climate. British musical life in the years immediately after the war will then be illustrated, again followed by discussion of developments in clarinet manufacturing at B&H. The end point of 1950 has been used, as this is when the 1010 clarinet was redesigned and launched as the 'Symphony 1010'. This will be discussed in detail in the following chapter.

4.1 Musical Life in Wartime Britain

Boosey & Hawkes was able to sustain some instrument manufacturing during WWII, because of continued musical activity by orchestras and military bands during the war. A sense of musical and political jingoism during and after WWII inspired new ranges of B&H clarinets. However, wartime production was significantly affected both by trade sanctions and by the fact that much of the Edgware plant was co-opted for the war effort, being given over to the production of munitions and aircraft. In many ways, the war acted as a catalyst for change at B&H, not least because the introduction of precision engineering to B&H's designers paved the way for mass production on a grand scale. These areas of relationship

between WWII and B&H are discussed below, in order to provide the context for discussions of clarinet manufacturing during and after the war.

4.1.1 Musical Performances

As soon as war was declared in Britain, emergency measures affecting all areas of life were put into place. In general terms these included the evacuation of schoolchildren and expectant mothers from cities to more rural areas, blackouts after dark and restrictions on public transport. These measures inevitably had an impact on musical life: the blackout regulations threatened to seriously impact upon professional entertainments, as any venues hosting evening events had to abide by blackout rules.[321] Initially many theatres and concert halls were closed completely, and all public entertainment was cancelled – such as the Proms, which were abruptly cancelled on 1 September 1939.[322] Many orchestras and opera companies including Sadler's Wells Opera were forced to tour around the British provinces.[323] These restrictions posed a threat to musicians' livelihoods. In a letter to *The Times* on 7 September 1939, Henry Wood asked:

> Are all our British artists, vocal, instrumental and dramatic, who have devoted their lives to their art, to be turned down to face, in many cases, I fear, dreadful poverty just because their vocation, and particular training, is not of technical service during war time?[324]

It soon became clear that Wood's fears were not to be realised, as it became apparent that initial responses to the declaration of war had been somewhat hasty. In fact, public demand for wartime music-making increased, possibly, as Mackerness

[321] Mackerness, *A Social History of English Music.* p. 266.
[322] Kenyon, *The BBC Symphony Orchestra: The First Fifty Years 1930-1980.* p. 265.
[323] Mackerness, *A Social History of English Music.* p. 266.
[324] Wood, "Concerts in War Time", *The Times*, 07.09.1939. p. 7.

suggests, because 'the sudden uncertainty of life quickened the demand for serious music'.[325]

The BBC SO started to broadcast a concert series from its wartime home in Bristol, though with a number of special regulations in place to keep the whereabouts of the concerts secret and to prevent important radio time being taken up by musical broadcasts.[326] The main broadcast service became known as 'The Home Service'. Another BBC programme called 'The Forces' Programme' was first broadcast in February 1940. This showcased variety artists 'who could appease homesickness and induce a cheerful outlook'.[327] Live wartime BBC broadcasts were fraught with difficulty, however, particularly as the number of air raids in Bristol increased. This eventually led the BBC SO to seek a new refuge, and it moved to Bedford on 30 July 1941. Concert giving in Bedford began on 17 September 1941 at 7pm.[328] The London Philharmonic Orchestra also continued to perform, vowing that any planned concert would go ahead. The LPO toured the provinces during the war; according to the LPO's wartime secretary, Thomas Russell, musicians apparently often spent nights in air-raid shelters or railway stations. Touring the country created an audience for orchestral music in towns that previously had little involvement with large symphony orchestras.[329]

It is evident that high-profile classical music was still performed and enjoyed during the war, but there were numerous other musical activities that took place, and even flourished, during this time. Mackerness paints a positively rosy picture of

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[325] *A Social History of English Music.* p. 267.
[326] Kenyon, *The BBC Symphony Orchestra: The First Fifty Years 1930-1980*. p. 265.
[327] Mackerness, *A Social History of English Music.* p. 268.
[328] This was also the first year that the Proms (without the aid of the BBC for the 2nd year running) were held at the Albert Hall as the Queens Hall had been destroyed by bombing.
[329] Russell, *London Philharmonic: A Brief History*. p. 11.

musical life in England during the war, claiming that: 'For thousands of people not actually in the fighting services the period from 1940 to 1945 was full of novelty and interest'.[330] The *Musical Times*' regular feature 'Music in the Provinces' reveals a large number of concerts given by choral societies, philharmonic societies and university music groups, all listed alongside the professional concerts given by the BBC SO in Bristol, and the Hallé in Manchester.[331] Army commands established various choral and orchestral groups, and other musical organizations were set up to provide entertainment for troops and civilians.[332] Light music and entertainment were also in great demand, and once longer opening hours had been permitted, dance halls and night clubs were crowded, and fashionable West-End resorts were also very popular. This sudden thirst for music can be attributed to the continual shifting around of military personnel, causing sudden concentrations of population in unexpected places. Military stations could provide audiences at any time of day, and personnel were keen to do anything to break the routine of wartime existence.[333]

B&H was clearly involved in efforts to sustain musical performances during the war, as at the end of the 1941-2 season a series of London concerts was promoted under the patronage of the Allied Governments and the British Council by the Royal Philharmonic Society in collaboration with the BBC, the London Symphony Orchestra and Boosey & Hawkes.[334] It was in B&H's interest that music making should continue during the war years, as it ensured an ongoing demand for musical instruments and printed sheet music.

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[330] Mackerness, *A Social History of English Music. [with Plates.]*. p. 269.
[331] "Music in the Provinces," *The Musical Times* 82, no. 1175 (1941). pp. 38-39. This is one such example of this regular feature.
[332] *A Social History of English Music. [with Plates.]*. p. 266.
[333] *A Social History of English Music. [with Plates.].* pp. 266-269.
[334] Kenyon, *The BBC Symphony Orchestra: The First Fifty Years 1930-1980*. p. 179.

4.1.2 International Relations

Though in most respects international relations were tense and complex during the war, in terms of music making in Britain there was still a remarkable amount of cooperation between British musicians and those from abroad. There is even evidence to suggest that there was a certain degree of pragmatism about the relationship between Britain and Germany: as Fox-Strangways notes, 'The Germans, with whom by one of those accidents that will happen between friends, we are not for the moment on speaking terms, have specialized in [...] music'.[335] Many foreign musicians who had fled from Nazi persecution in Europe sought refuge in Britain, and were accepted in the profession.[336] The previous sense of foreign competition was also evident, with orchestras attempting to match up to the wartime standards of those abroad. Adrian Boult, conductor of the BBC Symphony Orchestra, noted in 1941 that 'the Berlin Philharmonic is broadcasting at pre-war strength with pre-war personnel. We have got to stand up to this'.[337] Though Boult phrases this in a rather competitive manner, there is still a sense of wanting to 'keep up' with foreign orchestras, and to able to achieve what they were able to. Boult also adopted the position that the BBC's programming policy should remain unchanged, so that no overtly political feelings would influence the choice of repertoire to be performed. These attempts to remain politically neutral reveal that there was not a strongly anti-German sentiment present in terms of music making.

Although Boult's position on programming had been 'policy unchanged', his successor Arthur Bliss felt that emphasis should be placed on British composers or

[335] A. H. Fox-Strangways, "German Song," *The Musical Times* 81, no. 1173 (1940). p. 439.
[336] Mackerness, *A Social History of English Music. [with Plates.]*. p. 266.
[337] Kenyon, *The BBC Symphony Orchestra: The First Fifty Years 1930-1980*. p. 171.

those sympathetic to the cause of Britain in the war. Kenyon claims that the bias of the BBC towards native music was also continued, if not increased, by Hely-Hutchinson, who succeeded Arthur Bliss.[338] Emphasis on performing British music could be seen as an inevitable consequence of being involved in the Second World War, and to some degree it echoes the drive towards a more prominent British musical voice that was observed in the late nineteenth and early twentieth centuries. This musical nationalism verging on jingoism is apparent to some extent at B&H following the war, where a large number of models are given very British model names, as is shown later in this chapter.[339] B&H also advertised – and stamped – many instruments as being 'British throughout'.

4.1.3 Boosey at War

All areas of British industry were affected by WWII. From September 1939, increasing government controls were placed upon primary raw materials, methods of production, industrial plants, designs, tools, engineering skills and factory managements.[340] A Raw Material Department was established, and became responsible for the control of all raw materials, to ensure that available supplies were used to the best advantage for the war effort.[341] Trades that were restricted included alcohol, molasses and solvents; cotton; flax; hemp; iron and steel; jute; leather; non-ferrous metals; paper; silk and artificial silk; sulphuric acid; industrial ammonia and other fertilizers; timber; wool, plastics and rubber, and chrome ore. Restrictions varied, but tended to limit the sale of the material concerned and impose a maximum

[338] Hely Hutchinson died soon after taking this position.
[339] See p. 197 for details of new model names applied to B&H clarinets.
[340] Mary Elizabeth Murphy, *The British War Economy 1939-1943* (New York: Professional and Technical Press, 1943). p. 45.
[341] Murphy, *The British War Economy 1939-1943*. pp. 51-52.

price.[342] Clearly some of these restrictions would have affected the materials available to B&H, such as ebonite (a vulcanised rubber). International trading was severely curtailed, with all import markets from continental Europe being closed. This created something of an opportunity for B&H, as instruments from foreign manufacturers could not be imported. This led to the purchase of a Hohner factory in Wales in the early 1950s, as there was not the usual German supply of harmonicas to Britain.

The government developed a programme to secure the greatest possible transfer of resources to the war effort by contracting civil consumption and releasing labour materials and factory space for vital purposes.[343] B&H was one of the companies co-opted for manufacture of munitions and aircraft. In the musical instrument industry, a total of 300 workers were released for war production, and 390,000 square feet of factory space was given over to the war effort.[344] Mary Murphy, a contemporary economist, describes some of the unlikely producers of war materials:

> Torpedoes now are made in a former boot and shoe plant; anti-gas and medicated ointments in a former beauty cream factory; aircraft engine parts in a hairpin plant; and airplane frames in a toy factory.[345]

To this list can be added 'bombs and aircraft parts in a musical instrument factory', as these were the products manufactured by B&H.

[342] *The British War Economy 1939-1943*. p. 52.
[343] *The British War Economy 1939-1943*. p. 82.
[344] *The British War Economy 1939-1943*. p. 93.
[345] *The British War Economy 1939-1943*. p. 64.

Figure 4-1 Women manufacturing aircraft doors at the Edgware plant during WWII. B&HA, GB HM. n.m.n.

Though wartime economy resulted in reduced instrument manufacturing at B&H, the war was a catalyst for mass production, due to the introduction of precision engineering to the Edgware plant. The impact of this new technology and its impact upon clarinet manufacturing techniques are discussed later in this chapter. The war was also significant in bringing women workers to the B&H factories, as was the case with other industries in Britain during WWII.

In addition to munitions production, B&H showed its support for Britain during the war by stepping in to rescue Covent Garden opera house, which had been leased by Mecca's Dance Hall for the first years of war. In order to use the theatre for ballet and opera once more, Leslie Boosey offered to pay the lease on the

building for five years, thinking 'what a wonderful patriotic gesture it would be'.[346] Leasing Covent Garden cost B&H £10,000 a year, and they never received any money from the government. This patriotic gesture went on to cost them far more than they imagined or accounted for, and this contributed to significant financial problems in later years.[347]

Figure 4-2 Women assembling 'sticky bombs' in the Edgware plant during WWII. B&HA, GB HM. n.m.n.

4.2 Boosey & Hawkes Clarinets during the Second World War

Due to continued musical performance activity throughout the war years, there was a steady demand for musical instruments. However, clarinet production was

[346] *Boosey & Hawkes: The Publishing Story*. p. 50. See p. 181 for the impact of Covent Garden on B&H's finances.
[347] *Boosey & Hawkes: The Publishing Story*. p. 63.

substantially reduced as a result of the wartime economy and the co-option of the Edgware plant for munitions production. In the last three years of the war the factory's average clarinet output was lower than it had been in the first three years of production at Boosey & Co. in the nineteenth century. Between 1942 and 1945 the average clarinet output each year was 122, compared with 145.3 in the first three years of B&Co's clarinet manufacturing. The table below shows the total number of clarinets made in each year of the war.

Table 4-1 Total number of clarinets manufactured at B&H during each year of WWII.

1939-40	1940-41	1941-2	1942-3	1943-4	1944-5
598	692	218	78	135	153

The total number of clarinets manufactured at Boosey between 1 September 1939 and 14 August 1945 was 1,874. Large table 4 shows all the clarinet models manufactured at Boosey & Hawkes during the war. The table shows that three models dominated clarinet production at Boosey during the war: the 1001, 1026 and the 926. The 1001 was established at Boosey long before the war, but the 1026 and 926 both made their first appearances during this period, and very quickly became the most commonly made clarinets. The 926 in particular accounts for a very large percentage of the total output. Between them, these three models account for around 75% of the total wartime clarinet production. This contrasts markedly with earlier periods when there was a much more even distribution of models across the total output. War would have been a key factor in influencing this: reduced facilities, staff and resources at Boosey meant that it was easier to concentrate on a smaller number

of instruments, requiring fewer separate tools, materials, and skills. From the middle of 1944 onwards, the 1026 and 926 almost completely dominate the records, even before batches of instruments are listed as being mass produced. The dominance of just two models shows that there was a changing preference at Boosey, moving from a situation in which there was a relatively large number of different models all being produced in various quantities, to one where only two models are made in any sort of quantity, and other models only appear very occasionally, usually as a single random example or perhaps a pair.

1001

The 1001 had been introduced into production long before the war, and is an example of one of the simple system 14-key clarinets popular earlier in the century. Its longevity shows that though the Boehm system had been steadily growing in popularity, it was still some way from being universally accepted in Britain. During WWII the 1001 was the second most commonly manufactured clarinet at B&H, accounting for a total of 22.3% of total production. It was made in A, B♭ and E♭, suggesting that it was used in both orchestral and military settings.

1026

The first 1026 was manufactured in October 1939, just a month after the initial declaration of war. It is unlikely that this instrument was actually designed and developed during wartime, as it would probably have been through months of development before being manufactured for the first time. Despite wartime difficulties however, this model was thought successful enough to be produced in large quantities. The 1026 in its earliest incarnations was a Boehm system instrument

made of wood, with German silver plated keys.[348] It formed part of Boosey's range of 'clarinets of moderate price', which were designed in collaboration with a continental key machinery manufacturer.[349] B&H publicity from the time explains that the reason the clarinets in this range were cheaper than the 100% British-made instruments was because 'certain parts, such as rough key machinery, rough wooden joints etc., are imported, inasmuch as they can be manufactured in quantities abroad at lower prices than in this country'.[350] Clarinets in this range were stamped with the 'London and Paris' branding.[351]

The 1026 accounted for 16.6% of the total wartime output of clarinets at B&H, the third largest proportion after the 1001 and the 926. This was quite possibly because people were financially restricted during the war, and the cheaper clarinet ranges were therefore a more feasible option for those who still wished to purchase instruments. The fact that some of the components of the 1026 were imported would have meant less work inside the B&H factory, which would have made it easier for B&H to produce this model in larger numbers, as it was less of a drain on resources.[352]

926

This was a top-range B&H Boehm system clarinet, which went on to become the well-known Imperial model in later periods of B&H's manufacturing history. The first 926 model was manufactured at the beginning of 1941, making it another

[348] See Chapter 1, p. 51 for discussion of German silver.
[349] Boosey, *The Clarinet*. p. A15.
[350] *The Clarinet*. p. A15.
[351] The initials L.P. on a B&H instrument generally refer to low pitch – not London and Paris. This is how models were recorded in the instrument books to show that they were of low pitch, and many instruments made by B&H were also stamped Low Pitch. Several B&H clarinets which were clearly not part of the London and Paris range have the initials L.P. on them, reinforcing that this meant something different. London and Paris instruments had the full words stamped on them.
[352] Presumably there were imported parts already at the factory at the start of WWII, as foreign importation was strictly limited during the war years.

model that first appeared during the war. In terms of lasting legacy, the 926 seems to have been well thought of by many players, and was seen as one of the two professional models made by Boosey, the other of course being the 1010. Though most would agree that the 1010 was the more well-known of the two models, it was not produced in anywhere near as large quantities as the 926. The 926 clarinet was developed to provide a professional alternative for those who found that the 1010 was not to their liking. With a slightly narrower bore of 15.0mm, and toneholes with no undercutting, it had a different feel to the 1010, and some players found it easier to play in tune.[353] The 926 also had a more traditional, conical mouthpiece, rather than the unusual cylindrical one that was always used with the 1010.

During WWII, the 926 accounted for 36.18% of clarinet manufacturing, making it by far the most commonly manufactured clarinet during this period. This is particularly remarkable, as the 926 made its first appearance in 1941, so had not been established at all before the war. It was manufactured in both A and B♭, indicating that it was designed to be used in orchestral settings. The 926 must have quickly been accepted by players, as it was made consistently throughout the war years. This would not have been the case had it not sold initially.

4.2.1 The 1010 during the War

The following table shows how many 1010 models were manufactured during each year of the war, and what proportion of the total clarinet output it accounted for.

Table 4-2 Total number of 1010 clarinets manufactured during WWII.

Year	1939-40	1940-1	1941-2	1942-3	1943-4	1944-5

[353] Greenham, "Clarinet Toneholes: A Study of Undercutting and Its Effects". p. 103.

Number of 1010s	60	32	0	0	10	0
Proportion of Total Clarinet Output	10.03%	4.62%	0%	0%	7.41%	0%

1010 model clarinets clearly continued to be manufactured during the first two years of war. However, the proportion of total output for which it accounted is much smaller than it had been before the war. A decrease in demand for top level instruments could have happened as a result of reduced numbers of performances, and also perhaps because musicians were not financially in a position to acquire more expensive instruments, so were buying cheaper models. It was not long after the start of the war that the 1010 stopped being manufactured almost completely, apart from ten clarinets that were produced in 1944. This gap in manufacturing continues through to 1947.[354] This break in production would have been because B&H was trying to focus on instruments which were less labour-intensive (the 1010 required a greater amount of hand-finishing than some other models), due to reduced resources in terms of factory space, workforce and materials.

1011

The 1011, which was essentially the ebonite version of the 1010, was manufactured in very small quantities during WWII, with a complete cease of manufacture from 1943 onwards. A total of just fifty-two were made during the war. Like the 1010, it was an expensive model aimed at professional players, which goes some way to explaining why there was reduced demand for it during WWII.

1012

The 1012 was the metal version of the 1010 clarinet. Only one 1012 was manufactured during WWII. This clarinet had not been made in large numbers in the

[354] In 1947 the 1010 began to appear in different guises, as is discussed below.

pre-war manufacturing period either. After the war it was not made at all, indicating that there was very little demand for metal Boehm clarinets.

4.2.2 Other Clarinet Models

1002 and 1003

These clarinets were made extensively before the war, and belong to the same category of clarinet as the 1001. They were both simple system clarinets, the 1002 made from ebonite and the 1003 from metal. Some of these instruments were tuned to high pitch, suggesting military band usage. There were also some low-pitched examples. Only eight 1003s were manufactured, but there were eighty-three of the ebonite 1002s. The 1002 was made in A, B♭ and E♭ during WWII, but the 1003 was only made in B♭ and E♭. This would suggest that the metal 1003 was used primarily in military bands, as the A clarinet was used more for orchestral playing.

1004 and 1005

Again these were models that were available before the war. They were Barret system clarinets. The 1004 was made from blackwood, and the 1005 from ebonite. During the war there were just eight wooden 1004s manufactured, and four ebonite 1005s. This was the first time that wooden Barret clarinets outnumbered ebonite ones. The 1004 was made in A, B♭ and E♭ during WWII, the 1005 was only made in A and B♭.

1007 and 1008

These were Clinton clarinets, again from the pre-war manufacturing period, made from wood (1007) and ebonite (1008) respectively. The ebonite version was made 49 times during WWII, but all before 1941. Only twelve examples of the wooden version were made. The 1007 was manufactured in both A and B♭ during the war, indicating that this model was used primarily in orchestral settings. The 1008

was manufactured in B♭ and E♭, which would indicate military or wind band usage. Though metal Clinton clarinets were available before WWII (the 1009 model), none of these were made at all during the war.

1019

This was an ebonite bass clarinet, which had also been available before the war. Only three of these were manufactured during WWII, between January and March 1940. This indicates two things: that there was a reduced demand for bass clarinets during the war, largely due to financial restrictions upon purchasers; and that bass clarinet manufacturing was limited due to munitions production taking place at Edgware. Because bass clarinets were generally much less frequently manufactured than soprano clarinets, and would have taken up a considerable amount of time and resources in the factory, manufacture of these models was not economically viable during WWII.

1024

Like the 1026, the 1024 was part of B&H's London and Paris range of cheaper clarinets. The 1024 was the 14-key model in this range, and was manufactured a total of 61 times between 1935 and 1942. When this model is listed in the instrument books, it is often described as 'cheap'. The 1024 was made from different materials (this was not normally the case for clarinets with the same model number); examples are listed in ebonite, cocus and blackwood.

1027

Little is known about the 1027, as it is not mentioned in extant B&H catalogues from the time. Analysis of other B&H model numbers has revealed that two consecutive model numbers generally referred to instruments of the same design, manufactured from different materials. If this is true in the case of the 1027,

this model was probably an ebonite version of the 1026 – a Boehm 'clarinet of moderate price'. Twenty-six 1027 clarinets were manufactured between October 1940 and January 1941. Unlike the 1026, which was made in large numbers after WWII, the 1027 does not appear again in records after this short spell during the war.

1248

The 1248, a 'full Boehm' clarinet with 20 keys and 7 rings, appears seven times during the war. Whilst it was by no means frequently manufactured, it was clearly made more during the war than it had been before, which shows that it was becoming a more popular choice for performers. This clarinet was manufactured in both A and B♭, indicating that it was used for orchestral playing.

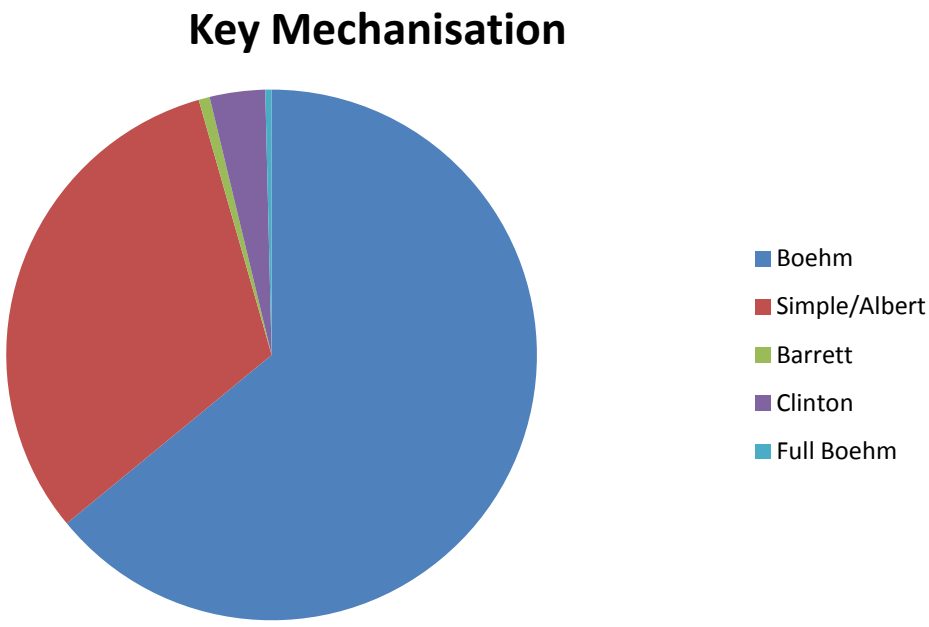
927, 1070 and 226

Only one 927 model clarinet was manufactured during this period, and there is very limited information about it in the instrument books. In later periods this model number refers to an 18-key clarinet, but records from the WWII period neither support nor contradict this. 1070 was a model number usually applied to oboes, so it is possible that the B♭ clarinet listed as a 1070 was actually an oboe, and that this is an example of the human error occasionally evident in B&H records. In the instrument book its description reads 'B♭ Clarionets', so it has been counted in with clarinet manufacture. The 226 is a similar anomaly: the description of the two examples of this model in the instrument book reads 'B flat clarinet', but 226 is a model number that again is normally used for oboes. This could have been a case of 926 clarinets accidentally being recorded as 226, or of oboes being erroneously described as clarinets.

4.3 Manufacturing Trends during the Second World War.

4.3.1 Key Mechanisation

Five systems of key mechanisation were used at Boosey during the war: simple (or Albert) system, Boehm, Barrett, Clinton and full Boehm. For the first time in B&H's manufacturing history, by far the most commonly made key mechanisation was the Boehm system. In previous periods a steady increase in the production of Boehm clarinets was observed, but during the war Boehm clarinets accounted for considerably more than half of the total wartime output. The chart below shows the proportion of each key mechanisation used, taking data from those models where key mechanisation is known.



It is clear by this point in history that the Boehm system had become firmly established in Britain, being widely used by professionals and amateurs alike. It is also evident that the Albert system instruments that had been popular in Britain for so long were still being used by many players, in order for them to still be

manufactured in such large numbers by B&H. Clinton clarinets were used by a small but not insignificant group of players, and Barrett and full Boehm clarinets had very limited use.

4.3.2 Materials for Manufacture

There is an observable shift in the number of ebonite instruments that were manufactured during WWII, compared with previous periods of manufacturing. Ebonite clarinets had already been in decline, but for the first time the proportion of wooden instruments is significantly greater than that of ebonite ones. This could be attributed to the fact that the factories from which Boosey bought its ebonite were focusing production on materials needed for the war rather than those needed for other, less critical purposes such as musical instrument making.

In the previous period of manufacturing, it was noted that the Boehm system clarinets were the only ones made more often from wood than from ebonite, but during the war there were many more wooden 14-key clarinets than ebonite. The other clarinets that accounted for large proportions of the total clarinet output – the 926 and 1026 – were also made from blackwood. A very small number of metal clarinets were manufactured during the war.

Table 4-3 Numbers of wood and ebonite Boehm and simple system clarinets.

	14 key (simple system)		Boehm	
Wood	1001	418	1010	102
Ebonite	1002	83	1011	52

Most clarinets during this period had German silver keys. The 1010 and 1011 have silver plated keys; this is one of the features that set it apart from other models. During this period two new models – the 1027 and the 926 – are made with nickel

plated keys.[355] The first recorded instance of nickel as a material for B&H clarinet keys is a 1248 full Boehm clarinet, number 34115, charged to Regent Street on 04/05/1939. Other than this one occasion, nickel is only used regularly from 1940 onwards, in association with the two new models.

4.3.3 Pitch Standards

During this period there is a sharp decline in the number of high pitch instruments manufactured by Boosey. This could partly be because in general the new 'standardised' Low Pitch – of A=439Hz – was becoming more common. High pitch clarinets in the instrument books are most frequently 14-key and/or E♭ models. This is likely to be because players who still preferred the older key system also felt the same way about pitch standards. Most high pitch clarinets would have been used in military or amateur bands, as these ensembles took much longer to switch to the new lower pitch. These bands, or members of them, would therefore have purchased high pitch clarinets in order that they would be in tune with the rest of the musicians who were still using high pitch. Not one high pitch A clarinet was manufactured during this period, reinforcing the fact that orchestral players (who would have been those most likely to play on an A clarinet at any point) were no longer using high pitched instruments.

4.3.4 Sounding Pitches

It is evident from large table 4 and the production records that there are proportionally fewer E♭ and bass clarinets manufactured during the war than before, and there is not a single alto clarinet listed in the production records from this time at all. This would have been partly a result of financial difficulties faced by consumers

[355] See Chapter 1, p. 51 for an explanation of different materials for key manufacture.

during the war, as these instruments were considerably more expensive than soprano models. It would also have been more difficult for B&H to manufacture these models, as with limited space and resources available at the factory, production had to be streamlined in order that fewer sets of tools were required. Clarinets in different pitches utilised separate tooling, much of which would have been dismantled during the war in order to make space for munitions production. This meant that it was easier, and more economical, for B&H to concentrate on soprano models which a) took up less time, space and equipment, and b) were in much greater demand from customers than the more unusual bass, E♭ and alto clarinets. Just one C clarinet was manufactured during the war, a 1010 clarinet in C, serial number 35561. This would have been partly to do with the difficulties of making less common instruments during the war, but is also a strong indicator that C clarinets were becoming much less frequently used, and therefore in lower demand.

4.3.5 The Boosey & Hawkes Workforce during the War

From the extant records it seems there was very little difference to the clarinet manufacturing workforce at B&H during the war. Most of the workmen's names that are listed regularly during the war are names that appeared several times before 1939. Very few names listed between 1933 and 1939 cease to appear once the war has started. This indicates that these manufacturers were felt to be too important to be released for military service. The greatly reduced production figures, however, may have resulted in pay cuts for individual craftsmen, or there may have been other areas of work for which they were required during this time. As with many other areas of British industry during the war, conscription provided an opportunity for women to enter the workplace for the first time. Though there is no evidence of any

of the main clarinet makers during this time having been women, many photographs depict women undertaking various jobs at the Edgware plant, including fitting keys by hand.

Although mass production of clarinets at B&H was an entirely post-war phenomenon, there are a few early signs that the company was beginning to think along the lines of becoming more efficient and being able to produce identical clarinets in batches. Records kept during the war show that each instrument is still clearly linked to one workman; however, there are often two or three instruments listed together with the same workman's name, which all seem to have been made in a small batch. After the war similar moves begin to happen on a much larger scale.

4.3.6 Customers

The continuation of military musical activity during the war would have ensured that B&H's usual role in supplying regimental bands with instruments was continued to some extent during the war years. As much orchestral and amateur music also continued during the war, many of these musicians would also have provided B&H with custom. There are no clear links in the instrument books to any individual customers as was the case in previous periods of manufacturing history.

4.4 On the Road to Recovery: 1945-1950

4.4.1 British musical life returns to normal

With the arrival of peacetime in Britain, the music business, along with virtually every other aspect of British society, soon began to recover from the effects of war. Various companies that had been restricted during the war were soon able to re-establish themselves in their normal patterns of operation. Opera companies, which had been touring the provinces for much of the war, were soon able to reopen.

According to the *Musical Times,* 'the first positive sign in London music that peace is upon us' was the reopening of Sadler's Wells. The company set out to provide a home for English language opera only. The opening performance was Britten's *Peter Grimes* on 7 June 1945.[356] Trustees of The Royal Opera House aimed to reform the opera company there, and establish Covent Garden as the national centre of opera and ballet, employing British artists wherever possible.[357] The first performance by the reformed company was held in January 1947.[358] The promotion of British works and British artists continues the theme of raising the profile of British music – perhaps not surprising in a post-war context. This patriotic feeling is reflected in new clarinet models created at B&H in the late 1940s, as will be discussed later in this chapter.

At the end of the war many orchestral musicians returned to London having served with the armed forces, and other new recruits were needed for London orchestras. By 1949, there were three full-time concert orchestras – the LSO, LPO and BBC SO, and three which gave occasional concerts: the Philharmonia, Royal Philharmonic Orchestra (under Beecham) and the New London Orchestra.[359] Post-war orchestral developments also included the reorganisation of the Scottish Orchestra into the full-time Scottish National Orchestra in 1950, and the expansion under Charles Groves of the Bournemouth Municipal Orchestra into the Bournemouth Symphony Orchestra in 1954.[360] Commenting on the destruction caused by the war, social historian Arthur Marwick highlights the Free Trade Hall in

[356] W. McN, "'Peter Grimes'," *The Musical Times* 86, no. 1229 (1945). p. 215.
[357] "Opera at Covent Garden," *Tempo*, no. 15 (1946). p. 11.
[358] John Amis and Anthony Gishford, "Notes on Covent Garden," *Tempo*, no. 10 (1948). p. 28.
[359] Stanley Sadie (ed). *New Grove Dictionary of Music & Musicians.* 2nd edn. (London: Macmillan Reference, 2000). Vol. 15. London (i), §VII, 3(i): Concert life: Postwar consolidation, 1945-60. p. 151.
[360] Arthur Marwick, *British Society since 1945* (London: Allen Lane, 1982). p. 87.

Manchester – home of the Hallé orchestra – which was not fit for reoccupation until 1951.[361]

Marwick suggests that creative individuals aspired to make the new dawn of 1945 a rich and life-enhancing one, and illustrates this with the example of many festivals that were established in the post-war years. The largest example of this is the Edinburgh festival, which was first held in 1947.[362] He argues that in this post-war expansion of creative activity, although theatres were playing Shakespeare, British music was still relatively neglected as the orchestras were still playing Beethoven. This is another illustration of the fact that there was no strong anti-German feeling amongst musicians. However, some sense of British nationalism clearly *was* present, as seen in the Covent Garden Trustees' efforts to reassure the public that British artists would be used wherever possible.[363] This feeling extended to the promotion of British composers. Those who were particularly in favour were Vaughan Williams and – perhaps most importantly – Benjamin Britten. Britten was represented by Boosey & Hawkes' publishing, and was one of their greatest successes in post-war Britain. His opera *Peter Grimes* was particularly useful in terms of forging links with major opera companies, and of course exposure for the company.[364] Looking at B&H publicity from the time suggests that there may have been deliberate efforts to appeal to a sense of nationalist pride: as soon as the war is over, advertisements of Boosey's 'Latest Additions to the Catalogue' appear, with a certain degree of emphasis on Boosey's British composers.[365]

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[361] Marwick, *British Society since 1945*. p. 87.
[362] *British Society since 1945.* p. 88.
[363] "Opera at Covent Garden." p. 279.
[364] Wallace, *Boosey & Hawkes: The Publishing Story*. p. 53.
[365] "Front Matter," *Music & Letters* 26, no. 4 (1945). (n.p.n.).

4.4.2 Post-war years at Boosey and Hawkes

Helen Wallace describes the directors at B&H as having 'spent the war cooking up ambitious plans for expansion and they lost no time in the forties in pursuing them.'[366] Many of these plans were linked to the publishing arm of the business, and were put into practice in the years immediately after the war. A German office was established in the British Zone in Bonn in 1949, securing rights to the works of the (then very ill) Richard Strauss. It was hoped that by administering Strauss's works on a 20% commission, the German business would see significant turnover of some 100,000 marks per year.[367] An office in South Africa was also established, and found a significant market for sheet music- particularly light music – Hammond organs and other instruments. This model of international expansion paved the way for mass production of instruments, as the potential customer base was expanding accordingly. Not all international outposts were so successful; agencies in Delhi and Sydney were both running at a loss. Financial difficulties were amplified by two pieces of litigation in the post-war years: a 1939 agreement with Universal Edition was challenged, resulting in B&H handing back the copyrights on both Mahler and Weinberger, and the Ministry of Works claimed a much larger amount for dilapidations to Covent Garden than B&H had accounted for.[368] B&H developed a bad reputation for treating its staff badly, paying very low wages because the firm needed to save money.[369] These financial

[366] *Boosey & Hawkes: The Publishing Story*. p. 63.
[367] *Boosey & Hawkes: The Publishing Story*. p. 63.
[368] *Boosey & Hawkes: The Publishing Story*. pp. 64-65. See p. 164 for B&H's involvement with Covent Garden during WWII.
[369] *Boosey & Hawkes: The Publishing Story.* p. 64.

difficulties increased over the next decades, and will be discussed further in later chapters.

Post-war expansion at B&H was not restricted to the publishing side of the business. The production of munitions and aircraft at the Edgware plant had introduced modern precision engineering to Boosey's engineers and designers. After the war, some engineers who arrived at B&H during the war stayed, and others came in. Mr F. C. Draper took over the engineering direction of the project to mechanise many areas of the factory – including the clarinet production lines – for quantity production of instruments.[370] Mass-production was an enormous change for the company, and its effects on clarinet design and manufacturing are discussed below.[371]

[370] Eric McGavin, "Craftsmanship in a New Setting," in *The Woodwind Book* (UK: Boosey & Hawkes, 1957-8). p. 30.
[371] Some moves towards mass production of brass instruments had been made before the war, led by Arthur Blaikley. WWII enabled these ideas to come to fruition, and affected all areas of B&H's production – including clarinet manufacture.

Figure 4-3 Mr F. C. Draper, responsible for the mechanisation of clarinet lines at Edgware. McGA, GB HM. E444.

4.4.3 The First Mass-Produced Clarinets

The clarinet was the first B&H instrument for which serious re-planning took place after the war.[372] Before WWII, a clarinet required 40-45 hours of labour from a highly skilled craftsman. Mass production broke this work down into individual operations that could be carried out by semi-skilled operators, creating – to some degree – a de-skilled workforce.[373] The first clarinet in the production records to be listed as 'mass produced' is in fact a single clarinet which appears on 23 August 1946. Though it is listed as a single instrument, it has 'mass p.' written in the

[372] Unpublished Typescript. B&HA, GB HM, E1095.7. n.p.n.
[373] Unpublished Typescript. B&HA, GB HM, E1095.7. n.p.n.

'workman's name' column, and this is the first time the phrase is used in the instrument books.

Table 4-4 The first ever mass-produced clarinet at B&H, as recorded in the WOB.

Date Given Out	Number of Instrument	Description	Model Number	Workman's Name	Charged to Regent Street
23/08/1946	37272	B flat Clart (Regent) Die Cast Keys. L.P.	1026B	Enfield (Could read Engined) Mass P.	31/12/1946

Previous signs of this move being imminent are that a number of other clarinets are listed as having die cast keys. Die casting, or power forging, of keys was one of the first techniques employed in order to allow greater numbers of clarinets to be manufactured in a short space of time, replacing the slower and more labour-intensive process of forging individual keys by hand. According to Rendall:

> In this process the metal is forced under pressure into partitioned steel dies. This removes the possibility of blow-holes and pitting [both problems encountered with cheaper methods of casting such as sand casting]. It produces, moreover, clean and accurately dimensioned castings; further, the subsequent labour of filing and soldering together of small parts is eliminated, since even complicated keywork may be cast as a whole.[374]

Harry Bradstock, chief engineer at the Edgware plant, wrote about the advantages of the new technology being used for key manufacturing:

> One of the most notable contributions to the improved all-round quality of present-day woodwind has been the introduction of mechanically forged and machined components for key mechanism, and the resultant strong keys, with their beautiful appearance and absolute fidelity to the master patterns.[375]

Other time-saving methods involved in mass production included the use of 'grinding' in order to finish the bore of rough-bored billets. A centreless grinder was used for the main body of the clarinet, and a cylindrical Churchill grinder was used

[374] Rendall, *The Clarinet: Some Notes Upon Its History and Construction*. p. 23.
[375] Harry Bradstock, "How They Are Made: Power forged keys – for strength and long service" in *Boosey & Hawkes Woodwind Book*. (England: Boosey & Hawkes, 1957-58). p. 33.

for the bell. This automated process saved time, replacing the old method of finishing, turning and sanding by hand. An indexing machine then drilled all the toneholes and holes for pillars, taking roughly three to four minutes to complete the process. When this 'setting out' was done by hand, it took at least two hours and required a highly skilled craftsman. Only after all the keys had been mounted and pads attached, by a semi-skilled worker, was the instrument passed to a skilled instrument maker. His job was to vet and inspect the final clarinet, correct any faults in assembly and make any necessary adjustments to the keywork.

The new production methods were swiftly adopted, and soon accounted for much of Boosey's output. Even in this early period of mass production, there are only 1,096 hand-crafted clarinets compared with 18,465 mass produced ones.[376] Eric McGavin commented on the relationship between the old and new methods of clarinet manufacturing in 1956:

> The grey-haired craftsman in the green apron, surrounded by shavings, has not quite disappeared. He is there still, working alongside the most modern engineering devices known anywhere, and is still producing a hand-made instrument with the tools he has known all his life.[377]

The automation of many parts of the clarinet manufacturing process gradually de-skilled the workforce, as fewer tasks relied upon highly specialised skills and experience.

After the single first 'mass produced' clarinet, the first large batches of clarinets listed as Mass Produced (or often 'Massed Produced', in these earlier

[376] This includes all hand crafted clarinets manufactured after WWII.
[377] McGavin, "The Evolution of Wind and Brass Instruments." p. 38.

records) appear in October 1946. In catalogues, B&H often used the phrase 'quantity produced'.[378]

Table 4-5 Total of mass produced clarinets from commencement of production to 1950.

Model Number	Date of First	Serial Number of First	Description	Date of Last	Serial Number of Last	Total Number made
1026B	23/08/1946	37272	Mass Produced. B flat. Regent. Boehm. Die Cast Keys.	1950	68344	18,465

Mass produced clarinets were recorded in large batches, such as the first batch of 1026/^{B} models, serial numbers 37300-37399 (a batch of 100 clarinets). These instruments all have the same 'date given out' – 2 October – and are listed as having 'die cast keys'.

[378] Photograph caption in "The Woodwind Book," (UK: Boosey & Hawkes, 1957-8). p. 27.

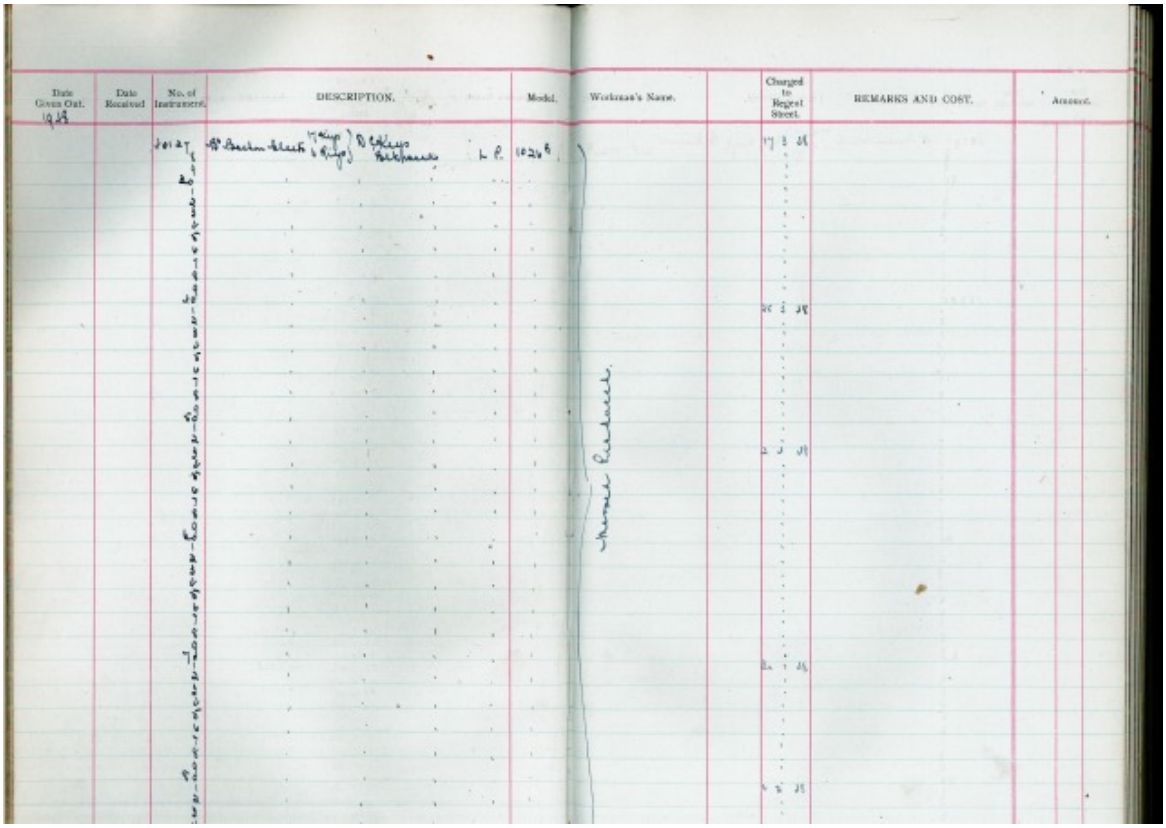


Figure 4-4 A batch of mass-produced clarinets recorded in the WOB.

Many of the mass produced instruments are described as ‘Regent’, ‘Edgware’, ‘Lafleur’ or ‘Berkeley’. There is nothing in the production records to indicate that there was any difference between these models, as all are simply listed as 1026B mass produced clarinets. Technical drawings of some of these clarinets suggest that perhaps the only real difference between them was the stamping, with ‘Edgware’ clarinets having the ‘Edgware’ logo, the ‘Regent’ a different one and so on. These clarinets could be what are known by some clarinettists as ‘Edgware clones’.[379] This practice seems to indicate a move towards at least creating the appearance of widening the range of cheaper models, perhaps those aimed at the educational market. The table below shows the different mass-produced models from

[379] During the 1950s it is evident that there were design differences between the different cheaper models, which contradicts the notion of the Edgware clone. However, during these immediate post-war years the clarinets all have the same model number and there is no indication anywhere that they may have had different design features.

the post-war period, and provides details about them where these were recorded in the instrument books.

Table 4-6 Mass produced clarinet modes at B&H, 1946-1950.

Model / Part Number	Model Name	Likely Description of Instrument	Dates Covered (During the 1946-1950 period, by Date Given Out).	
1026B	[No name]	Boehm Clarinet, B♭, Die Cast Keys, Blackwood.	February 1946-November 1949	
1026B	Revere	Boehm Clarinet, B♭, Die Cast Keys, Blackwood.	January 1947-November 1949	Many have '2nd Grade Bell and Socket'.
1026B	Lafleur	Boehm Clarinet, B♭, Die Cast Keys, Blackwood.	October 1947-November 1949	
1026B	Regent	Boehm Clarinet, B♭, Die Cast Keys, Blackwood.	October 1947-November 1949	
1026B	Triumph	Boehm Clarinet, B♭, Die Cast Keys, Blackwood.	November 1947-[No month given] 1948	
1026B	Imperial	Boehm Clarinet, B♭, Die Cast Keys, Blackwood.	1948	
1026B	Edgware	Boehm Clarinet, B♭, Die Cast Keys, Blackwood.	1948-November 1949	
1026B	Regent (Besson)	Boehm Clarinet, B♭, Die Cast Keys, Blackwood.	1948-November 1949	
1026B	Berkeley	Boehm Clarinet, B♭, Die Cast Keys, Blackwood.	1949	
1026B	Hohner	Boehm Clarinet, B♭, Die Cast Keys, Blackwood.	1949	

As the batches of 'massed produced' clarinets became larger and more frequent, the groups of individually crafted instruments got conversely smaller and less frequent. Towards the end of November 1947, a small group of instruments in the midst of a large batch of mass produced ones is listed as 'handmade'.[380] These

[380] Clarinets 38961-38969.

smaller groups tend to include ebonite clarinets, E♭ clarinets and A clarinets – often 1010 imperials. There are usually only around two of each instrument at the most, with one or two exceptions. There are also often one or two oboes, either 'artist' model or 'conservatoire'. In addition, some groups include bassoons, sometimes listed as being Heckel models.

4.4.4 Individually Crafted Clarinets at Post-War B&H

Large table 4.2 shows all the individually crafted clarinet models that were manufactured at Boosey during the post-war years.[381] Throughout this period clarinets at B&H were all given new model numbers. This was largely due to mass-production technology whereby instrument components needed to have more specific part numbers, so that differences between sounding pitch, material and model of each instrument could be conveyed by one number.[382] The renumbering makes for a rather complex table, as clarinets were recorded either by their old number, their new number, or a combination of both numbers. It is also evident that in the early stages of ranges such as the 'Imperial', there was not a clear standardisation of model names and what they represented. For the purposes of the table, each model or model derivative is recorded as it appears in the instrument books. The correlations between model numbers are explained in the discussion of individual instruments below.

1010

[381] During this period the production records become more difficult to read than they have previously. It is sometimes hard to tell how many of each model was made, and especially to tell which workman is attached to which group of instruments.
[382] The new model numbers are explained in further detail on p. 196.

During WWII the 1010 was not manufactured from 1944 onwards. It does not reappear in the records until December 1947.[383] From this point on, nearly all the 1010 clarinets recorded are listed as 'Imperial' models. Many models during these years had Imperial written in their description, so it is hard to ascertain from records what, if anything, this label actually signified. As is discussed below, 1010s were affected by a renumbering of instruments that took place during the post-war years. It appears from the instrument books that 1010 models began to become known instead as 1539, 1540 and 1541 clarinets – applied to 1010s in A, B♭ and E♭ respectively.[384] By 1947 however, though 1010s are generally listed with these new numbers attached, there are also some entries where the number 1010 appears entirely by itself. It is not completely clear from the records whether or not anything concrete differentiates the two. In 1950, the 1010 was re-launched as the Symphony 1010, which will be discussed in the following chapter.

1011

Like its wooden counterpart the 1010, the ebonite 1011 was not manufactured during the last years of WWII: none were made between 1943 and 1947. The 1011 was also affected by the renumbering system – generally appearing as 1011/1596 for a B♭ instrument, and 1011/1598 for an E♭. 1011s were not made as frequently as 1010s.

1001 and 1002

The 14-key models that had been so popular before the war are still found in the post-war years, but in very small numbers. Simple system clarinets were often manufactured at high pitch. There were just twenty-two 1001s manufactured, and

[383] The newer model numbers attached to 1010s do appear in the records slightly earlier than this, but the first clarinet just listed as a 1010 appears in December of 1947.
[384] See p. 196.

twenty-seven 1002s during the post-war years at B&H. There are also ‘Imp 1001’s and ‘Imp 1002’s listed in the instrument books. There is no indication that there was anything different about these clarinets.

1026

Most 1026 models manufactured during this period were 1026B clarinets, which were mass produced. There were also 272 individually crafted 1026s manufactured before mass production began. 1026 clarinets were generally Boehm clarinets, manufactured in either B♭ or A. There are occasional mentions of 14-key 1026 models, but this is very rare. All of these 14-key examples are included amongst the 272 individually crafted 1026s rather than the mass-produced ones.

926

The 926 had first appeared during the war, and was made in large numbers. However, in post-war years only one 926 clarinet is listed in the instrument books. In later periods of manufacture the 926 becomes synonymous with the Imperial clarinet, so it could be that the Imperials listed during the post-war years were the same as the 926 model from WWII. However, there is no clear evidence in the records that the model has been renamed, as there is with many other models. Therefore no assumptions about the 926/Imperial connection can be made for this period of manufacture.

1248

The full Boehm model, which was made in small numbers before and during the war, continued to be made on a similar scale. Initially a 1248 clarinet could be in either A or B♭, made from wood or from ebonite. By 1950, there were two new model numbers associated with the full Boehm model: 1601 referred to a full Boehm B♭ in Ebonite, a 1549 a full Boehm B♭ in blackwood. No examples of full Boehm

clarinets in A were made during this period, but if they had been, they would presumably have been assigned a new model number.

Imperial

Ninety clarinets are listed as 'Imperial' models in the instrument books in the post-war years. These clarinets were only manufactured between February and October of 1946. Imperials could be manufactured in A, B♭ or E♭. All the Imperial models in the records were made from blackwood. The Imperial went on to become one of Boosey's best-known clarinets, along with the 1010. However, because during this period it only appeared for a short while, it is unclear if it was the same design of clarinet. The Imperial name is attached to several clarinets during this period (as demonstrated by large table 4.2), so it is difficult to infer exactly what it may have meant.

4.5 Manufacturing Trends in the Post-War Years

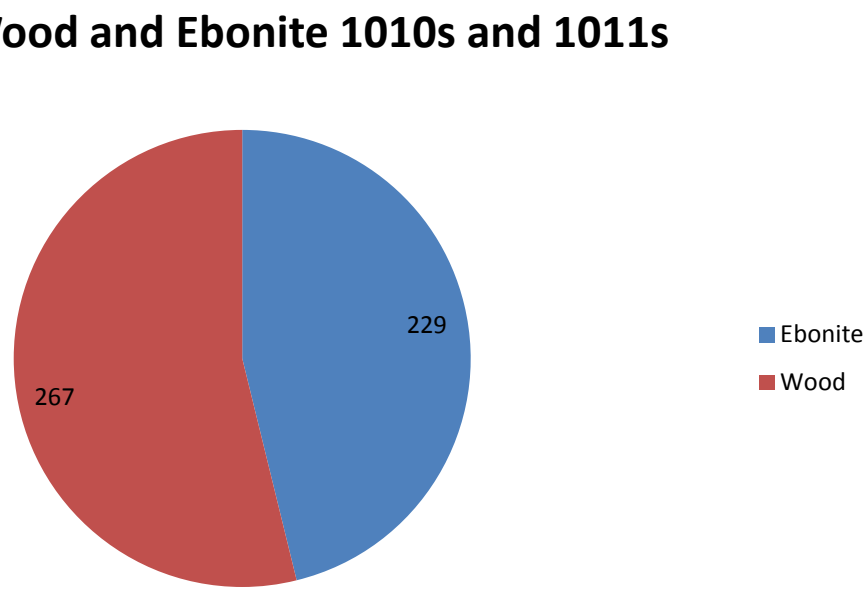
4.5.1 Key Mechanisation

Though in the post-war years it is rare to see anything other than a Boehm system clarinet in the records, different versions of this key mechanisation do appear, and these variants clearly increased in popularity during this period. Boosey manufactured a 20-key 'full' Boehm clarinet, which included a G♯/E♭ key for the left hand, a low E♭ key (to enable the player to play A clarinet parts on the B♭ instrument) and an articulated G♯ key to the top joint. In some instances this clarinet is listed as model number 1549, whereas in other cases it is not given its own model number. Though this model was not made in particularly large numbers, it was clearly thought to be popular or useful enough to be made relatively often, compared with earlier in the century.

Pre-Boehm system 14-key clarinets listed now account for only 5% of the total output of non-mass-produced clarinets. These include all the models with numbers 1001 and 1002, and various examples of the newer model numbers such as the 1596. The presence of simple system clarinets in the records shows that though the Boehm system was becoming increasingly popular, there were enough players still wishing to buy simple system instruments for B&H to consider their manufacture worthwhile. Simple system instruments would perhaps have been used by older players who were reluctant to switch to an unfamiliar key system, or military players whose ensembles still held sets of simple system clarinets. Interestingly, some 1011 models are described as having 14 keys, which contradicts what has been found about 1011s in previous periods. 14-key 1011s are an exception, however, and most of the 1011s in the records are still described as Boehm clarinets. The overwhelming majority of clarinets manufactured during this period – including all of the new, mass-produced models – are Boehm clarinets, demonstrating that the Boehm system had been established as the key mechanisation system of choice in Britain by the end of WWII.

4.5.2 Material for Manufacture

During the war the majority of clarinets manufactured at B&H were made from wood. This was partly attributable to short supplies of ebonite in wartime, but the post-war years reveal that the preference for wood was not a passing phase. In terms of the 1010 and 1011 Boehm models, there were still many ebonite clarinets manufactured, showing that it remained a popular choice of material, although wooden clarinets were made in slightly greater numbers.



If, however, one takes into account the fact that most of the mass-produced clarinets during these post-war years, plus new models like the Imperial, were recorded as being made from wood, it is evident that ebonite was much less commonly used overall than in the case of the Boehm clarinets discussed above.

There is one B♭ clarinet from 1946 listed as being made from 'Perspex' – clarinet number 37188. In the next decades B&H began to experiment with a variety of materials for clarinet manufacture; it would appear that this Perspex clarinet was an early example of such material experimentation. Brian Manton-Myatt claimed that Perspex was the only material that could rival wood in terms of tonal quality for woodwind. However, he acknowledged that

> the highly unusual appearance of Perspex seems to have prevented it from achieving anything like the degree of toleration that has for many years been linked to ebonite, which in spite of its undeniably lighter tonal texture has

been employed largely for instruments destined for climates or conditions conducive to cracking of wood.[385]

4.5.3 Pitch Standards

During the post-war period at B&H, only four high pitched instruments were listed in the records. This does not necessarily mean that only four were made – some instruments many have been made to a high-pitch specification but not listed as such. However, it does indicate that high pitched instruments were becoming much less common, as in previous years many more were listed in the records. Though some amateur bands were still playing at high pitch, most ensembles in Britain by the end of the 1940s had adopted the new lower pitch. The only two models that are listed as having been made in high pitch are the 1001 and 1002. These were the 14-key models popular before the Boehm system began to gain in popularity. Again this would suggest that it was players – or bands – who were reluctant to move on from older styles of clarinet design who were also reluctant to adopt the new pitch standards.

4.5.4 Sounding Pitches

The vast majority of clarinets manufactured at B&H during this period were B♭ clarinets, largely because all of the mass-produced clarinets during this time were in B♭. This indicates that mass-produced clarinets were used largely by beginner and intermediate students (who would have no need of an A clarinet) or bandsmen, because military band music rarely requires an A clarinet. There were also many individually crafted clarinets made in A and E♭. By this point in history the C clarinet

[385] Brian Manton-Myatt, "They Call it Woodwind: But it isn't always made of Wood!" In *The Woodwind Book*. (England: Boosey & Hawkes, 1957-8). p. 44.

had fallen out of usage almost completely, and this is reflected by the fact that no C clarinets were manufactured in the post-war years at B&H.

There were just three bass clarinets manufactured during this period. In previous years, bass clarinets had their own model numbers, but this was not the case between 1946 and 1950. Instead bass clarinets are simply listed without a number. No alto clarinets were made in the post-war years. Clearly the immediate priority after the war was to mechanise the Edgware plant for mass production of B♭ soprano clarinets. Perhaps the tooling required for alto clarinets was not reinstated very quickly after the war. In an economic climate where consumers still needed encouragement to purchase new goods, the more expensive alto and bass clarinets were unlikely to be very popular. This combination of tooling difficulties and the probable lack of consumer interest in alto and bass clarinets explains why only three bass and no alto clarinets were manufactured by B&H during the immediate post-war years.

4.5.5 Model Numbers

It was noted in the sections above that clarinets at B&H were allocated new model numbers during the post-war years. The reasons behind this renumbering seem, from examining technical drawings from the time, to have been to aid manufacturing processes by making part-labelling clearer. For instance, the basic bored joint for the top joint of an A or B♭ 1010 would need to be of different lengths and proportions. This would be clearly defined by labelling one set of parts as 1539 and the other as 1540. The renumbering of instruments was the first to take place since the one that occurred in the early 1930s after the merger between B&Co. and

H&S. This indicates that the post-war years were a similarly significant period for B&H, with the dawn of mass production signalling the company moving into a different phase and scale of operation. The new, more detailed numbering system was needed in order to clarify the mass-production process.

The table below shows the relationship between the old and new model numbers where they are clear from instrument books from this period.

Table 4-7 Old and new part numbers at post-war B&H.

Old Model Number	New model/part number	Description
1010	1540	B♭ Wooden Boehm
1010	1539	A Wooden Boehm
1010	1541	E♭ Wooden Boehm
1011	1596	B♭ Ebonite Boehm
1011	1597	A Ebonite Boehm
1011	1598	E♭ Ebonite Boehm
1248	1549	B♭ Wooden Full Boehm
1248	1601	B♭ Ebonite Full Boehm

4.5.6 Model Names.

Well known Boosey model names such as the Regent and the Imperial instruments start to appear in the workshop order books almost immediately after the end of the war. These names create a sense of Boosey marketing itself as instrument maker for the British Empire, and reinforce the presence of a strong national pride at this time. Boosey felt its customers would be drawn towards instruments with strong connections to the Empire in the beginning of peacetime. A new image for B&H clarinets would have been a wise advertising move, as given the financial restrictions imposed during the war, consumers would have needed some enticement to start spending money again.

The post-war years are the first time that B&H began to regularly use model names, or brandings, for their clarinets. In some past instances there were clarinets listed in the instrument books as 'Clinton' clarinets, but this was nothing more than a reference to the key system. With the new model ranges, it is evident that B&H was trying to create a brand identity for each of its clarinet models. This was especially important in the case of mass-produced clarinets, where several similar models were on offer, and each needed to have an image of its own in order to ensure that people would see the clarinet as a consumer item. The creation of model identities is something that became increasingly important during the 1950s, as will be demonstrated in the next chapter.

4.5.7 International Connections.

Foreign countries are referred to on a number of occasions in the instrument records during this post-war period, usually as destinations for exported instruments. The first of these is Bulgaria, which appears in the model column by a bass clarinet, and also by a number of oboes and cor anglais. In one instance a small batch of oboes is listed as being for the Bulgarian Symphony Orchestra. The other place that is mentioned regularly during this time is California, with a number of clarinets being described as 'Californian spec'. This is a reflection of Boosey's growing international profile, as shops had been opened up across the globe. Several mass-produced clarinets are listed as having been sent (unassembled) to New York. Relations between London and the New York office were a priority after the war, so B&H was sending English-made clarinets there to be sold in America in order to

raise the profile of B&H instruments.[386] This American priority is also suggested elsewhere in the production records, which reveal that one mass-produced clarinet was used for a convention in Chicago, indicating that B&H was trying to raise the profile of its clarinets amongst American players and retailers. McGavin refers to the American post-war market in the Boosey Woodwind Book, stating that towards the end of the war 'Mr. Geoffrey Hawkes foresaw the possibility of securing a market in America – at least in clarinets – in return for dollars, which at that time were urgently needed'.[387]

4.5.8 When did the clarinet lose its 'O'?

It is during this period that the use of the idiosyncratic spelling of clarinet – 'clarionet' – makes its final appearance in the B&H production records, in the following entry:

Table 4-8 The final WOB entry to use the old spelling of 'clarionet'.

Date Given Out	Number of Instrument	Description	Model Number	Workman's Name	Charged to Regent Street
05/10/1945	36810	B flat Clarionet Boehm LP	1026	G Skillin	[N.D.]

Prior to this, the spelling had been used interchangeably with the modern version for around fifteen years, the modern spelling having been used for the first time in the following entry from 1936.

Table 4-9 The first WOB enry to use the modern spelling of clarinet.

Date Given Out	Number of Instrument	Description	Model Number	Workman's Name	Keys Polished	Charged to Regent Street

[386] Wallace, *Boosey & Hawkes: The Publishing Story*. p. 58. A Boosey office was first opened in New York in 1892, in the post-war period efforts were being made to strengthen the pre-existing relationship.
[387] McGavin, "Craftsmanship in a New Setting.". p. 29.

25/05/1936	32342	A Clarinet LP Bwd g.s.	1001	Skillin Senr	03/06/1936	17/06/1936

The reasons for the eventual standardisation of the spelling, or for the continued usage of the antiquated version, are hard to determine. It could perhaps be because of the end of the war, but also the new directions the factory was beginning to move in, that this standardisation occurred. In terms of the models that were being manufactured, it is clear that there was something of a move to 'streamline' production, concentrating on producing fewer models in greater quantity, with fewer differences between models. The move towards a more machine-based production system reflects a more modern approach, which could also have been a reason for the universal adoption of the new standardised spelling of clarinet. Strengthened connections with the American offices could have played a part in the standardisation of spelling, as American companies had also adopted the modern version.

4.6 Conclusions

Musical activity during the war continued in many spheres: military bands, amateur ensembles, and professional orchestras and opera companies. The continuation of music making resulted in an ongoing customer base for B&H. Though there was a demand for musical instruments, the demands of WWII – trade sanctions and restrictions, and the co-opting of factories for munitions production – had a negative impact upon production at B&H. Reduced factory resources required changes in patterns of production, with B&H generally focusing on producing larger quantities of cheaper clarinets. More expensive or complex instruments such as bass

clarinets were not manufactured during the war. The introduction of precision engineering to the B&H factory ushered in a new era of mass production of musical instruments which became evident in clarinet manufacturing at the end of the war.

The general sense of nationalist pride in post-war Britain was reflected at B&H not only through its publishing activity, in which British composers were promoted and celebrated, but through its instrument ranges too. Post-war clarinet models such as the 'Regent' and the 'Imperial' illustrate B&H following the public mood of the time, and taking advantage of this as a way of advertising instruments to the British public. Model numbers also changed during the period, in this instance aiding production by being made much more specific to different sounding pitches and materials of instruments.

An expansionist business model in the immediate post-war years created a much-increased international customer base for B&H instruments, including clarinets. The introduction of mass production technology to the B&H factory allowed the demands of this new international customer base to be met. A number of other factors led to increased custom for clarinets, most notably music education and amateur music making. B&H had been working on expanding the international footprint of the business, and during the post-war years especially there is evidence of many instruments being exported. Clearly expanding the company – especially in America – required significantly more instruments to be manufactured. Before the war there were signs of B&H starting to advertise clarinets 'of moderate price' which would have been suitable for amateur and student players. Amateur music thrived during WWII, and music education became a much greater priority in post-

war years.[388] These two areas of music making led to an increased demand for inexpensive instruments, which was met through the advent of mass production.

B&H did not completely shift its attention away from professional music making, however. The redevelopment of the 1010 that led to the launch of the 'Symphony 1010' in 1950 was a concerted effort to continue positive relations with orchestral players: though the factory had stopped manufacturing 1010 clarinets, Geoffrey Hawkes was persuaded by professional players – most notably Frederick Thurston – to re-launch the model.[389] The fact that he bowed to the pressure indicates a continued desire to satisfy the needs of orchestral musicians. More 19- and 20-key Boehm clarinets were manufactured during the post-war years than previous periods. This reveals that although B&H was promoting cheaper instruments to a large consumer market, there was still a level of interest in catering for more specialist professional players.

Towards the end of WWII, B&H ceased manufacture of 1010 clarinets: they were not manufactured again until 1947. Many of the models listed in the instrument books around this time are described as 'Imperial' 1010s, but 'Imperial' is applied to several other models during this period, so it is not clear whether or not it referred to any difference in the design of the instrument. The first Symphony 1010 was manufactured in 1950, and this version of the iconic model had some design differences.[390] In the post-war years, one thing which does change about the 1010 is

[388] The development of music education in the 1950s is discussed in the next chapter, see p. 207.
[389] Adrian Greenham, "Thurston's Clarinets," in *Frederick Thurston 1901-53: A Centenary Celebration.*, ed. Colin Bradbury and Thea King (London: Clarinet and Saxophone Society of Great Britain, 2001). pp. 20 and 22.
[390] The Symphony 1010 is discussed in the following chapter.

that it receives new model numbers, with a different model number for each sounding pitch.

WWII and the years following it acted as a catalyst for change at B&H. The results of this change became very apparent in the 1950s, when increased customer demand for clarinets and the lifting of trade sanctions led to mass production rates increasing even more than in the post-war years. Greater economic freedom for customers, the government's emphasis on increasing exportation after the war and a growing educational market provided an outlet for these mass-produced clarinets. Increased consumerism, combined with post-war patriotism, led to developments in the design and advertising of clarinets during the 1950s. Such a dramatic shift in the scale of operation at B&H inevitably began to cause some tensions, and during the 1950s and 60s financial difficulties began to plague the company as will be discussed in the following chapters.

5 Consumerism and the Clarinet

Introduction

Many changes took place at B&H between 1950 and 1964. Some of the new trends that became evident in the post-war years continued to be pursued and developed, and other new priorities became apparent in the work carried out by the firm. It was during this period that B&H's transformation from small craft-based industry to mass-producing global instrument manufacturing firm was really consolidated. This was largely a result of the developments in mass production technology influenced by WWII, but also by the booming economic climate in Britain at the time.

5.1 Boosey &Hawkes in 1950s Britain

Clarinet manufacturing at B&H was affected by the widespread economic growth and prosperity which was evident in 1950s Britain. Businesses boomed and consumerism rocketed. A number of factors contributed to this growth of the consumer sector. One was the end of rationing, which was still applied to some consumer goods in the early 1950s. These included chocolate and sugar confectionery, eggs, and sugar which were all rationed until 1953, and Coke, dairy products and meat and bacon which were rationed until 1954.[391] Once these restrictions were lifted, consumers had a new purchasing freedom. General economic growth in Britain after the Korean War resulted in consumers having higher incomes, and this increased the middle-classes' spending power. Demand for durable goods, such as radios, television sets and other household appliances rose dramatically during the 1950s. Hire purchase schemes – though these had been

[391] Margret Hall, "The Consumer Sector" in G. D. N. Worswick and P. H. Ady, *The British Economy in the Nineteen-Fifties* (Oxford: [s.n.], (1966)). p. 439.

present in Britain for some time – began to be used much more widely. A growing focus on 'the consumer' was apparent, for instance through the development of consumers' associations.[392]

The purchase of musical instruments was also affected by this growth of consumerism, as instrument manufacturers – including B&H – strove to produce instruments which suited every budget, not just that of the professional musician purchasing the essential tools of their trade. Cheaper methods of manufacturing, along with the hire purchase schemes which were becoming increasingly popular, meant that B&H was able to realise the goal of making and selling clarinets which could be purchased by a wide range of customers.

Demand for consumer goods did not come purely from British consumers. There was a significant growth in exportation during the 1950s, which was encouraged by the government, and B&H was no exception to this. The previous chapter revealed how Boosey began to expand its global activity in the post-war years, and this continued during the 1950s and 60s. During the late 1940s and early 1950s offices were opened in Australia, Canada, Sweden and South Africa, and distributing agents around America and Europe were targeted as potential outlets for Boosey merchandise.[393] B&H also established the business Boosey & Hawkes GmbH in Germany, and Boosey & Hawkes Inc. in New York during this time.[394] This resulted in large numbers of instruments being exported, and also in certain ranges being designed specifically for the export market.

[392] Worswick and Ady, *The British Economy in the Nineteen-Fifties*. pp. 442-3.
[393] Wallace, *Boosey & Hawkes: The Publishing Story*. p. 63.
[394] *Boosey & Hawkes: The Publishing Story*. pp. 63 and 58.

In 1952, in addition to the brass and woodwind manufacturing plants that were by this point very active, Boosey acquired a Hohner harmonica factory in South Wales along with some other instrument factories there. This is a further example of B&H's post-war expansion project. The acquisition of the Hohner factory was a good opportunity at the time, as trade restrictions after the war meant that there was no supply of harmonicas coming from the German factories. However, harmonica manufacturing turned out to be a failure for Boosey, and in 1953 all the South Wales factories were closed, including the Hohner factory, as the market had been reopened to German manufacturers. The closure of the factories in Wales happened at great expense to B&H.[395] Other problems within the company were starting to become apparent in the 1950s: Wallace claims that during this period Boosey factories in general were not in a positive state, and that though the reputation of B&H was largely a good one, attitudes towards staff were 'famously mean'.[396] These difficulties were early signs of the bigger problems that Boosey began to face in later decades, which eventually led to the ceasing of clarinet manufacturing, and ultimately the closure of the Edgware plant.[397] B&H's financial difficulties that were discussed in the last chapter continued into the 1950s and 60s. Profits of £188,290 in 1959, slumped to £52,176 in 1960, due to massive losses in the instrument business after the first decade of mass production.[398]

Economic growth also affected other areas of the music business, such as the recording industry, which boomed during this time, in terms of both popular and classical music. Teenagers had a newfound financial freedom, and English pop

[395] *Boosey & Hawkes: The Publishing Story*. p. 81.
[396] *Boosey & Hawkes: The Publishing Story*. pp. 81 and 64.
[397] See p. 253 for information about the end of clarinet manufacturing at B&H.
[398] *Boosey & Hawkes: The Publishing Story*. p. 105.

music was developed as a source of supply to the youth demand for consumer goods. This created work for some classical musicians, who were employed as backing musicians for studio session work. In other classical areas, record companies sought to record as much of the repertoire as possible, again creating work for classical musicians.[399]

Music education was also an area that was transformed during this period – at all levels of provision. Changes in approaches to primary and secondary school music making had been taking place throughout the twentieth century, and these changes began to accelerate during the 1950s. The development of radio and gramophone technology earlier in the century had increased the interest in orchestral music in schools.[400] This led to a rise in the number of ensembles such as recorder and percussion bands, in addition to the whole-class singing which was prevalent up until the 1930s.[401] It also increased the demand for instrumental teaching in schools – though this was generally only available to a select few students and not linked in any way to class music teaching in general. Outside of the school, other opportunities for children to create music had already been created earlier on, such as the Junior Department of the Royal Academy, which was set up in 1935, and the National Youth Orchestra, established in 1947.[402] As these grew in popularity and size, this all resulted in a greater amount of participation in practical music making amongst children. In schools, however, there was still a gap between the public or elitist face of music making – large-scale performing activities, individual music

[399] Ehrlich, *The Music Profession in Britain since the Eighteenth Century: A Social History*. p. 225.
[400] Stephanie Pitts, *A Century of Change in Music Education: Historical Perspectives on Contemporary Practice in British Secondary School Music* (Aldershot: Ashgate, 2000). p. 105.
[401] *West Riding Education Ten Years of Change*, ([S.l.]: West Riding Education Committee, 1953). p. 55.
[402] Pitts, *A Century of Change in Music Education: Historical Perspectives on Contemporary Practice in British Secondary School Music*. p. 105.

tuition for talented students, extra-curricular opportunities – and what occurred in the classroom and was made available to all pupils. Efforts to lessen this gap influenced the provision of instrumental music tuition in schools, and hence the demand for cheap student musical instruments, such as those manufactured by B&H throughout the 1950s and 60s.

A sense of displeasure with music education was revealed in 1953, when the West Riding Education Committee issued a report revealing disappointing improvements in schools during the 1940s, largely due to a lack of specialist teachers. The report claimed that:

> To-day the subject is not well provided for. There is a completely inadequate supply of specialist teachers, and many that are so trained appear to be more interested in spotting and exploiting talent in their pupils than in developing to the full the possibilities that music holds for the education of the great mass of children.[403]

In post-war years, however, a greater number of specialists entered the profession. In addition, people still continued to promote more progressive ideas during the 1950s. Teaching manuals from the time advocate the development of instrumental music making in the classroom. One example is the book by James Mainwaring, a teacher-training lecturer at Dudley teacher training college. Mainwaring argues that the traditional forms of school music making – the recorder and percussion bands – were worthwhile, but that these should be made available to all pupils and would be of benefit to them. In 1951 he praised the 'growing appreciation of the useful possibilities afforded by the playing of percussion instruments' and the 'greatest advance made in school music in recent years [which] is the introduction of violin

[403] *West Riding Education Ten Years of Change*. p. 54.

classes into an increasing number of schools'.[404] This was revolutionary as it promoted the idea that music should really be for all pupils, and not just those who excelled in aural and musicianship tests at an early age.[405]

These educational advances would have greatly increased the market for cheaper educational instruments for children – this is evident in the teaching manual by music educator Rainbow which sets out suggestions for schools regarding the purchase of recorders:

> Perhaps the best way is to provide a pool of instruments to start with, but to get the children to ask their parents to let them buy their own as soon as possible. A duplicated letter to parents explaining that recorder lessons are to begin, and pointing out the disadvantages of using borrowed instruments, would help to avoid misunderstandings. At the same time, details of the make and size of the instrument required could be sent, to ensure that everyone uses an instrument of the same pattern and pitch.[406]

Rainbow goes on to suggest that encouraging this sort of music-making will lead to a higher musical morale for the school, and therefore to more students wishing to play orchestral instruments. 'Recorder players may graduate to flutes and, though the cost of instruments is high, even to oboes and clarinets.'[407] B&H manufactured and sold Dolmetsch recorders during this time, which would have been used for recorder teaching in schools, potentially leading to schools then purchasing orchestral wind instruments.

Similar changes were taking place in music education at a higher level. In 1944, the Government – for the first time – gave grants to the Royal College of

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[404] James Mainwaring, *Teaching Music in Schools* (pp. viii. 64. W. Paxton & Co.: London, 1951). pp. 37 and 43.
[405] "Tradition and exploration: 1940s-1950s ", in Pitts, *A Century of Change in Music Education: Historical Perspectives on Contemporary Practice in British Secondary School Music*. pp. 40-65
[406] Bernarr J. G. Rainbow, *Music in the Classroom* (William Heinemann: London, 1956). p. 87.
[407] Rainbow, *Music in the Classroom*. pp. 88-9.

Music, the Royal Academy of Music and the Royal Manchester College of Music. This indicates a higher level of importance being ascribed to music education at this level. However, conditions for students, and the standards of teaching were poor, and came under criticism. As with primary and secondary education, a small number of visionaries campaigned for better provision, and the financial situation by 1964 was quite different. Many other reforms that were suggested were, however, not made.[408] It could be said that the increased Government support would have made the study of music a more attractive prospect, and would thus have further increased pressure on instrument makers to provide excellent quality student instruments.

Developments in music education at all levels placed a great deal more demand on musical instrument makers to supply reliable but affordable instruments which could be played by keen young beginners. This would also have had an impact on musical instrument retailers, who began to offer instruments on hire purchase schemes. These were evident in Boosey literature from the early years of WWII: an advertisement in the Woodwind Year Book advertises 'Clarinets at Moderate Prices' (between £9 and £15) where 'Hire purchase terms are available'.[409] These were also offered on even cheaper models, such as The Predominant Clarinet, which was designed for the dance band saxophonist, which retailed from £5.5.0.[410] It is evident from the book that in the early 1940s hire purchase was a new concept, as there is a short article explaining the practical and legal sides of how an HP scheme worked.[411] By the 1950s, hire purchase was a much more common practice, and would therefore have been more readily used by customers. Hire purchase made it

[408] Ehrlich, *The Music Profession in Britain since the Eighteenth Century: A Social History*. p. 228.
[409] Boosey, "Woodwind Year Book." (England: Boosey & Hawkes, 1939-41). p. 46.
[410] "Woodwind Year Book." p. 54.
[411] G. A. Davies, "Hire Purchase and Insurance: The Financial Side of Owning an Instrument" in "Woodwind Year Book." pp. 41-45.

easier for families to afford instruments, and was an attractive prospect for parents who were unsure if their child would continue playing the instrument. This, in turn, further increased the demand placed upon musical instrument makers as a larger number of people would have been in a position to buy instruments.

The clarinet, in particular, was becoming an increasingly popular choice of instrument for people who wanted to develop some form of musical skill. In the late 1950s, Jack Brymer claimed that

> Over two-thirds of the population of our fair land either (*a*) plays the clarinet, (*b*) owns one, or (*c*) "Used to have a bash at it at school, old boy – made a filthy row!"[412]

Brymer attributes the ubiquitous presence of the clarinet to the legacy left by the 'few really great players' who had emerged during the late nineteenth and early twentieth centuries: Henry Lazarus, Manuel Gomez, Charles Draper, Haydn Draper, Frederick Thurston and Reginald Kell. Brymer claims that these great performers handed down a 'living torch' to new generations of clarinettists, offering another explanation for why customer demand for clarinets was increasing throughout the 1950s.[413]

5.2 Top Range Clarinets

One of the striking differences between this and the previous period of manufacturing is the sheer number of clarinets manufactured. The individually crafted clarinets listed in large table 5.1 total 5,854, which is an average of approximately 390 per year. Post-war production of individually crafted clarinets in the late 1940s averaged approximately 220 clarinets each year, showing that

[412] Jack Brymer, "The Clarinet as a Solo Instrument" in *Boosey & Hawkes Woodwind Book*. England: Boosey & Hawkes, 1957-58. p. 20.
[413] Brymer, "The Clarinet as a Solo Instrument" pp. 21-22.

Boosey's output increased significantly in a short space of time. In terms of mass produced clarinets, in the four-year period 1946-1949, a total of approximately 18,465 mass produced clarinets were made. Between 1950 and 1953 the total was in the region of 24,000, again showing a significant increase.[414] Mass production figures continued to rise throughout the 1950s and 60s. This increase in production seems, to some extent, to have affected the level of accuracy and attention to detail in the factory record keeping. Production records from this period are not all set out as clearly as previous records. It is much harder to make a distinction between 'individually crafted' instruments, and those that are mass produced in large batches. Dates are also much less specific, and sometimes many pages pass in the workshop order books before a 'date given out' is recorded. Large table 5.1 shows the production figures of those models that were previously identified as 'individually crafted', as they progress throughout the 1950s and early 60s.

[414] Inconsistencies in records mean that this is an approximate value, calculated on the basic batch size of each group of mass produced clarinets by serial number, without accounting for occasional missed serial numbers.

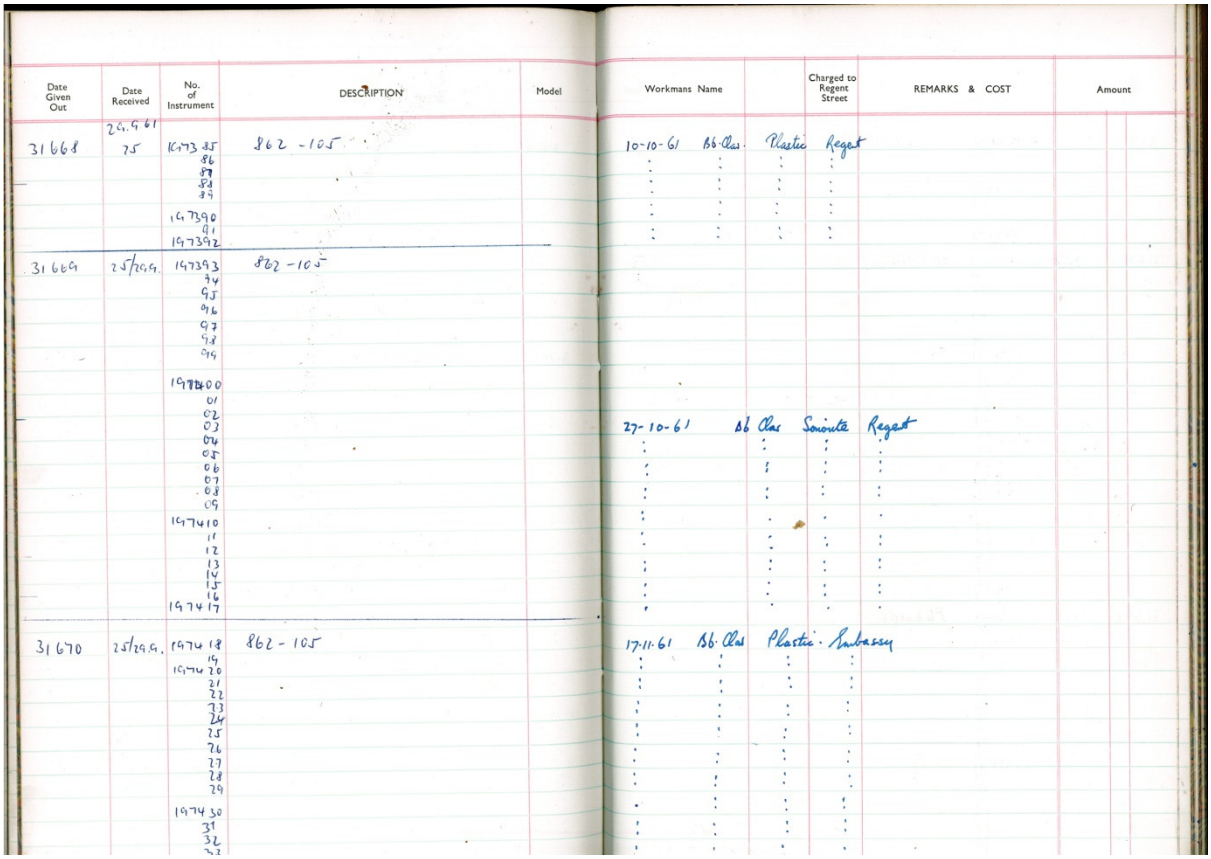


Figure 5-1 WOB showing the lack of detail entered for mass-produced clarinets.

Another difficulty with the records during this period is that very often model names overlap – for instance in the case of the Imperial and Symphony ranges, where often an instrument is described as being both Imperial and Symphony. Large table 5.1 represents an accurate total number of clarinets for the period, and for most of the main model names and numbers. In cases where there is a predominant model name, with another one appearing as a less important part of the description, the instrument has been recorded as being one of the models using the more predominant name. In instances where it is impossible to say which of the names is given most importance, the instrument has been recorded separately, such as in the case of the Imp A Nat Symphony, or the Imperial 1010. Some clarinet model numbers have been given the prefix 'SON' in the production records. Though the

SON 1540 appears to have been the exact same instrument as the 1540, the two have been recorded separately in order to represent the records as accurately as possible. Some of the model numbers listed are quite unlike the ones that have been used up to this point in Boosey's history. Many numbers beginning with 80 appear in the records. During this period such dramatic changes took place in factory processes that new approaches to numbering instruments, models and parts were clearly explored and implemented, in order to further clarify and simplify the manufacturing process.

Though the table indicates that there was a fairly wide range of models on offer during this time, these results can actually be condensed considerably, by combining models that have been listed under slightly different numbers – such as the 1540 and the SON 1540. Furthermore, detailed analysis of the records reveals that for the most part, the 1010 and 'Symphony' models are one and the same thing, as are the 1540 and the 'Imperial'. This then reveals that these two models – the Imperial and Symphony – essentially dominated production of the 'top-range' models manufactured by Boosey.

5.2.1 The Symphony 1010

In 1950 the 'Symphony 1010' model was introduced to B&H production. The first two of these instruments appear as a pair.

Table 5-1 Showing the First Pair of Symphony Clarinets

Pitch	Serial Number	Model	Description	Maker	Charged to Regent Street
B♭	49289	Imperial Symphony	LP, 1010, Wood	G. Skillin	16/8/1950
A	49290	Imperial Symphony	LP, 1010, Wood	G. Skillin	16/8/1950

In the first few months after its first listing, the word "Symphony" is written next to a number of wooden Boehm clarinets, generally those associated with what appeared in the previous chapter to be new 1010 numbers – i.e. the 1540. There seems to be little distinction between 1540s that have the "Symphony" label attached to them, and those that do not. Both versions of the model appear with £20 and £22 listed in the amount column, and there is no difference between descriptions. The next time the number 1010 is linked to the 'Symphony' label is in a batch of six B♭ clarinets – serial numbers 49738-49743. Again there is little to distinguish these instruments: they have £22 in the amount column, and the given description states that they are wooden Boehm clarinets in Low Pitch, and they are (somewhat confusingly) described as being 'imperials'. The 'Symphony' name appears with increasing frequency throughout the period. By 1952, the number 1540 is applied only to Imperial clarinets, and 1010 is used as the model number for the Symphony clarinets. Some of these Symphony models are described also as Imperial, however, until 1962 when finally the two models establish their own separate identity – with the 1010 and associated numbers being applied to just the Symphony range, and the 1540 etc. applied to the Imperial range. This clear distinction is then maintained right up until the end of clarinet manufacturing at B&H. To some people, the model name Symphony has become synonymous with all 1010 clarinets; in fact this label is only applied to post-war 1010 clarinets after 1950. The use of the word 'symphony' seems to be tied in to Boosey's desire to link the 1010 strongly to orchestral playing.

5.2.2 Other models in the 1010 range

During the pre-war period different model numbers began to be used to differentiate between sounding pitches of clarinets. Throughout the 1950s, the

practice changes somewhat again: the number 1012 began to be applied to 1010 models in A.[415] Production records show, however, that this was clearly a distinction made in the factory but not outside it: 1012 models were still stamped as 1010s. This is seen in clarinets from the early 1960s, such as SN 190131. Though this is listed as a 1012 model, the instrument description refers to it as an 'A Nat 10-10'. The same is true of 1011s, the ebonite version of the wide-bore top range model. This indicates that while these numbers were used for factory identification purposes and as catalogue numbers, they were never used as brand names in the way that 1010 and Imperial were. During this period there were eighty-three examples of the 1011 made, and 163 of the 1012. In 1957, a small group of clarinets with the model number 8013E were recorded in the instrument books. These clarinets were all described as ebonite B♭ Symphony clarinets, and were sent to Canada. Though the model number is not used again during this period, it is similar to some that appear in the 1960s.

5.2.3 Other Clarinets

The Imperial

The description 'Imperial' is applied to many clarinets during this period, as was found in the records immediately after WWII. Initially it seems that B&H used Imperial to describe a wide range of top-level instruments, not just clarinets – this practice was clearly happening in 1974, as evidenced by the catalogue descriptions shown below. The catalogue also demonstrates that instruments in the Imperial range were aimed particularly at military and (later) brass band players, rather than

[415] Previously a 1012 had been a 1010 made from metal.

orchestral ones.


The B&H Imperial and Besson New Standard ranges has been internationally respected for generations. The well established designs have given long years of service and untold pleasure to players in the brass and military band worlds who demand instruments which are not only durable and hardwearing but also responsive and easy to play.

Figure 5-2 Extract from a Besson catalogue from c. 1974 giving a description of the long-established Imperial range. B&HA, GB HM. E82.211, n. p. n.

Many clarinets from the beginning of this period are stamped as Imperial clarinets, but as this is applied to more than one type of clarinet, it is clear that it was not used as a model name throughout its history. By the end of this period, however, there becomes a much clearer distinction between those clarinets that are Symphony models, those that are Imperial, and those that do not fall into either category. As stated above, this distinction is maintained from the early 1960s until the end of clarinet manufacture at B&H.

The model numbers that – by the mid-1960s – are clearly linked to the Imperial range of clarinets are shown below. Some of these numbers were attached to what were thought to be re-numbered 1010 clarinets in the records discussed in the previous chapter. During the 1950s and 60s they become much more clearly linked to the Imperial model. The confusion surrounding the model names and numbers during this period is likely to be because design and manufacturing at B&H was in such a state of flux after the introduction of mass production that model numbers took some time to be fully standardised.

Table 5-2 New model numbers.

Number	Sounding Pitch / Description	Material
1539	A	Wood
1540	B♭	Wood
1541	E♭	Wood
1596	B♭	Ebonite
1597	A	Ebonite
1598	E♭	Ebonite
1599	A or B♭ / 18 keys, 7 rings.	Wood
926	A or B♭	Wood

926 Imperial

In 1960, one 926 model is listed: SN 176363. The description of this clarinet includes the word imperial, and reveals that it was made from wood. Two Imperial 926s are listed, also in 1960: SNs 183741-2. Both of these are A clarinets. There is also one 926 18/7 listed: SN 184069, also in 1960. This would have been a clarinet with one additional key. Though these are the only four instances during this period when the number 926 is linked to the Imperial label, the Imperial is often referred to as the 926 – so these early examples have been highlighted.

8010E, 8011, 8012

In the early 1960s, some clarinets described as Imperials are listed with model numbers starting with 80xx. The 8010 was a B♭ in ebonite, the 8011 an A in wood, and the 8012 an E♭ in ebonite.

5.2.4 Comparisons

Of these two top-range models, the records reveal that the Imperial was made in much greater numbers. Comparing the two instruments' most basic forms – i.e. the 1540 and 1010 – the 1540 accounts for almost double the proportion of clarinet output of the 1010: 23.4% as against 12.52% for the 1010. However, if all the

models that can be unambiguously called 'Imperial' or 'Symphony' are combined, the respective manufacturing totals are 3,857 for the Imperial and 316 for the Symphony.[416] This proves that though the Symphony or 1010 was seen to be the most prestigious and certainly the most well-known of the two models, the Imperial was undoubtedly played by many more people, as for every Symphony model manufactured more than ten Imperials were made. One explanation for this is that the Imperial was a cheaper clarinet than the Symphony: the amount attached to the Imperial in the instrument books by 1959 is £22.0.0, the Symphony £26.1.9. The Imperial would therefore have been a more affordable instrument, appealing to players who wanted a professional level instrument but did not have the resources to purchase a Symphony clarinet. The Imperial also had a slightly narrower bore than the 1010, and a lesser degree of undercutting to the toneholes.[417] This created an instrument with a very different feel from the 1010, so that top level performers who were not comfortable with B&H's iconic instrument still had the option of a different British-made professional instrument. When the Imperial was first launched, Frederick Thurston was given a presentation pair, in the hope that he would endorse the model. As a regular 1010 player, however, Thurston was not comfortable with the different feel of the Imperial.[418]

1602, 1838, 8060E, 8062, 806DE

[416] This method of calculation has required the category of '1010' to be left uncounted, as many of these instruments are also listed as Imperials. With these clarinets included the figures would alter, but the proportion of Imperials would still be significantly greater.
[417] The differences between the Imperial and Symphony clarinet are discussed in greater detail in Chapter 6, as the two models were standardised during this period. See p. 258.
[418] Colin Bradbury and Thea King, eds., *Frederick Thurston 1901-53: A Centenary Celebration* (London: Clarinet and Saxophone Society of Great Britain, 2001). p. 22.

These were all bass clarinets, in a variety of materials. The 1602 was made from ebonite, the 1838 from wood. The 8060E and 806DE were both made from ebonite, and the 8062 from an unspecified plastic.

Reginald Kell Clarinets

Four clarinets in the WOBs are listed as being 'R. Kell' Models. These clarinets constitute two pairs of A and B♭ sopranos, and all have consecutive serial numbers, SNs 80266-80269.[419]

Stratford Small Bore

The 'Stratford Small Bore' would probably have been a modified version of the mass-produced affordable 'Stratford' clarinet. These nine clarinets may have been made as a bespoke order for a client who requested a smaller bore dimension than was commonly applied to the Stratford.

SONxxxx

For a short period in these records many clarinet model numbers are listed with a 'SON' prefix. This practice included the most commonly made models – the 1010, 1540, 1596, 1539 – and happened between 1952 and 1959. The use of a SON prefix was observed much earlier, in the years after the Hawkes & Son merger. Whether the use of this prefix indicated anything different about the models or whether it was just a different way in which the same model numbers were recorded is hard to tell. There is no discernible difference between the SON 1010 and the 1010 as described in the production records.

820 and 860

[419] See p. 236 below for further information on Reginald Kell and his connection with B&H clarinets during this period.

These clarinets were both made in relatively small numbers. Every example of each of these models listed was sent to the US. The 820 was described as 'R-K type' (presumably R-K stands for Reginald Kell); the 860 was a plastic 1010.

5.3 'Affordable Instruments'

Boosey's range of affordable clarinets originated from the early days of mass production described in the previous chapter. There were many different models manufactured and sold, though some players have speculated about whether or not these clarinets were actually different instruments, referring to a number of these mass-produced cheaper clarinets as 'Edgware Clones'. This implies that people thought that each model was actually an identical copy of the Edgware, which was one of the earliest mass-produced models to be made. This was not strictly true, as technical drawings from 1958 showing the part numbers of each component of many mass-produced clarinets reveal that each model had a unique combination of parts. For example, every part of the Regent clarinet apart from the socket (bell) has a 1026 part number, whereas the Emperor has a 1596 mouthpiece, a 1556 top joint and bottom joint, a 1026 bell and a 926 socket.[420]

[420] Technical drawings showing part numbers of components for mass-produced clarinets. B&HA, GB HM, E98.720 and E98.725.

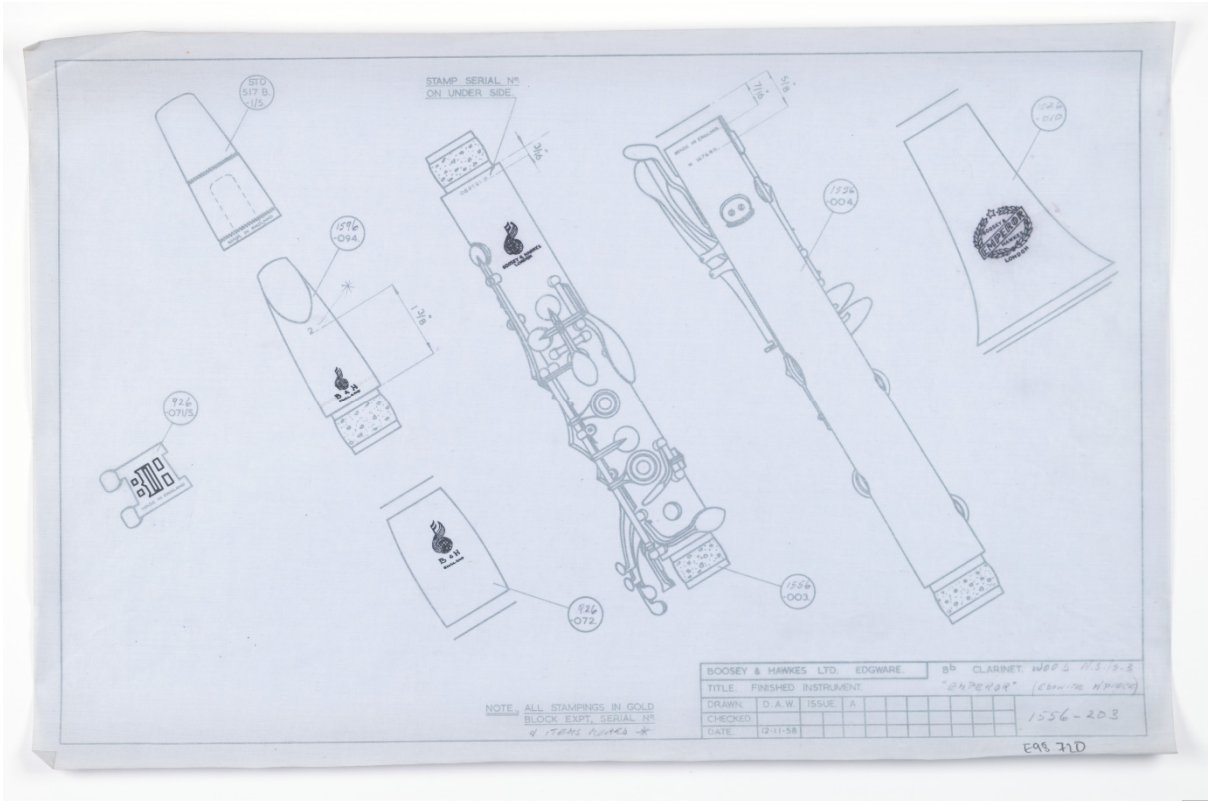


Figure 5-3 Showing part numbers for components of an Emperor clarinet. Photo by permission of the Horniman Museum, London.

Large table 5.2 shows all of the different mass produced models that are listed in the production records, attempts to identify the model – or part – numbers that were attached to them, and gives an idea of what differentiated some of these clarinets. Due to the less precise nature of record keeping during this period, it is not always possible to give exact dates or production figures, as these are not always included in the records, or possible to extract from the archives. Where a 'date given out' or 'date received' has been given in the WOBs, these have been included in the table. Where these dates have not been provided, the 'charged to Regent Street' dates have been used instead.

The table shows that of all the clarinets manufactured during this period (a total of fifty-six models is shown), only nine were manufactured throughout the entire period. These were the Edgware, Regent, Westminster, Marlborough, Lafleur, Embassy, Oxford, Victor and Emperor. There was clearly a consistent demand for these clarinets, and they are discussed individually below.

The Edgware

This was a popular student and amateur model, which was clearly named after Boosey & Hawkes' factory location. Throughout the period it is made from all materials offered by B&H: wood, metal, plastic and ebonite. The clarinet was supplied with die cast keys. A Besson catalogue produced shortly after this period claims that the 'Edgware' was 'the world's most popular clarinet'.

> Cracking of Grenadilla wood clarinets, due to moisture and climate changes, is virtually a thing of the past... thanks to Boosey & Hawkes' untiring efforts in perfecting this instrument. With reasonable care, the Edgware of Grenadilla wood, with its secret processing and woodwind tone quality, is now a highly practical investment too![421]

The Regent

The Regent was arguably the most well known of the cheaper models produced by B&H. It was targeted specifically at students, and given quite a strong marketing push by the company. In a catalogue that summarises many of the instruments developed during this period the Regent clarinet is shown being modelled by Jack Brymer. For many years in Britain entire generations of young clarinet players learned to play on B&H Regent clarinets.[422] The catalogue claims that this clarinet was 'the finest low-priced clarinet in the world'. It was certainly made in large quantities, and the records show that it was manufactured in wood and

[421] Besson Catalogue. n.d. B&HA, GB HM. n.m.n.
[422] The author included.

sonorite. The emphasis placed on the Regent shows the new importance that B&H attached to the student market during this period. Many of these clarinets were exported to various locations.

Westminster

Again aimed at students and amateur players, the Westminster was available in A and B♭, and supplied with die cast keys. Many of these were also exported. The Westmisnter was manufactured in wood and in ebonite, though a catalogue from 1965 states that it is made of African blackwood.[423]

Lafleur

The use of 'Lafleur', apparently as a model name, is somewhat more confusing. Lafleur had been a music publishing and instrument dealing company who manufactured some woodwind instruments in the late nineteenth and early twentieth centuries. It was bought by Boosey & Co. in c. 1917. The way that it is referred to in the WOBs gives the impression that there was a clear 'Lafleur' model, but catalogues from around the same time suggest more that 'Lafleur' was the name given to a range of instruments, marketed under the 'Besson' name as well as B&H.[424] From a 1965 B&H catalogue, it is clear that the Lafleur range was an educational one, as illustrations throughout this section of the catalogue are of school ensembles and individual children with instruments. This would indicate that the 'Lafleur' clarinet was another model aimed at the student performer. Records show it was made in wood and plastic, and sometimes supplied with ebonite bells and sockets.

[423] This could, of course, be a standardisation that took place towards the end of the period discussed here.
[424] Besson was another company that had been partially absorbed by Boosey earlier on, under whose name some Boosey instruments were sold.

Emperor

The Emperor was seen as the most prestigious of the more affordable clarinets manufactured by Boosey. It was available in A and B♭, which shows there was an expectation it would be played by reasonably serious players who would at least have been performing in amateur orchestras, rather than simply playing at home alone or in large wind bands with several clarinettists. Where prices of instruments are shown in the WOBs, the Emperor is always a little higher in price than other models. In 1965, the RRP of an Emperor was the third highest of any B&H soprano clarinet, after the Symphony 1010 and the Imperial.[425] The catalogue claims that it was the favourite of professional and semi-professional players, reinforcing the idea that this model was being marketed to the higher level amateur at least.

A range of "de luxe" instruments – which comprised the Oxford de luxe, Lafleur de luxe, Gaylord de luxe and the Markis de luxe – appeared between 1958 and 1961. This demonstrates Boosey attempting to create a more prestigious image for some of the mass produced clarinets, in order to make them appear more desirable to the brand-conscious consumer. There is nothing in the records that reveals what constituted a 'de luxe' model: whether it was the addition of silver plated keys, or extra keys of some sort, is unclear, but an alteration to the keywork would have been the most likely change to the model, as anything that required more of a serious change to the body of the clarinet would have elevated the instrument into the top-range category.

Many of the mass produced clarinets have distinctly 'English' names, such as the Oxford, Cambridge and Stratford. These reflect very traditional English cities

[425] See p. 233 for price comparisons for these models.

with longstanding academic or cultural traditions. Other distinctly English names have echoes of the Imperial names used in the post-war years, reinforcing, instead, a different side of English culture such as the Buckingham, Westminster and Whitehall. This could be seen as a patriotic attempt to appeal to English traditionalists or an effort to conform to American or European stereotypes of England, reinforcing the notion that customers were buying a truly English product.

Towards the end of the period discussed, a number of models with Besson in their name were manufactured. Besson had been a separate musical instrument manufacturer which had been partially absorbed by Boosey by this point. During the early 1960s, Boosey began to release instruments under the name of Besson, giving the impression that this was a separate range of models. As with the Lafleur range, many of the Besson instruments were marketed at education-based customers. Evidence of this is shown in the photographs of school children that appear throughout the catalogues. Records indicate that although these instruments were marketed as being a separate range, many of them were in fact the same basic instrument as others labelled directly as Boosey ones. The model number 857-103 is used for the Besson in A, and was also used for the Emperor. This would imply that in this instance they were the same basic models, with different stampings added at the end of the manufacturing process.

5.4 Manufacturing Trends

5.4.1 Exportation

Evidence of exportation is extensive throughout the records of individually crafted clarinets during this period. Destinations of instruments are often listed, and include the USA, New York, Mexico, Canada, and Australia. Though it was only

referred to as a single batch of 20 clarinets, the USA 1540 indicates a model number given to an instrument specifically intended for export purposes.

Many of the mass produced models were also destined for foreign exportation. Certain ranges of instruments, or individual models, were developed specifically for this purpose, as this can be seen throughout the clarinet records. The 'Starline' series of clarinets that makes a brief appearance during the 1950s was intended purely for the European market. Destinations listed include Germany, Switzerland, Sweden and Holland. European activity only makes a very brief appearance in the middle of this time frame; during 1956-7. It was at this point that B&H was doing particularly well financially – in 1956, for the first time, the company was listed on the London Stock Exchange – which could have been what provided the impetus for this apparent expansion.[426] American, Canadian and Australian exportation, however, was much more of a continuous theme throughout the 1950s and early 60s. Many models were marketed solely in the USA and Canada. These included the 1-10, 2-20, and 4-20, none of which appears to have been used for any other purpose. Other models that were almost exclusively marketed in the USA were the Gaylord, Commodore and American Leader. The unmistakably American names given to these models indicate that they were designed with the American market in mind, and were very specifically targeted. It also shows that there was enough demand for B&H clarinets in the USA to warrant separate stampings, if not actual designs, for instruments. These models tend to appear grouped together into batches, indicating that a certain number of export jobs would have all been ordered at the same time.

[426] Wallace, *Boosey & Hawkes: The Publishing Story*. p. 164.

5.4.2 Key Mechanisation

Virtually all of the top-range clarinets from this period use the standard 17-key 6-ring Boehm system. This was the first manufacturing period at Boosey that did not see the production of a single 14-key, or 'Simple System' clarinet. By this time this system had fallen so out of favour with the British clarinet-playing population that there was no longer enough demand for the instruments for them to be manufactured.[427] The fact that no 14-key clarinets were manufactured during this time shows B&H's ability to constantly re-align itself with different and changing markets, responding to altering player and customer demands and preferences. By contrast, an increasing number of people were requesting instruments with 18, 19 and 20 keys. Judging by the very small numbers in which these were manufactured, it is likely they would have been made to order rather than as a matter of course. This would have almost certainly been the case with the 1958 clarinet labelled as '18 K 7 R', as there was only one made.[428] Catalogues from around this time suggest that these 'extra' keys could be added to all of the top range clarinets – essentially just the Symphony and Imperial – at the request of the customer. As these keys are generally used to facilitate very demanding music, it would have been the very serious players who requested them, quite probably professional players, as they would have been an expensive addition and would not have been of use to people performing less complex material. The increasing popularity of these additional keys could be linked to earlier B&H publicity material, which described the advantages of

[427] There were, almost undoubtedly, still clarinettists in Britain playing on these clarinets, as there are today. However, the popularity of the older system – especially amongst classical performers – had dwindled so much that there really would have been little point in it being manufactured.
[428] This is the only clarinet with no other model number that is described as an 18K/7R Model.

using a 20 key and 7 ring clarinet: 'The manifold advantages of this system are such that I believe all artist clarinettists must eventually adopt it.'[429]

Another key mechanisation that is mentioned is the Taylor Action, which was applied to a total of 153 clarinets. Nothing is written in clarinet literature about this system, which indicates that its usage was short-lived. The mechanisation is applied to the lower joint of the clarinet, and is a small, square metal plate to the side of the shaft of the LH F♯/C♯ Key. Its purpose was to eradicate the 'clanking' noise which is often apparent on all but the very newest Boehm system clarinets. Boosey catalogues at the time referred to it as The Silent Taylor Action.[430] According to the catalogue, the mechanisation was patented. (The clarinet in the photograph has 'Patent Pending' stamped on the joint next to the Taylor Action.) This makes it seem particularly strange that it was only manufactured in such small quantities and not standardised: it is certainly a useful addition to this joint, and it is hard to see that it would have adversely interfered with playing in any way. This is reminiscent of David Blaikley's Patent B♭ mechanism, which was released in very small numbers earlier in the century.

[429] Thomas Young, "The 20 Key and 7 Ring Clarinet: Advancement for Boehm-system Players" in "Woodwind Year Book." (England: Boosey & Hawkes, 1939-41). p. 61.
[430] Boosey Catalogue, n.d. Private Collection, Paul Sargent.

Figure 5-4 Clarinet with the Taylor Action to the LH F♯ /C♯ key.

All of the 'affordable' clarinets offered by B&H were Boehm system clarinets. There is no evidence at all in the records that this was ever varied. Though catalogues state that additional keys can be fitted to the top-range instruments, which were marketed as being 'individually crafted', this service was never offered in conjunction with the cheaper ranges. As the manufacture of keys was one of the main features of mass-production, allowing clarinets to be finished much more quickly and with less direct human input, it seems logical that the regular pattern of 17 keys and 6 rings had to be adhered to for all clarinets manufactured in this way.

5.4.3 Materials for Manufacture.

Analysis of the records shows that all of the top range models were manufactured from either wood or ebonite. Despite B&H's bold claims about their plastic 'sonorite' instruments, this material was never used for any of the more

prestigious models.[431] Most instruments, as has been seen throughout B&H's production history, are made in both a wooden and an ebonite version. As before, these generally have different model numbers. This applies to the Symphony range, where a wooden instrument is a 1010 and an ebonite a 1011, as had been the case since these clarinets were first manufactured. Bass and alto clarinets throughout this period were also both made in wood and ebonite, usually with different model numbers. It can be seen during this period that in terms of the two most commonly made models – the Symphony and the Imperial – quantities of wood and ebonite instruments are much closer than they had been in previous times. This indicates that the trend observed in the previous chapter for a decline in the preference for ebonite continued throughout this period.

A new material appears in clarinet records during this period: sonorite. This was a kind of mouldable plastic, which was developed for the cheaper ranges of instruments. The fact that it could be moulded was perfect for mass production, as it was cheaper and faster to mould instruments than it was to turn them, as was the case with ebonite clarinets. According to B&H publicity from the time:

> Here is the most modern approach to musical instrument construction. Made from a new scientific formula "Sonorite", it is virtually unbreakable, and defies the connoisseur to distinguish its sound from an instrument made of conventional wood.[432]

Despite these claims, the material was never used for Symphony or Imperial clarinets, only for the cheaper ranges. This may have more to do with performer attitudes than anything else, as there is generally a degree of suspicion amongst

[431] Sonorite was claimed to be a plastic that had the same acoustic properties as wood. See section 6.3 on materials for manufacture of affordable clarinets.
[432] Besson Woodwind Catalogue, c. 1960. B&HA, GB HM, E82.210. p. 5.

classical players of the value of plastic as a material for clarinets. The development of a cheaper material for student clarinets is evidence of B&H attempting to increase profit margins on these instruments. In order to keep prices competitive, B&H was trying to find ways of cutting the cost of manufacturing student clarinets, and sonorite seemed to be a good solution.[433] Other instruments are listed purely as 'plastic' rather than sonorite, but there is no evidence to indicate that any other kind of plastic was used. Amongst the mass produced clarinets are many examples of metal clarinets. Many of the clarinet models listed in large table 5.2 appear to be made from metal on occasion. Metal clarinets were often exported to the USA, for use in military style bands. There was clearly less of a taste for metal instruments in the UK, as the majority of them were exported and were not advertised in UK-based sales catalogues.

Keys during this period were made from a variety of materials, and this was often one of the characteristics that categorised a model as being of higher or lower quality. Top range models all still had German silver keys which were heavily silver plated. Further down the range, keys were cast from nickel, and silver plated, or made from nickel and nickel plated. The cheaper keys were more susceptible to breakage, and generally when describing clarinets from this period clarinettists are careful to warn of the potential problems associated with these keys. Another new material – Mazak – appears during this period in conjunction with the mass produced models.[434]

Ebonite is used throughout this period, but the decline in usage observed in the previous chapter continues into the 1950s and 60s. This was a result of the

[433] Wallace. *Boosey & Hawkes: The Publishing Story.* p. 105.
[434] See Chapter 1, p. 51 for information on Mazak.

decline of military music making, as the largest demand for ebonite previously came from military musicians. This is very apparent in the top range instruments, particularly with the 'Symphony' models, as 733 Symphony 1010s in wood were manufactured, and only thirty-eight in ebonite.[435] In previous years ebonite models were made in larger quantities than wooden ones. As well as reflecting the decline of military music making, this could show a general change in preference for materials; that more people were favouring wood and becoming less interested in the ebonite. It is apparent from catalogues that during this period many people were making strong links between the material of an instrument and its sound: catalogues are eager to point out that the new 'sonorite' plastic sounds exactly like wood. These concerns would have been another reason wooden clarinets were manufactured in larger quantities. In fact, B&H's own literature went some way to reinforcing the belief that wood was a superior material to plastic: in the late 1950s Brian Manton Myatt wrote:

> It is unlikely that anyone who has experienced the differing qualities of various materials, however slight they may be, will be found contesting for the tonal superiority of fine wood, which is generally considered to be unapproached for clarinet.[436]

5.4.4 B&H Clarinet Workforce

At the beginning of this period some new workmen's names appear in the production records. The first of these are Kevealy (no dates are given, serial numbers 49353-8) and Jasper (December 1950). Neither of these appears again. For four pages in the workshop books, a different person has recorded the workman's names from all the other information. Other new names to appear in the records around this

[435] This is based purely on instruments which were listed as '1010' or '1011' clarinets; not Symphony, 1012, or any other variant.
[436] Brian Manton-Myatt, "They Call it Woodwind: But it isn't always made of Wood!" in *The Woodwind Book*. (England: Boosey & Hawkes, 1957-8). p. 44.

time are Goodchild, who is listed quite regularly after his first mention in 1951, and Winterbourne, who appears less regularly.

From the beginning of 1959, however, no name is given at all next to clarinets in the workshop order books. This means that models such as the 1010 are listed in very much the same way as the mass-produced models, making it harder to distinguish between them. This could imply that the more prestigious instruments began to be manufactured in the same way as the mass-produced ones, with more direct mechanical involvement. This is reinforced to some degree by notes found in the archive, written by Eric McGavin. He claims that 'The 1010 etc are hand crafted instruments in so far as they can be supplied with additional keys at the customers' request'.[437] This reveals that though there was an attempt to make it appear as though these clarinets were individually manufactured, much of the process clearly was automated. More generally, this trend against listing manufacturers' names is further evidence of changing priorities within the factory: from the levels of individual craftsmanship evident earlier in the century to a focus on quantity of instruments and cheap costs in the post-war era.

The workshop books begin to be divided by 'JC' – or Job Card – numbers. Each of these refers to a batch of instruments, very often 25. By mid 1964 these are written alongside the instrument's description as well as being noted in the margin.

5.4.5 Pricing

Table 5-3 Showing price changes to models during the 1950s.

	1950-1951	1952-1953	1954-1955	1956-1957	1958-1959	% difference across the period

[437] Eric McGavin, unpublished typescript, McGA, B&HA, GB HM.

Edgware	7.16.9	7.19.7	7.10.0	9.0.0	8.18.6	+13.88
Regent	7.16.9	8.17.1	7.10.0	7.16.3	8.12.3	+9.89
Westminster	7.3.0	7.10.0	-------	-------	8.12.3	+20.45
Marlborough	7.8.6	7.10.0	-------	-------	-------	+1.01
Lafleur	8.17.1	8.13.4	7.10.0	8.16.2	8.12.3	-2.73
Embassy	8.7.2	6.10.0	-------	-------	8.12.3	+3.04
Oxford	7.0.0	6.10.0	6.17.6	9.13.9	10.13.9	+52.68
Victor	8.7.2	-------	7.12.6	-------	-------	-8.77
Emperor	-------	9.0.0	9.0.0	9.13.9	10.13.9	+18.75
Imperial (1540)	20.0.0	22.0.0	17.7.0	21.0.0	22.0.0	+10.00
Symphony (1010)	20.0.0	22.0.0	17.7.0	23.13.7	26.1.9	+30.44

This table reveals that some models – particularly the Westminster, Oxford, Emperor and Symphony – had a significant change in price over the ten-year period. The dramatic increase in the cost of each of these models indicates that B&H was creating a more exclusive image for the clarinets in question, by pricing them in a different category from that in which they started. The Emperor was seen as being the most prestigious of the cheaper models, aimed at higher level students and amateur players. The fact that it was available in A as well as B♭ reveals that it was marketed at orchestral players at amateur or college level, as an A clarinet would normally only be used for orchestral playing. The Westminster was also available in A, so would have been aimed at a similar level of player. The fact that the price of these two models increased so much shows that B&H was ensuring that it was clear to the customer that these two models were a significant improvement on the very cheap clarinets on offer.

The Oxford clarinet had the most significant increase in price over the period, at over 50%. Though this model clearly started out as the cheapest clarinet model available, by the end of the period represented by table 5.2 it was clearly being marketed at a different level. Publicity from the time displays an Oxford saxophone,

and describes the Oxford range as 'of outstanding quality and value for the medium-price market'.[438] There is no evidence in the archive, or known extant instruments, that can reveal if the design of the instrument changed during this period, or if it was re-priced in order to create a different image. The Symphony clarinet also had a significant increase in price over this period, rising by over 30%. Clearly there was more work involved in manufacturing the top range instruments, as many of the jobs that were automated for mass-produced clarinets were still done by hand. However, of particular interest is that the Symphony increased in price by 30%, and the Imperial by just 10%. Though the undercutting applied to Symphony clarinets would have made the model slightly more costly to produce, this does not seem to be enough to warrant the difference in price increase. It would seem, instead, that B&H was finding another way to reinforce the exclusivity of the Symphony clarinet, by pricing it clearly at the top of the product range.

5.4.6 Endorsements and Professional Connections

In addition to the four R Kell clarinets in the instrument books, there are a number of abbreviations in the records that could indicate some connection with Kell (N.R.K. keywork could possibly denote 'new Reginald Kell keywork'). Correspondence between Eric McGavin and Kell certainly shows that the celebrity performer was closely linked to B&H during this period.[439] Many orders are shown for batches of R Kell mouthpieces, which – along with various other B&H mouthpieces – were manufactured by French firm Chédeville.[440] The instrument books show at least one clarinet that was supplied with one of these (clarinet 150955

[438] *The Woodwind Book*. UK: Boosey & Hawkes, 1957-8. p. 112.
[439] Various items of personal communication between Eric McGavin and Reginald Kell, McGA, GB HM. n.m.n.
[440] Letter and an order regarding the Kell mouthpieces being ordered from Chédeville. McGA, GB HM. E1227 and 1228.

in 1959), and many others where 'R Kell' appears somewhere in the description – which could indicate an R Kell mouthpiece. These connections with Reginald Kell show that Boosey was interested in maintaining its connections with 'celebrity' players. Kell worked closely with B&H factory designers on the 'R Kell' mouthpiece and also clarinet design features. Photographic evidence shows Kell with Eric McGavin, who was chief clarinet tuner during this period, and their connection is further reinforced by personal correspondence.

Figure 5-5 Reginald Kell (left) with Eric McGavin. McGA, GB HM, E493.

Wallace claims that during this period Boosey was trying to strengthen its reputation as supplier of instruments to the classical profession, with Kell working with Ed Sonfield, owner of US instrument importer C Bruno & Son, to develop a new professional clarinet.[441] The fact that production figures show increasing numbers of mass produced models for education, and a converse decline in the number of top range models made, reinforces the fact that classical musicians were

[441] *Boosey & Hawkes: The Publishing Story*. p. 105.

not an especially strong customer base for B&H. Using Reginald Kell – a well-thought-of English clarinettist familiar in Britain – to publicly endorse and work on Boosey products was an attempt to strengthen connections with well known classical performers, and reinforce the image of the Symphony 1010 as being used by top orchestral performers.

5.5 Conclusions

One of the major influences upon B&H between 1950 and 1965 was the growing emphasis on consumerism in British society. At B&H this was manifested in the increasing focus on the clarinet as a consumer product, with a range of clarinets being marketed with different customers in mind. For the first time, nearly all the models listed were given names rather than simply model numbers, and even those with well-established numbers – such as the 1010 – were given additional labels in order to ensure that their target audience could identify each product. Models were more standardised than they had previously been, showing a further move towards a streamlined production pattern, where the concept of 'the model' had become more important than satisfying any individual customers' needs.

B&H's response to the increasing consumerism in Britain indicates that the company was following economic trends at the time. The company was clearly capitalising upon the growing consumerism evident throughout this period, by widening its range of products and constantly changing and updating this range. Conformity with social trends is also demonstrated by B&H's greatly increased manufacture of cheap student models, which was a result of escalating interest in instrumental teaching in schools and in use of performance in the classroom. These educational issues had been ongoing for some time, but it seems that it was only

once they were reasonably well-established that B&H began to cater for this demand by supplying more educational instruments. Though these social trends were ones that B&H was only too happy to follow, the company's responses to new challenges display innovation and creativity, with a wide range of different model names and ranges appearing throughout this period. The development of the mouldable plastic sonorite for clarinet manufacture is another example of B&H's innovation. The various different model images were clearly developed in order to appeal to as wide a customer base as possible, incorporating groups who would previously have found little in the B&H catalogue within their reach, such as curious amateurs or young students. Once again this presents Boosey & Hawkes as opportunists, making the most of current trends to increase profitability, rather than actually shaping trends.

In addition to the educational market, clarinets for export also accounted for a significant part of B&H's output during this period. Increased exportation was strongly linked to growth in international trade during the 1950s as wartime trading sanctions were lifted. Many of the clarinets that were exported were mass-produced student models, indicating that they were to be used by the education market abroad as well as in the UK. Post-war cuts in the Army led to the disbandment of many military ensembles. The reduction in military music making resulted in a sharp decline in B&H's hitherto most important customer base.[442] This meant that for the first time, the most important market for B&H instruments was educational instruments, where large numbers of cheap student models were being bought by dealers looking to forge links with schools, or by educational establishments.

[442] Gordon Turner and Alwyn Turner, *The History of British Military Bands Volume 2, Guards & Infantry: Including the Guards Division, the Scottish Division, the Queen's Division* (Staplehurst: Spellmount, 1996). p. 11.

High-level classical musicians accounted for a small, but not insignificant, portion of B&H's customer base. Throughout the 1950s and 60s there is evidence of various efforts made by the company to portray itself as supplier to the highest end of classical music making. The use of the title 'Symphony' for the top range model, combined with the collaboration with Reginald Kell, indicates attempts to raise the profile of this side of the company's activity. This provides further indication that some of the long-term successful reputation of the 1010 model is linked more to marketing than it is to actual usage. This is especially pertinent during this period, when relatively few 1010s or Symphony 1010s were actually manufactured, compared with the other top range model, the Imperial.

This period represents a significant development in the history of B&H's iconic model. It was during these years that a strong brand image was created for the model, represented through its re-launch as the Symphony 1010. As was noted in the previous chapter, there was a period during the last years of WWII and the first years of peacetime when the 1010 was not manufactured at all. It is thought that B&H had decided to permanently stop manufacturing 1010s towards the end of the war.[443] However, after some persuasion from Frederick Thurston, Geoffrey Hawkes agreed to start manufacturing them again.[444] The purpose of attaching the label 'Symphony' to 1010 clarinets was to ensure that they were strongly connected to orchestral playing, and professional use.

Although by 1950 the 1010 had been in use for nearly two decades, this was the first time that the model had an image and brand of its own. It has been noted in

[443] Colin Bradbury, in conversation with the author, 20 May 2011.
[444] See eds. Bradbury and King, *Frederick Thurston 1901-53: A Centenary Celebration*, p. 20 for a draft of Thurston's letter to Geoffrey Hawkes.

previous chapters that model numbers were used more for factory and sales purposes than as common identifiers of instruments, in the way that 1010 is used today to refer to all clarinets with that model number. Thurston's draft letter to Geoffrey Hawkes simply refers to the 'top line' models and does not use the label 1010 at all, indicating that the model number was not used in the way that has become so common.[445] This makes it probable that it was only in the 1950s and 60s, as the product identity of each clarinet model became more important, that Boosey's iconic model became known as 'the 1010', or at least 'the Symphony 1010'. This echoes practice in all instrument marketing at B&H, where model names and numbers take on greater significance. Of all the clarinets during this period, only the 1010 and the Imperial 926 seem to have developed identities based on original model numbers. All other clarinet identities were created using words with strong British connotations as shown above, or using company names of instrument manufacturing outfits purchased by B&H earlier in the company's history.

[445] *Frederick Thurston 1901-53: A Centenary Celebration*. p. 20.

Figure 5-6 Bob Alloway, engineer in charge of the wood mill at Edgware. McGA, GB HM. E454.

Bob Alloway, who was engineer in charge of the wood mill at the Boosey & Hawkes Edgware factory, summarised activity at B&H during the 1950s with a statistic: he claimed that in a ten-year period 'the output of British-made woodwind has increased by approximately 2000 per cent'.[446] This rapid expansion of the business meant that by the mid 1950s B&H had made a dramatic transition, from small craft-based industry to an internationally recognised large-scale mass-producer of musical instruments. By this point B&H had established several businesses abroad, was operating on a global scale, and had earned Britain an enviable

[446] Bob Alloway, "New Methods in Woodwind Production: Meeting the Demand That British Quality Created," in *Boosey & Hawkes Woodwind Book* (England: Boosey & Hawkes, 1957-58). p. 7.

reputation as woodwind manufacturers. These factors resulted in B&H being listed on the London Stock Exchange for the first time in 1956.[447] Many of B&H's iconic clarinet models such as the Regent, Symphony and Imperial first became well-known and established during this period, as a result of the growing emphasis on consumerism in Britain. This period, therefore, contributed a great deal to B&H's lasting legacy.

The 1950s and 60s could be seen as a golden age of British instrument manufacturing, with B&H instruments being manufactured at rates never previously witnessed, and exported around the globe. However, this success did not last for long, as the drive to produce ever-cheaper student models became a serious financial drain on the company throughout the late 1960s and 70s. Despite many attempts to overcome losses in the instrument manufacturing business, B&H eventually had to cease manufacturing clarinets. The circumstances leading up to the cessation of clarinet manufacturing at B&H will form the basis for much of the discussion in the following chapter, and the role of B&H clarinets in the company's eventual demise will be demonstrated.

[447] Wallace, *Boosey & Hawkes: The Publishing Story*. p. 82.

6 The Final Years: 1965-1986

Introduction

The years between 1965 and 1986 could be seen as the most dramatic in the history of B&H as instrument makers: divisions between the instrument making and publishing sides of the business became increasingly apparent; 1970 saw the very sad and sudden death of Eric McGavin who was an important figure in clarinet manufacturing; in 1971 the instrument manufacturing division received the Queen's Award to Industry; but by 1986 ever-increasing financial difficulties had resulted in B&H permanently ceasing the manufacture of clarinets. These events all either affected or were affected by changing patterns of clarinet manufacturing at Boosey & Hawkes. Changing practices in industry in Britain, and shifting preferences in clarinet playing across Europe were also to have a significant effect on Boosey & Hawkes, and play their part in forcing the eventual decision to cease large-scale clarinet manufacturing in Britain.

6.1 Boosey & Britain: A Summary of Activity from 1965-1986

The mid 1960s to mid 1980s was a turbulent time in Britain, especially in terms of economy and industry. There were many parallels between the developing situation at B&H and the socio-political-economic climate in Britain at the time. The latter is summarised here to give context to the ensuing discussion of B&H and its place in musical Britain during this period.

Until 1973, the British economy continued to grow at a reasonably healthy rate as it had done throughout the post-war era. In 1973, however, the international oil crisis resulted in dramatic rises in interest rates in Britain, pushing the economy into recession. Pay freezes were introduced in order to help combat this, but workers

were unhappy and began to take industrial action. Strikes by coal miners meant that electricity was in short supply, which led to the implementation of Ted Heath's Three Day Week at the beginning of 1974. During this time unemployment rose considerably, from 2.3% in 1971 to 6.6% in 1977.[448] Job losses were most dramatic in traditional sectors, such as metal manufacturing, where a total of 115,700 jobs were lost between 1971 and 1977, and paper, publishing and printing where 52,600 jobs were lost.[449] Unemployment and battles against rising interest rates led to the 'Winter of Discontent' in 1978-9, which prompted a victory for the Conservative Party under Margaret Thatcher in 1979.

One of Thatcher's major priorities was to tackle rising inflation rates by closing down traditional industries – such as coal mines – which were no longer economically viable. This, however, exacerbated the unemployment problem: in the winter of 1982-3, unemployment peaked at 3.3 million.[450] Many of the factories which were closed during this time affected entire communities, for example the steelworks at Consett in County Durham.[451] These job losses reflected the culmination of a long-term decline in traditional industries in Britain, and resulted in the early 1980s being a time of recession and crisis for many people, communities and industries. By the mid-1980s there were fleeting signs that a growth of affluence was imminent, especially as a result of Britain becoming self-sufficient in North Sea

[448] Kenneth J. Button, "Spatial Economic Policy" in ed. W. Peter J. Maunder, *The British Economy in the 1970's* (London: Heinemann Educational, 1980). p. 186.
[449] David Lovatt, *Unemployment and Class Conflict in Britain During the 1970s* (London: University College London, Bartlett School of Architecture & Planning, 1980).
[450] Jeremy Black, *Britain since the Seventies: Politics and Society in the Consumer Age* (London: Reaktion, 2004). p. 127.
[451] Black, *Britain since the Seventies: Politics and Society in the Consumer Age*. p. 127.

oil. These positive changes did not become fully apparent until the late 1980s, however.[452]

6.1.1 Musical Britain

In many ways musical life in Britain during the late 1960s and the 1970s was thriving. Standards of orchestral and instrumental playing were continually rising: Basil Tschaikov recalls that by the 1980s he was auditioning clarinet applicants for the RCM who – at the age of seventeen – were playing the Carl Nielsen clarinet concerto. Tschaikov claims that only a few of the best clarinettists of his own generation would have attempted this virtuosic work, and that virtuosity on woodwind instruments had become commonplace.[453] Britain could now boast a number of orchestras and chamber ensembles of international repute, and British musicians were able to gain employment abroad, without encountering the cynicism towards British musicians experienced in earlier decades. Due to the expansion of musical education at university level, however, there was an increasing problem of supply outstripping demand in terms of musicians.[454] Ehrlich claims that though an increasing number of higher education providers were offering music at degree level, it was assumed that the pursuit of music at this standard was 'a liberal education, neither more nor less appropriate to the market-place than history, or philosophy'. Therefore, graduate musicians who could not find employment as full-time performers had to seek work in other areas of the industry. This is reflected in statistics from professional associations at the time: at least half of the Musicians'

[452] Kenneth O. Morgan, *Twentieth Century Britain: A Very Short Introduction* (UK: Oxford Paperbacks, 2000). p. 88.
[453] Tschaikov, *The Music Goes Round and Around*. p. 258.
[454] Ehrlich, *The Music Profession in Britain since the Eighteenth Century: A Social History*. p. 231.

Union's 40,000 members were part-time musicians, working in pop, dance and club bands; one third of the ISM's membership was accounted for by teachers.[455] Public appetite for classical concerts, opera and musical theatre was still relatively small by the 1980s when Ehrlich completed his study, and was showing no signs of growing in order to meet the supply of keen and talented musicians who were seeking work. Though there was no growth of interest in classical performances, increasing opportunities for jobs – and study at all levels – in music education meant that growing numbers of people still required quality musical instruments. This ensured a constant customer base for B&H throughout the 1970s and 80s.

It was not just the higher education sector that had an impact on the changing face of music and musical instrument manufacturing in Britain. Gordon Cox, erstwhile leader of the PGCE course at Reading university, describes the mid 1970s as the era of the 'advent of the classroom orchestra' in his brief but thorough summary of developments in music education in the twentieth century.[456] Cox is referring specifically to an article that appeared in *Music Teacher* periodical in February 1974, in which George Odam, then Senior Lecturer in Music at Newton Park, argues in favour of instrumental music-making in the classroom as a way to increase musical literacy.[457] The development of music education, and a drive towards designing a stimulating and 'effective' music curriculum was a chief concern of many writers in *Music Teacher* during this period, and undoubtedly reflects the efforts made by many classroom teachers to reinforce both new methods, and the work hitherto carried out by dedicated peripatetic staff. Odam was adamant

[455] *The Music Profession in Britain since the Eighteenth Century: A Social History*. p. 231.
[456] Gordon Cox, "Teaching Music in schools: Some historical Reflections" in ed. Chris Philpott and Charles Plummeridge, *Issues in Music Teaching* (London: RoutledgeFalmer, 2001). p. 15.
[457] George Odam, "Music in the Secondary School" in *Music Teacher*, February 1974. p. 15.

that part of the solution lay in improving resources, by buying new classroom instruments: 'A few glockenspiels is not the answer'.[458] This was clearly intended to encourage schools to purchase new instruments, and the various advertisements for educational ranges of instruments which appear in *Music Teacher* magazine indicate that manufacturers were aware of this increasing demand. Boosey & Hawkes was no exception to this, as full-page adverts showcasing B&H educational ranges are to be found in issues of *Music Teacher* throughout the mid 1970s.[459]

Keith Swanwick, erstwhile Professor of Music Education at the Institute of Education, also suggested that classroom instruments should be supplemented, where possible, by orchestral ones: 'Pupils who play them could be encouraged to take an active part in classroom music arrangements.'[460] This would have been more of a possibility than ever before during the 1960s and 70s, owing to the ascendancy of instrumental teaching in schools that took place during the late 1940s and 1950s, and the increasing opportunities for young people to make music.[461] Other developments occurred during the years leading up to the 1970s, which furthered opportunities for aspiring young musicians. These included the appointment of several local authority music advisers, who were responsible for developing music both in schools and in regional extra-curricular ensembles.[462] This led to the establishment of instrumental schemes in many local authorities, the appointment of various instrumental teachers, and then the provision of large ensembles where

[458] George Odam, "Music in the Secondary School" in *Music Teacher*, February 1974. p. 17.
[459] *Music Teacher,* several issues, 1970-1976.
[460] Keith Swanwick, "Class Music in the Secondary School – a perspective: Towards a music curriculum" in *Music Teacher*, June 1974. p. 17.
[461] Gordon Cox, "Teaching Music" in ed. Philpott and Plummeridge, *Issues in Music Teaching*. p. 13.
[462] Dorothy Taylor, *Music Now: A Guide to Recent Developments and Current Opportunities in Music Education* (Milton Keynes: Open University Press, 1979). p. 23.

newly-acquired instrumental skills could be put to use.[463] Local Authority-maintained music centres were also established, and provided a base for peripatetic staff and a variety of musical activities.[464] Increased opportunities for young people to participate in music making of course meant an increased demand for musical instruments, especially as instrumental music – including the use of orchestral instruments – was now being encouraged as part of a music curriculum. All manufacturers of musical instruments – including Boosey – had to find ways to respond to this ever-expanding – though increasingly competitive – market. This was to be one of the challenges that shaped the course of B&H's history throughout its final two decades.

6.1.2 Boosey & Hawkes

In the mid-1960s instrument manufacturing at B&H was operating on a grand scale, with instruments being released from the factory at a rate never seen before in the UK. In 1965 an average of 500 clarinets were manufactured every month. This level of productivity continued until the late 1960s. The instrument manufacturing division went from strength to strength: during the late 1960s there was a period of high productivity and sales, and in 1971 the instrument side of B&H received the Queen's Award for Industry.[465]

[463] Taylor, *Music Now: A Guide to Recent Developments and Current Opportunities in Music Education*. pp. 23-4.
[464] *Music Now: A Guide to Recent Developments and Current Opportunities in Music Education*. p. 24.
[465] Wallace, *Boosey & Hawkes: The Publishing Story*. p. 137.

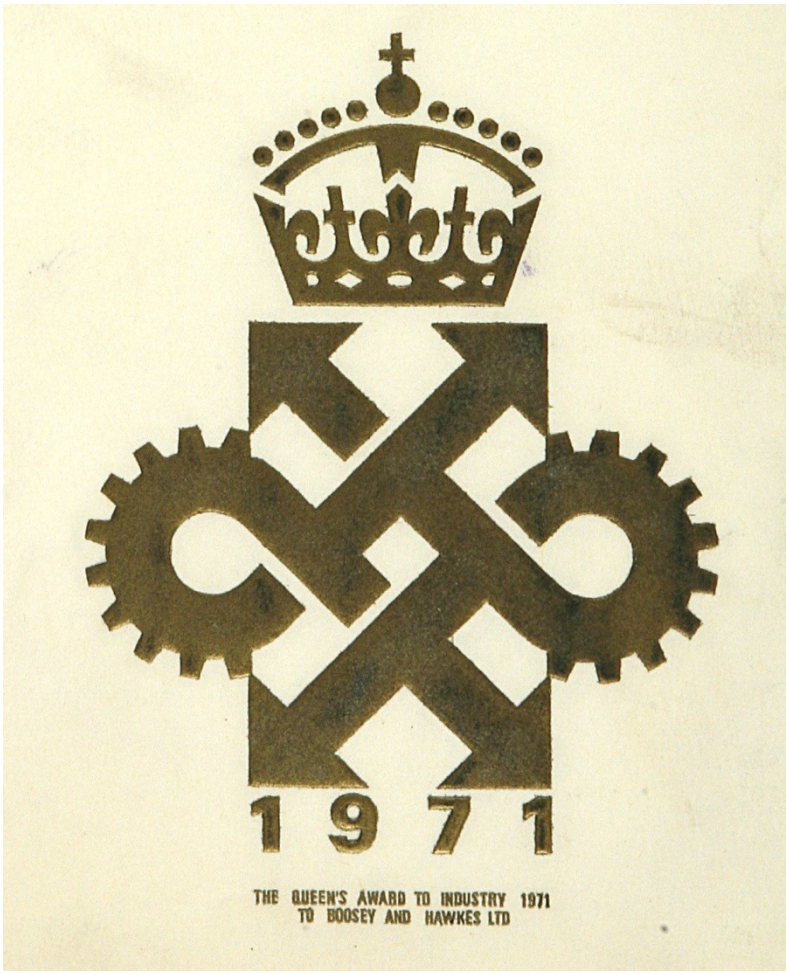


Figure 6-1 The Queen's Award to Industry, embossed on a Boosey & Hawkes catalogue c. 1971. B&HA, GB HM, E82.206.

These years saw B&H maintain strong links with high-profile clarinettists, who endorsed both top range models and more affordable instruments. These connections are evident in marketing material during this period, and from personal communication between players and B&H staff. A postcard from Jack Brymer to Eric McGavin describes Brymer's experiences on tour and his apparent promotion of B&H clarinets to other players:

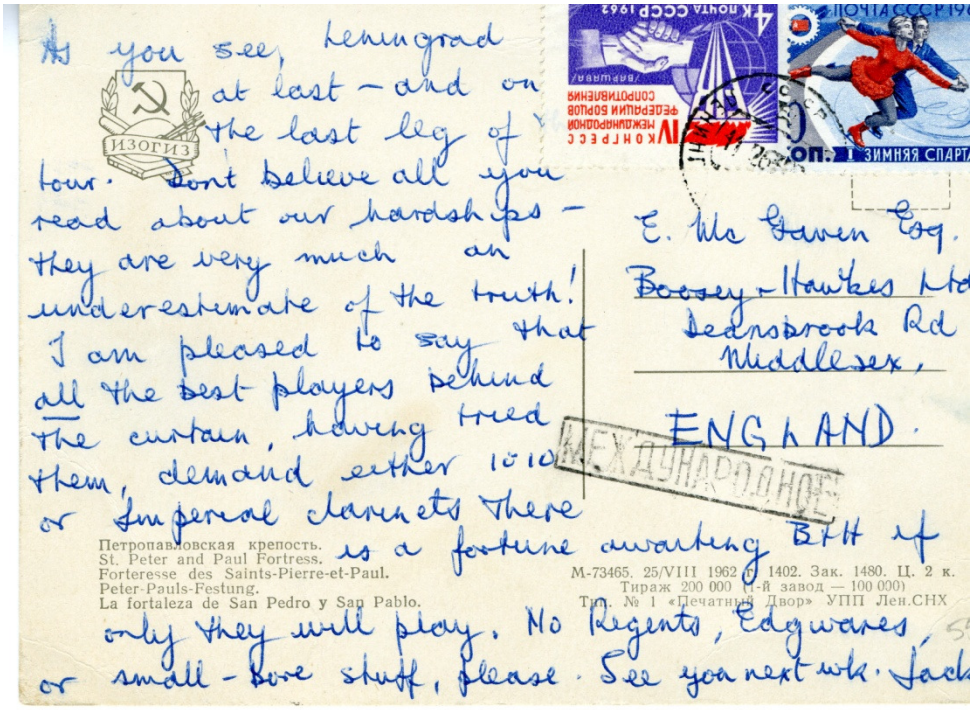


Figure 6-2 Postcard from Jack Brymer to Eric McGavin. McGA, GB HM, E550.

Various other notes and memos found amongst Eric McGavin's papers indicate that he put a considerable amount of effort into fostering these relationships.[466] Another influential 1010 player during this time was Thea King, the pupil and subsequent wife of leading English clarinettist Frederick (Jack) Thurston. King used a pair of pre-war 1010 clarinets when she was a student at the RCM. After Thurston died, she also used his 1010s though with her own mouthpiece. One of King's 1010s had the serial number 31185, dating it from 1934, and making it a very early example of this model. She was exposed to the new French Buffet clarinets through young students she was coaching, and became very interested in these instruments. During an intensive sales drive by Buffet she decided to take the bold step and changed instruments in 1975.[467] This sales drive was co-ordinated by Alan Lucas, who was in charge of Buffet UK in the 1970s, and allegedly involved pairs of R13 clarinets

[466] Various un-catalogued items, McGA, GB HM.
[467] Pamela Weston, *Clarinet Virtuosi of Today* (Egon, 1989). p. 161.

being given on approval to high-profile performers.[468] If King had expressed interest in Buffet clarinets she would probably have been a prime target for a complementary pair. This transition by a high-profile exponent of B&H clarinets to the new French Buffets may have influenced other players to abandon their 1010s in favour of R13 Buffet clarinets. However, clearly the general shift was already in motion as it was through being exposed to the French instruments used by her pupils that King first began to take an interest in using Buffets.

The visible presence of B&H in the world of music education was another key feature of company policy during the 1960s and 70s. As has been shown above, the development of music in schools was a prominent aspect of musical life in Britain, and presented new challenges to instrument manufacturers. B&H's range of 'affordable' clarinets continued to be manufactured in large numbers, and greater emphasis was placed on the marketing of these instruments. B&H also manufactured Dolmetsch recorders, which were again aimed at the education market. Other educational instruments and resources that were advertised by Boosey included Buescher brass and woodwind instruments, Beverly drums and Harmony guitars. These were not manufactured by Boosey (the firm merely acted as distributor), but according to advertisements they were available exclusively from Boosey & Hawkes. There was also a clear desire on Boosey's part to appear 'in touch' with music education of the time, as adverts highlight the ARP synthesiser range: 'truly music education of the 1970s.' It was not just instruments that B&H provided however; on 19 November 1973, a party of schoolchildren arrived at the Edgware

[468] "International Clarinet Association article on Peter Eaton clarinets and mouthpieces," 2000. Reproduced at http://www.eatonclarinets.freeserve.co.uk/article.html (accessed 09.08.12). and Andrew Roberts, "Interview with Chris King" c. 2009. http://www.theclarinet.co.uk/articles/chrisking2.shtml (accessed 09.08.12).

factory for a routine schools' visit, and returned to school with a 39-seater bus presented by B&H. The school had approached various companies for funding for a school bus, and with some extra money in the publicity allocation, B&H decided to grant the school's request. The bus was a mobile B&H advertisement, as it was decorated with images of instruments, the company name and other musical images. A further benefit to B&H was that a short story about this act of generosity appeared in *Music Teacher* magazine, clearly raising the profile of Boosey & Hawkes as a music education supplier and supporter.[469] Much of the impetus for the connection with the education business came from self-styled Education Adviser to B&H, Eric McGavin, who built up this side of the company's outreach.[470]

However, for many years the evident conflicts that arose from attempting to turn a small craft-based industry into an outfit for mass production continued to cause difficulty for the instrument-making side of the business. Though B&H had continually had success with its top range clarinets, many problems arose as a result of producing large quantities of student instruments. In order to compete with manufacturers from Japan, B&H's prices on these models had to remain low, meaning that profit margins were very small. So much of production was devoted to these instruments, however, that the financial imbalance began to increase. Added to this was the fact that players found the new Japanese instruments to be more reliable: 'When you took a Japanese instrument out of its case you could be 99% sure that it would work. With a B&H instrument, that figure dropped to 80%, and when changes or spare parts were needed you could be waiting months not weeks'.[471] The success

[469] Dick Sadleir, "Boosey & Hawkes present school bus", in *Music Teacher*, January 1974. p. 23.
[470] See Strauchen-Scherer and Myers, "A Manufacturer's Museum: The Collection of Boosey & Hawkes." pp. 156-160 for more information on Eric McGavin.
[471] An unnamed retailer, quoted in Wallace, *Boosey & Hawkes: The Publishing Story*. p. 166.

of Japanese-made clarinets – as with other goods manufactured in Japan – can be attributed to 'advanced technology and production skills, and the introduction of new products and superior management and organisation methods'.[472] Such obvious advantages, in tandem with cheaper labour, meant that Japanese manufacturers were able to produce reliable student instruments more cheaply and efficiently than B&H.

In order to address the increasing losses made by the instrument-making side of the business, Michael Boxford was employed as factory manager in 1980.[473] He had previously been employed by Yves Saint Laurent, where he claimed he was increasing sales by 50% a year.[474] Clearly B&H hoped that Boxford would be able to exert a similar influence on instrumental sales. Boxford had no experience with musical instruments whatsoever, having come directly from the world of fashion. B&H's management evidently believed that knowledge of the music industry was irrelevant; a proven track record in sales was the only requirement. This takes the idea of clarinets as commodities to something of an extreme, when compared with the level of musical expertise of earlier factory managers such as David James Blaikley. Management's decision to employ Boxford demonstrates emphasis on profitability over being in touch with the needs of musicians. Boxford's two-fold solution was to extend the product range by buying up top instrument brands – such as Buffet Crampon in 1981 – and to encourage the staff to operate on a more international level, rather than focusing on their own immediate locales. Though in principle these ideas appeared sensible, neither proved to be the success that Boxford had envisaged. Whilst instrumental sales did increase initially, this came at a cost,

[472] Roger Strange. *Japanese Manufacturing Investment in Europe: Its impact on the UK economy.* (Canada: Routledge Inc., 1993). p. 385.
[473] *Boosey & Hawkes: The Publishing Story*. p. 165.
[474] *Boosey & Hawkes: The Publishing Story*. p. 166.

and perhaps revealed some naivety on Boxford's part with regards to musical instrument manufacture: 'What I had not predicted was the way the instrument business consumed cash'.[475]

Boosey's purchase of famous clarinet maker Buffet Crampon was inspired by the realisation that though the top range 1010 clarinet was popular in Britain and Northern Europe, players elsewhere preferred the greater control of tuning offered by narrower-bore instruments such as those manufactured by Buffet, and British clarinettists were starting to follow this trend too.[476] B&H was attempting to accommodate these different preferences, and thus increase its customer base. Buffet clarinets continued to be manufactured in Paris, however, and were not integrated into B&H production. This meant that the two companies could still be seen by customers as entirely separate, allowing for a total shift in preference from Boosey to Buffet. Richard Carrée's innovative R13 clarinet was beginning to dominate the market. This clarinet had a considerably narrower bore (14.65mm) than the 1010, and featured Carrée's innovative 'polycylindrical' shaping to the bore in the expansion at the top joint. Gibson claims that this discovery meant that 'the instrument could produce mellower tones while preserving most, if not all, of the better modal frequency ratios of clarinets having smaller bores'.[477] These clarinets were thought to be considerably easier to play than 1010s, especially in terms of controlling the tuning, which was difficult on the 1010 because of the wide bore. Though teachers who had played on 1010s for years had adjusted their techniques to suit these clarinets, a new generation of students was drawn towards the Buffet

[475] Michael Boxford, quoted in *Boosey & Hawkes: The Publishing Story*. p. 167.
[476] *Boosey & Hawkes: The Publishing Story*. p. 166.
[477] Gibson, *Clarinet Acoustics*. p. 36.

clarinets, which were ultimately easier to play accurately. Gibson cites this as the primary reason for B&H having to cease the manufacture of clarinets, though it is clear that financial problems initially stemmed from the small profit margins of the student models which dominated production.[478]

In order to keep instrument prices down, B&H was having instruments manufactured across the globe, taking advantage of cheap labour in other countries. Brass instruments came from the Czecho-Slovak Socialist Republic (CSSR), German Democratic Republic (GDR) and Italy. In terms of woodwind, Lafleur clarinets came from the CSSR, as did bassoons and Powertone saxophones. Lafleur saxophones came from the GDR. A new line of flutes came from Taiwan, and some bassoons and saxophones were from the USA. Guitars were coming from Korea, Japan and the CSSR. A range of bowed string instruments was manufactured in the CSSR and Hungary, with some violins made in China.

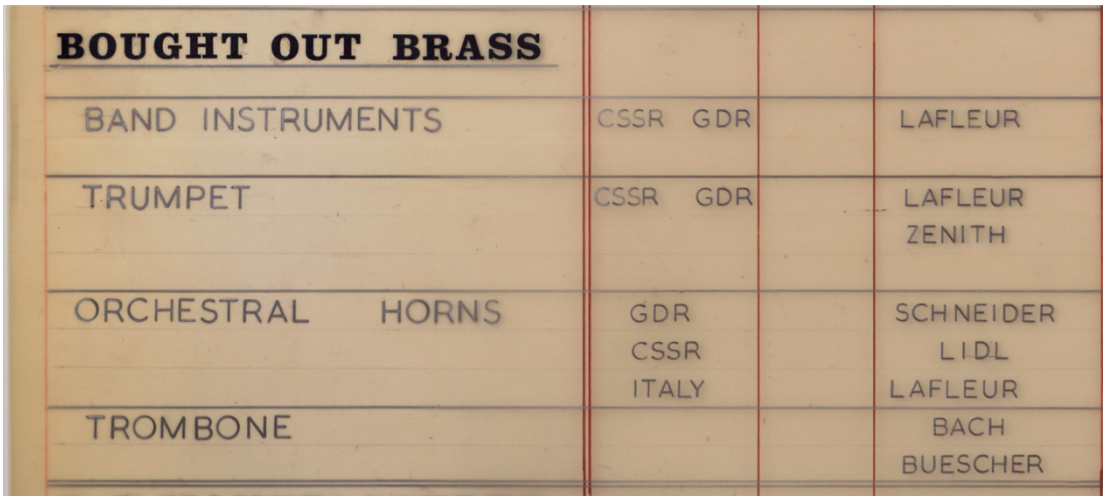
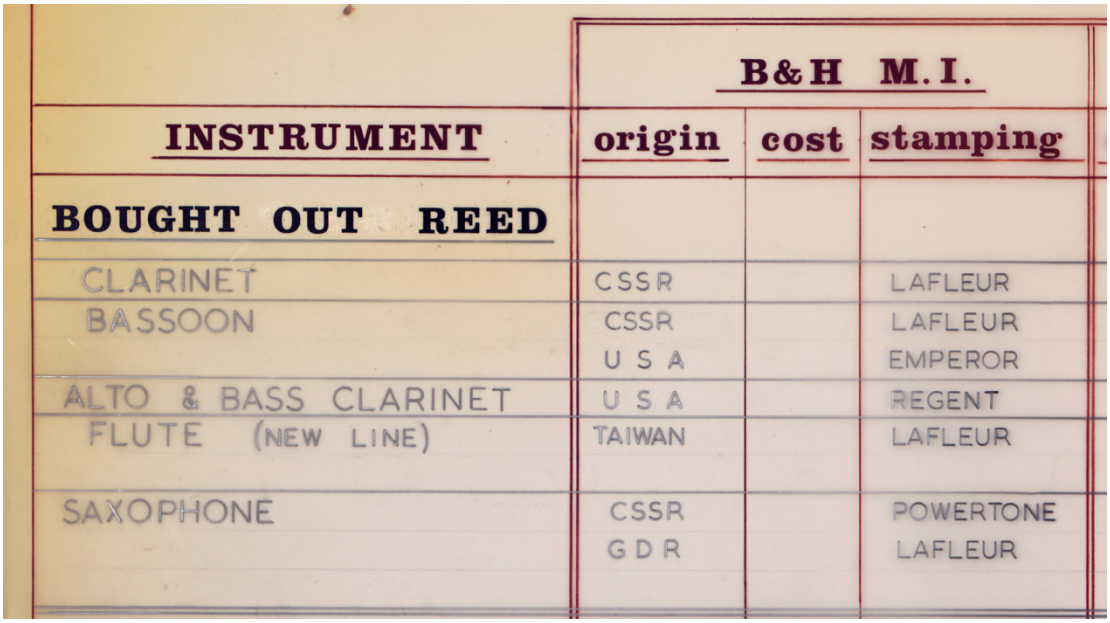


Figure 6-3 Comparison of catalogue brand names and source of supply. B&HA, GB HM. E93.730. Photo by permission of the Horniman Museum, London.

[478] *Clarinet Acoustics*. p. 29.



INSTRUMENT	B&H M.I. origin	cost	stamping
BOUGHT OUT REED			
CLARINET	CSSR		LAFLEUR
BASSOON	CSSR		LAFLEUR
	U S A		EMPEROR
ALTO & BASS CLARINET	U S A		REGENT
FLUTE (NEW LINE)	TAIWAN		LAFLEUR
SAXOPHONE	CSSR		POWERTONE
	G D R		LAFLEUR

Figure 6-4 Comparison of catalogue brand names and source of supply. B&HA, GB HM. E93.731. Photo by permission of the Horniman Museum, London.

By 1985, in spite of Boxford's effort, the instrument company – though now significantly expanded – was still failing to make projected profits. This, in turn, placed increasing strain upon the publishing company, meaning that Boosey & Hawkes was in a very difficult financial situation in the mid-1980s.[479]

6.2 Top Range Clarinet Models Manufactured Throughout the Period

All of the top range clarinets manufactured by B&H during this period are shown in large table 6.1. The model or part numbers used to identify all of these instruments in both workshop order books and catalogues changed during this period. A complete re-numbering took place between 1974 and 1975. Models were renumbered as shown below.

[479] Wallace, *Boosey & Hawkes: The Publishing Story*. p. 181.

Table 6-1 Old and new model numbers from 1975.

Old Number	New Number
1010	530
1540	520
1541	521
1012	532

Two models clearly dominated production throughout this period, the 520 and 530, accounting for 19.71% and 17.76% of the total output respectively. These two model numbers were those given to the Imperial and Symphony models in the re-numbering of models that took place in 1974. The other two models manufactured in large quantities were the 1540 (representing 10.18%) and the 1010 (9.61%), again the Imperial and Symphony with different model numbers. In both cases, as with previous periods, the Imperial accounts for a higher proportion of the total output than the Symphony. In the final decades of clarinet making at B&H the number of other top range models continued to decline, and both Imperial and Symphony models became increasingly more standardised.

6.2.1 The Symphony 1010

As always, this clarinet is marketed by B&H as the most prestigious of the models on offer. A B&H catalogue from 1971 describes it as:

> the Clarinet of Distinction. ... The Symphony 1010 clarinet, Boehm System, is played by almost every symphony clarinettist in the British Isles and is extremely popular throughout the United Kingdom and the rest of the world.[480]

The significant organological development to the 1010 during this period was the addition of the Vent F♯ action invented by Geoffrey Acton:

[480] B&H Woodwind Catalogue, 1971.B&HA, GB HM, p. 2.

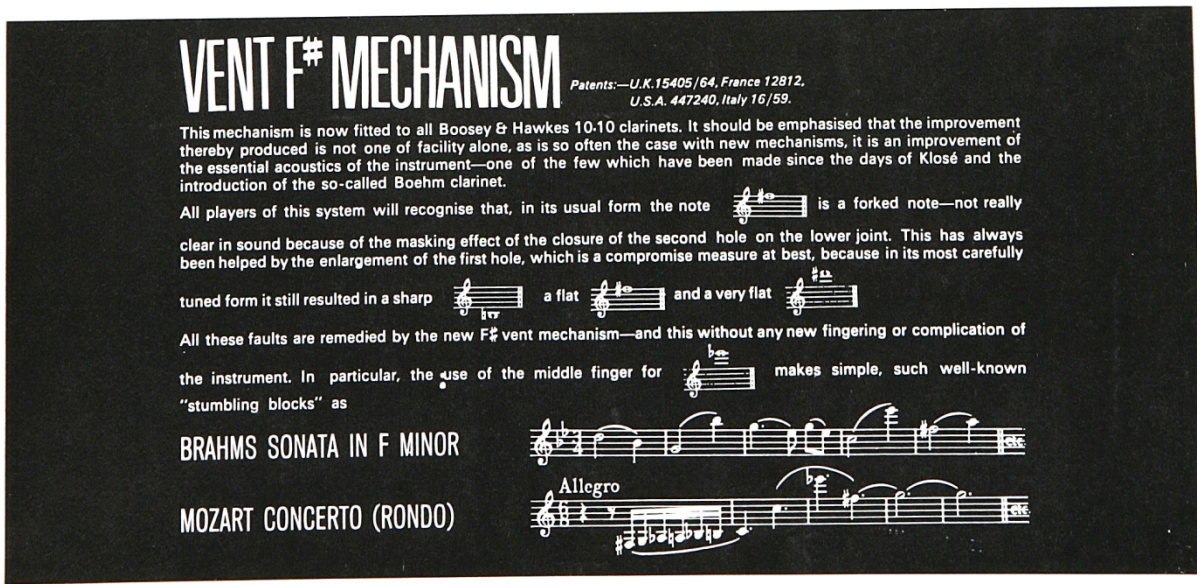


Figure 6-5 Explanation of the Acton Vent. B&H Woodwind Catalogue, 1971. B&HA, GB HM, E82.206.0080. p. 3.

Other basic organological features of the 1010 are described in the catalogue: the bore is 0.600"; a mouthpiece with a parallel internal tone chamber is supplied with the instrument; all 1010s are tuned to the international standard of pitch; each one is made from selected and fully seasoned African blackwood (Dalbergia Melanoxylon); all tips are sterling silver, and the keywork mechanism is heavily silver plated.

In contrast with earlier periods, the Symphony 1010 was advertised as only being available in wood, rather than also being offered in ebonite. As we have seen, ebonite 1010s have gradually declined in numbers, but this is the first period where none were manufactured at all. This is yet further evidence of B&H adapting to the changing consumer base resulting from the decline of military music making. It is also revealing of the growing prejudice amongst clarinettists against the use of materials other than wood: seemingly B&H felt that either there would be no demand for such a prestigious instrument in plastic or ebonite, or that it would

somehow tarnish the image of the 1010 if it were advertised as being available manufactured from an 'inferior' material. Four experimental 1010s were manufactured using glass nylon in c. 1974 (Serial numbers 428313-428316), though this was clearly not adopted as a regular material for manufacture as it does not appear with any other Symphony clarinets in the records, nor is it listed in catalogues as being available for purchase.

The Symphony was available in both A as well as B♭ throughout this period, firstly identified by the model number 1012, then later by 532. As the 1012 it accounted for 4.73% of the total output of 'top range' clarinets, and as the 532, 8.83%. This indicates a continued, if not growing, demand for Symphonies in A, and suggests continued amateur orchestral, as well as professional use of this model.

It is said that 1010s from the 1930s were 'better' instruments than those from later periods. Despite the addition of the Acton vent – a design improvement – it is clear that less individual, specialised attention was paid to 1010 clarinets than it had been in earlier periods. Oral history research indicates that upon being sent to the tuning room, imperfections in tuning were 'corrected' by altering the tonehole undercutting and other modifications to the bore.[481] Done without great care, this would have created further tuning problems across the instrument. It may have been this approach to finishing an instrument, combined with the greater amount of automation that was taking place in clarinet manufacturing that led to some clarinettists being unhappy with later models.

[481] Colin Bradbury, in conversation with the author, 20 May, 2011.

Tuning problems would have always occurred with the 1010, because the large bore makes controlling the tuning between registers, or across the twelfths, difficult. Gibson's experiences with 1010s from this period prove that tuning would have been an issue: 'my 1969 had such incredibly undersized middle twelfths that they could not have been played in any respectable symphony orchestra' – he claimed that the B3-F5 twelfth was flat by six cents.[482] The ever-increasing expectations of tuning in musical performances would have meant that the popularity of the 1010 inevitably decreased, as players wished to use an instrument which would be easier to play in tune.

6.2.2 The Imperial

At the beginning of this period, wooden Imperials appeared under the following model numbers: 1539 (A), 1540 (B♭), 1541 (E♭). Initially the ebonite Imperials were numbered 1596 (B♭), 1597 (A) and 1598 (E♭), and later 521 (B♭) and 541 (E♭). Records show that after the models were renumbered there were no more ebonite Imperials made in A. It is clear that in this period the wooden instruments were made in much larger numbers: the 520 accounts for almost 20% of total output, whereas the 521 only around 5%.

The catalogue description of the Imperial lists the following organological features: a bore of 0.593" (narrower, of course, than the 1010); a heavy bell which gives greater sonority in the lower registers; a specially designed barrel which stabilises the higher register; a body, bell and barrel all manufactured from selected and fully seasoned African blackwood. The catalogue also points out that the Imperial was designed to be used with a conical-bored mouthpiece (rather than the

[482] O. Lee Gibson. *Clarinet Acoustics.* p. 9, p. 34.

less common parallel bored one issued with 1010s). The keywork is manufactured using the cold forged process, and is made of nickel silver and heavily silver plated. Many of these listed features differ distinctly from those of the 1010, showing that the image of the Imperial that B&H wished to project was of a very different clarinet. This marketing strategy would have been employed to appeal to those 1010 sceptics who found the wide bore or the cylindrical mouthpiece difficult to use. B&H was therefore trying to appeal to as many top-range players as possible, whilst still offering a very streamlined range of products at this level.

The fact that no A Imperials in ebonite were manufactured during this period indicates that this material had fallen out of favour with orchestral players of any description.

6.2.3 Other Clarinets in the Higher Price Range

An Imperial bass clarinet was also listed in the 1971 catalogue. The description claims that this clarinet was 'an instrument of outstanding merit'. The clarinet was craftsman-made throughout, the mechanism made from high content nickel silver and heavily silver plated. The mechanism was a conventional Boehm system set-up, with a double speaker key to ensure smooth technique. The clarinet came with a low E♭ as standard, and an extension to low C could be added at the customer's request. The bass clarinet was available in wood 'or other conventional materials upon application'.[483]

The 2000 model appears a number of times during this period. This was manufactured in both A and B♭, and is always recorded in a small batch (in the manner of other top range clarinets) rather than the very large batches seen with the

[483] Boosey & Hawkes Woodwind Catalogue. 1971. B&HA, GB HM. p. 5.

affordable clarinets. The 2000 was always exported, however, and is not listed in any British catalogues. When a destination is listed for the exportation, it is generally Canada or the U.S.A. This indicates that the 2000 was manufactured purely for this purpose, as was the case with some of the less expensive models.[484]

A very small number of clarinets with 18 or 19 keys were made during this period. The fact that these instruments were never made in large quantities by B&H is further evidence that there was less emphasis on providing bespoke instruments to order – as these extra keys were always fitted at the customer's request.

A pair of 926 clarinets was made in 1969. This was generally the model number associated with the Imperial model. They were clearly intended to be sold as a pair, with consecutive serial numbers (a rarity at this stage in B&H's history), as both clarinets are listed in the same way and are the only two 926s listed in this period.

Some of the other models listed in the table are not actually top range instruments, but clarinets from the affordable range that were manufactured as a one-off, generally for a trade fair or because of a bespoke order. Clarinet 545232 is one such example. It is a 516 model, generally the number attached to an Emperor clarinet in A. These would usually have been manufactured in small batches, but this one appears as an individual instrument, described as 'special for Frankfurt Fair'.[485] Clearly this instrument was given special attention, as it was to be taken to a trade fair. Clarinet 477912 is a 501 model, which usually indicates a Regent, Edgware or a Sonata. In this case, however, the only description of the instrument reads 'Mr R

[484] See description of 1-10 and 2-20 clarinets on p. 268 below.
[485] Now known as Musik Messe, this is currently the largest international trade fair for musical instruments and has been in existence since the early 1980s.

Sheridan'. Sheridan, a senior manufacturer at B&H, may have worked on this instrument for a special occasion.

6.3 Affordable Clarinet Models

The range of Affordable Clarinets was also streamlined considerably during this time. The number of distinct model types is significantly smaller than in the previous period, and models are standardised much more than they had been before. The affordable clarinets that were on offer by 1971 are shown in large table 6.2.

In 1974, all of the mass-produced clarinets were given new model numbers. This was a simplification of the numbering process in place until this point, and from 1974 onwards there were considerably fewer model numbers, or variations of model numbers. In the years 1965-1974, models often had a three digit number with a three digit suffix after a hyphen e.g. 862-105, 860-109. This died out gradually over the years, and ceased all together by 1974. The mass produced clarinet models were renumbered as follows:

Table 6-2 New model numbers of mass produced clarinets, 1975.

Original Number	New Number
862	501 (then 502)
861	519
858	515
816	507
857	516
864	506

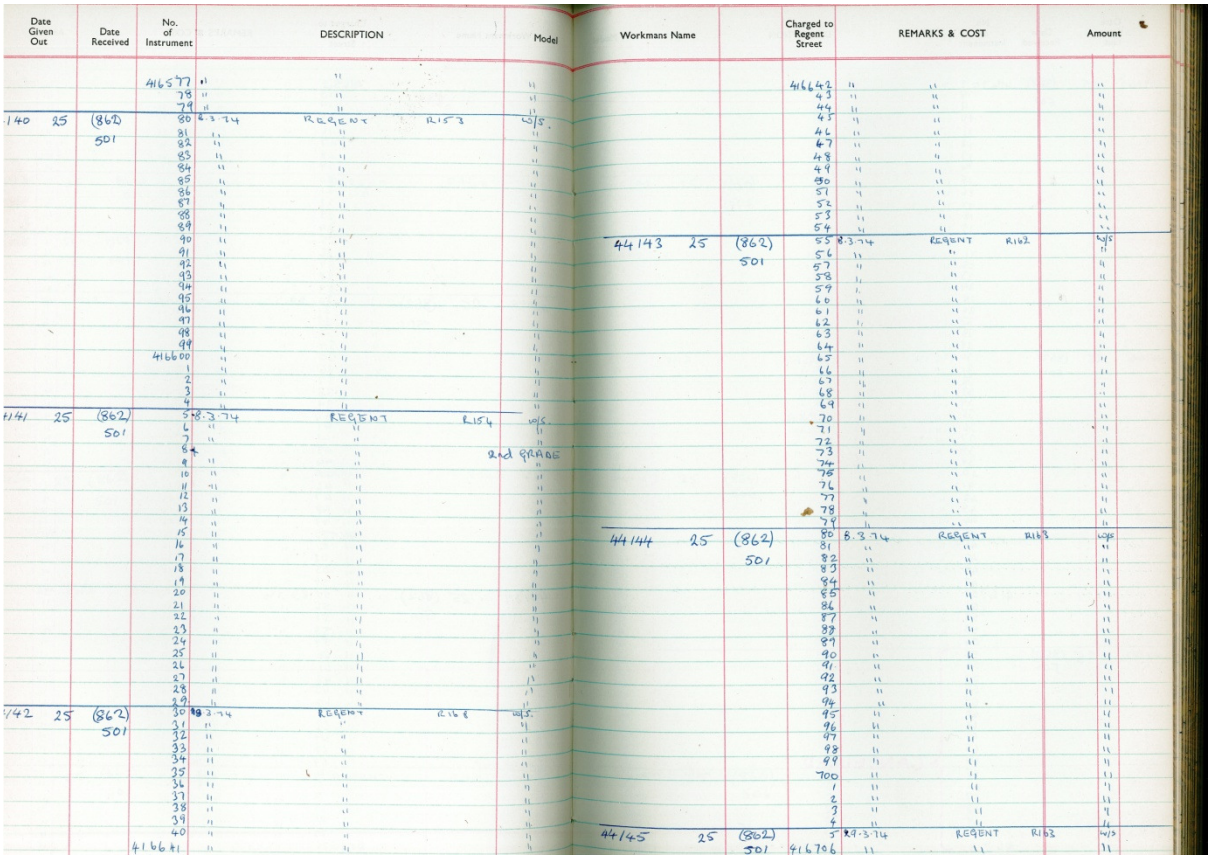


Figure 6-6 WOB showing old and new model numbers recorded together. The old numbers are in parentheses.

The Emperor

The catalogue describes the Emperor clarinet as acoustically similar to the Imperial. It was available in African blackwood, and also sonorite. Clarinets in both A and B♭ were available, and could be purchased individually, as a matched pair, or as a 'complete outfit'. The outfit contained a case, mop (for cleaning the clarinet), reeds and cork grease (for greasing clarinet joints).[486] From these specifications it can be seen that this model was marketed as being a very good affordable instrument – through being likened acoustically to one of B&H's professional models, and also being available in African blackwood, which was the material preferred by professional players. The Emperor was clearly also seen to be a suitable choice for

[486] Boosey & Hawkes Woodwind Catalogue. 1971. B&HA, GB HM. p. 7.

amateur or student players, as evidenced by the considerably lower price, but also the fact that it was available as an outfit: it is unlikely that a professional player would not already have a case, his own favourite brand of reed and cork grease, and a well used mop.[487]

The Edgware

The catalogue suggests that the Edgware was 'perhaps the world's most popular student clarinet'. Again a comparison with the Imperial is made: according to the catalogue description the Edgware is 'a facsimile in acoustic design of the "Imperial" 926'. The keys of the Edgware were made from high quality nickel-plated nickel silver. The clarinet was available in A and B♭, and manufactured from an unspecified wood. As with the Emperor, the Edgware was available for purchase as a complete outfit, again indicating that it was aimed at amateur and student players rather than professionals.[488]

The Regent Sonorite

According to the 1971 B&H Catalogue, the Regent Sonorite was 'without any doubt the most efficient clarinet available'. Again the written description states that the acoustical design of the clarinet is a faithful copy of one of B&H's more highly priced clarinets. Though there are no direct quotations, the catalogue claims that the Regent Sonorite is recommended by leading teachers and professionals in all parts of the world. The Regent was available in B♭ but not A, indicating that this was purely a student or amateur model, as professional and even advanced student players would be required to own an A clarinet also. Lower pitched Regents were available; both an alto in E♭ and a B♭ bass. The B♭ soprano clarinet could be

[487] B&H Woodwind Catalogue, 1971. B&HA, GB HM. p. 7.
[488] B&H Woodwind Catalogue, 1971. B&HA, GB HM. p. 9.

purchased as a complete outfit. As well as sonorite, the Regent was also manufactured from an unspecified wood.[489] This clarinet was publicised by Jack Brymer, with his photograph used in advertising material, and also him speaking about the instrument on an advertising record from 1967.[490]

Besson Clarinets

Boosey manufactured and sold instruments under the name of Besson. The clarinets on offer were the Stratford, the Besson "35", and the Besson "55". Contrary to its name, the Stratford B♭ clarinet could be purchased in either A or B♭, though only the B♭ was available in both wood and sonorite; the A only came in wood. The B♭ could be bought as an outfit, and matched pairs of wooden Stratfords were offered. This indicates that this model, though primarily aimed at amateur/student players, was intended to be used by those serious enough about playing to need a pair of matching clarinets, i.e. those who were playing in orchestras.[491]

According to the Besson catalogue, the "Besson 35" was 'The clarinet of tomorrow for the Musician of today'. Manufactured from sonorite, it was only available in B♭, and could be purchased as an outfit. This was clearly an instrument aimed at the beginner player, as no option for wood, or an A clarinet in this range, is offered.[492] The Besson "55" was available in wood and sonorite.

Lafleur Clarinets

B&H also sold clarinets under the name of Lafleur. Some other Lafleur instruments sold by Boosey were manufactured abroad (including many of the Brass Lafleur models), but the clarinets were manufactured in Britain. The Lafleur range of

[489] B&H Woodwind Catalogue, 1971. B&HA, GB HM. p. 12.
[490] Advertising Record, "Boosey & Hawkes Sonorite B♭ Clarinet". Narrator Jack Brymer, music by BBCSO, Jon Kelley, Jack Brymer. 1967.
[491] Besson Woodwind Catalogue, B&HA, GB HM. n.m.n. p. 2.
[492] Besson Woodwind Catalogue, B&HA, GB HM. n.m.n. p. 2.

instruments was marketed at the educational sector. A Lafleur in A was available, and Lafleur clarinets could be manufactured from wood or ebonite.

1-10, 2-20 and 4-20.

These models seem to have been manufactured exclusively for Canada, the USA and Australia. Almost every time they are listed in the WOBs, they are described as being 'For Canada' or 'For USA'. They have not been found in any British B&H catalogue, also indicating that they were only marketed elsewhere too. The part numbers linked to these models are the same as those linked to many of the models that were marketed in Britain.[493] For instance the 2-20 is associated with the model number 512, which was also applied to the Edgware and the Concord(e). It was obviously felt that the associations of 'Edgware' and 'Concorde' would not be sufficient to market these clarinets in the USA and Canada, so, though they followed the same acoustic design, they were given different names for marketing to this different customer base.

Model / Part Numbers

It is evident from large table 6.2 that many of these apparently different models shared identical model or part numbers. This indicates that the common conception of many of B&H's affordable clarinets being 'Edgware Clones' is, in this instance, an accurate one, as apparently diverse clarinets were essentially the same basic instrument, with different stampings applied. The number 515 is applied to at least six different clarinets: the Emperor, Regent, Academy, Concord, Concerto and Graduate. Eighteen different stampings are listed under the model number 862. Similarly, one individual stamping – such as Regent – is often associated with more than one model number. This is because – as has always been the case at B&H –

[493] See p. 268 below for discussion of duplicated models.

model numbers refer to material of manufacture and sounding pitch, so a Regent clarinet in A and one in B♭ would have separate numbers.

This clearly had the effect of making the product range at B&H look considerably larger than it was in reality, as there were several types of clarinet that were actually the same model. From a marketing perspective, however, the large range of instruments available would have at least given the impression that there was a model to suit every type of player.

Rudall Carte Clarinets

In addition to the mass produced clarinets listed above, a number of other models are listed in the records from this time as having been 'ordered' but never completed. They are not explicitly cancelled, but have no 'Date Completed' or D.O.S. number, implying that they were not actually manufactured, or bought in from abroad. There is, however, an extant 501 model Rudall Carte clarinet from this time, stamped 'Made in England', which indicates that at least some of the Carte clarinets were manufactured in Britain.[494] Carte clarinet models included: the 502-RC Graduate, 511-RC Graduate, 510-RC. The 510 also appears as a 'Super Graduate' and the 511 as an A Super Graduate. All of these were listed between serial numbers 523225 and 537580. All the RC model numbers refer to the clarinets sold under the Rudall Carte label, listed in Carte catalogues from the time. The Catalogue claims that these clarinets were favoured by many leading teachers, and that they were used by amateur players well beyond the beginner stages.

[494] B♭ Clarinet, stamped 'Carte/Made in England', B&H, England, 1982. GB HM, 2004.1001:422.211.2.

6.4 Trends and Developments in Clarinet Manufacturing During this Period

6.4.1 Materials for Manufacture

It is clear by this point that wood (specifically African blackwood) was seen as the material of choice for top range clarinets. This is evidenced by B&H publicity, where readers are assured that other, cheaper, materials will sound 'just as good' as wood. The 1010 – B&H's flagship clarinet – was indeed only available in wood. The other top range clarinet, the Imperial, was initially available in both materials. However, during this period many more were manufactured in wood. Between 1965 and 1974, wood and ebonite manufacturing figures for the Imperial were as follows:

Table 6-3 Total numbers of wood and ebonite Imperials between 1965 and 1986.[495]

	Wood	Ebonite
B♭	3071	1158
A	721	16

No ebonite Imperials in A were manufactured after 1971. Top range clarinets were not manufactured in any other materials, apart from a very small number of experimental glass nylon clarinets.

E♭ clarinets during the period were manufactured in both wood and ebonite, with a slightly larger quantity of ebonite clarinets (274 wood to 294 ebonite). Bass clarinets could be manufactured from wood or ebonite, and some are listed as simply 'plastic'. Again there was a slightly higher number of bass clarinets in ebonite or plastic (thirty-seven) than wood (eight). Both bass and E♭ clarinets would have been bought for orchestral and band usage, suggesting that though ebonite would probably not have been required by many orchestral players, it would have been perhaps more desirable for band-based clarinettists.

[495] Based purely on clarinets with model numbers 1540, 1539, 1596, 1597, 520, 521 and 522, not any others linked to the Imperial name.

Affordable clarinets were made either from wood or from moulded plastic. Some wooden clarinets are specifically described as being made of African blackwood (the Emperor), whereas in other cases the wood is unspecified. Many non-specific 'plastic' clarinets are listed, though some are shown as being made from 'sonorite'.[496] A number of models were available in either material, including the Regent, Edgware, Lafleur, Stratford, Emperor and Rondo. It was generally the supposedly higher end affordable clarinets that were available in wood, such as the Emperor and the Edgware. In the Besson range of instruments, the bottom-of-the-range "35" was only made from plastic, reinforcing this hierarchy of materials.

6.4.2 Sounding Pitches

All of the top-range models – the 1010, Imperial and 2000 – were available in both A and B♭, as would be expected for models that were designed for professional use. The Symphony range did not include clarinets in any other sounding pitch. Both E♭ and bass Imperials were available, however. Presumably a professional player who preferred to play on English clarinets might have used an Imperial E♭ alongside a pair of 1010s.[497] In total there are sixty bass clarinets listed in the records, some linked to the Imperial range and others with no model name. 568 E♭ clarinets were manufactured during this period, but only one alto clarinet was made.

Though the vast majority of affordable models were B♭ instruments, some of the models were also available in A. These included the Westminster, Lafleur, Edgware, Stratford and Rondo. These were all aimed at higher level students and

[496] See p. 230 for more information on sonorite.
[497] This would not be seen by most players to be as problematic as playing on a mismatched A and B♭ instrument, where the general feeling is that the closer the pair is matched is the better. (Hence the notion that the ideal is to have a pair of clarinets with consecutive serial numbers.)

very keen amateur players, as only players who were playing in orchestras would have needed to have a pair of clarinets: those who simply played alone for pleasure or in school/community wind ensembles would have had no need for an A instrument. There are, however, no bass, alto or E♭ clarinets. These were not manufactured in large numbers at B&H during this period anyway, but clearly there was felt to be no need for affordable versions of these models.[498] The Emperor, Edgware and Stratford were advertised in the catalogue as being available in a 'matched pair', supposedly two clarinets (A and B♭) chosen specifically so that they were as similar to each other as possible.[499]

The choice of sounding pitches available in each model range gives a good indication of the type of player that B&H felt was suited to the range in question. Obviously all of the higher end models, both in the top bracket and in the more affordable one, were available as both A and B♭ for orchestral use. This included the Symphony 1010. The Imperial was perhaps thought equally suited to orchestral use, but also appropriate for playing in bands, as it was in this range that E♭s and basses appear, both of which would equally find a home in the orchestra or band setting. Lower end affordable clarinets, such as the Besson "35", were only manufactured in B♭, indicating they were thought only suitable for basic level players. The very small number of basses and altos is a further indication of the decline in military and other band music making, as it would be in these ensembles where these instruments –

[498] This could potentially have been a missed opportunity for Boosey, as the developing advanced youth music-making in England might well have provided a market for more affordable bass and E♭ clarinets for use in ensembles such as the National Youth Orchestra, or the various county youth orchestras.

[499] Clearly these instruments, though sold as a 'matched' pair, would not have had consecutive serial numbers as they would have been quantity produced in large batches of clarinets with the same sounding pitch – a batch of several B♭s with consecutive serial numbers or one of A clarinets. Batches always had consecutive serial numbers.

especially the alto clarinet – would be in greater demand. The one alto that was made during this period was sent to America, so was clearly not intended for use in Britain at all.

6.4.3 Key Mechanisation

By now, the standard Boehm system of 17 keys and 6 rings was *de rigeur* on all clarinets made at B&H. The Symphony 1010, however, had the added 'Vent F♯ mechanism', noted above, which, according to the catalogue, 'placed the clarinet in advance of the conventional Boehm System'.[500] This was only an addition to the basic Boehm system though, not a new system in itself. Other additional keys were added to a small number of clarinets, but this was not advertised as a customisation option in catalogues as it had been in previous periods. In total there were sixteen clarinets with extra keys: eight with 19 or 20 keys (made from wood) and eight with 18 (made from ebonite). As these options were not advertised in the catalogue, it must be assumed that these clarinets were made either at the request of a specific customer, or perhaps just a small batch was made in anticipation of such a request. As both wood and ebonite examples appear in batches of eight, it is likely that the latter situation was the case. These clarinets would no doubt have been reserved for top orchestral or solo players, as these would be the most likely customers to require an additional LH G♯/E♭ key, for instance.

6.4.4 Exportation

There are many instances in the records of clarinets being shown to have been manufactured for export. This tends to only apply to certain models. In terms of the individually crafted or top range models, the 2000 clarinet was often exported to

[500] B&H Woodwind Catalogue, 1971. B&HA, GB HM. p. 2.

Canada. The one alto clarinet, and many of the bass clarinets, went to the U.S.A., and some other bass clarinets to Canada. It is likely these clarinets would have been required for playing in wind ensembles, which were flourishing in the U.S.A. at this time. The 2000 in particular seems to have been manufactured purely for use abroad, as it is not listed in B&H publicity material from Britain.

In the more affordable range, other models were manufactured specifically for export. These included the 1-10, 2-20 and 4-40. Again many of these were destined for Canada, others for the U.S.A. Many plastic Edgwares were also exported to Canada, though these were clearly popular in Britain too. There is one mention of Australia, in connection with some plastic Oxford models, and also one reference to Russia connected to some Lafleur clarinets.[501] The continued manufacture of models specifically for export reveals that the foreign market was an important part of the B&H customer base right up until its final years.

6.4.5 Customers

B&H's marketing material shows that target audiences for clarinets continued to change throughout the last twenty years of manufacturing. The predominant trend is a continually expanding educational emphasis, with the range of affordable instruments available at B&H reaching its largest during this period. Many B&H catalogues throughout this period display whole ranges of educational instruments, not just clarinets, and some marketing material was targeted solely at this market. Certain models were publicised by B&H as being suited to student players, especially the Edgware model which was claimed to be 'perhaps the world's

[501] This seems to be such an anomaly; it is the only mention of Russia in the records for the entire period. This may mean that 'Russia' refers to something else, or that it is simply an error in the records.

most popular student clarinet'. Though the educational market was of great importance, and was one of the factors that enabled B&H to grow into the instrument producing giant it was in the 1960s and 70s, the mass production of large numbers of cheap clarinets was one of the primary causes of the company's increasing financial difficulties. In order to compete with cheap instruments coming from Eastern Europe and Japan, B&H had to keep prices as low as possible. Despite B&H's efforts to increase profit margins such as the development of the cheap material sonorite, B&H production methods and cost of labour were no match for efficient Japanese factory processes. As it was student ranges that accounted for the bulk of B&H's output, the small profit margins led to financial problems, as focus had switched away from the more profitable top-range instruments to the less lucrative educational ranges.

In the top range clarinet records, only two individual names are mentioned between 1965 and 1986: Mr R Sheridan and G Acton. These were not B&H customers, but it is thought that Mr Sheridan was a clarinet manufacturer at B&H, and the other person mentioned by name was almost undoubtedly Geoffrey Acton, who was employed at B&H from the 1950s to the 1980s. The entry relating to Acton, assigned serial number 448998 was for 'top and bottom joint replacements for Mr Acton'. Geoffrey Acton was one of B&H's clarinet designers at the time, and it is likely that these replacements were ordered specifically for him, either because he was dealing with a high-profile customer or because he was assessing some aspect of design or manufacturing quality control.

Figure 6-7 Geoffrey Acton (with pipe), Acker Bilk (left) and other B&H workers. McGA, GB HM. E435.

6.4.6 The final clarinets

1986 is usually the date given as the end of large-scale clarinet manufacturing in Britain, when, in fact, B&H's final clarinets were manufactured in July 1984. The last affordable clarinets manufactured were a group of unspecified 515s, serial numbers 574975-575024, dated 27/07/1984.[502] The last top range clarinets were 520s – or Imperial B♭s – again dated 27/07/1984, serial numbers 573795-573799. 1986 is the date usually given, as this was when B&H dismantled their clarinet production lines, sold clarinet-making tools and equipment, and officially ceased manufacture of their own clarinets.

[502] By this point in the records, many clarinets are listed purely by part number with no stamping listed.

6.5 Conclusions

Though it had been a continuing pattern at B&H, it was during this period that the tension between the old craft industry, which was where B&H began, and the modern desire for mass production on a grand scale really took its toll on the company. It is evident from looking at the numbers of top-range instruments compared with the affordable clarinets that pressure to produce large numbers of student clarinets greatly affected production at B&H. Even the top range models were given less specialist attention than previously, with the standard models being produced in batches, and the only real alteration available to these clarinets being the addition of extra keys at the customer's request, which clearly did not occur much at all during this period. There is very little evidence of instruments ever being made to order for specific customers, and when instruments are listed individually and with some detail it is usually in reference to a trade event.

This change of focus away from treating customers as individuals was coupled with two other factors. The first of these is signified by the death of Eric McGavin, who worked tirelessly both to foster positive relationships with top players such as Jack Brymer, and to encourage links with schools and other educational establishments. These links were influential in elevating Boosey & Hawkes to its status as internationally renowned musical instrument manufacturers in the 1960s, and showed a serious commitment both to customers and to using top professional knowledge to inform design. McGavin's death coincides with a decline in this work, as no real efforts were made to continue what he had begun. Though McGavin's death was clearly not the sole reason for this decline in customer focus, it was

undoubtedly a prominent factor in terms of clarinet manufacturing losing touch with important figures across the company customer base.

Management at B&H became even further removed from the music world with the appointment of Michael Boxford as factory manager. Though Boxford had a proven track record in sales, he had no working knowledge of musical instruments or of the music business as a whole. This illustrates very simply just how far Boosey's attitudes had changed since the early twentieth century, when D.J. Blaikley – acoustician and innovative instrument designer – was factory manager. Over the century there had been a total shift from valuing specialist knowledge, work with musicians and personal customer relations to a purely sales-focussed, profit-making approach. This contributed both to the declining popularity of Boosey & Hawkes clarinets, and also to the worsening situation of the company.

The 1010 cannot be held responsible for the eventual cease of clarinet manufacturing in Britain, although this is exactly what Gibson implies.[503] In its earlier years it held great appeal for clarinettists in England and abroad, but changing preferences and decreasing quality of instruments inevitably meant that its golden age was to be short-lived. The real competition at this end of the market came from Paris, in the form of Carré's Buffet R13. The major advantage of the R13 was that with a narrower bore, it was much easier to play in tune. The innovative designs, and timing of the release of this clarinet, were reminiscent of that which was evident in the early 1010 models. It could be argued that had B&H focussed on design and customer focus in the way that Blaikley had done, another 1010-type product might

[503] Gibson, *Clarinet Acoustics*. p. 29.

have originated in the B&H design offices rather than the Buffet ones. However, with a change of focus towards increasing sales and productivity, this opportunity was instead seized by Buffet, who went on to manufacture the professional clarinet that was to replace the 1010 as the model of choice for many professional players.

The decline of B&H took place against a backdrop of similar decline in industries across Britain. However, the situation at B&H could not be linked directly to the broader picture. It was not one of the companies forced into closure by rising inflation in the 1970s, and was not closed by Thatcher in the early 1980s. There was a strong pattern of industrial change taking place, though, with industry in Britain becoming much less secure than it had been. It was cheaper for many companies to manufacture goods outside the UK, which thus provided competition for firms based in Britain. B&H tried to keep prices as low as possible, in order to compete with cheap instruments from Japanese manufacturers, which drastically reduced the profit margins on the B&H student clarinets. The lack of profit from these affordable clarinets was ultimately why clarinet manufacturing at B&H ceased to be a viable operation after 1984.

7 Conclusions

7.1 Production History

One of the primary aims of this thesis was to produce detailed empirical data showing the manufacturing history of each clarinet model, from the first recorded example in the workshop order books through to the last. All of this information has been displayed in the detailed tables relating to each chapter. In the case of top-range clarinets, every model has been listed with the date and serial number of both first and last examples of each model, along with a figure showing exactly how many were manufactured in each of the chronological periods addressed in the thesis. In the case of mass-produced models, due to these records being less detailed and specific than those for the top-range models, the information available is slightly less detailed, though the years during which each mass-produced model was available have been given. This means that it is now possible to see exactly which models were available at which point during the history of B&H, and in many instances trace with great accuracy the quantities in which each model was being produced. Below is a summary of manufacturing trends observable across B&H's manufacturing time-span.

7.1.1 Key Mechanisation

When B&Co. first began to manufacture clarinets in 1879, the majority of clarinets were 13-key Albert system models. This was the key mechanisation system most popular in Britain before B&Co. commenced clarinet manufacture, and was thus the most logical one to use for their instruments. During this period Albert was working as instructor to the B&Co. clarinet designers, so his presence in the factory would also have influenced the adoption of this key system. Even as the Boehm

system became more popular, Albert system clarinets still accounted for the largest proportion of B&H's output until the onset of WWII. During the war years, Albert system clarinets became the second most commonly manufactured system after the Boehm system. After the war, a small number of simple system clarinets were still manufactured, but by this point in B&H's history the older models were clearly falling out of favour, as B&H's production focused much more heavily on manufacturing Boehm clarinets. By 1950, the manufacture of simple system clarinets at B&H ceased altogether.

Clarinets using the Clinton system and Barret system were manufactured at B&Co. and B&H between 1879 and WWII. After WWII, the Boehm system was the only key mechanisation manufactured by B&H, reflecting the general trend towards standardisation that had taken place in orchestral playing and instrument manufacturing throughout the first half of the twentieth century.

Boehm system clarinets appear in very small numbers in the early days of B&Co, at this time far outweighed by Albert system clarinets. A dramatic increase in the production of Boehm clarinets took place in 1932, when Boehm instruments accounted for 22.6% of the total clarinet output. Prior to this, less than 4% of clarinets used the Boehm system. Though Klosé's new system of keys had found success in France, it took much longer to be accepted by British players, largely due to the popularity of the Albert clarinets. With influence from players such as Charles Draper and Manuel Gomez, however, by the early 1930s Boehm system clarinets were becoming much more popular, as evidenced by the dramatic increase in B&H's manufacture of these models. When mass production began after WWII, all the mass produced models manufactured by B&H used the Boehm system. This meant that

from 1945 onwards the overwhelming majority of clarinets made by B&H were Boehm models.

Full Boehm clarinets, and those with additional keys, appear in B&H's production records from WWII onwards. These were always manufactured in relatively small numbers. After WWII, a full Boehm model – the 1549 – was listed in the records. The allocation of a specific model number to the full Boehm clarinet indicates that this mechanisation had become more popular. Previously, B&H had manufactured a small number of bespoke clarinets with additional keys at customers' requests, but not listed a discrete full Boehm model. In later decades, however, catalogues indicate that extra keys could be added to all top-range models at the customer's request, but clarinets using these extra keys were not manufactured as a matter of course. A specific full Boehm model is not listed again after the brief period post-WWII when it was evident in production records. By the final two decades of B&H's manufacturing, extra keys were not even advertised as optional additions to basic models. Sixteen clarinets with extra keys were manufactured, but these must have been requested by individual customers as they were not part of any advertised model.

7.1.2 Materials for manufacture

B&Co.'s first clarinets were usually made from either wood or ebonite, with the latter being the most commonly used. Various woods were used for clarinet manufacture in the early years of B&Co.'s operation, but African blackwood – the first recorded use of which appears in 1884 – quickly became the most commonly used wood. Cocus wood continued to be used until 1938. During the early years, ebonite instruments accounted for the largest proportion of B&Co.'s output because

the company supplied instruments to the army, who found the durability of ebonite an advantage for playing in a variety of adverse conditions. After the merger with H&S, B&H continued to manufacture more ebonite clarinets than wooden ones. The only model that was more commonly made from wood was the new Boehm system 1010 clarinet. This marked the beginning of the idea that wood is the most desirable and prestigious material for clarinet manufacture, and also that wooden clarinets were the most suitable choice for orchestral usage.

Trade sanctions and other restrictions on B&H's manufacturing during WWII saw, for the first time, a significant drop in the proportion of ebonite clarinets produced. During the war, wooden clarinets were manufactured in larger quantities than ebonite, and this trend was not reversed with the onset of peacetime. Ebonite clarinets were still manufactured in large numbers during the 1950s and 60s, and in rather smaller numbers during the 1970s and 80s. By the second half of the twentieth century there was a clear feeling that wood was the only suitable material for top range instruments, evidenced by the fact that the Symphony clarinets during the last two decades of B&H's clarinet manufacturing were only available in wood.

A small number of B&Co. clarinets were manufactured from metal, and metal clarinets continued to appear in B&H production records until around WWII. Other occasionally-used materials included Perspex (which appeared just once after WWII), and glass nylon. The focus on cheap student models in the latter part of the twentieth century gave rise to the use of various plastics for clarinet manufacture. This included sonorite, a moulded plastic developed in the 1950s, and designed to have the same acoustic qualities as hardwood.

Most clarinets manufactured before WWII are listed as having German silver keys. More expensive models had silver plated keys. During and after WWII, B&H began to experiment with other materials for clarinet keys. Nickel was first used during WWII, and applied to new, more affordable models. Mazak was used for keys on many mass produced clarinets, from the 1950s onwards. The materials used for keys were often one of the features that determined a clarinet's price.

7.1.3 Pitch Standards

British Army regulation pitch was A=452Hz in 1878, meaning that when B&Co. commenced clarinet manufacture in 1879 the majority of their customers – i.e. Army bands – needed instruments manufactured at 'high pitch'. During this period, however, moves were being made towards the adoption of a lower standard pitch – particularly amongst opera groups and orchestras. B&Co. catered for this by manufacturing all clarinet models in both high and low pitches (as did other manufacturers for other instruments, such as Conn in the United States). After the 1930 merger, the distinction between high pitch for the military and low pitch for orchestral musicians became clearer, as the top range wooden Boehm models tended to be made at low pitch, and the ebonite clarinets generally used for military players were often made at high pitch.

During the 1930s a number of efforts were made to try to satisfy players who needed instruments at both pitches, through supplying different length barrels, or clarinets with an internal metal tuning slide, for instance. B&H could clearly see that there was a general move towards low pitch, but that many bands – and therefore musicians – were sticking resolutely to old pitch. The firm was trying to find ways in

which it could accommodate the needs of all players without having to alter the basic acoustic design of its clarinet models.

WWII saw a significant decline in the number of high pitch instruments manufactured, with those that were still made tending to be models associated with military use. The division between orchestral and military pitch standards is evidenced by the fact that no A clarinets were manufactured at high pitch during this time: A clarinets are rarely used in military bands. After WWII high pitch instruments cease to be manufactured, with the exception of four clarinets manufactured between 1945 and 1950. From 1950 onwards, all B&H clarinets were manufactured at one standard low pitch.

7.1.4 Sounding Pitches

Clarinets in both A and B♭ were manufactured throughout B&H's history. Both sounding pitches were used for models at the top of the range, down to mass produced student models. B♭ clarinets were made in larger numbers, as they are generally more commonly used. Some student models were not available as A clarinets, meaning that there were many more B♭ mass produced models made than A. Clarinets in E♭ were also manufactured throughout B&H's history, though never as a student model.

Clarinets in C were common during the B&Co. years, and most of B&Co.'s models were available in C. However, instruments in C became less common, and during WWII only one clarinet in C was manufactured. The decline in C clarinets came about largely because of developments in key mechanisation: it became increasingly straightforward to play music in a range of keys on the clarinet, which

reduced the need for different sounding pitches of clarinet. By the end of WWII, manufacture of C clarinets at B&H ceased completely.

Alto and bass clarinets were manufactured by B&Co., in very small numbers, and continued to be produced in small numbers until WWII. During the war, very few bass clarinets were manufactured, and no alto clarinets were made during this period. This was largely due to restricted manufacturing facilities at the Edgware plant during the war. Alto clarinets re-appeared in the 1950s, though they were still made in relatively small quantities. During the final two decades of manufacturing at B&H, top range bass clarinets continued to be made, but only one alto clarinet was produced during this time. No student alto or bass clarinets were ever manufactured.

7.2 The History of the 1010

This research has revealed the exact date of the first 1010 clarinet listed in the WOBs: 12 December 1933. It has also highlighted the potential progression from an earlier model – the 200 – which was manufactured for many years before the first 1010s. Because this study has discovered the link between the 1010 and earlier models, it has also made it possible to strongly connect two designers' names to the first 1010 clarinets: acoustician David James Blaikley and Belgian clarinet maker Eugène Albert. Though it is not possible to say that these were the two people solely responsible for the design of the 1010, this study has shown that their influence on B&H's iconic model would have been significant.

An examination of B&H publicity material and various clarinet-related sources from the 1920s and 1930s indicates a strong possibility that the initial concept of the 1010 was a response to the growing popularity of the Boehm system in England. Although it took some time before this became the preferred system of key

mechanisation in England, it had begun to grow steadily enough in popularity during the 1930s that B&H felt the need to look in more detail at the design of its Boehm system model. The 1010 was the outcome of this.

There is a certain amount of evidence to link the wide bore of the 1010 clarinet with an increasing preference for German style instruments in British orchestras, in an attempt to emulate the darker sonority produced by German orchestras. The archive includes designs held by B&H which showed German clarinets with the same bore width that features in the 1010 design. However, the general trend for widening bores since the clarinet was first designed leads to the argument that the 1010 was perhaps not as revolutionary as it may initially seem.

It is also evident that the conception of the 1010 was something of an effort on B&H's part to appeal to a different customer base. Until the 1920s by far the largest customer group for B&H's instruments was the military. The 1010 was designed to appeal more to orchestral players, indicating that B&H was trying to be taken more seriously as instrument makers for the classical music world as well as providing band instruments to the military.

7.2.1 The 1010's Success

The 1010 had many design features in common with clarinets that were already in use in Britain. The Albert system clarinets popular in the late nineteenth century had a relatively wide bore of 15.0mm, so although the 1010 was wider, at 15.2, British players were already used to a wide bore. Albert's influence at the B&Co. factory also resulted in clarinets that looked similar to what had been used before in Britain, with long, flat metal rings at each tenon join. Even though the 1010

clarinets used the new Boehm system, there were some features that players were already familiar with.

Boosey's Boehm model received a great deal of attention at the same time that Britain was striving to a) find its own musical voice in terms of composition, and b) increase the standard of orchestral playing and orchestral instruments. The arrival of a (seemingly) all new British Boehm clarinet at this time captured the *Zeitgeist* of British music-making by offering a serious rival to French Boehm instruments that was uniquely British. Clarinets went on to become B&H's flagship product line, and this is attributable to their early success. Other woodwind instrument designs at the time were directly derived from foreign ones: the Heckel Bassoon, the Triébert oboe. The clarinet, however, could be identified as uniquely British, which is why it was such a success for the company during the 1930s when the desire for a British musical voice was so apparent.

7.2.2 The legacy of the 1010

The 1010 clarinet has become associated with British clarinet playing from 1930-c.1980. The association between the 1010 and the idea of a British school of sound came about largely because of the number of 'celebrity' clarinettists who used 1010s throughout their performance career. At each stage of the 1010's development there was a popular player who openly championed the model. These players included Frederick Thurston, Reginald Kell, Jack Brymer, Gervase de Peyer, and Thea King. The fact that these eminent British players have used 1010 clarinets has helped to create the 1010's iconic image. Having leading players – and teachers – using 1010 clarinets influenced students to use the same model. This lineage from

pupil to teacher enabled the 1010 to remain at the forefront of British playing for nearly fifty years.

B&H's publicity also helped to create an iconic image and status for the 1010 model. The company branded later 1010 clarinets as the Symphony 1010, and claimed that most orchestral players in Britain and many others across the world used these instruments. This helped to cement the connection between the 1010 and the British school of clarinet playing.

Though the 1010 clarinet has not been manufactured in Britain since 1984, the tradition of wide-bore British clarinet manufacturing has been continued by Peter Eaton. Eaton's range of Elite clarinets are based on the pre-war 1010 model clarinets, and his earliest clarinets were made using the 1010 tooling which Eaton purchased from the B&H factory when clarinet production was curtailed. Eaton's models are used by many celebrity British clarinettists, continuing the tradition started with the 1010 of British players using uniquely British clarinets. Performers using Peter Eaton's Elite clarinets include international soloist Emma Johnson, principal clarinettist of the English National Opera, Hale Hambleton, international soloist Richard Hosford, and many others. The Elite clarinets have been used by many clarinettists who previously played on 1010s, including Hale Hambleton and Gervase de Peyer. Interestingly, in much the same way as B&H also produced the Imperial clarinet for those who were not comfortable with the wide bore of the 1010, Peter Eaton makes a smaller bore 'International' model, which combines aspects of traditional British and French design. In creating these two models, Eaton is an example of a return to small, craft-based clarinet manufacturing in Britain, with a level of care and craftsmanship evident in the early days of manufacturing at B&H,

combined with the modern techniques available to instrument manufacturers of today. Eaton's Elite model continues to underpin the notion of British clarinet playing: it is linked to players who seek to maintain this identity, such as Emma Johnson – billed as 'Britain's favourite clarinettist'.[504]

7.3 Boosey &Hawkes' Relationship to the Market

The research undertaken has demonstrated a number of instances in which B&H responded to public taste or was led by customer preference, rather than making any significant attempt to influence the market or develop particularly new ideas. The first evidence of this comes very early in the company's history, when Boosey & Co first began to manufacture Boehm system clarinets. Though other manufacturers were starting to produce these in quite large quantities, B&H was cautious in its initial production of these instruments. It took quite some time for British players to adopt the Boehm system, and B&H only began to manufacture more Boehm clarinets when the system began to be more obviously popular with performers, instead preferring to manufacture clarinets that were already well established in Britain, namely Albert system clarinets.

Section 7.2 above demonstrates how the 1010 was something of a response to an English desire for a stronger sense of national identity in the wider musical world. This again indicates B&H responding – in this instance perhaps very cleverly – to public demand, rather than endeavouring to be particularly innovative.

Chapter 4 highlights the first steps taken by B&H to cater for the educational market. Again this was hardly an innovation on the part of B&H, but a response to

[504] n.a. "The Emma Johnson Website" http://www.emmajohnson.co.uk/ (accessed 15.09.2012).

significant developments taking place in music education at the time. This was yet another very successful step for B&H, and continued to influence clarinet designs until the company's demise.

Chapter 5 reveals a strong move towards developing the clarinet as a consumer product, with a wide variety of different models to suit every customer, and clear brand identities for each of these. Again this was a clear response to growing consumerism in the British economy, where the priority placed on consumer goods was a new phenomenon creating opportunities for manufacturers. B&H went as far as to manufacture many different models that were in essence the exact same clarinet, just with a different model name and stamping on the instrument. This shows the company trying to emulate the behaviour of other consumer goods manufacturers, where there was emphasis on having the latest model, or having a brand that other people would easily recognise.

In many ways this opportunism resulted in some of B&H's biggest successes, especially in terms of the 1010.

7.4 Customer-base Trajectory

In the earliest days of Boosey & Co., it was evident that the military made up by far the largest group of customers. Publicity material from the time shows images of entire regiments supplied by Boosey, and the extant stock books from the time show instruments being sent to various military groups across the empire. After the merger with Hawkes & Son, more efforts were made to appeal to professional orchestral musicians, in line with the increasing professionalisation of orchestral music making in Britain. As this greater emphasis on the orchestral world increased, military music was on the decline in Britain, which had a significant effect on the

manufacturing of clarinets at B&H, influencing both materials that were used and the sounding pitches of instruments.

Efforts to satisfy the demands of high-level orchestral players of course included the development of the 1010 model, and the Imperial as well. Publicity material from this period tended to focus much more extensively on celebrity players than military musicians, revealing a shift from the company's earlier history.

It was not long, however, before another market began to take priority at B&H – namely that for educational instruments. There were significant developments made in music education practices across Britain in the 1940s and 1950s, and this resulted in a demand for high quality student instruments, as well as for classroom instruments. B&H, along with other musical instrument manufacturers in the country, found many ways to meet this increasing demand, developing their famous Regent clarinet, in addition to many other student models. Publicity material from this time shows this change of emphasis, with images showing young players, or even whole classes, playing on B&H instruments. There was still some degree of trying to appear to be endorsed by top orchestral players too, as eminent performers and teachers such as Jack Brymer were used to publicise student instruments. Ultimately it was B&H's decision to concentrate so heavily on the educational market that caused the downfall of the instrument making branch of the company.

7.5 Boosey & Hawkes and the Wider World

This thesis has identified a number of occasions when political, social and economic factors have played a significant role in shaping the course of industry in Britain. Though it has not always been possible to state for certain that clarinet manufacturing has also been influenced by these factors, there have clearly been

many instances when a corroboration of primary source data from B&H and secondary source information from the wider world suggest very strong possibilities of clarinet manufacturing having been directly influenced by events in the wider world. There are also, of course, several examples where links are unquestionable; for instance the decrease in production during World War II and the increasing automation of manufacturing processes in the growing consumerism of the 1950s.

Early in the history of B&H it was evident that expansion in British music-making in general gave rise to the conception of many new small musical businesses, including Boosey & Co. Expansionism in music was partly a result of social factors, such as the increase in leisure time for many working people. Boosey & Co.'s origins, then, were strongly linked both to broad social trends and to more specific developments within British music-making itself. Occurring soon after the merger between Boosey & Co. and Hawkes & Son, the development of the 1010 clarinet can also be linked to developments in British and international musical trends. The increasing possibilities both for travel and for listening to musicians from around the globe meant that British musicians and audiences were exposed to new standards and approaches to playing. This, in turn, led to the desire to raise the standard of British orchestral playing, develop a darker, heavier sound such as that found in German orchestras, and also to create a more unique identity for British music making in general. All of these factors were of great importance to the development and subsequent success of the 1010.

The direct influence of WWII on clarinet manufacturing figures has already been mentioned, but other links between the war and B&H's production can be made. After the war there was a sense of nationalist pride amongst British people

and industries. B&H appear to have capitalised on this patriotism with two of their new models which were released around this time: the Regent and the Imperial. This was the first point in B&H's history at which clarinets were assigned model names rather than numbers, and these two were clearly designed to attract the proud British consumer. In the post-war years, increasing consumerism led to B&H developing this range of named instruments to keep up with the efforts of other manufacturers of consumer goods. Even though some clarinet models were in fact almost exactly the same instrument, with a different name and stamping they were clearly conceived in order to appeal to every type of customer.

The final decades of B&H's manufacturing were greatly affected by the consumerism of this period, coupled with ever-growing automation of factory processes and the decline of 'traditional' industries in Britain. Though the demise of B&H was not directly linked to that industrial decline, it is an interesting parallel that the company attempted to keep up with consumerism and the modernisation of industry. In doing this, however, B&H set itself up for many financial problems, and ended up following the *Zeitgeist* of the age, in which many long-standing British industries were shut down.

7.6 The 1010 and the Demise of Boosey & Hawkes

At least one author has attributed the demise of B&H's clarinet manufacturing solely to the decreasing popularity of the 1010 clarinet.[505] This thesis reveals, however, that this was clearly not the predominant factor. It is indisputable that the 1010 did decline in popularity during the last few decades of manufacturing, after it

[505] *Clarinet Acoustics*. p. 29.

had been (reluctantly) reinstated after the war. This could well have been attributable to lower levels of individual craftsmanship within the factory with the advent of automation and mass production technologies. It is evident from the analysis of production figures that the cheaper, mass produced instruments were a much higher priority for B&H. Therefore, efforts went into increasing productivity and decreasing prices in this area, probably to the detriment of the top range models. This is also evidenced by the gradual decrease in references to individual customers across the time frame. If there were, then, changes in the standard of top range instruments, this was because of a change in focus on the part of B&H.

During the latter period of B&H's history many clarinettists preferred French instruments and the sound they produced to their British counterparts, and this presaged a change from British to French instruments also. This has been demonstrated in Chapter 6. However, production figures for the 1010 do not show significant enough decline during this period for this shifting sound preference to be held accountable for the demise of B&H. Intonation was also a major factor in driving the declining popularity of the 1010. As it became increasingly important for performers to play with great accuracy of tuning, the 1010 – which was notoriously hard to play in tune – became a less practical option. The newer French clarinets were much easier to play in tune due to their narrower bores.

The real problems for B&H arose from the drive to decrease the retail price of cheap student models, in order to keep up with competition from firms in Eastern Europe and Japan. This meant that profit margins on these instruments were dramatically reduced, and as a result B&H's profits decreased. It could be said that had the company attempted to continue producing high quality top range models

there would have been more scope for keeping profit margins high on these clarinets. However, with so much of the production geared towards the cheapest models, it was these – and not the 1010 – that had the most direct impact on the company's fortunes, and which ultimately led to the demise of this British musical flagship.

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