

New Light on the Early History of the Keyed Bugle Part I: The Astor Advertisement and Collins v. Green¹

by David Lasocki

Advertisements in both English and American newspapers of the eighteenth and nineteenth centuries are rich in material about music and tutors, performances, sales and auctions, teachers, and makers and sellers of instruments. The present article, largely based on such advertisements as well as a court case, reports some surprising discoveries about the keyed bugle, including its invention ten years before Joseph Haliday's patent of 1810 and the struggles to control or bypass Haliday's patent rights. The article owes its existence to the recent availability of facsimile databases of newspapers, and other databases, which have made it possible to do research in a few weeks, sitting at home, that in the past would have taken several years of visits to libraries and archives.²

The present state of knowledge

Our present knowledge of the early history of the keyed bugle, also known as the Royal Kent Bugle, is set out in the opening pages of Ralph Dudgeon's book on the instrument.³ The Yorkshire-born Joseph Haliday (1774–1857), “Master of the Band belonging to the Cavan Regiment of Militia, now quartered in Dublin,” was granted a patent in London on 5 May 1810, registered as “Halliday's [*sic*] Improvements in the Musical Instrument called the Bugle Horn.”⁴ In the specification—the written description of the invention—submitted on 25 June and accepted on 5 July, he declared that “The former or only scale ever hitherto known on the bugle horn, until my Invention, contained but five tones; viz. [*c*¹, *g*¹, *c*², *e*², *g*²]. My improvements on that instrument are five keys to be used by the performer according to the annexed scale, which, with its five original notes, render it capable of producing twenty-five separate [*sic*] tones in regular progression.” Dudgeon observes: “The patent office in London was the only place that one could legally secure a patent.... It is likely that the patent presentation was made by a lawyer, instead of a personal appearance by Haliday in front of the [court of] Chancery ... as the document describes.”⁵ The instrument illustrated has a single coil.

Dudgeon notes there is no surviving evidence that Haliday made instruments himself. In 1954, R. Morley-Pegge stated, without citing a source, that “Haliday is believed to have disposed at once of the patent rights to the Dublin instrument-maker Matthew Pace,”⁶ and later researchers have accepted this statement without question. According to a widely cited article by John Teahan, based on directories, newspaper advertisements, and surviving instruments, Pace was listed as a “Five Keyed Bugle and Wind Instrument Maker” at 23 Henry Street, Dublin, 1798–1813, then at 26 Henry Street, 1814–15.⁷ William Waterhouse cites a surviving maker's mark: “Royal Kent Bugle (number) Made by Mathw Pace & Sons 23 Henry Street Dublin, Halliday Inventor.”⁸ Waterhouse lists

Pace's sons Charles and Frederick as joining his business in 1814, but clearly this mark dates from before the move along Henry Street. Waterhouse also reports that Pace moved to London in 1815—which would be consistent with his absence from the Dublin directory after that year—and established himself in King Street, Westminster.

According to Dudgeon, the first known soloist on the keyed bugle was the Irish clarinetist Thomas Lindsay Willman (1784–1840). Dudgeon cites a benefit concert in Dublin on 30 May 1811, in which Willman played a concerto on “the improved patent Kent Bugle horn,” repeated at James Barton’s benefit at the Dublin Theatre on 14 June.⁹ Johann Bernhard Logier (1777–1846) declared in 1813 that the keyed bugle “has also been lately introduced most effectively in the *Theatres*, and to the admiration of those who have heard that *incomparable Performer*, Mr. WILLMAN.”¹⁰



*To the Pupils of Mr. Logier, and to the Professors of
The Logierian System of Musical Education,
this Print is respectfully inscribed by their D. & C.
J. R. Maguire
of Dublin.*

Figure 1: Portrait of Johann Bernhard Logier from his *A System of the Science of Music and Practical Composition; Incidentally Comprising What Is Usually Understood by the Term Thorough Bass* (London: John Green, 1827).

Logier (see Figure 1) was a German bandleader, composer, music dealer, music teacher, theorist, and inventor, brother-in-law of Thomas Willman and his brother Henry, and resident in Dublin initially in 1809–21.¹¹ By 1810 he had given up working with bands and opened a music store, Logier's Music Saloon, which flourished until 1818. As a supplier of musical instruments and a teacher, Logier evidently saw the keyed bugle as a great business opportunity. He wrote the first tutor for the instrument, *Logier's Introduction to the Art of Playing on the Royal Kent Bugle* (Dublin, 1813), which he dedicated to "His Royal Highness, the Duke of Kent."¹² In his preface he calls the instrument "THE ROYAL PATENT KENT BUGLE, (for the invention of which the Musical World is indebted to that very able and ingenious Musician, Mr. HALLYDAY)."¹³ Dudgeon suggests it was most likely Logier rather than Haliday who named the new instrument.¹⁴

Logier goes on to claim that he has "now the *sole advantage* of the *Patent*, by a transfer of it and *all* its privileges, from the Patentees, which confirms the Manufacture of the Instrument to him EXCLUSIVELY." Improvements had already been made to the instrument: "Six keys are prefixed to it, with which *auxiliaries*, and the *original* and fixed tones, a good *Artist* may produce almost *incredible* effects." A six-keyed bugle now missing (formerly D-Berlin, 2088) was marked "Royal Patent Kent Bugle Manuf^d Exclusively by I.B. Logier, Dublin (number) Halliday Inventor."¹⁵

Dudgeon lists a revised edition of Logier's tutor for the nine-keyed bugle published by Clementi in London in 1823.¹⁶ This or a similar revision had already appeared in 1820, as mentioned in a bibliography published two years later.¹⁷ It is curious that the edition was issued by Clementi rather than Logier's normal London agent John Green (see below); perhaps it was unauthorized.

Logier may have also taught the keyed bugle. An article published in 1821 about Richard Willis, an Irishman who moved to the United States in 1816, and evidently based on an interview with him, reports that "the facility with which he executes the chromatic passages upon the Kent Bugle, is the result of many years practice under the celebrated Mr. Logier of Dublin, whose improvements have brought this useful and much admired instrument into general use."¹⁸

In a word, Logier co-opted the new instrument, and Haliday was hardly pleased. In 1817 he published anonymously a pamphlet attacking Logier's ideas on musical education, and including a long footnote about the word "bugle."¹⁹ The basic points are: (1) Haliday thought of himself as Irish, even a "native"; (2) Haliday invented the keyed bugle and by 1817 had invented additional improvements to it; (3) Haliday's patent rights did not extend to Ireland; (4) the patent was for the original invention, without the improvements; (5) Haliday transferred the patent rights to a lawyer named Robert Tilly; (6) Haliday surmised that Tilly could be the sole maker in England; (7) Logier advertised that he had bought the rights from Tilly; (8) Haliday conceded that Logier could have done so; (9) Logier put Haliday's name and the words "Royal Patent" on the instruments he sold; (10) Logier, chosen by Haliday to value the improvements, put the value at 300 guineas; (11) Logier did not make the original type of keyed bugle but stole Haliday's improvements; (12) Logier never gave Haliday any money for his inventions.

Point 9 is confirmed by the mark on the ex-Berlin six-keyed bugle, which also tends to support point 11. Dudgeon suggests that Haliday's improvements "may refer to the open-standing key closest to the bell as well as the seventh key placed on the second bend of the instrument that produces a written E \flat in the first octave of the instrument."²⁰

Newly discovered material: George Astor

The new material about the keyed bugle begins with George Astor (1752–1813), a flute-maker who emigrated to London from Germany by 1778.²¹ In the 1790s, Astor greatly expanded his business, becoming a dealer and manufacturer of all kinds of instruments, including pianos. In July 1795 he sought to introduce himself to the military market as an agent and instrument seller:

MILITARY BANDS OF MUSIC

OFFICERS of the ARMY and NAVY may be immediately supplied with complete sets of Instruments for a Band, with good Musicians to play the same, at GEORGE ASTOR's, Musical Instrument-maker, No. 26 Wych-street, St. Clement's, who keeps always ready for their inspection an Assortment of well-tuned and properly-seasoned Instruments; consisting of Clarionets, Hautboys, Flutes, Fifes, Bassoons, Serpents, Tamborines, Drums, Trumpets, French-horns, Bugle-horns, Triangles, and Cymbals equal to those made in Turkey. Several good Masters for teaching Bands to be heard of as above.²²

A similar advertisement in April 1796 mentions "complete sets of instruments warranted well in tune, of fine seasoned wood, and finished in the best manner."²³ Astor evidently succeeded in his attempt to woo the military, for in December 1796 he advertised from new premises at 79 Cornhill: "Regiments supplied with complete Setts of Military Instruments, and Musicians provided."²⁴

In a similar advertisement in June 1798, Astor, describing himself as

Musical Instrument-maker, and Music Seller ... respectfully begs leave to inform the Officers of his Majesty's Army, and the Public in general, that he has always ready for sale a large Assortment of Military Musical Instruments of every description, made of good seasoned wood, and the best materials, complete sets of which, for a Band, may be had at an hour's notice. Also a new-invented Sliding Horn, which, by the addition of one crook only, tunes it in all the keys, and is a most desirable acquisition.²⁵

Although hardly new, this instrument may simply have been the Inventionshorn, "the work of Charles Clagget ... who united 2 instruments, one in D and the other in E \flat , in such a way that the player had both at command and could thus gain the advantage of the full chromatic scale. Clagget's work, patented 1788, was made possible by the invention, by

the horn player Hampel of Dresden, of curved sliding crooks called ‘inventions,’ hence the name.”²⁶ Two months later, Astor listed his “low prices” for the military instruments, including clarinets, bassoons, trumpet tops to bassoons, horns, trumpets, serpents, cymbals, bugles, tambourines, and bass drums.²⁷

Two catalogues of Astor’s, one bearing the date 1799, the other apparently dating from slightly earlier, show in remarkable detail what the well-appointed instrument manufacturer and dealer was selling at that time. They include bassoons, horns, trumpets, serpents, kettle drums, brass drums, tambourines, cymbals, triangles, and bugles.

Despite being so comprehensive, Astor’s catalogues did not include two instruments he began to advertise in 1799–1800. Waterhouse notes that the Frenchman Louis Alexandre Frichot (1760–1825) in the “Early 1790s came to London as player of serpent; a1800 had a bass-horn built for him by George Astor ... for which in 1800 he published a fingering chart.”²⁸ Waterhouse’s source of information was a book by Constant Pierre (1890), which reported that “this bass horn was conceived by Frichot during his sojourn in London, where he went as a refugee at the beginning of the Revolution. In 1800, he published in this city, a description of his instrument in a kind of method entitled *A complete scale and gammut of the bass-horn, a new instrument, invented by M. Frichot, and manufactured by J. [sic] Astor.*”²⁹ Frichot is listed in Doane’s *A Musical Directory* (1794, p. 25) under “Frichot, *Serpent.*” The so-called bass-horn was “an early variety of upright serpent.”³⁰ “A fine specimen, signed by Astor & Co. and dated 1807, is in the Musée de la Musique in Paris.”³¹ We can now move back the dates of the instrument and its fingering chart one year, as attested in the following advertisement in November 1799:

NEW INVENTED BASS HORN.

GEORGE ASTOR respectfully begs leave to recommend to the Officers of his Majesty’s Army and Loyal Volunteer Associations, a new invented BASS HORN, which independent of its elegant appearance, produces a most astonishing and powerful Bass, far superior to the Serpents now in use; from its clearness of tones also, and being manufactured of Copper and Brass, insures its certain durability of keeping in tune, in all climates and changes of weather, and is very light in carriage; the decided superiority it possesses over other Bass Instruments, has already induced several Regiments to Introduce the same, being a most valuable Acquisition to Military and other Bands of Music.

Specimens of the above, with a Scale, shewing the fingering and use of the Keys, may be seen at his Warehouse, No. 79, Cornhill, London, where may be had, complete Sets of Military Instruments, made of the best materials, on the shortest notice.

N.B. Several good Masters of reputation, also a complete Military Band, that can be well recommended.³²

The bass-horn was not exclusive to Astor, as William Napier advertised it in November 1800:

MILITARY MUSICAL INSTRUMENTS. MR. NAPIER begs leave to inform Officers of the Army and Navy, and Gentlemen having Commissions from Abroad for MILITARY MUSICAL INSTRUMENTS, that he has now for Sale a large and valuable Assortment manufactured in the best manner, and warranted to stand in tune in any climate. They consist of Clarionets, Bassoons, Concert and Bugle Horns, Trumpets, Trombones or Sackbuts, Bass Horns, Bass Drums, Cymbals, Tambourines, and Triangles, &c.³³

But it was not mentioned in the comprehensive catalogue of Goulding, Phipps, & D'Almaine that same year.

And now for the discovery. In April 1800 the following advertisement appeared:

NEW-INVENTED BUGLE HORN, which, by the improvement of Finger-holes and Keys, may be performed on, in any Key of Music, with facility and ease, the Tones being much superior to those now in use, and is of handsome appearance. Made and Sold by G. ASTOR.³⁴

Three months later, Astor added the two new instruments to an advertisement addressed to the military:

To the OFFICERS of his MAJESTY'S ARMY
GEORGE ASTOR begs leave to inform the Officers of his Majesty's Army, that he has now ready for sale a large assortment of Military Musical Instruments of every description, warranted to be well in tune, and made of the best materials; complete Sets of which for a Band, may be had at an hour's notice; also the new invented Bugle Horn and Brass [*sic*] Horn, No. 79, Cornhill, London. N.B. Several Music Masters of good abilities that can be well recommended.³⁵

In another advertisement two weeks later, he appended an important detail: "The new invented Bass Horn; also the Bugle, (an Octave higher) with a Scale for both, may be had, as above."³⁶

An advertisement in October includes Astor's claim that the keyed bugle had already become popular:

[W]here are for sale several of the new invented Bass Horns, which, independent of its elegant appearance, produces a most astonishing and powerful Bass, far superior to the Serpents now in use, being manufactured of copper and brass, insures its certain durability, and keeping in tune in all climates

NEW-INVENTED BUGLE HORN, which, by the improvement of Finger-holes and Keys, may be performed on, in any Key of Music, with facility and ease, the Tones being much superior to those now in use, and is of handsome appearance—Made and Sold by G. ASTOR, at his Music Warehouse, No. 79, Cornhill.

Where may be had, just published,

A second Collection of Military Music, for a full Band, in which Parts are introduced for the new-invented Bass Horn.—Composed and dedicated to Col. Thewles, of the 4th Dragoon Guards, by P. Brillaud, price 21s.

A favourite slow March, composed for the 4th Dragoon Guards, by ditto, price 2s. 6d.

The Grinder, a favourite Irish Tune, harmonized, with Variations for different Military Instruments, by ditto, price 1s. 6d.

A new Waltz and Allemande for ditto, by ditto, price 3s.

Figure 2: Advertisement by George Astor in *Morning Chronicle* (London), 4 April 1800; © British Library Board; reproduced by permission.

and changes of weather. The decided superiority it possesses over other Bass Instruments, has already induced several Regiments to introduce the same, being a most valuable acquisition to Military and other Bands of Music. Also, the new-invented Finger'd Bugle Horn, now so much in use.³⁷

These references to a keyed bugle in 1800 represent an astonishing find. Who was making the instrument, not to mention the bass horn that Astor was selling? The German-born Christopher Gerock (1772/3–1850), later a partner of Astor's widow, Elizabeth, in 1822–26, had made keyed bugles by 1821, but he was not established in business in London until 1805.³⁸ The most prominent London brass makers at the time were Samuel Keat (fl. 1780–1830)³⁹ and John Köhler I (1753/4–1801).⁴⁰ I suggest that the keyed bugle was invented prior to Haliday's 1810 patent by the German-born Köhler, who has a documented connection with Astor (as well as being free to sell through Napier). Lance Whitehead and Arnold Myers note: "There is ... an eight-keyed bassoon with brass keys and mounts bearing the stamp of George Astor ... in Ridlington Church, Oakham, with a copper bell by John Köhler, inscribed near the rim 'John Köhler Maker Whitcomb Street London.' The bell is probably an example of a 'Bassoon top' as listed and depicted ... on Köhler's trade card."⁴¹ Köhler occupied that address in 1786–93,⁴² within three years of arriving in London, so his connection with Astor was established early on. The trade card mentioned, enclosed with a bill in 1795, states that he "Makes German post

horns, Bugal horns, Bassoon tops, &c. in Silver, Brass and Copper.... No. 89 St. James's Street, London."⁴³

John Köhler I died on 3 January 1801, leaving a widow but no heirs.⁴⁴ His namesake nephew, John Köhler II, who had been apprenticed to him in the early 1790s, then took over the business. But he died only four years later, in April 1805.⁴⁵ After that, the business was run by Elizabeth Köhler, the widow of either John I or John II, until 1810.⁴⁶ Thereupon Thomas Percival, perhaps a former employee, joined in, and "the firm was generally listed in *The Post Office Annual Directory* from 1809 until 1833 as 'Percival & Kohler' or 'Kohler & Percival,' indicating that Percival was either in partnership with Elizabeth Köhler or that he wished to maintain Köhler's name for marketing purposes."⁴⁷

It is probably not coincidental that the keyed bugle and bass horn turn up in Astor's advertisements at almost the same time, and that the former is noted as being an octave higher than the latter. Dudgeon comments, "I think that the bass horn was an inspiration in the sense that it was a successful vented brass instrument and musicians simply asked the question, 'What would happen if we applied these principles to the military bugle?'"⁴⁸ If indeed the keyed bugle was modeled on the bass horn, invented in the late 1790s, and therefore John I had not yet invented the keyed bugle while John II was apprenticed to him, then John II may not have been familiar with this new instrument, and its production could have ceased with John I's death in 1801. Even if John II had continued to make the instrument, his own death in 1805 created another hiatus in the firm that could have had the same result.

John Badcock's *A Living Picture of London for 1828* describes the practice of coachmen and guards indulging in some private trade on the side: "this begets the necessity of having confidants ready to hand off the packages; and the persons so engaged *hang about* the inn-yards, until the horn, or Köhler, or keyed bugle, announces the approach of their employer."⁴⁹ Did Badcock mean "Köhler bugle" or just an instrument known simply as "a Köhler"? Köhler and Percival must certainly have been prominent makers of the instrument in the 1820s. It is just conceivable that the name refers back to the prior invention of the keyed bugle by John Köhler I around 1800. More likely, as Arnold Myers suggests, "a Köhler" was a coach horn, for which the firm was famous later.⁵⁰

Other evidence for the keyed bugle before 1810

There is some ambiguous evidence that the keyed bugle was performed in concerts before 1810. John Hyde's benefit concert at his rooms in Tottenham Street on 26 May 1800, in which he played a trumpet concerto and the accompaniment to "Let the bright Seraphim," also featured "Finale, with the Bugle-horn obligato."⁵¹ Hyde (see section in Part 2) was associated with the invention of the slide trumpet, and thus clearly interested in new brass instruments. Moreover, around 1818, he published a tutor for the keyed bugle.⁵²

The German trumpeter Johann Georg Schmidt (1774–1822)⁵³ seems to have arrived in London in early 1802 and quickly made an impression: on 1 March, he played a trumpet concerto, "being his first appearance," in Friedrich Griesbach's concert at the Great Room,

King's Theatre.⁵⁴ On 26 February 1803, *Jackson's Oxford Journal* could already describe Schmidt as “the celebrated Performer on the Trumpet” for a performance of Handel's *Samson*. On 11 July it was advertised that at Vauxhall, “Mr. Schmidt, whose wonderful powers on the trumpet have met such general approbation, will this evening entertain the Company with a new performance, never attempted by any but himself; a Concerto upon the Bugle Horn, as performed by him before His Royal Highness the Prince of Wales.”⁵⁵ Two days later at the same venue, “Mr. Schmidt will perform his much-admired Concerto upon the Bugle Horn.”⁵⁶

The normal bugle with its simple overtone series is unlikely to have inspired a “never attempted” concerto, however we might define the genre of such a piece today. Therefore we may conclude that Schmidt was playing on some kind of modified instrument that looked more like a bugle than a normal trumpet in 1803. But what kind of instrument? Waterhouse notes succinctly of Schmidt, “1815 invented the ‘Regent's Bugle,’ a type of keyed bugle fitted with a slide.”⁵⁷ The nineteenth-century accounts of such an instrument, collected in Morley-Pegge's article on it,⁵⁸ all seem to stem from a long article in the *Allgemeine musikalische Zeitung* in 1815, written by “a London correspondent” and entitled “On recent improvements in the trumpet and similar wind instruments.”⁵⁹ It is worth looking at the relevant passage in full, because it is normally only excerpted:

Finally, under the supervision of Herr Schmidt, a German from Thüringen, who is first trumpet of the Prince Regent and very excellent on his instrument, a bugle horn is being produced, which through an extension below a fourth lower can be made. Through this can be obtained not only all diatonic and chromatic steps from its fundamental note upwards, but also a diatonic and chromatic fourth deeper than its fundamental note, and consequently two complete octaves. This is called *The Regent's Bugle*, and made by the respected Mr. Percival, who crafted it so accurately that the extension does not produce the slightest buzzing of the tone.—But although this instrument in the hands of Herr Schmidt ought to work wonders, because he himself has on several occasions played concerts/concertos on the regular bugle horn, it seems certain that the extension of such a wind instrument requires degrees of precision that could only seldom be attained. But should such extreme precision also be possible for some virtuosi, then it is still hardly to be doubted that this precision will never be possible in melodies of the same speed as can be done easily on a similar instrument with tone holes.⁶⁰

Thus, this passage reports that in 1815 Schmidt was “supervising” an instrument being made by Percival on which it is harder to play fast passages than on—what? A regular keyed bugle? Even at face value, it does not say that Schmidt invented the Regent's bugle in 1815. Thomas Percival was certainly working then, as we have seen, and he advertised that he made the instrument in 1819.⁶¹ The *AmZ* correspondent even tells us that Schmidt had played either concerts or concertos—the German word *Concert* is ambiguous—on the

regular *Jagdborn*. Earlier in his article the correspondent says of the keyed bugle, “A Mr. Halliday, I think in Dublin, has constructed a hunting horn (bugle-horn), or so-called half moon, with six keys, for which Mr. Logier & Co. have a patent.”⁶² This confirms that by 1815 the six-keyed instrument was known in London, and word had spread that Logier held the rights.

Scholars have generally accepted Joseph Wheeler’s proposal that we have a surviving example of the Regent’s Bugle in a five-keyed trumpet equipped with a tuning slide made by Richard Curtis of Glasgow, working period 1830–38.⁶³ The visual impression is indeed of “an improvement of the bugle-horn of Haliday,” as described by Fétis.⁶⁴ Schmidt’s bugle concerto of 1803 could therefore have been performed on an early example of the Regent’s Bugle, or on the keyed bugle. Unfortunately, he is never again mentioned in advertisements as playing the bugle, only the “trumpet” (which description may have in any case covered the Regent’s Bugle).

When the royal family visited Weymouth, Dorset, in September 1804, King George III reviewed the troops stationed there,

to behold which, great numbers of persons are flocking in for a number of miles round the country. The Review includes, as well as all the regular Foot regiments, the Hanoverian Legion, Heavy and Light Dragoons, and the Artillery... the different regiments marched past him by companies.... We never observed better discipline in any troops, although the weather was oppressively hot, the whole of their evolutions were performed with the greatest exactness. The bugle horns used on the occasion do the performers the greatest credit, we never heard them with a more charming effect.⁶⁵

A month later, on 20 October 1804, *Times* reported,

Amongst the infantine phenomena of the day may be justly reckoned a boy, not four years old, the son of Mr. WIGLEY, Music-seller, opposite St. Clement’s Church, in the Strand, who performs the most difficult passages on the bugle-horn with all the *full-toned* powers of a regimental trumpeter.

A year later, on 7 October 1805, the same newspaper advertised,

For the Benefit of Mr. [James] SANDERSON, Composer and Leader of the Band, AMPHITHEATRE, WESTMINSTER-BRIDGE. FIRST appearance of Master WIGLEY, the Musical Wonder.—This present MONDAY will be presented.... Master Wigley, a child only 5 years old, will perform on the Bugle Horn, in a surprising manner, will go through the military-duty, and play a Concerto, composed for the occasion by Mr. Sanderson; his tone is allowed by all who have heard him, to surpass every thing ever attempted on the Instrument, and requires to be heard to be believed.

This prodigy's father was Charles Wigley (fl. 1797–1825), who traded as a musical instrument maker and dealer, music seller, and publisher, as well as running a fancy jewelry store and a suite of exhibition rooms.⁶⁶

In his annual benefit concert at Corri's Rooms, Edinburgh, on 25 February 1805, John Mahon (c1748–1834), a well-known clarinetist and string player,⁶⁷ performed his own "New Military Concerto, Clarinet ... with accompaniments for a Military Band," and there was also a "Military Piece, with Bugle Horn,—*Mahon*" (that is, composed by but not necessarily played by him).⁶⁸ Perhaps the bugle in question was a keyed one or, because of the "military" connotation, still a normal one that was incorporated into the musical context.

The only advertisement I found, besides Percival's, that mentions the Regent's Bugle by name is for a concert at the Strand Theatre, the Sans Pareil, on 25 March 1817, which included "a New Medley Overture. In which will be introduced the favourite Song of 'Rest thee Babe,' on the Regent Bugle, composed expressly for this occasion, by Mr. Schoengen."⁶⁹ Schoengen tried William Close's polyphonic horns in 1812; and he is listed as a tenor trombonist for northern festivals in 1825 and 1828.⁷⁰

Newly discovered material: Collins v. Green

The next discovery about the history of the keyed bugle is documented in an advertisement in March 1819:

TO all MASTERS OF BANDS, Music sellers, and others.—Notice is hereby given, that I, the undersigned GEORGE COLLINS, the sole Assignee of the Patent granted by his present Majesty, for the Improvements on the Bugle Horn, and now generally known by the name of the ROYAL KENT BUGLE, have appointed Mr. Thomas Key, of Charing cross, to be the sole vender thereof, in those parts of the United Kingdom called England, Wales, and the town of Berwick upon Tweed, and that any other persons who shall make or vend the same shall be prosecuted. The patent and deeds are in the hands of my solicitor, Edward Alderson, 10, Symond's-inn. GEO. COLLINS, 12, Warwick-court, Holborn. Witness, Edw. Keane.⁷¹

Collins is otherwise unknown. Thomas Key was established as a woodwind and brass maker in 1800; worked briefly with woodwind maker John Cramer (1804/5–1807),⁷² then became independent again. In 1810 and 1813, he was listed as "Musical-instrument-maker to their R. H. Prince of Wales, Dukes of York, Kent, Cumberland & Cambridge."⁷³ Dudgeon therefore speculates that "It is likely that he at least encouraged the name 'Royal Kent Bugle' in marketing the instrument."⁷⁴ In 1812/13 Key moved to 20 Charing Cross, where he remained until his death in 1853.⁷⁵ In 1813 he was one of the agents for Logier, as we will see. In 1816 he was described as "martial musical instrument maker" and in 1820–25 as "military instrument maker."⁷⁶ Dudgeon mentions two surviving keyed bugles

by him: seven-keyed, Royal Northern College of Music, Manchester, MPL 20, marked “Royal Kent Bugle KEY / 20 Charing Cross / London / HALLIDAY INVENTOR”; eight-keyed, National Music Museum, Vermillion, SD, no. 2376.⁷⁷ According to Sabine Klaus, the latter is actually six-keyed and of great relevance for our purposes, because it is engraved: “Tho^s Key / 20 Charing Cross / SOLE VENDER / Royal Patent Kent Bugle / N^o = 1033 / HALLIDAY INVENTOR”⁷⁸ (see Figure 3). Thus it seems to have been one of the instruments that Key was selling for Collins.

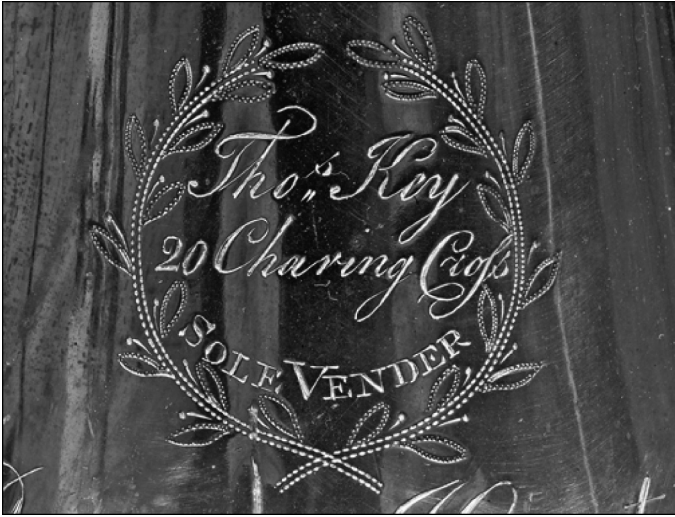


Figure 3: Thomas Key’s signature garland from a six-keyed bugle, London, ca. 1820, NMM 2376. National Music Museum, The University of South Dakota; Bill Willroth Sr., Photographer; reproduced by permission.

Nine months after his first advertisement, in January 1820, Collins issued a similar notice, elaborating on his threat of prosecution: “TO the ARMY, also to DEALERS in MILITARY MUSICAL INSTRUMENTS ... I hereby caution the Army, that any Bugles made on similar principles, sold by any other person, are spurious, and that the parties concerned will be prosecuted.... GEORGE COLLINS, 19, Carey-street, Lincoln’s-inn-fields.”⁷⁹ Collins had in fact already begun such a prosecution in the Court of Chancery, against John Green, a musical instrument dealer and publisher in Soho Square, London. The Bill of Complaint from “George Collins of Carey Street, Lincoln’s Inn Fields, Middlesex, gentleman” is dated 23 December 1819.⁸⁰

Collins begins by stating that letters patent, dated “on or about” 5 May 1810, were granted to Joseph Haliday, master of the band of the Cavan Regiment of Militia, “then quartered in Kilkenny.” Haliday had conceived that the improvements in the bugle would be “of great use and advantage” to military music. The improvements had “not been practised

by any person or persons whomsoever to [Haliday's] knowledge or belief." According to Collins, the patent was valid in England and Wales and the town of Berwick upon Tweed on the Scottish border for fourteen years, and applied to Haliday, his executors, administrators, and assigns. Collins stated his belief that the patent provided that no one should "in any wise counterfeit, imitate, or resemble the same [invention] nor should make or cause to be made any addition thereunto or subtraction from the same" without the consent of Haliday, etc. He went on that the patent had two provisions: (1) Haliday needed to "describe or explain the nature of the ... Invention and in what manner the same was to be performed by an Instrument" within two months. If this provision had not been met, the patent would have been voided. But according to Collins, on or about 5 July 1810, a specification of the invention was sent to the Court (implied, by Haliday). (2) Haliday should supply, or cause to be supplied, for His Majesty's service all such instruments required at times and prices set by the Master General of the Ordnance or principal Officers of Ordnance. If this provision had not been met, then the patent could also have been voided. Up to this point, Collins' bill is unremarkable, except for Haliday's location (Kilkenny rather than Dublin).

Collins then provides new information about assignments of the patent to others. First, an indenture (a type of legal contract) dated on or about 20 May 1811 was made between (1) Joseph Haliday, late master of the band belonging to the Cavan Regiment of Militia but then of the City of Dublin, teacher of music, and Smollett Holden of Parliament Street, Dublin, teacher of music and music seller and (2) Robert Tilly of Pembroke Street, Dublin, attorney at law. Haliday had incurred charges and expenses in obtaining the Letters Patent. Holden had promised to advance money to Haliday from time to time, and in consideration Haliday had assigned to Holden his "right, title, and interest of, in, and to the new invention," but no deed had been executed. In the indenture, Tilly now agreed with Haliday and Holden to purchase the same rights for £113 15s 0d to Haliday and £796 10s 0d to Holden for the remainder of the patent term.

Holden, whose first name is usually spelled Smollet, was a well-known musical figure in Irish musical life in the late eighteenth century and at the beginning of the nineteenth, worthy of entries in both *New Grove 2* and *MGG*.⁸¹ After graduating from the University of Glasgow in 1770, he became bandmaster of the 66th (Berkshire) Regiment of Foot. By 1794 he had emigrated to Ireland and taken the same post in the Downshire Militia; two years later his band was said to be "superior to any in Ireland." Nevertheless that year he moved over to the Westmeath Militia, in which he also held the rank of Lieutenant and Quartermaster. He had apparently retired from the military by 1805, being listed as "military music master and instrument maker" on Arran Quay, Dublin. The next following year, presumably abandoning instrument-making, he moved to 26 Parliament Street as "music and musical instrument seller"; he also published music, largely his own but including some by Logier. George Petrie in 1855 called Holden "the most eminent British composer of military music in his time."⁸² His most famous publication was *A Collection of Old Established Irish Slow and Quick Tunes* (ca. 1807), probably collected by his son Francis.

We have the familiar situation of an inventor without capital to patent or develop his invention. Haliday therefore went to Holden, who could provide not only capital but a retail outlet for the new instrument. Tilly purchased the patent rights for no less than £910 5s 0d, a considerable sum. Most of this money went to Holden, presumably reflecting the capital he had put into the venture, so Haliday ended up with little more than £100 for his invention.

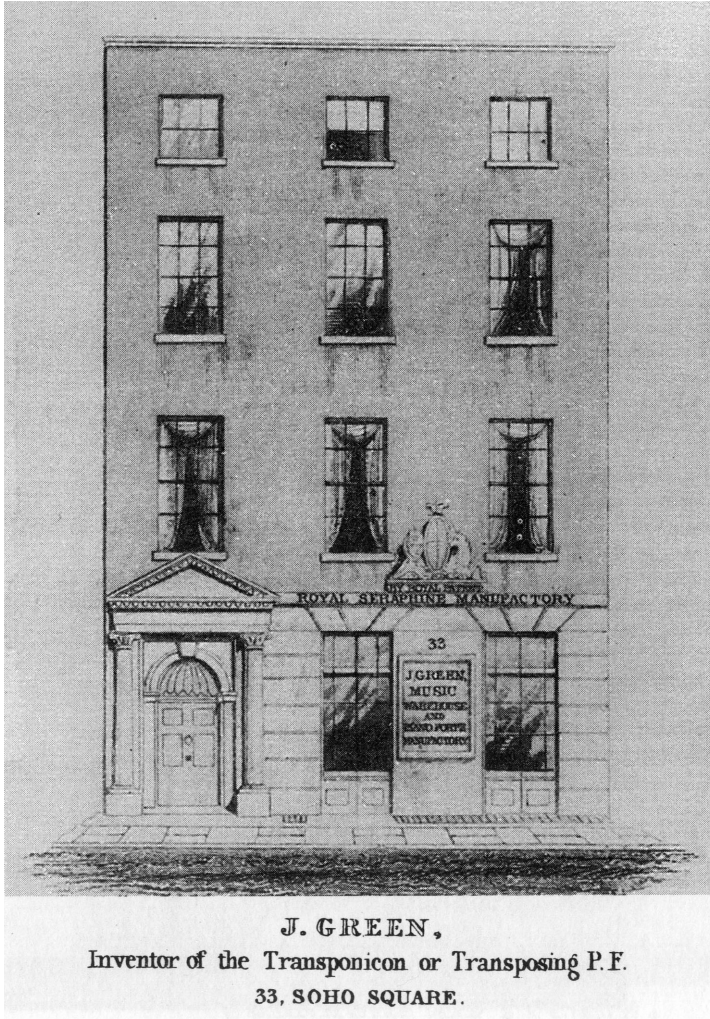


Figure 4: The front of John Green's shop, from Tallis's *London Street Views* (London: John Tallis, 1838–40).

Second, Collins reports that another indenture was made on or about 23 September 1818 between Tilly and himself, to purchase the rights for £500 for the remainder of the patent term. Collins has subsequently offered “publicly for sale at fair and moderate prices Bugle Horns constructed according to the ... Invention,” has provided himself with a sufficient number at great expense, and now has a large supply on his hands.

Collins’ complaint is that John Green, “musical instrument maker and vendor” (see Figures 4, 5), has been willfully infringing on the patent by “selling and exposing to sale at his house in Soho Square and other places Bugle Horns constructed according to the ... invention without any licence or authority whatsoever from” Collins. Collins and his agents had asked Green to desist from selling them and to account to him for the profits until the patent expired. But Green, “combining and confederating with divers other persons at present unknown” to Collins, refused to comply.

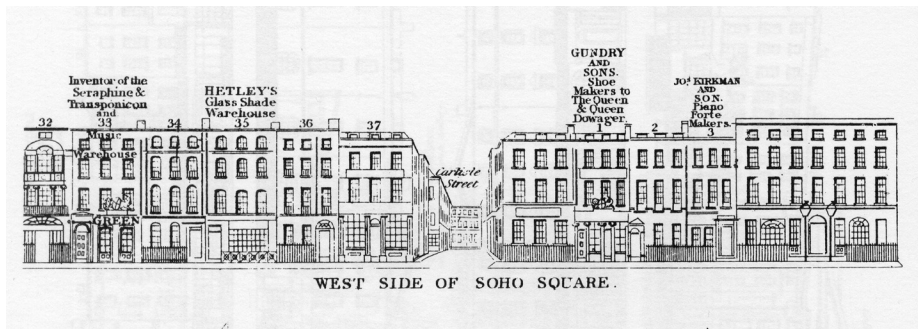


Figure 5: The front of John Green’s shop in the context of his neighbors, from Tallis’s *London Street Views* (London: John Tallis, 1838–40).

Collins goes on to claim that Green “sometimes pretends that the Instrument sold by him is not the Instrument for which the ... Letters Patent were granted, in as much that the Instrument invented by Joseph Halliday ... contains five keys only whereas the Instrument made and sold by ... Green hath six keys.” But Collins “charges that the said Instrument so made and sold by ... Green is substantially the same as the one for which the ... Letters patent were granted with the mere addition of a sixth key, and that by making and vending the said instrument with six keys he has infringed upon [Collins’] exclusive right ... and that the said Instrument sold by him, tho’ with six keys, is not a new invention but is virtually the Instrument so invented by ... Halliday.”

Collins states that Green also pretends he made and sold few of the instrument and made little profit. Collins, however, believes Green has sold “great numbers” of the instrument and made “very considerable profit.” Green has refused to give Collins an account. Furthermore, Green pretends Collins gave him some “permission, licence, or authority” to sell the instrument, which Collins denies. In conclusion, Collins asks the Court to restrain Green from selling or disposing of any more keyed bugles, to ask him to

hand over all the instruments in his possession or control, and also to account to Collins for his profits.

John Green's "answer" to Collins is dated 13 May 1820 (second page dated 14 May, altered to 16 May).⁸³ It not only provides a sterling defense to Collins' accusations but furnishes some fascinating details of the instrument's invention that presumably came from the maker Matthew Pace.

Green's main defense is to attack the sufficiency of the patent specification.

He admits that a certain Specification of the Invention ... was enrolled in this honorable Court, but [he] Saith he hath been advised and submits ... that the Specification so enrolled doth not contain and is not accompanied by any Scale of the size of the Instrument or Bugle Horn mentioned in the ... Letters Patent; and that the ... Specification doth not state or explain the sizes or dimensions of the holes to be made in the ... Instrument or the respective distance at which the same ought to be made from each other; and that the ... Specification doth not state the manner in which the ... Holes ought to be made or manufactured, and which [he] is advised and submits this Specification ought to have done; for [he] Saith he hath been informed and believes that in the making or manufacturing of the ... Holes, and to make them complete or in any manner to answer the purpose for which they are intended, it is absolutely necessary to surround each of them with a small rim or tube standing up or projecting from the ... Instrument or Bugle Horn, upon the top of which small rim or projecting tube the key attached to each Hole of the ... Instrument ought to rest; and which [he] Saith the ... Specification doth not in any manner state. And [he] is informed and verily believes that the utility and perfection of the ... Instrument very materially and essentially depend on the Size of the ... Instrument, on the size and dimensions of each hole, on the distance of each hole from the other, and on the manner in which the ... Holes are made or manufactured, and which the ... Specification doth not in any manner state.

And [he] ... Saith he is informed and for the reasons and under the circumstances hereinbefore verily believes that a Manufacturer of Musical Instruments or any person capable of making Bugle Horns cannot from an inspection or examination of the ... Specification so inrolled by ... Halliday clearly understand the nature of the ... Invention and cannot by following the directions or description contained in the ... Specification make a five keyed Bugle Horn (for which the ... Letters Patent appear to have been granted) in a perfect or workmanlike manner. And [he] therefore is advised and submits ... that the ... Specification so inrolled by ... Halliday doth not contain such a description of the Invention as by Law is required and that the ... Letters Patent are consequently void.

Green's second defense is that the invention was not original. He submits that "holes and keys of a similar nature and construction" as the improvements "alleged to have been invented" by Haliday "were made and adapted to certain Musical Instruments of a similar nature to the Bugle Horn, namely to Bass Horns and Serpents, and were commonly known and used by musical Instrument makers in England a long time before the time of the discovery and invention alleged ... to have been made by ... Halliday and the granting of the ... Letters Patent; and further, inasmuch as holes of a similar nature and construction were made in Instruments called Trumpets and French horns and commonly used and sold for many years" before Haliday's patent.

We may wonder why Green did not mention the earlier invention of the keyed bugle in 1800. He seems to have grown up in Preston, Lancashire,⁸⁴ but had settled in London by the mid-1810s. His father was born around 1760, so he himself would have been born no earlier than the 1780s, and therefore he may simply have been too young to have known of developments in London in 1800.

Nevertheless, another element of Green's defense is that others had the same idea for improving the bugle before Haliday. Green has been informed "that Mr. John Bernard Logier and Mr. Thomas Willman, Musicians then residing in Ireland, by the assistance of and in conjunction with each other did alter the ... Instrument called the Bugle Horn by cutting holes therein for the purpose of producing, and that the same did produce, a variety in the Notes of the ... Instrument in a manner similar to the mode alleged to have been discovered and invented by ... Halliday upwards of twelve months before the granting of the ... Letters patent to ... Halliday."

Green presumably received this information directly from Logier, with whom he had a business connection that is well documented in newspaper advertisements. In March 1818 the following advertisement appeared:

LOGIER'S SYSTEM of MUSICAL EDUCATION.—Mr. J. WILKINS begs leave to announce, that he has taken a house, No. 33, Soho-square, in conjunction with Mr J. GREEN, for the purpose of OPENING an ACADEMY on the above SYSTEM of MUSICAL TUITION, with the extraordinary merits of which he is fully acquainted, having been for some time in constant communication with Mr. Logier. The eminent superiority of this plan being now so completely proved, he would consider himself wanting in duty towards the Pupils committed to his care, were he longer to delay their participation in its manifest advantages. He is in hopes to complete his arrangements early in April, and respectfully requests that applications in the intermediate time may be addressed to No. 28, Norfolk-street, Strand.⁸⁵

That last address was Green's, which Humphries and Smith indicate he occupied from about 1815.⁸⁶ He was certainly already publishing music, as an advertisement in April 1818 shows: "MR. KEAN'S SONG.—On Thursday will be published, price 2s. to be had of Mr. Green, Music Agent, 28, Norfolk-street, Strand...."⁸⁷

Green was established in Soho Square by 13 May 1818, when he advertised,

MR. LOGIER'S PAMPHLET, in reply to the PHILHARMONIC EXPOSITION. Published by J. Green, Music Agent, 33, Soho-square. Where may be had, THE PATENT CHIROPPLAST; or, Hand Director: with the Books of Instructions. Ruled Slates, Ruled Books, Portfolios, Port Crayons, and every thing necessary in Mr. Logier's Method of Musical Tuition.⁸⁸

His description of himself as "music agent" referred partly to acting as an agent for Logier's publications and accessories, as well as being an authorized teacher of Logier's system.⁸⁹ Logier confirmed Green as a "professor" of his "new system of musical education" in an advertisement the following year.⁹⁰ Green continued to publish or be the agent for Logier's writings, as well as run his academy on Logerian principles, right up to Logier's death in 1846.⁹¹

To return to Green's answer to Collins in the legal case of 1819–20, Green now provides details about the circumstances surrounding Haliday's invention of the five-keyed bugle and other developments in Ireland. In every instance he says that he has heard or been informed and believes (or "verily believes") the information, most of which he presumably obtained from Pace.

Before the granting of the patent, in or about December 1809, John Wood, then Bugle Major of the Cavan Regiment, wrote from Kilkenny, where the regiment was stationed, to Pace in Dublin, informing him that an improvement was being made to the bugle by Haliday "which would surprize the Musical World"; and informing Pace that Wood "was the principal in bringing the same forward" and would give him the improvement's secret. Pace immediately went to Kilkenny, where he negotiated with Wood to purchase the secret for £50. Pace and Wood went to a Kilkenny attorney and entered into an agreement that Wood would put Pace "in full possession of the Secret" and all benefit arising from it. Wood then showed Pace a bugle with three holes in it and explained the principle of the instrument by playing it and "otherwise shewing him the superiority of the ... Instrument over the Bugle Horns then in common use." Finally, Wood gave Pace the bugle.

The whole of the "pretended secret" at that time "consisted only of the Addition of three holes made in the ... Instrument and that in playing thereon the ... three holes were stopped by the hand and Fingers of the player only and not by keys." The bugle Wood gave Pace "was a Bugle Horn which had been procured from ... Haliday by ... Wood and ... the three holes made therein had been previously made by ... Halliday."

Pace then returned to Dublin with the bugle, having "procured a promise from ... Wood that ... Wood would from time to time communicate by post to ... Pace in Dublin such other additional Improvements as should be subsequently made to the ... Instrument by ... Halliday." At the time of his "pretended" discovery of the three holes Haliday had no intention of applying for a patent, because he communicated the principle to Wood, and the Surgeon of the Cavan Regiment, "and to many other persons."

After Pace left Kilkenny, Haliday “with the assistance of a Tinman residing in Kilkenny,” made additional improvements by affixing keys to the three holes in another bugle similar to the one Pace took to Dublin. Wood communicated this development to Pace, who affixed three keys to his own bugle, so the two bugles “were in the same state of forwardness.” At that time Pace showed his three-keyed bugle to Edmund Nugent of Dublin (later lord mayor of Dublin and knighted). Haliday “openly disclosed the principle of the ... pretended improvement to many persons and particularly to many persons in the Town of Kilkenny and to the Officers and privates of the Regiment of the Cavan Militia by openly playing the ... Instrument before them and explaining the ... pretended Improvement to them and to many other persons.”

Shortly afterwards Wood wrote to Pace, informing him that Haliday had obtained leave to go to Dublin “with his said improved Bugle for the purpose of making the best use and advantage derivable from the ... Improvement,” and accordingly he called on Holden “since deceased (and who was at that time a Musician or Music Seller residing in Dublin)” to make an arrangement with him to sell him the secret of the “pretended improvement” and to procure a patent for it. “But in consequence of ... Holden not being a manufacturer of musical Instruments it was deemed necessary in the completion of the intended arrangement between them to apply to ... Matthew Pace.” As already mentioned, Holden had been listed as a musical instrument maker, probably of band instruments, in 1805, but the following year seems to have given that up in favor of selling instruments and publishing and selling music.

Haliday and Holden accordingly called on Pace. On discovering he already possessed the secret of the keyed bugle, they entered into an agreement with him to obtain a patent in Holden’s name; the profits resulting from the sale of the instrument, after paying Pace “a certain sum” for manufacturing them, were to be divided between Holden and Pace.

Immediately after the agreement, Haliday, “for the purpose of making his said pretended Invention more complete” and in Holden’s house, added two additional holes and keys, thereby making the five-keyed bugle for which the patent application was made. This bugle was delivered to Pace, so he could make more, and Pace “did manufacture a great number” and also showed the instrument and its principles to Nugent. Pace continued to manufacture and deliver to Holden the bugles he had “from time to time manufactured” before the patent was granted.

Although it had been previously arranged between Holden, Haliday, and Pace that a patent should be obtained in Holden’s name, “it was clearly and explicitly understood between them that in consideration of ... Pace being already in the possession of the Secret of the ... Improvement and having also paid the Sum of Fifty pounds to ... Wood as hereinbefore mentioned ... Pace was to be at full liberty to make and sell the ... Instrument wherever and to whomsoever he thought proper without the hindrance of ... Holden or ... Haliday or any person claiming under them by virtue of the ... Patent.” Holden went to London to procure a patent, but ascertained that it could not be taken out in his name, so he returned to Dublin and the patent was ultimately obtained in Haliday’s name.

Holden communicated the secret of the improvement to the Duke of Kent, made a present of two of the instruments to the duke, "and procured from him the liberty of calling the ... Instrument the Royal Kent Bugle and ... the ... Instruments were publicly played upon by the Band belonging to the ... Duke of Kent before the ... Letters patent were granted." After the grant, Pace, based on the "agreement or understanding" between him and Holden and Haliday, was employed by Holden "from time to time" to manufacture the five-keyed bugle. Pace on his own account manufactured and sold the instrument "from the time the ... Letters Patent were granted for the space of about three years ... until the Improvement of the sixth key hereinafter mentioned was discovered without any molestation or interruption from any person or persons whomsoever."

Green declares that he does not know when the assignment of the patent rights to Tilly was made, although he "hath heard and believes" that it was not in May 1811 but seven years later. This is the only part of Green's answer that makes no sense in relation to the chronology of his story. He should have been able to calculate that that would have placed the assignment only four months before Collins claimed he acquired the rights from Tilly; and he knew that Holden was already dead. Perhaps "years" was an error for "months"? According to Green, when the assignment of the patent rights was made to Tilly, it was understood by Tilly that Pace's rights under his agreement with Holden and Haliday were to remain, and Pace was to continue to make and sell the five-keyed bugle without any "interruption or molestation" from Tilly. Shortly after the assignment to Tilly, "an improvement was made and as it is alleged by ... Haliday in the ... five keyed Bugle Horn by the addition of a sixth hole and key."

Green states his belief that

additional improvement is of a nature different from and so essential as totally to supersede the use of the ... five keyed Bugle Horn, for which only the ... Letters Patent were obtained.... [T]he most skilful musical Instrument makers and the most Scientific musical performers are decidedly of opinion that the five keyed Bugle Horn ... is an imperfect Instrument and is comparatively useless without the addition of the Sixth hole and key. And that in order to make a Bugle with the addition of the Sixth hole and key it is necessary to [words obscured] longer than the five keyed Bugle Horn and of a Form and shape essentially different therefrom. But ... it is not alleged by [Collins] nor did [he] ever hear nor does he believe that ... Halliday ever applied for or in any manner obtained Letters patent for the ... last mentioned Improvement....

"[U]pon or immediately after" Haliday's invention of [the sixth key, Pace purchased from Haliday

all his right, title, and Interest in the ... last mentioned Improvement at or for [the Sum] of Fifty pounds with the knowledge of ... Tilly and ... Pace

with the like knowledge of ... Tilly began to manufacture and continued to manufacture and Sell the ... Instrument with the addition of the Sixth hole and key without any hindrance or molestation from ... Tilly or any other person or persons whomsoever until a Bill of Complaint in this honorable Court was filed against ... Pace by [Collins].

Dudgeon observes, however, that it would have been perfectly possible to create a six-keyed bugle by adding another key to a five-keyed instrument without making any other changes; the bell would need to have a different contour only if the open-standing key were close to the bell.⁹² Green's last statement was curious: Did Collins really file another complaint against Pace (no trace of which seems to survive) or was it an error for Green?

Since the invention of the sixth key "and the necessary alterations in the ... Instrument attendant thereon," Green believes that no five-keyed bugles have been manufactured or sold, the new improvement of the sixth key "having totally superseded the sale" of the five-keyed bugle. Green questions whether Collins could afford to purchase the patent rights in the first place, "being as this defendant hath been informed and verily believes a person in indigent circumstances and incapable of paying any Sum of money as purchase money for the ... Letters patent." Moreover, Green believes that, since the discovery of the sixth key, Collins has offered only six-keyed bugles for sale. Furthermore, Haliday before the assignment of the patent and Collins since he acquired the patent "hath not supplied or caused to be supplied for His Majesty's Service all such Instruments of the ... Invention as they respectively have been required to supply in such manner and at such times and at or upon such reasonable price or terms as have been settled for that purpose by the Master General of the Ordnance and the principal Officers of the Ordnance." According to Collins' own statement, that would be grounds for voiding the patent.

Green denies that Collins has, since the assignment to him, continued to offer "publicly for Sale and at a Fair and moderate price Bugle Horns constructed according to the ... Invention [with the sixth key?]." The problem is again that "no person would purchase from [Green] or any other vender the ... five keyed Bugle Horn after the ... Improvement of the Sixth key." Mr. Owen of His Majesty's Band called upon Collins or his agent to buy a bugle, and after examining Collins' stock in trade, refused to buy any "in consequence of the imperfect manner in which all the said Bugles were manufactured" (presumably being five-keyed). But Owen has since bought a six-keyed bugle manufactured by Pace and considered it "perfect."

Sometime in 1816, and before the alleged assignment of the patent to Collins, Green was employed by Collins "to sell for him on commission the ... improved six keyed Bugle Horn" and did sell many of them in England. Green asserts he is not bound to submit an account of all such instruments he has sold or are now remaining in his hands or of the profits he or anyone else received from the sales. Green believes Collins for several years prior to that agreement sold it himself in England "on his own account without any hindrance or molestation from any person or persons whomsoever."

Green was also employed by Maxwell Holles, “a musical Instrument maker residing in Ireland,” to sell “the last mentioned improved Instruments in England.” And accordingly he did sell them from about December 1817 to February 1819, “without any molestation or interruption from any person or persons whomsoever.” Teahan lists Holles as “Six Keyed Bugle Maker, Dublin, 20 Tigge St., 1816–18,” but Holles’s first entry in *Wilson’s Dublin Directory* for 1816 reads only “Musical Instrument-maker, 20 Tigge Street.”⁹³ A six-keyed bugle in the Historisches Museum, Basel (Inv. No. 1980.2543, ex Bernoulli collection) is engraved “Royal / Patent / KENT / Bugle / No 272 / HALLIDAY INVENTOR” as well as “Made by M. Holles / 20 Tigge St / Dublin” on the bell rim.⁹⁴ And a seven-keyed bugle in the Horniman Museum, London (ex Carse 115.80) has the mark “Made by M. Holles. 18 Upr. Ormond Quay, Dublin. Royal Patent Bugle, No. 378, Halliday inventor.”⁹⁵ According to Teahan, Holles occupied the latter premises in 1818–19. To judge by the manufacturing numbers of these instruments, he may have been making keyed bugles before his first listing in 1816. The phrase “Halliday inventor,” with its misspelling of Haliday’s name, is the same one used by both Key and Pace (and as we will see, Turton); it may ultimately stem from Logier. According to Green, “various Manufacturers and dealers in musical Instruments in England” as well as Collins “for several years last past have continued to manufacture or sell” the six-keyed bugle “without any molestation or interruption whatever until the ... pretended assignment” of the patent to Collins.

Green says that all the bugles he has sold at any time since the assignment of the patent to Collins in September 1818 have been the six-keyed type and all, as he believes, were made by Pace. He states his opinion that Pace has the full right to make and sell both the five-keyed bugle (notwithstanding the patent, “and supposing the same to be valid, which [he] doth not admit”) in light of his purchase from Wood and the subsequent agreement with Holden and Haliday, and also to make and sell the six-keyed bugle because that instrument “is not the subject of the ... Letters patent.” Green has the right to sell the six-keyed bugle as agent for and on behalf of Pace. Finally, Green contends that he is not bound to submit an account of all such instruments he has sold or are now remaining in his hands or of the profits he or anyone else received from the sales.

The outcome of the case can be followed in further newspaper advertisements. On 26 and 28 March 1820, Green issued the following:

ROYAL KENT BUGLE, sold by J. Green, 33, Soho-square, (under the Authority of the Court of Chancery.)

Mr. GREEN respectfully informs the numerous Applicants for the above Instruments, that he is now authorised by the Court of Chancery to supply them to the public, and is provided with an extensive stock, at only half the usual prices, manufactured expressly for him alone by the original Proprietor....⁹⁶

The “original Proprietor” would have been Pace. A week later, Green provided more details:

ROYAL KENT BUGLE.—Mr. JOHN GREEN wishing to avoid any misrepresentation on the subject of the Suit in Chancery now pending between Mr. Collins and him, concerning the exclusive right to the Sale of this Instrument, is desirous of explaining his Advertisement on the 28th day of March, and respectfully informs the Public, that an Order has been made by the Court in the Suit dissolving the Injunction which had been obtained by Mr. Collins, to restrain Mr. Green from selling the said Instrument, and the validity of the Patent shall be decided in a Court of Law, and on Mr. Green undertaking to keep an account of the Profits arising from the Sale until the Suit is decided. Mr. Green, therefore, begs leave to inform Music-sellers and the Public, that he will continue to supply that Instrument in the same manner, and on the same terms, as he has hitherto done.⁹⁷

Green added to an advertisement in December: “N. B. Has always a supply of the Royal Kent Bugle, with six keys.”⁹⁸ And later that month he refers to the second trial, to decide the validity of the patent:

ROYAL KENT BUGLE.—J. GREEN, 33, Soho-square, begs to inform the Trade, Military Bands, and the Public, that the party who contests his right to sell the above Instruments having postponed the trial of the question, he is still fully authorised to dispose of them, and is provided with an extensive assortment at his usual very low prices. He has at present for sale also, on unprecedented low terms, a few Slide Horns, Trombones, Plain and Spring Slide Trumpets, Field Bugles, &c....⁹⁹

Collins responded at once:

ROYAL KENT BUGLE.—GEORGE COLLINS, the Assignee of the Patentee, feels himself called upon, by Mr. J. Green’s Advertisement, to inform the Trade, Military Bands, and the Public, that the Trial of the Action against Mr. Green, for an Infringement of the Patent, was unavoidably postponed in consequence of Mr. Green’s refusal to admit the Deeds of Assignment of the Patent, which had been executed in Ireland. This conduct shews no anxiety, on the part of Mr. Green, to have the question of right determined: however, as the Trial will take place in the next Hilary Term, Mr. Collins cautions all parties interested from being misled by puffing advertisements. Mr. Key, of No. 20, Charing-cross, is the sole Agent authorised by Mr. Collins, who will dispose of these Instruments at fair and regular prices.—Dec. 30, 1820.¹⁰⁰

Hilary Term ran from January to March. The case in fact went to court less than two months after Collins’ advertisement, as reported in the legal section of the newspapers:

Court of King's Bench, Westminster, Feb 24, Collins v. Greene

This was an action upon a patent. The plaintiff is the assignee of a certain musical instrument called "the Kent bugle," being an improvement upon the common bugle by the addition of keys, after the manner of the flute and clarionet; and the complaint was, that the defendant, by making an improved bugle, carrying six keys instead of five, had infringed upon the right of the original inventor. The patent under which Mr. Collins claimed was obtained by Mr. Halliday, of the Cavan militia, who first made "the Kent bugle," and the defendant, after attempting to impeach the originality of the invention by showing that more than 20 years since keys had been applied to an instrument called the serpent, attacked the specification. The specification (as usual) was found insufficient: and The LORD CHIEF JUSTICE, with reluctance, nonsuited the plaintiff.¹⁰¹

Only two of Green's original defenses are mentioned. First, that the general principle of adding keys to brass instruments was established with the bass horn in the 1790s as we have seen above, therefore Halliday's invention was not original. Second, that the patent specification was "insufficient," or in other words, was not sufficiently detailed to establish the originality of the patented instrument.¹⁰² Note that the court evidently did not dispute Collins' rights to the patent itself.

Vindicated by law, Green advertised only four days later,

ROYAL KENT BUGLE, with Six Keys.—J. GREEN, 33, Soho-square, respectfully informs the Trade and the Public, that a Jury having decided his right to manufacture and sell the above Instruments, he will continue to supply them at his usual prices; and, being now provided with an extensive Stock, he respectfully invites to an early application those who may have been hitherto deterred by the litigation of this question.—N. B. His name and address are engraved upon these and all descriptions of Military Brass Instruments, which he warrants and sells on extraordinarily low terms.¹⁰³

Green advertised the keyed bugle only once more, in January 1822:

ROYAL KENT BUGLE.—By order of his Royal Highness the Commander in Chief, these Bugles with keys, are commanded to be used in all Military Bands, &c. J. GREEN, No. 33, Soho-square, (the same side as the Bazaar,) has, in consequence, prepared an extensive assortment, in the keys of C and B[b], and also with 3 turns and a close bell for the pocket; all warranted, and to be supplied on the extraordinary low terms of from 3 guineas to 3 guineas and a half each: which he is enabled to do since the successful issue of his trial at law respecting the patent right of this instrument.¹⁰⁴

Subsequently Green advertised only harps and keyboard instruments. He was still listed in 1825 as “Proprietor for Maelzil’s [*sic*] Metronome[,] Kent Bugle, Hencock’s Patent Metallic Writing Slates, &c.”¹⁰⁵ In 1831, he invented and started manufacturing The Royal Seraphine, an ancestor of the harmonium¹⁰⁶; and in 1837, the Transponicon, a transposing piano.¹⁰⁷

Comments on Green’s answer and further adjustments to the story

Who invented the sixth and seventh keys and when?

In his verbal attack on Logier in 1817, Haliday (writing in the third person) mentioned “all the latest and best Improvements of the Inventor,” without specifying what those improvements were. Since Logier was already dealing with the six-keyed bugle in his tutor of 1813, one of the improvements would have been the extra key. According to Green’s answer, Haliday was the one who invented the sixth key, “about three years after the ... Letters were granted,” or around 1813, and Haliday immediately sold the rights to it to Pace.

John Hyde’s tutor, published around 1818, also attributes the sixth key to Haliday and provides what seems to be the earliest clear evidence for the seventh key,¹⁰⁸ although he apparently believed it was invented by someone else. In the preface he says the “Royal Kent or Keyed Bugle” was “invented by the ingenious Mr Hallyday... The ingenious inventor of the Royal Kent, or Keyed Bugle, has added six Keys.... Notwithstanding the improvements Mr Hallyday has made, there has been another ventige [i.e., key, the seventh] added to make the lower E \flat .” It is certainly curious that neither Collins nor Green mentioned the seventh key in 1819–20, a year or two after Hyde, so evidently it had not yet come into common use.

The Pace Family

Matthew Pace and his sons Charles and Frederick are absent from the Dublin directory after 1815, therefore apparently moved to London around that year. Green was selling six-keyed bugles by Pace from September 1818 and probably earlier; in 1820, Green advertised that his six-keyed bugles were “manufactured expressly for him alone by the original Proprietor.” The Paces would have needed some time to establish their reputation in London, so it would have been an attractive proposition to sell through an enterprising dealer such as Green.

Pace’s sons are listed in the poor rate books for 2 Lower Crown Street, Westminster, in 1819, and in a trade directory the following year as “Pace, C & F, Musical Instrument Makers” under the heading “French Horn, Bugle & Trumpet Makers.”¹⁰⁹ Surprisingly, they were only seventeen and fourteen years old, respectively, in 1820, presumably having needed to take over the business because of Matthew’s failing health. He is named as the householder of the Crown Street property in 1821, but died in 1823, when his age was given in the burial register as 53, thus born around 1770.¹¹⁰ In 1826 Charles and Frederick appear in a directory as “Martial musical instrument makers and original makers

of the Royal Kent Bugle.”¹¹¹ Charles was still stating on an invoice in 1840 that he was the “Original maker of the Royal Kent Bugle.”¹¹² According to Dudgeon, incidentally, some surviving keyed bugles, identical in every respect to the instruments made by the Pace family, are unmarked; so perhaps the Paces supplied “blanks” for other makers to inscribe.¹¹³

The Willman Brothers

Dudgeon’s statements that the first known soloist on the keyed bugle was the Irish clarinetist Thomas Lindsay Willman (1784–1840) and that he played benefit concerts in Dublin in 1811 are a case of mistaken identity. A playbill for an earlier benefit performance at the Theatre Royal, Dublin, on 5 June 1810, only a month after Haliday obtained the patent, reads: “Mr. H. WILLMAN *will play a Concerto on that highly-improved Instrument, THE Patent Kent Bugle Horn, (INVENTED BY MR. JOSEPH HALLIDAY)* In which he will introduce several admired Airs, never attempted by any Person but himself. He will also play several Airs, accompanied by seven other Performers of the Tyrone Band, on the same instruments”¹¹⁴ (see Figure 6). The plural “instruments” suggests that the accompaniments were also played on the keyed bugle. Henry Willman, Thomas’s brother, was a trumpeter in the Tyrone Regimental Band and (from 1809) a member of the Crow Street Theatre orchestra.¹¹⁵ Michael Kelly, who heard him play in 1808, recalled that “The finest trumpet player I ever heard in any country played in our orchestra; his execution on the instrument almost baffled belief;—his name was Willman, and he is the brother of Mr. Willman, the principal clarionet, and an equally talented performer on that instrument, at the King’s Theatre.”¹¹⁶ Thus it would have been Henry rather than Thomas whom Logier referred to in 1813 when he declared that the keyed bugle “has also been lately introduced most effectively in the *Theatres*, and to the admiration of those who have heard that *incomparable Performer*, Mr. WILLMAN.”¹¹⁷ This playbill confirms that the name Kent, if not Royal Kent, had already been attached to the new instrument.

The Role of Logier

A surprising feature of Logier’s tutor, not mentioned by Dudgeon, is the following notice:

TO THE PUBLIC,

But more particularly to the Army.

THE sole right of manufacturing the ROYAL KENT BUGLE having been transferred from the Patentee to *J. B. LOGIER*, (the Author of the following Treatise on its use and qualities,) the latter thinks it necessary to state, that it will in future be manufactured under his *personal* inspection, a circumstance which, he presumes, his intimate acquaintance with the properties of Wind Instruments in general, particularly qualifies him to undertake successfully. The KENT BUGLE thus finished will possess every possible perfection which that rare, and *admirable Instrument* is capable of

THEATRE ROYAL.

**Mr. H. WILLMAN'S
NIGHT.**

On Tuesday, June 5, 1810,

Will be performed, the PLAY of

The Stranger.

The STRANGER, by
A Young Gentleman of this City,
(being his first Appearance on the Stage.)

Baron Steinfort, Mr. WHEATLEY, Count Wintersen, Mr. KING. Mr. Solomon, Mr. FULLAM.
Peter, Mr. JOHNSON. Francis, Mr. WILLIAMS. Tobias, Mr. N. JONES.
Stranger's Children, Misses MOORE and WESTON.

Countess Wintersen, Miss LOCKE. Annette, } Mrs. NUNN.
Charlotte, Mrs. DAVIS. Nannette, } Savoyards, } Mrs. JOHNSON.
Mrs. Haller, Miss SMITH.

End of the 3d Act, Mr. H. WILLMAN will perform a Concerto on the Trumpet,
In which he will introduce several favorite Airs.

End of Act IV. Mr. T. WILLMAN will perform a new Concerto on the Clarionet,
In which he will introduce a favourite Air and Rondo.

Between the Play and Farce, (by particular Desire) Mrs. COOKE will sing the
Bright Seraphim, accompanied on the Trumpet by Mr. H. WILLMAN.

After which, Mr. H. WILLMAN will play a Concerto on that highly-improved
Instrument, THE

Patent Kent Bugle Horn,

(INVENTED BY MR. JOSEPH HALLIDAY)

In which he will introduce several admired Airs, never attempted by any Person but himself.

He will also play several Airs, accompanied by seven other Performers of the Tyrone Band,
on the same Instruments.

To which will be added, the FARCE of

The Weathercook.

Tristram Fickle, Mr. FARREN.
Sneer, Mr. SLOMAN.
Old Fickle, Mr. NORMAN. Briefwit, Mr. W. FARREN. Peter, Mr. W. KING.
Gardener, Mr. MASSEY. Barber, Mr. CARROLL.

Ready, Mrs. KING. Variella, Mrs. STEWART.

Tickets to be had of Mr. H. Willman, No. 17, Fade Street; at all the Music Shops; and of Mr. M'Nally
at the Theatre, where Places for the Boxes may be taken.

PRINTED AT THE HIBERNIA PRESS OFFICE, TEMPLE LANE.

Figure 6: Playbill for benefit performance for Henry Willman at Theatre Royal, Dublin, 5 June 1810; from the Harvard Theatre Collection; reproduced by permission.

receiving, and will be easily distinguished from any that may be offered for Sale by any fraudulent Manufacturer. *J. B. LOGIER* begs permission to add, that his KENT BUGLES may be had at the following Houses in the United Kingdom:

LONDON.

Messrs. CLEMENTI & Co.	<i>Cheapside.</i>
Messrs. ASTOR & Co.	<i>– Corn-hill.</i>
Messrs. GOULDING & Co.	<i>Soho-square.</i>
Mr. CRAMER,	<i>– Pimlico-road.</i>
Mr. KEY,	<i>– Pall-mall.</i>
Mr. WHEATSTONE,	<i>– Strand.</i>
Mr. MILHOUSE,	<i>– Oxford-street.</i>

EDINBURGH.

Messrs. PENSON, ROBERTSON & Co.

DUBLIN.

Messrs. GOULDING & Co. *Westmoreland-street.*
 Messrs. COOKE & Co. –

AND

AT THE MANUFACTORY,
 No. 27,
 LOWER SACKVILLE-STREET.

We have already met Astor, Goulding, and Key; Charles Wheatstone will appear in part 2 of the article. Of the others, the composer Muzio Clementi (1752–1832) also had a business as piano maker and wind-instrument dealer.¹¹⁸ Waterhouse lists a J. Cramer at this address (presumably from directories) in 1816–20, suggesting that he may have been a son of the woodwind maker John Cramer (fl. 1790–1812), earlier briefly in partnership with Key.¹¹⁹ William Milhouse (b. 1761; d. 1835 or later) was a woodwind maker.¹²⁰ William Penson and Daniel Robertson, music teachers, were in business as music engravers, sellers, and publishers in Edinburgh, 1811–21.¹²¹

Logier was presumably planning only to inspect, not make, the large quantities of keyed bugles implied by this long list of agents, and had hired at least one maker for the job. But whom? According to Green, Logier and Willman had independently invented a keyed bugle a year before Haliday, but they evidently had not put their invention into practice. Holden died in 1813, the year Logier published his tutor, removing Pace's retail outlet for his instruments. That may have been the impetus for Logier to leap into the keyed-bugle business, offering Pace another outlet for his now six-keyed instruments, setting up agents, and writing or commissioning the tutor. This scenario would even lend

some credence to Logier's claim to have had the rights "transferred from the patentee," because by agreement with Haliday and Holden, Pace had been permitted to make instruments, and of course he had just bought the rights to the sixth key from Haliday. The Pace family's move to London two or three years later might then have resulted from a rift with Logier, been an attempt to find a larger market for their instruments, or been part of Logier's strategy to sell more keyed bugles in England. Green, who was acting as agent for Logier's publications by 1818 and helped to set up a school for his teaching methods that year, had become a significant retail outlet for Pace by the same year.

The Role of the Duke of Kent

According to Green, Holden told the Duke of Kent about the new keyed bugle, gave him two instruments, and obtained permission from him to call the new instrument the Royal Kent Bugle. Green also says that keyed bugles "were publicly played upon by the Band belonging to the ... Duke of Kent before the ... Letters patent were granted." Why was it the duke whom Holden approached and to whom Logier dedicated his tutor?

Dudgeon states that "The Duke of Kent was in charge of all the military, including all of the military bands. Since the military bands were the main consumers of band instruments, Logier's dedication to the Duke was a wise business decision."¹²² But these comments seem ultimately to stem from an initial misunderstanding of the duke's rank, passed on from one scholar to another for over a century. The earliest source I have found is Henry G. Farmer's *Memoirs of the Royal Artillery Band* (1904), which states, "The first really successful instrument of this type [keyed brass] was the key-bugle, called the 'Kent-bugle,' out of compliment to the Duke of Kent, who as Commander-in Chief, encouraged its introduction...."¹²³ Eight years later, Farmer warmed to his theme: "The Duke of Kent heard Halliday perform on the instrument at Dublin, and was so struck with the innovation that he encouraged its adoption by our regimental bands. Halliday out of compliment to his patron called the instrument the Royal Kent Bugle...."¹²⁴

In fact, Prince Edward Augustus, Duke of Kent (1767–1820), the fourth son of George III and father of Queen Victoria, was commander-in chief only of the British forces in North America, and that for a mere two years, 1799–1800.¹²⁵ After his controversial handling of his duties as governor of Gibraltar in 1802, when his harshness provoked a mutiny and a plot to assassinate him, he was recalled to England the following year. His promotion to the rank of field marshal in 1805 was a token appointment, and he never again had an active military command.¹²⁶ Rather, he was made "Keeper and paler of the house and park of Hampton Court,"¹²⁷ and he settled at Castle Hill Lodge in Ealing.

Based on his military career, the duke was an unlikely figure to symbolize a significant new instrument to the public.¹²⁸ One biographer wrote, however, that "His principal amusement was music."¹²⁹ While serving in Quebec he organized an amateur band.¹³⁰ Another biographer noted that the duke's house in Ealing "was filled with musical devices, cages of artificial singing-birds, organs with dancing horses, and musical clocks."¹³¹ A judge visiting the house was surprised when a door opened and "a band of thirty wind-instruments played a march, with a delicacy of tone, as well as precision, for which I have

no words equal to the charm of its effect. They were ... like one instrument.”¹³² Fulford remarks that “This band played in Ealing Parish Church when the Duke was at Castle Hill.”¹³³

The band was apparently not part of the duke’s “establishment.”¹³⁴ Nevertheless, several other sources show that the duke did have a wind band associated with him that played on public occasions. On 10 October 1803, five months after he returned from Gibraltar, Major J. Macleod, the Brigade Major at Woolwich, wrote: “I saw with the Duke of Kent’s Band the other day, what is called a Base Horn.”¹³⁵ At a celebration for the birthday of Prince William, Duke of Clarence, the third son of George III, in Bushy Park on 21 August 1806, “In the morning the *Dukes of York’s and Kent’s bands arrived in caravans*; after dressing themselves and dining, they went into the pleasure grounds, and played alternatively some charming pieces. The Duke of Kent’s played some of the choruses and movements from Haydn’s Oratorio of the *Creation*, arranged, *by command of his Royal Highness*, for a band of wind instruments.”¹³⁶ On 28 October 1812 it was recorded that Schoengen tried out Close’s polyphonic horns “before the Masters of the Duke of Kent’s and Cumberland’s band[s], and they did not find any fault.”¹³⁷

At a meeting in London of the Free and Accepted Masons of England According to the Old Institutions on 1 December 1813, to install the Duke of Kent as Grand Master, near the front of the procession walked “His Royal Highness’s band of music, being Masons.”¹³⁸ Later in the ceremony, “The band of music ... performed a symphony” and an Ode composed for the occasion by “Brother [Michael] Kelly” was performed by at least ten singers with piano, “accompanied by the Grand Master’s personal band.” This lodge then united with the other lodge, the Free and Accepted Masons of England under the Constitution of England. At a grand assembly to mark the union on 27 December, the procession was headed by “The Duke of Kent’s Band of Music, fifteen in number, all Masons, three and three.”¹³⁹ At the close of the procession, the processors “faced each other, the music playing a march composed for the occasion by Brother Kelly.” The band also played music by Kelly in 1814, at the installation of Prince Augustus Frederick, Duke of Sussex, sixth son of George III, as Grand Master of the united lodge.¹⁴⁰

The Duke of Kent also became an “active patron, chairman or president of no fewer than fifty-three societies and public charities,” including the Royal Society of Musicians.¹⁴¹ Presumably it was that mellowed side of his post-military life that appealed to the sponsor of the keyed bugle. Although he lived vastly in debt, he still managed to spend freely, so perhaps he contributed some money to the development of the instrument. Perhaps also the duke, a prolific correspondent, dashed off a round of letters to his brothers and some military commanders about the instrument.

Conclusions

The new documents reported in this article, mostly newspaper advertisements and the bill of complaint and answer from a court case in 1819–20, considerably expand the early history of the keyed bugle. First and foremost, Joseph Haliday was not the only person

thinking about adding holes and keys to the bugle at the turn of the nineteenth century. In 1800, ten years before Haliday's patent, the London music manufacturer and dealer George Astor advertised that he "made and sold" a "NEW-INVENTED BUGLE HORN, which, by the improvement of Finger-holes and Keys, may be performed on, in any Key of Music, with facility and ease...." Within six months he could claim that the instrument was "now so much in use." The most likely explanation for the appearance of such an instrument, apparently modeled on the bass horn, is that it was made and perhaps invented by the brass maker John Köhler I, who made copper bells for one type of bassoon sold by Astor. Köhler's death in 1801, and the death of his successor John II in 1805, would have soon stopped the spread of the new instrument. A few possible performances on a keyed bugle can be traced in the first decade of the nineteenth century: a piece with bugle obbligato by John Hyde (1800); concertos by Johann George Schmidt and Master Wigley, the latter composed by James Sanderson (1803–04); troops performing before George III (1804); and a "Military Piece" (composed?) by John Mahon (1805).

Between about 1798 and 1812, William Close, an apothecary and surgeon in the Lake District, invented and developed what he called "polyphonian" trumpets, horns, and bugles, to which crooks with holes and keys could be added at will to facilitate the production of the chromatic scale.¹⁴² He received a patent for them in 1812. Later that year they were being sold by Thomas Percival, who wrote to Close that the "opposition by several shopkeepers ... who do not deal with me is very great, and with a few French Horn players I am told have combined to prevent their selling if possible by spreading an evil report of them.... It shews the sordid disposition of man who to gratify a covetous mind in part and injure me would gladly destroy such a beautiful fabric."¹⁴³

The London music dealer John Green claimed that the German-born bandleader, composer, music dealer, music teacher, theorist, and inventor Johann Bernard Logier, resident in Dublin, together with the clarinetist Thomas Willman, put holes in a bugle in a manner similar to Haliday, more than a year before his patent. Green, like some modern scholars, was confusing Thomas with his brother Henry, a famous trumpeter and (shortly) player of the keyed bugle. In fact Henry played the instrument in a benefit concert at a Dublin theater only about a month after Haliday was granted his patent.

In 1819 the otherwise unknown George Collins advertised that he owned the patent rights to the keyed bugle and had appointed the brass maker Thomas Key as its sole vendor in England and Wales (the countries in which the patent was valid). Collins also cautioned that anyone making or selling instruments on the same principles would be prosecuted. At the end of that year he did sue Green in the Court of Chancery for violating the patent, but lost the case. Among other things, Collins' bill of complaint against Green states that the Dublin music teacher and seller Smollet Holden became involved in the keyed-bugle business by promising to advance money to Haliday and paying for the costs of obtaining the patent, for which Haliday agreed to sign over the rights to Holden, although no deed of assignment was made. In 1811, only a year after the patent was obtained, Haliday and Holden jointly sold the patent rights for the remainder of the fourteen-year term to Robert Tilly, a Dublin lawyer, for more than £900. In 1818, Collins had bought the rights

from Tilly for £500. But because Green together with “divers other persons at present unknown” had been selling “great numbers” of six-keyed bugles, Collins had been left with a large supply of instruments on his hands. He argued that Green’s instruments were “substantially the same as the one for which the ... Letters patent were granted with the mere addition of a sixth key.”

In his “answer” to Collins, Green told a complex story about the circumstances surrounding Haliday’s invention. Haliday, while stationed with the Cavan Militia in Kilkenny, at first put three holes in a bugle, later going to a tinsmith and employing him to fit three keys over the holes. (For this reason, the claim by Henry Distin that his father, John, took a three-keyed bugle made by Haliday and added two more keys should not be dismissed out of hand.) Behind Haliday’s back, his regimental bugle master, John Wood, sold the “secret” of the new instrument to the Dublin brass-instrument maker Matthew Pace. Haliday obtained leave to go to Dublin, where he approached Holden, himself a former band master and musical instrument-maker, seeking to sell him the “secret” of his invention and procure a patent for it. When Haliday and Holden went to Pace, needing someone to make the keyed bugle, they discovered he already knew about Haliday’s discovery. Making the best of the situation, they went into partnership together to produce the instrument. Before applying for the patent in 1810, Haliday added two more holes and keys to the instrument, creating the five-keyed version we know from the patent specification. It was Holden who successfully approached the Duke of Kent about calling the new instrument after him: the Royal Kent Bugle. The duke was not commander-in-chief of the army or in charge of military bands, as scholars have stated, and in fact he no longer had an active military command. But he loved music, had a wind band associated with him, and was conspicuous in charitable work. Certainly it was prudent of Holden to obtain royal support for the keyed bugle, in view of the opposition experienced by Percival to keyed brass instruments patented by Close only two years later.

Pace made “a great number” of instruments and continued to supply them to Holden before the patent was granted; afterwards, it was understood by Haliday and Holden that Pace would continue to make them and sell them to anyone he thought fit. After the patent, Holden employed Pace to make the instrument, and Pace made more on his own account for three years. When the rights were sold to Tilly, it was understood by all three parties that Pace was free to make the instrument without interference from Tilly. Around 1813 Haliday added another key to his instrument, creating the six-keyed bugle, and soon afterwards sold the rights to the new key to Pace for £50. Pace made these new instruments, again without interference from Tilly or anyone else, until Collins’ bill of complaint.

Green, who had been selling six-keyed instruments made by Pace, argued successfully in court that Haliday’s patent specification was not sufficiently detailed to establish the originality of the patented instrument. He further argued, as mentioned in the court’s summary, that the general principle of adding keys to brass instruments was established with the bass horn in the 1790s and other brass instruments around the same time, so Haliday’s idea was in any case not original. (He clearly was unaware of the earlier invention

of the keyed bugle around 1800.) Green also claimed, perhaps disingenuously, that the six-keyed bugle was not just the five-keyed variety with another key, as Collins had stated, but built on another construction and design.

Logier's role in the early history of the keyed bugle is still not entirely clear, but some new pieces can be added to the puzzle. It was not he but Holden who named the instrument Royal Kent Bugle. Logier wrote, or perhaps commissioned from Henry Willman, the first tutor for the six-keyed bugle, published in 1813. In it he states that the instrument will be manufactured on his premises, under his inspection, and he already has no fewer than ten agents, in London, Edinburgh, and Dublin, all well-known instrument makers or music dealers, including Key. Perhaps Logier's bugles were being made for him by Pace, who, with the death of Holden that year, had just lost his retail outlet. Pace's move to London around 1815 with his two teenage sons Charles and Frederick may represent a rift with Logier, an attempt to broaden their market, or a business ploy by Logier to expand his influence in England. For his entire working life Green had strong ties with Logier, selling his publications and working as an authorized teacher of his "new system of musical education." The younger Paces advertised themselves from 1826 onwards as "original makers of the Royal Kent Bugle."

A formerly surviving six-keyed instrument bore the maker's inscription: "Royal Patent Kent Bugle Manuf^d Exclusively by I. B. Logier, Dublin (number) Halliday Inventor." Similar inscriptions, with the misspelling of Halliday's name, are found on instruments by Pace, Key, Maxwell Holles (who employed Green as his London agent in 1817–19), and another Irish maker named P. Turton, suggesting connections with Logier; Ellard, who took over Logier's music shop, also used a similar inscription.

A seventh key was added to the six-keyed bugle, making it fully chromatic, by around 1818, when it is mentioned in John Hyde's tutor. Perhaps the key was also invented by Halliday, although Hyde apparently did not know the identity of the inventor.

Part 2 of this article will deal with Charles Wheatstone, John Distin, Irish makers, Joseph Greenhill, John Hyde, and the early history of the keyed bugle in the United States.

David Lasocki, a prolific writer about the history of wind instruments, is Head of Reference Services in the William and Gayle Cook Music Library at Indiana University. He is still writing a history of the recorder for Yale University Press and a book on the New Orleans jazz group Astral Project.

NOTES

¹This article has emerged from a long one on eighteenth-century woodwind makers in English advertisements and taken on a life of its own. See "New Light on Eighteenth-Century English Woodwind Makers from Newspaper Advertisements," *Galpin Society Journal* 63 (2010).

I would like to thank warmly: Ralph T. Dudgeon for answering numerous questions and sending

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To save space, the initial articles of all newspaper titles have been removed.

² *17th–18th Century Burney Collection Newspapers* (Gale); accessed November 2008–April 2009; *19th Century British Newspapers* (Gale); accessed January–April 2009; *The Times Digital Archive 1785–1985* (Gale); accessed January–April 2009; *America's Historical Newspapers, including Early American Newspapers Series 1–5, 1690–1922* (Readex, a Division of NewsBank); accessed April–May 2009; see also *London Music Trades 1750–1800*, sponsored by the Centre for Performance History, Royal College of Music; available from <http://lmt.rcm.ac.uk/default.aspx>; accessed February 2009.

³ Ralph T. Dudgeon, *The Keyed Bugle*, 2nd ed. (Lanham, MD: Scarecrow Press, 2004).

⁴ A printed version published in 1856, but referring to 1810, is reproduced in Dudgeon, *Keyed Bugle*, 15; see also *Patents for Inventions. Abridgments of Specifications relating to Music and Musical Instruments. A.D. 1694–1866*, 2nd ed. (London: Eyre & Spottiswoode, 1871; reprint, London: Tony Bingham, 1984), 61.

⁵ Dudgeon, *Keyed Bugle*, 14.

⁶ *Grove's Dictionary of Music and Musicians*, 5th edn., ed. Eric Blom (London: Macmillan, 1954), s.v. “Key Bugle,” by R. Morley-Pegge. The claim is repeated in his “Regent’s Bugle,” *Galpin Society Journal* 9 (1956): 94. Dudgeon comments: “The lack of any documents from his papers about Haliday’s own production of instruments led me to believe that this statement was true.” E-mail message to the author, 5 March 2009.

⁷ John Teahan, “A List of Irish Instrument Makers,” *Galpin Society Journal* 16 (1963): 31.

⁸ William Waterhouse, *The New Langwill Index: A Dictionary of Musical Wind-Instrument Makers and Inventors* (London: Tony Bingham, 1993), 289.

⁹ Citing Margaret Ita Hogan, *Anglo-Irish Music, 1780–1830* (Cork: Cork University Press, 1966), 246, 501, but the book has only 246 pages, and the references are not to be found in it.

¹⁰ Preface to *Logier's Introduction to the Art of Playing on the Royal Kent Bugle* (Dublin, 1813).

¹¹ See *Grove Music Online*, s.v., “Logier, Johann Bernhard,” by David Charlton and Michael Musgrave.

¹² Clifford Bevan suggests that it was Thomas Willman, Logier’s student and brother-in-law, who actually wrote the tutor. Review of Dudgeon, *Keyed Bugle*, in *Galpin Society Journal* 59 (2006): 271. As we will see, he should have said Henry Willman. But in any case, why would not Logier, an experienced bandleader, have been able to write his own tutor?

¹³ Reproduced in Dudgeon, *Keyed Bugle*, 153.

¹⁴ *Ibid.*, 14.

¹⁵ Waterhouse, *New Langwill Index*, 239; Lyndesay G. Langwill, *An Index of Musical Wind-Instrument Makers*, 6th edn. (Edinburgh: author, 1980), 108.

¹⁶ Dudgeon, *Keyed Bugle*, 18.

¹⁷ *Bibliographie musicale de la France et de l'Étranger, ou Répertoire général systématique de tous les traités et œuvres de musique vocale et instrumentale, imprimés ou gravés en Europe jusqu'à ce jour, avec l'indication des lieux de l'impression, des marchands et des prix* (Paris: Niogret, 1822), 279: “Introduction to the art of playing on the royal Kent bugle.... par Logier. Nouvelle édition augmentée. Londres, 1820 chez Clementi. 10 sh. 6.d.” Maurice W. Riley, “A Tentative Bibliography of Early Wind Instrument Tutors,” *Journal of Research in Music Education* 6, no. 1 (spring 1958): 21, gives the title as *A Complete Introduction to the Art of Playing on the Keyed Bugle* and mentions that “the title page specifies that this is a ‘New Edition.’”

¹⁸ *Euterpeiad: or, Musical Intelligences, & Ladies' Gazette*, 1 September 1821, 92.

¹⁹ Quoted in Dudgeon, *Keyed Bugle*, 19–20.

²⁰ *Ibid.*, 51, n. 25.

²¹ For details of Astor's career, see Lasocki, "New Light on Eighteenth-Century English Woodwind Makers."

²² *Morning Chronicle*, 8 July 1795.

²³ *Morning Chronicle*, 25 April 1796.

²⁴ *Telegraph*, 20 December 1796.

²⁵ *Times*, 6 June 1798.

²⁶ *Grove Music Online*, s.v. "Inventionshorn"; accessed 7 February 2009. For his patent, see *Patents for Inventions*, 22.

²⁷ *Morning Herald*, 1 August 1798.

²⁸ Waterhouse, *New Langwill Index*, 124.

²⁹ "Ce cor-basse avait été imaginé par Frichot pendant le séjour qu'il fit à Londres, où il s'était réfugié dès le commencement de la Révolution. En 1800, il publia dans cette ville, une description de son instrument dans une sorte de méthode intitulée..." Constant Pierre, *La facture instrumentale à l'Exposition Universelle de 1889: notes d'un musicien sur les instruments à soufflé humain nouveaux & perfectionnés* (Paris: Librairie de l'Art Indépendant, 1890), 291.

³⁰ *Grove Music Online*, s.v., "Bass-horn," by Reginald Morley-Pegge and Anthony C. Baines (revised); accessed 23 January 2009.

³¹ *Grove Music Online*, s.v., "Frichot, Louis Alexandre," by Howard Mayer Brown and Stephen J. Weston; accessed 23 January 2009.

³² *Morning Chronicle*, 29 November 1799

³³ *Sun*, 22 November 1800.

³⁴ *Morning Chronicle*, 4 April 1800.

³⁵ *Morning Chronicle*, 14 July 1800.

³⁶ *Star*, 30 July 1800.

³⁷ *Times*, 29 October 1800.

³⁸ *The Times*, 6 December 1821, refers to the robbery of "a KENT BUGLE and a CONCERT TRUMPET, maker's name engraved on each, 'C. Gerock, 76, Bishopsgate-street, London'..." For more on Gerock, see Lasocki, "New Light on Eighteenth-Century English Woodwind Makers."

³⁹ A death date for Keat is established by his will, National Archives, Kew, Surrey, PROB 11/1768, proved in 1830.

⁴⁰ See Lance Whitehead and Arnold Myers, "The Köhler Family of Brasswind Instrument Makers," *Historic Brass Society Journal* 16 (2004): 89–96.

⁴¹ *Ibid.*, 91. Some light is shed on the purpose of the trumpet top by a letter written around 1798 by John Pearce, a "carver" (stone mason) in Frampton, Gloucestershire, to Nathaniel Winchcombe, Esq., lord of the manor, concerning instruments he needed for the Frampton Volunteers. He asks that Winchcombe "order ... the Bassoons [to] have Trumpet Bell tops and common tops to use occasionally which will render them fit for concerts or Church Music when wanted—the Trumpet tops to correspond with the Horns &c." Gloucestershire Archives, Frampton Volunteers D149.

⁴² Whitehead and Myers, "Köhler Family," 91.

⁴³ Reproduced in *ibid.*, 90.

⁴⁴ *Ibid.*, 96.

⁴⁵ *Ibid.*

⁴⁶ *The Post-Office Annual Directory for 1810*, 174, lists: "Kohler Elizabeth. Musical-instrument-mak. 89, St. James's-street."

⁴⁷ *Ibid.* Writing to William Close on 19 August 1812, Percival referred to "my Door Plate" for his

shop. Quoted in John Pearn and Christopher Gardner-Thorpe, "Tubular Branches, Additaments, Holes and Ventages: William Close (1775–1813), Lake District Apothecary and Surgeon; and his Invention of Polyphonian Trumpets and French Horns," *Galpin Society Journal* 58 (2005): 43.

⁴⁸ Dudgeon, e-mail message to the author, 26 January 2009.

⁴⁹ Jon Bee [John Badcock, pseud.], *A Living Picture of London, for 1828, and Stranger's Guide through the Streets of the Metropolis* (London: W. Clarke, 1828?), 28–29.

⁵⁰ Arnold Myers, e-mail message to the author, 4 June 2009.

⁵¹ *Times*, 26 May 1800.

⁵² *A New and Complete Preceptor*. Hyde's tutor had reached the United States by 1822, when it was advertised for sale by John Cole, Baltimore (*Baltimore Patriot*, 21 November).

⁵³ Year of birth from François-Joseph Fétis, *Biographie universelle des musiciens et bibliographie générale de la musique*, 2nd edn. (Paris: Firmin-Didot, 1864), s.v. "Schmidt, Johann Georg," hardly the most reliable of sources; repeated in *Musikalisches Conversations-Lexikon*, begründet von Hermann Mendel; fortgesetzt von August Reissmann, IX (Berlin: Robert Oppenheim, 1878), s.v. "Schmidt, Johann Georg." *Liverpool Mercury*, 6 December 1822, "DIED.... On Friday, the 22d ult, at Brighton, suddenly, the celebrated trumpet-player, Schmidt, belonging to the King's band. He ruptured a blood-vessel while in bed."

⁵⁴ *Morning Chronicle*, 26 February 1802.

⁵⁵ *Morning Chronicle*, 11 July 1803.

⁵⁶ *Morning Chronicle*, 13 July 1803.

⁵⁷ Waterhouse, *New Langwill Index*, 357.

⁵⁸ Morley-Pegge, "Regent's Bugle," 92.

⁵⁹ Von einem Correspondenten in London, "Ueber die neuerlichen Verbesserungen der Trompete, und der ihr ähnlichen Blasinstrumente," *Allgemeine musikalische Zeitung*, no. 38 (20 September 1815), 635–37.

⁶⁰ "Endlich wird gerade jetzt, unter der Aufsicht des Herrn Schmidt, eines Deutschen aus Thüringen, welcher erster Trompeter des Prinzen Regenten, und auf seinem Instrumente sehr ausgezeichnet ist, ein Jagdhorn verfertigt, welches durch einen Auszug nach unten um eine Quarte tiefer gemacht werden kann. Hierdurch erhält dasselbe nicht bloß alle diatonischen und chromatischen Tonstufen von seiner Grundnote aufwärts, sondern auch eine diatonische und chromatische Quarte tiefer, als seine Grundnote, und folglich zwey ganz vollständige Octaven. Dieses wird *The Regent's Bugle* genannt, und von gedachtem Mr. Percival verfertigt, welcher es auch so genau arbeitet, daß der Auszug nicht das geringste Schnarren des Tons hervorbringt.—Ogleich aber dies Instrument in der Hand des Hrn. Schmidt Wunder thun muss, weil derselbe verschiedene Male selbst auf dem gemeinen Jagdhorne Concert geblasen hat: so scheint es doch gewiss, daß das Ausziehen eines solchen Blasinstrumentes Grade von Genauigkeit erfordert, welche wol nur selten erreicht werden können. Sollte aber eine solche äusserste Genauigkeit auch einigen Virtuosen möglich werden: so ist es doch kaum zu bezweifeln, daß sie nie in Melodien von derselben Geschwindigkeit möglich werden kann, wie sie auf einem ähnlichen Instrumente mit Tonlöchern leicht sind." *Ibid.*, 637; my translation.

⁶¹ *Times*, 5 November 1819. The full advertisement reads: "That a TROMBONE, upon a new construction, is invented by T. PERCIVAL; the important improvements connected with it have been appreciated by several eminent professors of music, among whom is Mr. Blaney, the master of His Royal Highness the Duke of York's band, who has adopted it, and given the inventor permission to use his name, as highly approving of it. To be had of T. Percival, sole inventor and maker, opposite St. James's-palace; and of Messrs. Goulding and Co., Soho-square; also the Regent's Bugle, improved French Horns, Turkish Cymbals, and Turkish Music for a band, in MS; a second-hand set of instruments for a band to be disposed of; hunting horns." Percival never patented this improved

trombone. Trevor Herbert suspects that the improvement was modest (e-mail message to the author, 11 April 2009).

⁶² “Darauf ist von einem Mr. Halliday, mich dünkt in Dublin, ein Jagdhorn, (*Bugle-Horn*) oder sonst sogennanter halber Mond, mit sechs Klappen zu Stande gebracht worden, wofür Mr. Logier et Comp. ein Patent haben.” *Ibid.*, 636; my translation.

⁶³ Joseph Wheeler, “New Light on the ‘Regent’s Bugle’: with some Notes on the Keyed-Bugle,” *Galpin Society Journal* 19 (1966): 65–70; information on Curtis from Waterhouse, *New Langwill Index*, 77.

⁶⁴ Fétis, *Biographie universelle*, s.v. “Haliday, Joseph”: “un cor chromatique à clefs de son invention, auquel il avait donné le nom de *Regent’s bugle*. Cet instrument ... n’était qu’un perfectionnement du bugle-horn de Halliday.”

⁶⁵ *Times*, 15 September 1804.

⁶⁶ See Lasocki, “New Light on Eighteenth-Century England Woodwind Makers.”

⁶⁷ See *Biographical Dictionary of Actors* 10 (1984), s.v. “Mahon, John.”

⁶⁸ *Caledonian Mercury*, 23 February 1805.

⁶⁹ *Morning Chronicle*, 25 March 1817.

⁷⁰ Pearn and Gardner-Thorpe, “Tubular Branches,” 42. The Second Yorkshire Musical Festival, York Minster, 13–16 September 1825 (*Caledonian Mercury*, 3 September); the Third Yorkshire Musical Festival, 23–26 September 1828 (*Hull Packet and Humber Mercury*, 2 September); Grand Musical Festival, Manchester, 30 September–2 October 1828 (*Liverpool Mercury*, 19 September).

⁷¹ *Times*, 16 March 1819.

⁷² They are listed in *The Post-Office Annual Directory for the Year 1805*, 61. The partnership was dissolved on 29 September 1807; *London Gazette*, no. 16073, 3 October 1807.

⁷³ *The Post-Office Annual Directory for 1810*, 170; *The Post-Office Annual Directory for 1813*, 182. The Duke of Kent died in 1820. The royalty in question had changed in Key’s entry by 1823 to “his Majesty, the Dukes of York, Cumberland & Cambridge”; *The Post Office London Directory for 1823*, 209.

⁷⁴ Dudgeon, *Keyed Bugle*, 283.

⁷⁵ Waterhouse, *New Langwill Index*, 204.

⁷⁶ *Kent’s Original London Directory 1816*, 194; advertisements in *The Times*, 2 March 1820; *The Morning Chronicle*, 9 October 1822; *The Post Office London Directory for 1823*, 209; *The Post-Office London Directory for 1825*, 231.

⁷⁷ Dudgeon, *Keyed Bugle*, 283.

⁷⁸ Sabine Klaus, *Trumpets and Other High Brass: A History Inspired by the Joe R. and Joella F. Utley Collection at the National Music Museum. Vol. 1: The Pre-Value Era* (forthcoming).

⁷⁹ *Times*, 25 January 1820.

⁸⁰ National Archives, C 73 / 744 / 3, p. 1.

⁸¹ *Die Musik in Geschichte und Gegenwart* (Kassel: Bärenreiter, 1957), s.v. “Holden, Smollet,” by Henry George Farmer; *Die Musik in Geschichte und Gegenwart*, 2., neubearbeitete Ausg., Personen- teil 9 (Kassel: Bärenreiter, 2003), s.v. “Holden, Smollet,” by Barra Boydell; *Grove Music Online*, s.v. “Holden, Smollett,” by Lasairiona Duignan and Barra R. Boydell; accessed 13 October 2009.

⁸² *The Petrie Collection of the Ancient Music of Ireland. Arranged for the Pianoforte*, ed. George Petrie (Dublin: M. H. Gill for the Society for the Preservation and Publication of the Melodies of Ireland, 1855), ix.

⁸³ National Archives, C 73 / 744 / 3, pp. 2–3.

⁸⁴ Green’s father was from Preston, as documented in *Champion and Weekly Herald*, 22 January 1837: “DIED ... At the residence of his son, 33, Soho-square, John Green, Esq., sen., late of Preston, Lan-

cashire, aged 76." Green's son, Thomas, "late assistant at the Logierian Academy of Music," moved to Preston in 1846 (*Preston Guardian*, 25 July 1846). After retirement, Green himself moved back to Preston and worked as a piano tuner (*Preston Guardian*, 20 January 1849).

⁸⁵ *Morning Chronicle*, 20 March 1818.

⁸⁶ Charles Humphries and William C Smith, *Music Publishing in the British Isles: from the Beginning until the Middle of the Nineteenth Century*, 2nd ed., with supplement (New York: Barnes & Noble, 1970), s.v., "Green (John)."

⁸⁷ *Morning Chronicle*, 27 April 1818.

⁸⁸ *Morning Chronicle*, 13 May 1818.

⁸⁹ He also served as "Resident Agent for Country Music-sellers," according to his listing in *The Post-Office London Directory for 1825*, 167.

⁹⁰ *Liverpool Mercury*, 6 August 1819.

⁹¹ *Times*, 3 December 1846.

⁹² Dudgeon, phone conversation with the author, 14 October 2009.

⁹³ In *Pigot and Co.'s City of Dublin and Hibernian Provincial Directory* (1824), he is listed under "Musical Instrument Makers and Dealers" as "(military)."

⁹⁴ E-mail message from Martin Kirnbauer, Director of the Musikmuseum and Conservator of Musical Instruments, Historisches Museum, Basel, 21 April 2009.

⁹⁵ Dudgeon, *Keyed Bugle*, 281.

⁹⁶ *Examiner*, 26 March 1820; *Morning Chronicle*, 28 March.

⁹⁷ *Morning Chronicle*, 1 April 1820; *Examiner*, 2 April. Phrase "Music-sellers and the Public" from *Examiner*; *Morning Chronicle* has only "inform the Public, that he will continue to supply the Public."

⁹⁸ *Morning Chronicle*, 8 December 1820.

⁹⁹ *Morning Chronicle*, 28 December 1820.

¹⁰⁰ *Morning Chronicle*, 1 January 1821.

¹⁰¹ *Times*, 26 February 1821; version in *Freeman's Journal and Daily Commercial Advertiser* (Dublin), 2 March 1821, lacks "(as usual)."

¹⁰² On the definition of insufficiency, see William Carpmael, *Law Reports of Patent Cases, 1602–1842* (London: A. Macintosh, 1843), I, 453.

¹⁰³ *Morning Chronicle*, 28 February 1821.

¹⁰⁴ *Times*, 26 January 1822.

¹⁰⁵ *The Post-Office London Directory for 1825*, 167.

¹⁰⁶ See *Times*, 8 December 1831: "where may be seen his new-invented instrument, the Royal Seraphine"; *Harmonicon*, December 1831; etc.

¹⁰⁷ *Examiner*, 26 November 1837: "GREEN'S TRANSPONICON.—The Musical Public is invited to inspect this NEW PIANO-FORTE, which possesses the power of TRANSPOSING, at the pleasure of the Performer, any musical composition, to the extent of five half tones higher or lower in the scale."

¹⁰⁸ Klaus, *Trumpets and Other High Brass*, notes that *The Bugle Horn Major's Companion*, published by Samuel Potter in London, illustrates a seven-keyed bugle. The British Library catalogue gives the publication date as "1815?" but on what basis? The address given on the work was 20 King Street, which Waterhouse (*New Langwill Index*, 309) says Potter occupied in 1835–37, although he was on the same street (Waterhouse gives no house number) from 1815. *Pigot & Co.'s London & Provincial New Commercial Directory for 1823–4*, col. 471, already lists him as 20 King Street.

¹⁰⁹ Louise Bacon, "The Pace Family of Musical Instrument Makers, 1788–1901," *Galpin Society Journal* 57 (2004): 119.

¹¹⁰ Bacon, "Pace Family," 118.

- ¹¹¹ Waterhouse, *New Langwill Index*, 289; Bacon, "Pace Family," 119. See also *The Post-Office London Directory for 1825*, 299: "Pace C. & F. Key Bugle, French Horn, Trumpet, Trombone, and Cymbol-makers, 1, Lower Crown-street, Westminster."
- ¹¹² Bacon, "Pace Family," 119.
- ¹¹³ Dudgeon, phone call to the author, 14 October 2009.
- ¹¹⁴ Held at Houghton Library, Harvard University; kindly supplied by James Capobianco, reference librarian. See also George E. Ryan, *A Life of Bandmaster Richard Willis: First Teacher of Music at West Point* (Hanover, MA: The Christopher Publishing House, 2001), 35.
- ¹¹⁵ Ita Margaret Hogan, *Anglo-Irish Music 1780–1830* (Cork: Cork University Press, 1966), 224.
- ¹¹⁶ *Reminiscences of Michael Kelly*, 2nd ed. (London, 1826), 2:247.
- ¹¹⁷ Preface to *Logier's Introduction to the Art of Playing on the Royal Kent Bugle*.
- ¹¹⁸ Waterhouse, *New Langwill Index*, 65–66. Later Clementi made under license "T. Harper's Improved Royal Kent Bugle." The exact date he began to do so is not clear. A surviving seven-keyed bugle of this type is marked "Manufactured solely by Muzio Clementi & Co., 26 Cheapside, London." See Scott Sorenson and John Webb, "The Harpers and the Trumpet," *Galpin Society Journal* 39 (1986): 42. But Clementi had already taken partners in his business as far back as 1809.
- ¹¹⁹ Waterhouse, *New Langwill Index*, 75.
- ¹²⁰ See Lasocki, "New Light on Eighteenth-Century English Woodwind Makers." His son Richard, who joined him in business in 1822, was listed in 1836–39 as "French Horn-, Bugle-, Trumpet maker." See Cecil Adkins, "William Milhouse and the English Classical Oboe," *Journal of the American Musical Instrument Society* 22 (1996): 48, 82.
- ¹²¹ See *Scottish Book Trade Index*; http://www.nls.uk/catalogues/resources/sbti/peat_rae.html; accessed 2 May 2009; see also Humphries and Smith, *Music Publishing*, s.v. "Penson, Robertson & Co."
- ¹²² Dudgeon, *Keyed Bugle*, 152.
- ¹²³ Henry George Farmer, *Memoirs of the Royal Artillery Band, its Origin, History, and Progress: An Account of the Rise of Military Music in England* (London: Boosey & Co., 1904), 56.
- ¹²⁴ Farmer, *The Rise & Development of Military Music* (London: Wm. Reeves, 1912), 87–88.
- ¹²⁵ On the life of the Duke of Kent see Erskine Neal, *The Life of His Royal Highness Edward, Duke of Kent* (London: Richard Bentley, 1850); Roger Fulford, *Royal Dukes: the Father of Queen Victoria and his Brothers* (London: Duckworth, 1933), 149–99; rev. ed. (London: Collins, 1973), 161–204; David Duff, *Edward of Kent: the Life Story of Queen Victoria's Father* (London: Stanley Paul, 1938; reprint, London: Frederick Muller, 1973); McKenzie Potter, *Overture to Victoria* (London: Alvin Redman, 1961); Mollie Gillen, *The Prince and his Lady* (London: Sidgwick & Jackson, 1970; New York: St. Martin's Press, 1971); Helen Rappaport, *Queen Victoria: A Biographical Companion* (Santa Barbara, CA and Oxford: ABC-CLIO, 2003), 221–24; and *Oxford Dictionary of National Biography*, s.v., "Edward, Prince, duke of Kent and Strathearn," by Elizabeth Longford.
- ¹²⁶ The statement in Wikipedia that "The Duke of Kent continued to serve as honorary colonel of the 1st Regiment of Foot (the Royal Scots) until his death" is not confirmed by any other biography. See http://en.wikipedia.org/wiki/Prince_Edward,_Duke_of_Kent_and_Strathearn; accessed 23 October 2009.
- ¹²⁷ Duff, *Edward of Kent*, 185. A paler was responsible for keeping the fences of a park in good repair.
- ¹²⁸ Dudgeon, *Keyed Bugle*, 14, remarks that the duke "was not known for his kindness to the Irish. In light of what we now know of Haliday's political posture, it is unlikely that he would have dedicated his invention to the Duke of Kent." The duke's biographies make no mention of his views on the Irish, but he was the patron of the Benevolent Society of St. Patrick, "a charitable organization ... dedicated to relieving distress among the Irish community in London." See Jacqueline R. Hill,

“National Festivals, the State and ‘Protestant Ascendancy’ in Ireland, 1790–1829,” *Irish Historical Studies* 24, no. 93 (May 1984): 43, n. 85. In any case, as we now know from Green, Haliday’s associate Holden approached the duke.

¹²⁹ Duff, *Edward of Kent*, 222.

¹³⁰ L.F.S. Upton, “The London Diary of William Smith, 1803–1804,” *The Canadian Historical Review* 47, no. 2 (1966): 150, n. 21.

¹³¹ Fulford, *Royal Dukes*, 194.

¹³² Quoted in Neal, *Life of His Royal Highness Edward, Duke of Kent*, 215.

¹³³ Fulford, *Royal Dukes*, 195.

¹³⁴ Duff, *Edward of Kent*, 186. The Prince Regent, the future George IV, despite his own chronic indebtedness, had a private band of 34 players (in 1818). Adam Carse, “The Prince Regent’s Band,” *Music & Letters* 27, no. 3 (July 1946): 154, remarks: “The annual cost of the band was said to be between six and seven thousand pounds—a mere trifle to anyone who was at one time in debt to the extent of nearly £650,000.”

¹³⁵ Quoted in Henry George Farmer, *Handel’s Kettledrums and Other Papers on Military Music* (London: Hinrichsen Edition, 1950), 25; Macleod is identified in Farmer, *Memoirs of the Royal Artillery Band*, 46.

¹³⁶ “... from the government journals of that period,” quoted in a review of James Boaden, *The Life of Mrs. Jordan* (1831), in *The Monthly Review* 1 (1831), 33.

¹³⁷ Cited in Pearn and Gardner-Thorpe, “Tubular Branches,” 42.

¹³⁸ *Memorials of the Masonic Union of A.D. 1813*, compiled by William James Hughan, rev. and aug. ed. by John T. Thorp (Leicester: printed by Johnson, Wykes & Paine, 1913), 18–20.

¹³⁹ *Ibid.*, 37.

¹⁴⁰ “Free-Masonry,” *The London Review, and Literary Journal*, May 1814, 427–30.

¹⁴¹ Duff, *Edward of Kent*, 218.

¹⁴² Pearn and Gardner-Thorpe, “Tubular Branches,” 40–44.

¹⁴³ Quoted in *ibid.*, 43.