

THE ENGLISH SLIDE TRUMPET

John Webb

The most significant period in the evolution of the trumpet was the last two decades of the 18th century. Clearly, the art of natural trumpet playing was in decline, as exemplified by Burney's complaints about out-of-tune eleventh and thirteenth harmonics in a performance of "The Trumpet Shall Sound" by Sargant (1784): "He had not been bred in the clarion way of playing and could not temper these tones to their proper intonation."¹

Three years later, we had Shaw's "Harmonic Trumpet,"² the earliest surviving example of a brass instrument equipped with nodal venting. About the same time, hand-stopping was introduced (with the demi-lune trumpet, a natural instrument curved to make the bell accessible to one hand). The keyed trumpet, too, must have been around on the Continent for Haydn to have been familiar enough with its capabilities for his concerto (1796). In England, the big development was the slide trumpet.

The only novelty about the slide trumpet was the slide-return mechanism. The principle of slides on trumpets goes back probably to the 15th century and the common ancestors of the trumpet and trombone. Many engravings exist of the *Zugtrompete*, the instrument that could move to and fro on its mouthpipe yard. A few, showing U-bend slide trumpets, have come to light. Three are reproduced here (Figures 1 a, lb and 1c). Their kinship with the trombone is hinted at in Figure 1 e, the Cellier woodcut (ca. 1585), as well as in several descriptions: Trevor Herbert, in his article "The Sackbut in England in the 17th and 18th centuries," cites a 1692 dictionary definition of a sackbut as a "drawing trumpet".³ There is also Burney's "sackbut or double trumpet" (see note 1), Cerone and Mersenne's "sackbut or harmonic trumpet," and, of course, there are a number of engravings of the English flat trumpet with their "sackbut" captions.⁴

Figure 1 d shows the most familiar flat trumpet depiction. Figure 1 f is from a procession marking the anniversary of the accession of Elizabeth I in November, 1679. I have found and reproduced others dating from 1679 to 1714. Those with captions perpetuate a mistake by calling the instruments "sackbuts and courtall." Elsewhere in the processions of which they are part can be seen standard trumpets—shorter, bannered, and held horizontally by one hand. The association of cornetts with flat trumpets in these engravings equates with the more usual cornett and sackbut combination. In England at this time there seems to have been no differentiation between the two slide instruments.

Talbot describes both a sharp and a flat trumpet (1685-1701),⁵ the latter in C with a fourteen-inch slide movement, the back-bow being positioned by the left ear and extending backwards. This is at variance with the pictures, but as I have pointed out elsewhere,⁶ it is unlikely there was ever any definitive design for the instrument. Talbot's description, though, is of an instrument whose format clearly inspired that of the later slide trumpet. Less than seventy years separated the demise of the one and the introduction of the other, and



Figure 1

(a) Musicians of Graz in 1568. Vienna, Osterreichische Nationalbibliothek, Handschrift 10.116.

(b) Jean Stumpf, Zurich, 1548.

(c) From J. Rodler, *The Origins and Development of the Tournament in Germany* (1532).

(d) Barlow's engraving in Sandford's *History of the Coronation of...James II...* (1687).

(e) Cellier woodcut, ca. 1585.

(f) From a procession marking the anniversary of the accession of Elizabeth I, In November, 1679.

it is more than likely that a few old flat trumpets still survived at the end of the 18th century.

The mechanical slide trumpet was built always in F, and the earlier ones had a much shorter slide movement (four inches) than their successors. Toward the end of the 18th century, natural F trumpets had begun to appear, equipped with crooks for lower keys. These were the instruments on which the slide trumpets were based. Few remain today because, presumably, few were made. The one shown in Figure 2a, from the author's collection, bears no maker's name. It is of typical English natural-trumpet construction, with cantilevered mouthpipe yard passing through a groove in the ball, the front bow fastened to the bell with a wire ligature. In the cartouche of the garland are engraved the letters YHY. The trumpet is associated with an assortment of crooks, all early shapes and designs, indicating it to have been used orchestral rather than ceremonially. It probably dates from between 1790 and 1820. It is certainly the kind of instrument that was altered to form the earliest slide trumpets (the bell-yard of a D or Eb instrument being too wide at the point where the cylindrical slide tubing has to begin).

The reasons for the rise in basic pitch of orchestral trumpets, I know, are busily being investigated. Though most keyed and demi-lune trumpets were in G, and English slide trumpets in F, there are few early works scored for trumpets in those pitches.

One natural trumpet converted to a slide trumpet is that by John Harris (ca. 1715) at the Bate Collection in Oxford? Another well-known conversion is the Woodham-Rodenbostel instrument owned by Brian Galpin.⁸ Both instruments would have been converted in the last quarter of the 18th century. Thomas Harper, Jr. claimed that the Harris trumpet was the model for Kohler's slide instruments. Certainly, all the early slide trumpets employed the clock-spring slide-return mechanism. An 1835 Kohler example is shown in Figure 2b.

This silver-mounted instrument was acquired with its original chest but only one crook (shown in Figure 3b). The chest contains all the usual slots and holes for a range of tuning-bits, shanks, and crooks, plus accommodation for a complete corneopean outfit. Unfortunately, the latter is missing. But these old double cases cast an interesting light on the instrumental obligations of their musician owners. This player (in 1835) doubled on valved cornet. Another case in my collection contained a slide trumpet and keyed bugle, with all their accessories. Yet another, later, slide trumpet (Figure 4a) shared its case with a valved F trumpet (Figure 5c), exemplifying the reluctance with which the valved trumpets, even at the end of the 19th century, were accepted by the ever-conservative British.⁹ The only other item of interest in the chest was the original receipt, signed by Kohler himself (Figure 8). It reads: "London, 35 Henrietta St., Covent Garden. Received February 25th 1835 of Lord Arundell the Sum of Nineteen Pounds Sixteen Shillings on Acct." Not bad for a slide trumpet and corneopean with all their accompaniments, even in 1835.

The trumpet itself is typical of its period. The silver garland is engraved round its upper rim: "T. HARPER'S IMPROVED. MANUFACTURED BY I. KOHLER." In the cartouche: "35 Henrietta St. / Covent Garden / London." On the bell: "Lord Arundel" The rather shallow acanthus leaf decoration on the garland is chased, likewise the triple ball. The relief on the three ferrules was die-stamped when the silver was in sheet form. The bell

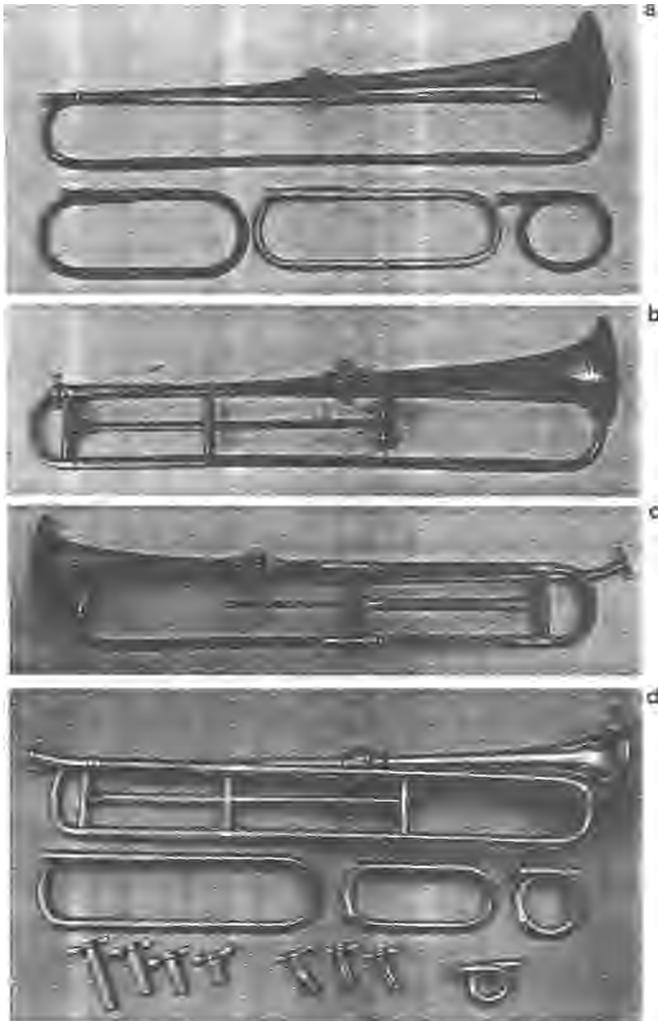


Figure 2

- (a) English natural trumpet, ca. 1790-1820. Author's collection.
 (b) KOhler slide trumpet of 1835. Padbrook Collection
 (c) Brass slide trumpet with nickel-silver garland, ball, and garnishes. Engraved on bell: " T. LLOYD / Maker / HANDSWORTH." Padbrook Collection.
 (d) Silver slide trumpet. Engraved around bell rim: "T. HARPER'S IMPROVED. KOHLER. MAKER. LONDON." Hallmarked 1860. Padbrook Collection.

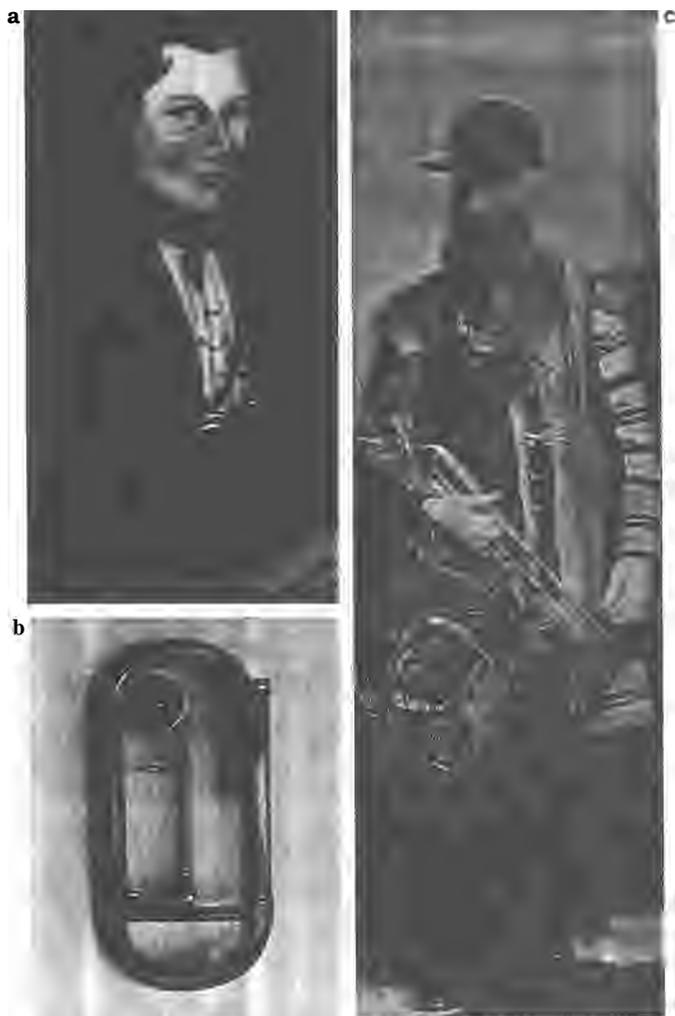


Figure 3

- (a) Young musician with slide trumpet.
- (b) Unusual D crook with clock-spring slide, acquired with the Kohler slide trumpet in Figure 2b.
- (c) Thomas Harper, Jr., in his Sergeant Trumpeter's regalia.

diameter is 11 cm., bell length is 15 inches. Bore of cylindrical tubing on the body: 10.5 mm. Bore of inner slides: 11 mm. Draw on slide: 4 inches.

More significant, in some ways, than the trumpet itself is the accompanying D crook furnished with its own clock-spring slide. Neither Crispian Steele-Perkins nor myself have found away of holding the instrument by which both slides can be manipulated at the same time, nor a reason why a slide trumpet would have been thought at the time to have required such a supplementary slide. It is likely that the crook was made for a natural trumpet in F. This supposition is supported by the painting, part of which is reproduced in Figure 3a.

This intriguing portrait was bought some time ago by trumpeter/maker Steve Keavey in an antique shop near the town of Worcester in England. It shows a very young musician holding what appears to be an unusual slide trumpet that has one clock-spring positioned inside the back-bow. This means the slide of the instrument would have had to be pushed forward rather than pulled backwards. We can reject theories of artistic license; it is a naive painting, and the details of mouthpiece, tuning-bit, supplementary crook, etc., are all shown with painful accuracy. In taking the picture therefore literally it is probable that the young man is holding a natural trumpet with a slide crook similar to that in Figure 3b or at least a short-model instrument in a similar arrangement. One other thought occurs when contemplating this portrait could the subject be a youthful Harper Sr.? He was born in Worcester.¹⁰

The Woodham-Rodenbostel trumpet mentioned above carries the claim on its spring-box cover: "Woodham, Inventor & Maker, Exeter court, Strand, London." In the earliest tutor for the slide trumpet, John Hyde, the author, under the heading "Observations on the Chromatic Trumpet," says, "Invented by J. Hyde, and made by Woodham." Woodham, originally a watchmaker, died in 1797 and so was not in a position to dispute Hyde's contention. (Woodham, incidentally, took in as apprentice the better-known Samuel Keat, who was to take over the instrument-making business on Woodham's death.)

The clock-spring mechanism with which all these early slide trumpets were equipped has always seemed to me to be an unnecessarily complex device for such a simple function. It is expensive to make, and very difficult to assemble and service. Inside the cast figure-8-shaped box are two drums containing clock-springs, each fixed at both ends to hooks on its drum and axle. Lengths of gut are wound round both drums, one running along the inside of the middle finger-bar tube and attached to a washer at the rear-bow end, the other emerging from a hole in the back of the figure-8 box and retained by a knotted-on bead or ring. This second spring was used as a spare. All clock-spring trumpets have a slot in the appropriate blade of their finger-pulls to accommodate it. (It takes a good half-hour for a professional clock maker to tension and re-string the main spring and gut, and conductors, then as now, are not the most patient of people.) The mechanism is described more exhaustively in Bartonll and Hoover.¹²

In the Hoover article, the author dwells on an instrument in the Smithsonian, No. 237,756. This, like the Woodham-Rodenbostel trumpet, has a notched tuning device on the finger-pull tube. It is simply a means whereby the slide is pushed incrementally out to flatten the instrument. Some have asked why this tuning solution was not used more widely.

The answer is that it effectively shortened the amount of available slide movement. Apart from a few of these earliest trumpets, tuning was accomplished, as it always had been on most natural instruments, by means of tuning bits, shanks of varying lengths inserted between mouthpipe and mouthpiece. Only some of the very last slide trumpets had tuning slides.

In the *Galpin Society Journal* vol. 9 (1956) is an article by Morley-Pegge entitled "The Regent's Bugle." The instrument described is a twice-wound short-model slide trumpet with a single clock-spring box and a slide pull of only two and one-half inches. It is silver, hall-marked 1819, made by James Power of London, the spring-box by Keat. I have not been able to trace its present whereabouts, but it belonged successively to Harper Sr., Harper Jr., Blandford, Morley-Pegge, and the late Joe Wheeler. Few of these short models were made (two are shown in Figure 5). They were not just experimental anomalies but seem to have occurred from time to time throughout the life of the slide trumpet. Why they weren't more popular is a mystery because, apart from being more compact, they had one big advantage over the standard single-loop models: their bells were much longer.

To accommodate the cylindrical tubing of the slide, the bell of a standard slide trumpet rarely exceeded fourteen inches, a fifth of the total length in F; crooked in C, a mere seventh. On the short models, the slide is fitted to the second loop so that the tapered bell tubing can be bent to form the main back bow. The two instruments in Figure 5 have bells of twenty-three inches and twenty-five inches, much closer to the conical/cylindrical ratios associated with natural trumpets.

Another mystery about these short-model slide trumpets concerns mouthpieces. The one in the instrument in Figure 5b seems to be original. It is brass with a silver rim and a deep, funnel-shaped cup. I would have said it was an D keyed bugle mouthpiece, except that Morley-Pegge, in the Regent's Bugle article mentioned above, describes another short-model trumpet dated 1832 by Clementi which had what sounds like an identical mouthpiece with a "deep hornlike cup." The general format of these instruments resembles that of keyed bugles. Were they perhaps meant to sound like them, too? Was this also the reason for the doubling of the length of their conical tubing?

After dock-springs, the next slide-return mechanism involved a compression spring. Figure 2c shows a standard model, Figure 5a a short model. Here a spring is enclosed in a cylinder between the bell- and bow-stays. The finger-pull rod passes through the center, and a fixed disc on it, inside the cylinder, squeezes the spring when the rod (and slide) is drawn back. Released, the spring returns the rod (and slide) to closed position. It is a good system, except that to completely dismantle the instrument the finger-pull has to be unsoldered and removed.

The final slide-return device was an expansion spring or a rubber cord (both require the same mechanism). An example of the latter is shown in Figure 2d. This is a Kohler "Harper Improved" trumpet with its normal complement of crooks, shank and tuning bits. The shank in the instrument is for F. The crooks: E, E1, D, and CO. Some of the later slide trumpets also had D1 crooks (Figures 4a and 4b). The bent tuning bits are for use with the crooks. The bent F shank and crook bits, according to Harper Sr., allow the trumpet to be held horizontally while the player looks down at his music. In fact, they have to be twisted slightly

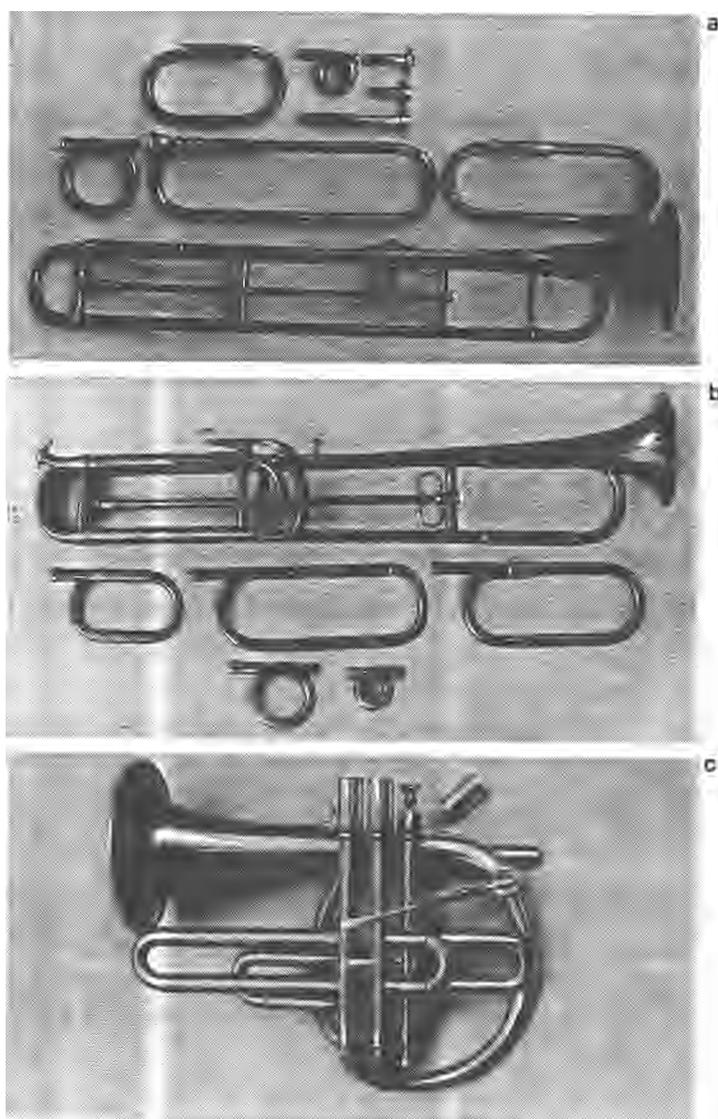


Figure 4

(a) Silver plated slide trumpet. Stamped 'F. BESSON / Prototype / 198 EUSTON ROAD / LONDON.' Ca. 1880. Padbrook Collection.

(b) Slide trumpet, mainly gold brass. Yellow brass ferrules and stays, etc. Engraved on bell, '6 / Wyatt's / PERFECTED PATENT 123 Portman Buildings / MARYLEBONE / Padbrook Collection.

(c) Clapper-key cornopean stamped 'MADE BY / FREDk PACE / 15 KING STEET / WHITE HALL.' Padbrook Collection.

sideways if the fully withdrawn slide is to avoid the face.

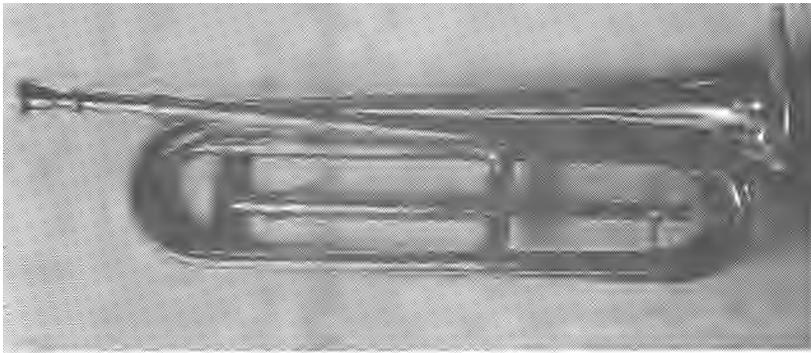
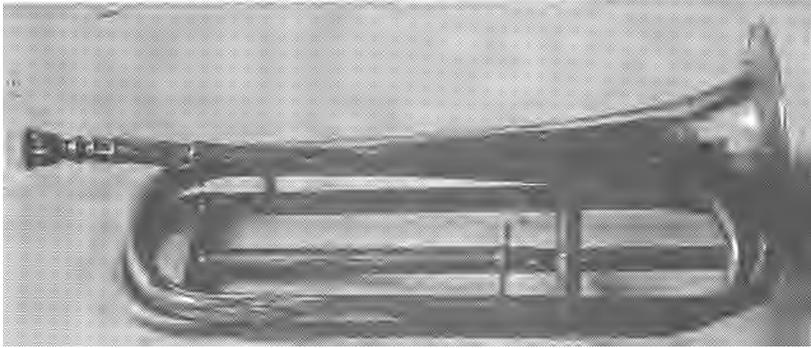
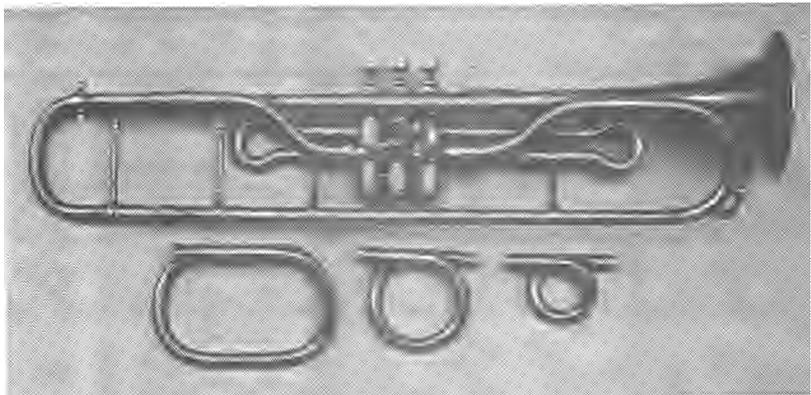
The earliest "Harper's Improved" claims I have come across are on a slide trumpet by Clementi in the Bate Collection, Oxford, made before 1821, on a keyed bugle by the same maker, and on another keyed bugle by Clementi, Collard & Collard (1822-1830), made at the same Cheapside address. On Muzio Clementi's death in 1832, Harper Sr. transferred his patronage to John Kohler. All Kohler's slide trumpets, from the earliest clock-spring models (Figure 2b) to the last rubber-cord instruments (Figure 2d) bore the "Harper's Improved" legend. Harper Sr. died in 1853 and Harper Jr. inherited and perpetuated the relationship.

The original 1833 agreement with Kohler stated that Harper would receive 30 shillings for every trumpet sold, but there is no evidence that either of the Harpers initiated any significant design features on the slide trumpet. Nothing was ever patented or registered, and instruments similar in every respect were produced by other makers throughout the whole of the 19th century. As has been stated elsewhere (see note 10), the arrangement with Kohler seems to have been purely commercial, a merchandising endorsement, although both father and son no doubt contributed general guidance about bores and bell profiles, etc.

A short-model expansion-spring/rubber-cord slide trumpet is shown in Figure 5b. Figure 4a shows another, very advanced standard slide trumpet with an expansion spring. The interesting features on this instrument are a tuning-slide on the front bow, a dual-bore slide (over 1 mm. difference) with corresponding tapered back bow, nickel-plated stocking on inner slides, a comparatively long slide-pull guaranteeing a full-tone shift even in the lowest crooking, and an adjustable and removable finger-pull for complete dismantling. The full outfit of accessories consists of a bent F shank, E, B, D, D', and C crooks, two short bent crook bits (to take different mouthpiece shank sizes), and the mouthpiece on the right in Figure 9. The bell, at 15 1/2 inches, is 1 1/2 inches longer than that on most single-loop slide trumpets, and the bore, apart from the slide-leg on the bell yard, is 0.7 mm. narrower (10.7 mm.) than average. The dual bore of the slide and tapered back bow adds the effect of extra conicity, as it does on the tuning slide back bows of trombones. The consequence is a reasonably centered bottom C, which hardly exists at all on other single-loop slide trumpets. It was made by Besson, London, ca. 1880, and shares a case, mentioned above, with an F valved trumpet (Figure 5c). On the bells of both trumpets is a shield-shaped enameled plaque bearing the device of a stag's head and the letters "ACN" in Gothic-black capitals. The case carries the same initials, presumably those of the player, whose identity is as yet unknown.

The final convulsion in the slide trumpet's evolution was the Wyatt double-slide trumpet, interesting and original, but too late to be of any significance. I show a mint, unused example in Figure 4b. Figure 10 is the abridged patent specification of 1890. Wyatt, a trumpeter, devised his double slide as a final bulwark against the invasive and inevitable valve. (Even in 1890, they were still resisting!) The instruments were made by William Brown. Like all Brown's brass, they are beautifully crafted.

The two slides gave a combined pull of eleven inches (two whole tones). They are returned by expansion spring. Although a rubber cord is quieter in operation, the spring was

**a****b****Figure 5**

(a) Brass slide trumpet. Stamped on bell garland, "Charles Pace / Maker / 49 King St. / Westminster." Tolson Museum, Huddersfield.

(b) Brass slide trumpet. Cliffe Castle Museum, Keighley, Yorkshire.

(c) Silver-plated slide trumpet. Stamped on bell, "GOLD MEDAL / PARIS / C. MAHILLON & COL / LONDON / MADE AT THEIR BRUSSELS / WORKS." Ca. 1880. Padbrook Collection.

no doubt deemed necessary to return the weight of the double slide. And the friction caused by four sets of slide legs means that, however well aligned, their movement is always going to be slow and cumbersome, just as it is on the double-slide bass and contrabass trombones. Other interesting features of the Wyatt trumpet are the nickel inner slide legs (to reduce friction), the long, false, cosmetic front bow, and the finger-pull, which is coiled into two loops to echo the shape of the old clock-spring boxes.

Curiously, in F, E, and 13, there is no way to tune the instrument except with tuning bits. The D, I>, and C crooks, however, are made in two parts that slide together, and are tunable. Most of the instrument is made of what we would now call gold-brass: brass with a high copper content. The standard Kohler slide trumpets were made of the same alloy, as were those of many other makers. There seems to have been a "copper" tradition in England: Talbot refers to Bull's famous copper trumpets in the late 17th century. The English field bugle has always been made of copper (the keyed bugle, too, based as it was on the 1800-period single-loop English field bugle). Algernon Rose, in *Talks with Bandsmen* (1894),¹³ describes tests made by the Royal Marine Artillery just before the Crimean War that proved that the sound of a copper bugle was clearly heard two miles away, while an identical brass one was inaudible at less than half the distance. On the lee side of a fairly strong wind, a copper bugle signal was said to carry up to five miles. Goodison, the maker (then foreman of Rudall Carte), was present at the tests on Woolwich Common. Brown said that good brass was superior in "musical quality" to copper and silver (pure metals), although the latter "carried farther." So perhaps gold-brass was a compromise, as it is on most modern trombones.

Old cockney William Brown died in 1893, aged 76. He had been the maker of the most highly regarded comets in Britain, having instigated major improvements in valve design. His three sons succeeded him, working without assistants, hand-making fine brass instruments, tempering and hammering bells as taught by their father, crafting every part, even hammering water-keys out of heavy wire. They were wiped out as makers at the beginning of the century by cheap, imported rubbish from France and Markneukirchen, but lingered as repairers until 1952—a permanent exemplification of the precedence of profit over craft.

The trumpet in Figure 4b is numbered 6; Steele-Perkins has No. 7. A few others survive, all in single numbers, and I doubt if more than a dozen were made. By 1890, the F valved trumpet was *afait accompli*.

Slide trumpets, however, continued to be advertised and included in catalogues well into the 20th century. Boosey's 1902 catalogue contains two F valved trumpets, a BWA trumpet which it calls a soprano, an "ordinary model" slide trumpet, and its Patent Ortho-Chromatic Slide Trumpet (Figure 6a). This it describes as a new instrument (although it is in the 1892 catalogue) with a slide arranged for a shift of two tones. Built in either F or D, "it therefore has a complete chromatic scale from the lower F) upwards and the necessity for changing crooks is thereby obviated." There is no return mechanism and it is not clear how it was supposed to be used. It is really a "slide-forward" flat trumpet, or trumpet-shaped alto trombone. Curiously, it cost nearly three times as much as the B-Class alto trombone in the same catalogue.

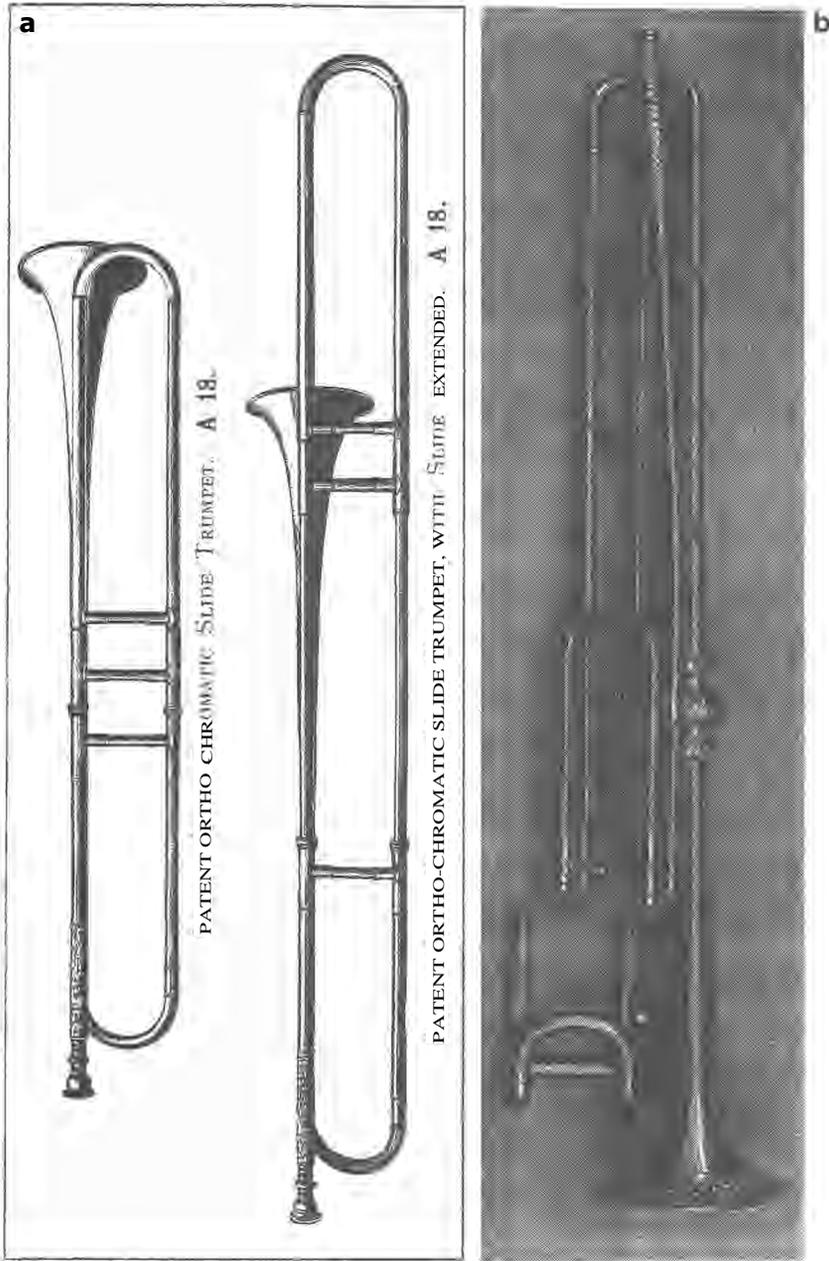


Figure 6

(a) Boosey catalogue (1902) Illustrations of the Patent Ortho-Chromatic Slide Trumpet.

(b) Slide trumpet by John Webb.

Two slide trumpets at Padbrook have associated mutes (Figure 4). They are very similar, light (about thirty grams), made of wood covered in crimson leather. The "corks" are under the leather in both cases. They keep perfect pitch, sounding like modern straight mutes.

The silver trumpet in Figure 2d has two mouthpieces (on the left in Figure 9). Both are the Harper Sr. model, as illustrated in his 1837 *Instructions for the Trumpet*¹⁴ (Figure 12). One is silver and highly decorated, the other, with identical basic turnings, is ebony, presumably for state trumpeting out-of-doors in winter. Harper says it is the mouthpiece he used for twenty years, and can be used with "Trumpets of every description." It has a massive rim and a very wide throat, and although I have made and sold forty or fifty copies of it, I don't know any modern players who can really get on with it. The mouthpiece third from left in Figure 9, associated with another Kohler trumpet, has a similar wide rim but a more conventional throat. Quite a number of players use copies of this with their natural



Figure 7

Thomas Harper, Sr. (1786-1853);
above, Harper with soprano Clara
Novel Io.

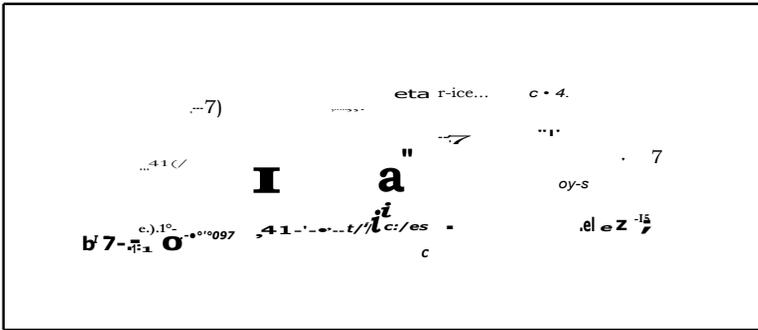


Figure 8

Receipt for trumpet shown in Figure 3b, signed by John KOHLER.



Figure 9

Left: Harper Sr.-model mouthpiece in silver associated with the silver trumpet shown in Figure 2d.

Left center: The same model mouthpiece, with similar turnings, in ebony, presumably for outdoor performance in winter.

Right center: Mouthpiece associated with another Kohler trumpet.

Right: Mouthpiece belonging to the short-model slide trumpet in Figure 4a.

trumpets.

Although the slide trumpet was the standard orchestral instrument in Britain throughout most of the 19th century, it had by no means an easy ride. It must be remembered that it was originally thought of as a natural trumpet with a means of correcting the inherently out-of-tune harmonics and adding a few notes. From early in the century it had to compete with the cornet. Figure 4c shows a typical English comepean of the 1830s of the type that

would have shared the case with the trumpet in Figure 2b.

Obviously, the slide trumpet lacked the cornet's agility. As late as 1897, Ebenezer Prout was writing: "As good trumpet players are rare, the parts written for these instruments are frequently played on the cornet-3-pistons--a much easier instrument to manipulate, but far inferior to the trumpet in nobility and beauty of tone."¹⁵ He went on to write, "We cordially endorse the dictum of M. Gavaert who says — 'no conductor worthy of the name of artist ought any longer to allow the cornet to be heard in place of the trumpet in a classical world'" In 1895, Walter Morrow lamented, "Experienced players of the older instrument [i.e., the slide trumpet] when they were called upon to play parts written for the valve trumpet, instead of adapting themselves to the valve trumpet resorted to the cornet. Consequently the cornet has crushed the trumpet out of the orchestra altogether. One rarely hears the sound of a real trumpet now."¹⁶

It is ironic that Morrow, the main exponent and defender of the F valve trumpet against the Bb instrument, studied at the Royal Academy of Music, where Harper Jr. was professor. Harper was the principal defender of the slide trumpet against the valved version. In turn, Morrow's most illustrious pupil when he was professor at the Royal College of Music, Ernest Hall (1890-1984), refused to take the F valve trumpet seriously and played 1E0 throughout his long life.

Harper Sr. (1786-1853) was the most famous and successful of slide trumpeters (Figure 7). His Instructions are mainly for that instrument, sections on valve trumpets, cornets, and keyed bugle being relegated to comparatively short sections at the back of the book. The keyed trumpet (so important on the Continent) is dismissed contemptuously in a footnote.

Like the slide trumpet, the first F valve trumpets were equipped with terminal crooks to take them down to E, B, D, C, and sometimes even B. Tapered lead-pipes do not work when cylindrical crooks are used with them. This is the main reason the cornet was found easier to play than either instrument. Even the crooks of cornets were conical, each really a tapered lead-pipe (*venturi*).

All modern trumpets, of course, have lead-pipes, and compared with slide trumpets, are much easier-blowing because of them. I have made many traditional slide trumpets and am aware of the difficulties most modern players have in adapting to them (much as they do to F [alto] valve trumpets). So a final instrument, my latest, is shown here (Figure 6b). This has a lead-pipe, a seventeen-inch bell length, a slide-pull of six inches and two tuning slides, one giving F and E, the other, D and C. It is still basically a slide-assisted natural trumpet "improved." At least, no vents. Now that "authentic performance" demands are beginning to affect the 19th century repertoire, interest is growing. Maybe, at least in Britain, the slide trumpet is on its way back.

9157. Wyatt, W. June 13.



Trumpets.—In a slide trumpet, an additional slide **B** is added and is secured to the ordinary slide **D** and moves with it. This makes an extra length of tube available so that any note down to E flat, (in the third space of the bass clef), can be obtained. The tube E, the ends of which are at P and O', is not used as a wind passage, but serves as a support for the bell &c. The crooks are fitted with slides for tuning instead of being made in one

Figure 10

Abridged patent application of 1890 by W. Wyatt for a double slide trumpet.

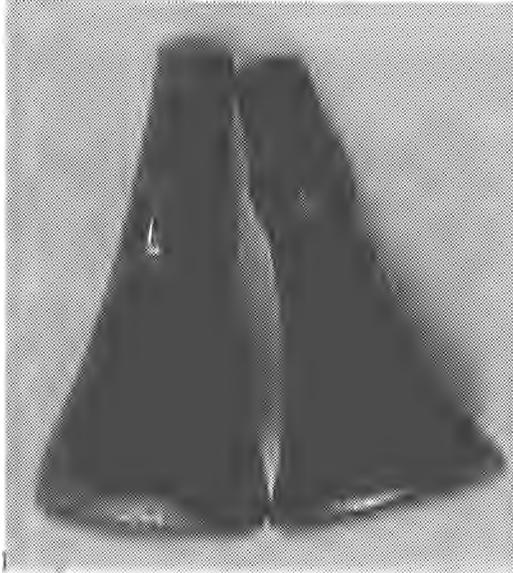


Figure 11

Two mutes associated with slide trumpets in the Padbrook Collection.

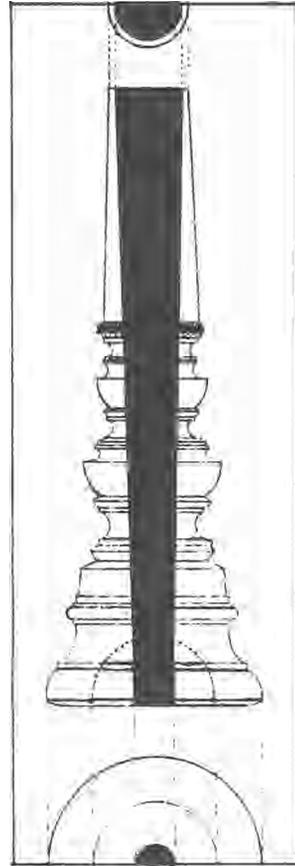


Figure 12
The Harper Sr.-model mouthpiece,
Instructions for *the Trumpet* (1837).

NOTES

1. Charles Burney, *An Account of the Musical Performance in Westminster Abbey. In Commemoration of Handel*. (London, 1785; facsimile reprint, Amsterdam, 1964). See also Eric Halfpenny's review in *Galpin Society Journal* 18 (1965): 141.
2. Eric Halfpenny, "William Shaw's Harmonic Trumpet," *Galpin Society Journal* 13 (1960): 7ff.
3. Trevor Herbert, "The Sackbut in England in the 17th and 18th Centuries," *Early Music* 18 (1990): 609-616, here p. 612 and note 27. The dictionary cited by Herbert is Elisha Coles, *An English Dictionary* (London, 1692).
4. John Webb, "The Flat Trumpet in Perspective," *Galpin Society Journal* 46 (1993).

5. Anthony Baines, "James Talbot's Manuscript," *Galpin Society Journal* 1 (1947), p. 9ff.
6. Webb, "Flat Trumpet."
7. *The Bate Collection of Historical Wind Instruments: Catalogue* (Oxford, 1976), p. 70.
8. Peter Barton, "The Woodham-Rodenbostel Slide Trumpet." *Galpin Society Journal* 42 (1989): 112ff.
9. An excellent dissertation, "A Historical Study of the F Trumpet," was prepared by trumpeter Paul Beniston as part of his M. Mus. in performance studies (Royal College of Music) in January, 1989. He outlines not only the problems of acceptance of the F valved trumpet in Britain, but also of the later change from F to D.
10. Scott Sorenson and John Webb, "The Harpers and the Trumpet," *Galpin Society Journal* 39 (1986): 35ff.
11. Barton, "Woodham-Rodenbostel."
12. Cynthia Adams Hoover, "The Slide Trumpet of the Nineteenth Century," *Brass Quarterly* 6, no. 4 (Summer 1963): 159-78.
13. Algernon S. Rose, *Talks with Bandsmen* (London, 1894).
14. Facsimile reprint, Homer, NY, 1988.
15. Ebenezer Prout, *The Orchestra, vol. 1: Technique of the Instruments* (London, 1897).
16. Walter Morrow, "The Trumpet as an Orchestral Instrument," *Proceedings of the Musical Association* 31 (1895). Morrow (1850-1937) was the leading F valve trumpet player of his generation, famous as a soloist and English pioneer of "Bach" trumpets and natural trumpet technique.

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