BRUCE HAYNES

Oboe Fingering Charts, 1695–1816

'Every Hoboy will not admit of being Fingered alike, for which reason as under you'll see a different way of Stopping some particular Notes from those in the Scale, some passages one way will be most handy, in other passages the other way, according what you execute.'

(Fischer, *New and Complete Instructions*)[1]

ALTHOUGH the oboe was probably already in existence by the late 1650s, the first record we have of its fingerings is in *The Sprightly Companion*, attributed to John Banister, which appeared in 1695 in London. This chart was written for the three-keyed instrument, which in the course of the 18th century evolved into the two-keyed ones (now known variously as the 'baroque', 'rococo', and 'classical' oboes after the musical periods in which they thrived). Of the charts that apply directly to them, a total of twenty-four different and original ones are known to us, plus a considerable number of copies and reprints. The last chart that concerns us here was published in Utica, New York, in 1816 by Wm. Whitely. After this, the existing charts are written for oboes with more keys, which imply fundamental fingering changes.[2] An annotated list of these twenty-four charts, plus some of their copiers, forms one section of this article, and all of them have been used for the fingering collations in the last section. The charts mirror the development of technique among players, the increasing demands made by contemporary taste and composition, and the gradual changes in the instrument's construction. A survey of fingerings is therefore of some historical interest, and will hopefully also be of practical value to players of the early oboe.

Virtually all of these charts were written for beginners and amateurs; a study of them therefore gives a rather superficial picture of the real fingerings used on the oboe in the 18th century. On the other hand, a comparison, even on a superficial level, points up differences in technique in various periods and reveals some interesting and generally little-known practices. They are unfortunately all the evidence we have, and are therefore worthy of our careful consideration.

Oboes during this period were not standardized in form, the differences depending on where and when they were made. Presumably these factors should be reflected in fingerings. In fact, this is only partly true. A clear development in time is obvious in the expansion of the upward range and the later use of safer harmonic fingerings for the high notes (this can also be seen in the gradual ascent of tessitura in music written for the oboe in the course of the 18th century). But while it is clear that oboes were made in distinct national styles (although such differences will never now be as audible on the oboe as on most other instruments, because of reeds) it is difficult to find any significant fingering characteristics which can be related to one country or another.[3] Within a given period, fingerings seemed to be fairly standard everywhere.[4]

A close look at the charts, however, does reveal some interesting anachronisms in our modern finger technique for the early oboe. These are: (1) the use of harmonic fingerings for the high notes; (2) the use of 'half-holing' on the top hole, ɪ; and (3) the fingering for low *f*♯′. (1) It can be seen from the fingering collations which follow that the use of the R.H. for playing the high notes (*b*♭″, *b*″, and *c*‴) began with the new charts of the Fischer series[5] (starting with source H, *c*.1770). Prior to that time, from the first charts until the middle of the 18th century, the high note fingerings were the same as in the octave below (often minus 6), or, in the case of *c*‴, with no fingers ('all open'). In fact, in most cases, even after *b*♭″ and *c*‴ started to be played with the R.H., *b*″ continued to be played simply with 1.[6] Even the undependable *a*″ was only given an alternate fingering (the much surer 12 456 8) by two sources, and then only starting in the 19th century. At the present time, however, most if not all players of the early 18th-century oboe regularly use these more secure harmonic fingerings for the upper notes when they must be tongued. The reason for this anachronism is one of the current mysteries in the field. Presumably it has to do with reed scrape and/or staple design, or possibly with the influence of our backgrounds on the modern oboe, which have led us to assumptions about blowing technique and embouchure which do not match the specifications of baroque oboes.[7]
(2) On the modern oboe, the 1st hole is covered by an ingenious plate which makes it easy to 'half-hole', or open this hole only a fraction, so that it can act as an octave speaker for the *c*♯″, *d*″, and *e*♭″.[8] This technique has often been quite naturally taken over on the early oboe for *d*″ and *e*♭″. The charts, however, indicate that ɪ is rarely used; the earlier charts prefer an entirely closed 1st hole for *d*″ and *e*♭″, and after *c*.1770 the *d*″ is usually entirely open. The same is true for the

high *c*♯‴: on all charts, the 1st hole is left completely open. It is only rarely half-closed for *d*‴. Again, this fact probably has something to say about our present manner of making reeds and blowing them.
(3) Finally, the low *f*♯′ is generally played nowadays with the 4th hole half-closed, i.e. 123 4 (sometimes with 6 or 7 added). It is surprising to observe, however, that of all early charts, only three give this fingering; the majority use one which is usually considered too low for our modern ears: 123 4 7 (i.e. with the 4th hole entirely closed). The unanimity in the charts is startling. Hotteterre (source E) does use 4 for *g*♭′ (which should be higher than *f*♯′), but the full 4 for *f*♯′. Corrette (source M) makes an interesting distinction between what he calls the 'Italian' F♯, fingered 123 56 or 123 4 in both octaves, and the 'French' 123 4 7. Most oboists of the time evidently preferred the French version. Intriguingly, Francoeur[9] in 1772 complains that the low *f*♯′ on the oboe '. . . is always too low, even when one forces it by blowing, so that it should be used only in passing', and he is not the only one to complain about this note.[10] Such comments can perhaps be regarded as encouragement to present-day players who wish to experiment with the lower fingering.

The invention of the double-hole with an indentation or 'dimple' must have been a great help to early woodwind players who needed to close certain holes only partially. It allowed the player to feel the amount of hole he was closing much more accurately. Half-closing a larger single hole is by comparison awkward and inaccurate. Yet long after the invention of the double holes, and often even on oboes whose 3rd hole is doubled, the 4th hole was still made single.[11] One can only conclude that players of these instruments saw no need to use 4, and fingered *f*♯′ either 123 56 or 123 4 7. Both Vanderhagen and Garnier treat the 4th hole as if it were single although each clearly illustrates doubled 4th holes on the oboes depicted with their charts (Garnier does use 4 for trills). Wragg comments on this practice:
'As many Oboes, particularly of the Italian Sort,[12] are made with two Holes in the second joint also,[13] it will not be amiss to inform the Pupil, that I have regarded those as a single hole only, they not being used separately as the others are.'[14]
And he proceeds to give the standard 123 4 7 fingering in his chart.[15]

It should be pointed out that in the 18th century leading tones (i.e. sharpened notes) were played low, which helps explain why a flat F♯ was tolerable or even appreciated. By the 1820s, the leading tone had reversed positions and was played higher than normal,[16] making the *f*♯′/*g*♭′, which Sellner (*c*.1825) describes as 'in the nature of the

instrument too low',[17] unendurable, and required the use of a special key.[18]

Although the 123 4 7 fingering is awkward in fast combinations with low *c'* and *d'*,[19] most technical passages are noticeably easier with it. Its appropriateness when playing with the flute (traverso), which uses the same fingering, and which also tends to be low, is self-evident.[20] When playing an oboe with a single 4th hole, if one must choose between 123 56 (too high) and 123 4 7 (too low), the latter would seem preferable in most harmonic situations.

It is much more important, of course, to play the early oboe in a pleasing and convincing manner than to play 'authentically', but I believe that the early fingerings just mentioned should be regularly attempted on various combinations of reeds and oboes, to see when and if, and eventually how, we might be able to use them. They are, after all, a rather solid clue about early playing, and of these there are precious few. With no compromises in technique or changes in reeds, for instance, one can play the upper *a''* and *b''* with simple fingerings (12 and 1 respectively) when they occur in slurred passages from below or above. Quite often good intonation and even response on the early oboe seem to depend on expectations and simple faith!

THE SOURCES

The dating of the charts in this study is based on that used by Thomas E. Warner in his *Annotated Bibliography of Woodwind Instruction Books, 1600–1830*.[21] Sources which are listed in Warner are identified by a 'W' number. The dating of other works is explained individually. The charts listed here are, with a few exceptions, only original versions; copies are noted, but not reprints. More than half of these charts appeared after 1760. With fingering charts however, as in other playing instructions, written evidence is usually considerably behind actual practice, and it can be assumed that charts can be read backwards about twenty years. As far as geographical distribution is concerned, England produced the greatest number of original charts (nine), followed by France (six), Germany (three), Italy (two), two from the United States, and one apiece from Spain and Holland. Thus the bulk of existing early fingerings were probably intended for English or French oboes made in the second half of the 18th century. Readers are therefore cautioned to be wary of generalizations about fingerings which may not be applicable. With this in mind, the chart collations have been divided into two groups: one is general for all charts, the other divides out the early charts and treats them separately.

Where illustrations of oboes are provided with charts, they are noted. The oboes have been typed according to Eric Halfpenny's system developed for English oboes.[22] One continental form which does not fit in this system is the mid-century oboe of the type made, for instance, by Bizey, L. Hotteterre and Scherer, with the smooth lines of the typical four-piece traverso, usually with two keys, and a narrow bore. Since these instruments were probably made at about the same time as the English Type 'B', I have called them Type 'B1'.[23]

It is a pity that Quantz left us no fingering chart for the oboe. The closest he came to this was to point out that the fingerings of the oboe and traverso, while misleadingly similar, are in fact quite different.[24] I have nevertheless chosen to use his system of notating fingerings as the simplest and most readily understood.[25] In this system the open holes are numbered from top to bottom as 1–6; but as there are two functioning keys on the oboe, the D♯ key remains 7,[26] and the C key becomes 8. Holes which are to be half-closed have a slash through them, e.g. 123. Many of the sources used here also give a separate chart for trills and other ornaments. As Eric Halfpenny points out,

'In reality the problem goes deeper than the mere performance of ornaments, for if two notes are difficult to shake the chances are that any quick passage through them will be equally difficult to play smoothly. Although there is little definite evidence to be obtained from contemporary sources, anyone practically acquainted with cross-fingered instruments will realize the value of alternative fingerings for certain passages and in certain circumstances . . . In the case of the oboe the conventional florid patterns of late Baroque writing, turning and returning over a small compass or repeated in sequence, are scarcely possible unless the unorthodox shake-fingerings are admitted. In much the same way, of course, the modern 'shake' key is not put on an instrument merely for playing the now comparatively unimportant trill, but simplifies many a quick passage through the note it controls.'[27]

For practical reasons, these potential alternate fingerings have not been included in this study.

There are no doubt other early oboe fingering charts of whose existence I am unaware. I would very much appreciate it if readers can inform me of any not included here, so that they may be used, together with fingerings for ornaments, in a future study of this subject.

A. [Banister, John Jr.] *The Sprightly Companion*. London, 1695. W21. Notable as the first known tutor for the oboe. Together with B and C, it represents the 17th-century sources, all English. There are three apparent mistakes in the chart, on *e♭′*, *e′*, and *f′*. The *e♭′* is missing its 6, which appears with the *e′*. This would be a very simple mistake were it not for the unfortunate fact that the 6

is missing on both of the other two 17th-century charts as well. That it is a mistake is clear because: (1) it is impossible to play the *e♭′* on the early oboe without 6, and (2) in the upper register, the *d♯″* and *e♭″* on all three charts include 6.[28] These three 17th-century sources are different enough from each other to be considered as independent, and therefore their similarities are interesting: the enharmonic distinction in fingering between *g♯/a♭″*, and the use of 2 for *b″*.[29]

B. [Talbot, James] Oxford Christ Church Music MS. 1187 (*c.* 1698). W26. This chart was apparently supplied to Talbot by the oboist La Riche. It differs from Banister in the solution for the *c♯′*, the use of 7 for F, the omission of 6 for *f♯′*, and the inclusion of a fingering for *a♯′*. The missing 6 on *e♭′* and 1 on *f♯′* are probably mistakes (see note under A).

C. [Anon.] *The Second Book of Theatre Musick*. London, 1699. W.30. This source is of interest as being the model for all English charts until the appearance in *c.*1770 of the first 'Fischer' book (source H). At least nine copies of the chart in this tutor were published in: *c.*1715 (W46), 1722 (W56), 1730 (W61), *c.*1745 (W74), *c.*1746 (W77), 1754 (W88), *c.*1758 (W92), 1767 (W113), and *c.*1775 (W126), not to mention countless reprints. This chart thus becomes one of the weightiest authorities on fingering which has come down to us, and applies to the entire first two-thirds of the 18th century in England, at least. It is similar to A and B, but uses the '*Stützfinger*' (6) more commonly for notes in the lower register. The omission of 6 on *d♯′* and *e♭′* is probably a mistake (see note under Banister). The use of 2 for the high *b″* instead of 1 is in common with Talbot.[31]

D. [Freillon-Poncein, Jean-Pierre] *La Veritable Manière* . . . Paris, 1700. W35. A book ostensibly about the oboe but in which the fingering chart is about the only hard evidence specifically about oboe playing, the rest being generally useful to wind players and even singers. Every conceivable enharmonic note has its fingering, but no enharmonic distinctions are attempted. He prescribes the same curious *b″* (2) as in B and C, but uses this fingering also for *b♯″* and *c♭‴*, thus making it suspect. Poncein almost always uses the *Stützfinger* if possible, even in the upper register. The schematic drawings of oboes used in the chart do not give a clear idea of what type they may be, but the bell suggests the heaviness of early oboes.[32]

E. Hotteterre, Jacques. *Principes de la Flute* . . . Paris, 1707. W42. At the end of this famous book Hotteterre compares oboe and

traverso fingerings in detail, which provides us with a chart. He distinguishes enharmonically between *f*♯′ and *g*′♭ (the only chart to do so), and is unique in playing the *d*″ with 1 open (as on traverso) until Fischer in *c*.1770 (H). The wording of his next-to-last paragraph unfortunately leaves it unclear whether one should use the same fingerings for the *c*♯‴ as in the lower octave, or the traverso fingering.[33]

F. [Eisel, Johann Philipp] *Musicus Autodidaktos*. Erfurt, 1738. W71. This chart is important for several reasons. Not only is it German, which is rare, but the nearest sizeable city to Erfurt, where it was published and its author was born, is Leipzig, and both Eisenach and Weimar are nearby; the possible relationship between this source and J. S. Bach is thus intriguing. In two surviving copies, one in modern facsimile and the other in the Bibliothèque Nationale, Paris, a hand-drawn oboe and a scale from *c*′ to *f*‴, plus fingerings for notes higher than Eisel's original *c*♯‴ are added. The additional fingerings do not agree in the two versions. Since a fingering for *f*‴ does not appear elsewhere until source P in 1785 (47 years later) we can assume that these notations were added some time later than 1738. For their interest, however, they have been included in the fingering collation. The turnery on the drawings strikingly resembles that of surviving oboes of the Denner family, master builders who worked in Nuremberg, also not far from Erfurt. The drawings depict double holes at 3 and 4, but these are never used singly in the chart. Some of the fingerings are unusual or unique, e.g. *f*♯′s, *g*♯′, *c*♯″ and *c*♯‴.

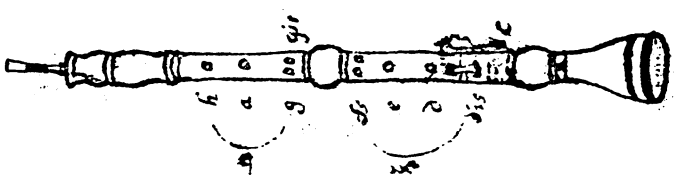

FIG. 1 *Eisel, Paris copy* (*Source F*).

G. Minguet y Yrol, Pablo. *Reglas y Advertencias Generales* . . . Madrid, 1754. W87. This source is curious because it is Spanish, where almost nothing is known about the history of the oboe, and because its fingerings straddle the otherwise clear line between Eisel (F, 1738) and Fischer I (H, *c*.1770, which introduces a new finger technique in the high notes). The *b*♭″ is thus old-fashioned (1 3 6), but the *c*‴ is new (23 45), and the range extends upwards

to *d*♯‴, which even the first five Fischers do not. There are interesting solutions to the *c*–*d*♭′ fingerings, there is a 'fingering' for *c*♭′, and the *f*♯′s and *g*♭′s use the full 4. It is the first chart to go higher than *d*‴. The drawing of the oboe is too crude to conclude anything but that the 4th hole is single.

E1. *Encyclopédie*, Diderot and d'Alembert. Vol. 6, Paris, 1756, article on 'Hautbois'. Information on the oboe was apparently gleaned from Hotteterre, which it paraphrases. The fingerings follow Hotteterre literally. The oboe depicted in this source is Type 'B1'.

FIG. 2 *Diderot (Source E1), Type 'B1'.*

H. [Fischer, Johann Christian] *The Compleat Tutor For the Hautboy.* London (*c.*1770). W119. This work represents a new conception of oboe playing, and the first new fingering system in England since the appearance of *The Second Book of Theatre Musick* (C) more than 70 years before. This was obviously needed, for while the oboe had evolved in form and function, the many copies and reprints of source C were unchanged. It is assumed that this new work was at least supervised by Fischer, who was at the time the most famous oboist in England. This chart was later copied in essence by sources N, H1, N1 (*c.* 1790, W167), and H2 (*c.*1790, W169), all of which form a part of the 'Fischer series'. There is a pleasant drawing of a playing oboist opposite the titlepage of this book, who appears to be playing a Type C oboe; this is confirmed in the sketch accompanying the fingering chart, which shows a straight-topped oboe with a single 4 hole.[34]

J. [Paneraj, Vincenzio] *Principj di Musica.* Venice (*c.*1770). W122. Unusual in its preference for 7 as the *Stützfinger*, this chart closely resembles the anonymous one which follows (K, with the same title).

K. [Anon.] *Principj di Musica.* Florence (*c.*1770). This chart can be dated because it is similar to the previous one by Paneraj. Both go to *d*♯‴, are unusual in the use of 7 as *Stützfinger*, and diligently give fingerings for many enharmonic notes such as E♯ and C♭ that other charts omit. They differ, however, in the fingerings for *f*♭′, *g*♭″, and *d*♯‴.

L. [Anon.] 'A Scale of the Notes on the Vox Humana in its Natural pitch by T. Stanesby J^unr.' London (*c.*1772). A further note reads: 'This Instrument answers to the same fingering with the OBOE . . .', so it may justifiably be included here. Dating: the publishers, Longman Lukey & Co., were active *c.*1769–1775. As Stanesby Jr. died in 1754,[35] it is highly probable that he is responsible for the Vox Humana and not the scale! This chart often shares with J and K the use of 7 as *Stützfinger*, but it is an independent scale which coincides with no other chart exactly. It distinguishes between *d*♯″ and *e*♭″ by the use of 1.

M. Corrette, Michel. *Méthode . . . de la Flûtte Traversiere . . . Nouvelle édition, revûe, corigée et augmentée de la Game du Haut-bois et de la Clarinette.* (Paris?) (*c.*1776) W130. This is a new French chart, unlike the previous ones. It is notable for its special differentiation of an 'Italian' and 'French' fingering for the F♯ (discussed in previous section). Echos of some of the peculiarities of this chart are to be found in source S in the high notes, especially *c*‴. There are often clear enharmonic fingering differences. The chart includes a drawing of a Type B1 oboe, whose 3rd and 4th holes appear to be single, but considering the fingerings given, are probably not.

N. [Fischer, Johann Christian] *New and Complete Instructions for the Hautboy.* London (*c.*1780). W141. This chart varies in minor ways from other charts in the series (e.g. *f*♯′ and *c*″). Fischer IV (W167, *c.* 1790) follows it exactly except for the omission of an alternate *f*♯′. Enharmonic distinctions are made between *a*♯/*b*♭′ and *g*♯/*a*♭″. The chart includes a depiction of the straight-topped, single 4-holed type C oboe.

H1. [Fischer, Johann Christian] *New and Complete Instructions for the Oboe or Hoboy.* London (*c.*1780). W142. This chart copies Fischer I (H), except that there are four additional alternate fingerings. Opposite the title page is the fine drawing of the 'Fischer oboist' (perhaps Fischer himself?),[36] playing a type C oboe, and this is confirmed in the sketch with the chart.

P. [Anon.] 'Scala für die Oboe', published by Artaria (Vienna, *c.*1785). This chart, published alone, can be dated *c.* 1785 for two reasons: (1) it is in many ways similar to Vanderhagen (Q) and Garnier (T); all three go up to *f*‴, and give the same *e*‴. This chart still uses the simple *b*♭″ (1 3), so is probably earlier than Q, which does not, but it goes a third higher than the second book of the Fischer series (N), so it probably postdates it; therefore it probably appeared between N and Q. (2) The Artaria firm began

publishing music in 1776,[37] and by 1780 were publishing music by C. P. E. Bach, Haydn, Mozart, and Beethoven. (This latter fact suggests the importance of this chart for performances of works by these composers.) The poor drawing of an oboe accompanying this chart suggests a type D with a single 4 hole.

Q. Vanderhagen, Amand. *Méthode Nouvelle et Raisonée Pour Le Hautbois*. Paris (*c*.1790). W175. This chart extends to *f'''*,[38] and uses the R.H. for the upper notes, including the *b''* in combination with *c'''*. The oboe drawn with the chart is similar to a Delusse (which is explicitly used by Garnier, source T), and has a doubled 4th hole, although this is always fully open or closed.

R. Wragg, J. *The Oboe Preceptor*. London (1792). W179. This is the first chart to go to *g'''*. Although apparently published eight years earlier than Fischer VI (U), it resembles it closely, and therefore also Holyoke (U1) as well. Although in each of these charts the fingerings for the natural notes are the same, Wragg gives alternates on *g♯/a♭''*, *a♯/b♭''*, and *d♯/e♭'''* which he repeats for each enharmonic pair, whereas Fischer chooses one or the other of these same fingerings to make enharmonic distinctions. The titles of these two works are nearly the same and their ranges coincide. Wragg's titlepage depicts an oboe apparently of type D. As Grush points out,[39] '. . . the concept of using a special fingering for slurring to a note of the upper register, presumably to aid speaking' is new.

S. Verschuere-Reynvaan, Joos. *Muzijkaal Kunst-Woordenboek*. Amsterdam, 1795. This chart includes a reasonably accurate depiction of a typically short-belled, three-keyed Dutch-type oboe. This is the most complete and refined of the charts used in this study; it includes sometimes as many as four fingerings for the same note. As noted under Corrette, these two charts have mutually unusual characteristics (cf. *b'*, *c'''*, *d'''*). Corrette, however, goes ½ step higher. Harmonic fingerings for the high notes are given as alternates.

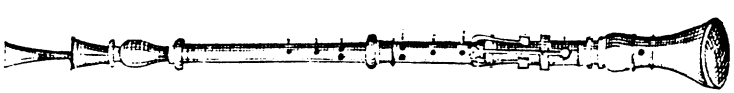

FIG. 3 *Verschuere-Reynvaan* (*Source S*).

T. Garnier, Joseph-François. *Méthode Raisonnée Pour le haut-bois*. Paris (*c*.1800). W233. This source is the most complete on most

aspects of oboe technique to be considered in this study, and its fingering chart therefore deserves careful attention. Garnier is writing for a two-keyed Delusse oboe, of which there are scaled drawings in his book. Although he gives fingerings up to *f'''*, he says that notes above *d'''* are seldom used because of their difficulty.

U. [Fischer, Johann Christian] *The Hoboy Preceptor*. London (*c.* 1800). W204. The last of the Fischer series (Fischer died in 1800), this chart is similar to the others but goes higher (to *g'''*) and makes enharmonic distinctions, although most common fingerings are identical. As noted under Wragg (R), this chart has a great similarity to it, and is almost an exact model for Holyoke (U1).

U1. Holyoke, Samuel. *The Instrumental Assistant*. Exeter, New Hampshire (*c.*1800). W234. This source, 'compiled from late European publications', is nearly an exact copy of source U, Fischer VI.

V. Gehot, Joseph. *Complete Instructions for Every Musical Instrument*. London (*c.*1801). W259. The 4th hole on this chart is single. This work includes also a chart for the 'Grand Oboe, or Voce Umane', i.e. the oboe in F. Although the oboe chart is rather conservative for its time, only going up to *d'''*, the Voce Umane chart goes up to *g'''*, with a fingering similar to R and U (1 3 7). Evans' erroneous statement that the oboe chart goes to *g'''* is probably based on this.[40]

W. Hulbert, James Jr. *A Variety of Marches*. Northampton, 1803. W269. This source is unfortunately incomplete and untrustworthy. Only the 'Scale of Natural Notes' is given (i.e. no accidentals), and only up to *b''*. Accidentals are used however in the music with follows the text. There are several obvious mistakes. Hulbert refers only to one key, as if his oboe had no 7.

X. Froelich, J. *Vollständige Theoretisch-praktische Musikschule*. Bonn (1810–11). W310. While much of Froelich's treatment of the oboe is borrowed from Garnier (T), his fingerings are not. Froelich does not distinguish between enharmonic pairs. He often uses the *Stützfinger*. The older, simple fingerings for high *b♭''* and *b''* are included for emergency use. The upper notes have a curious affinity to Minguet's (G), from *g''* to *c'''*. The lumpish oboe depicted on the chart could be type D, with two keys.

Y. Vogt (Auguste-Gustave). *Méthode pour hautbois*. MS. (*c.*1813). W335. Vogt's oboe already has two additional keys for the low *b* and *f♯'*. The fingerings otherwise remain basically the same as others for the two-keyed oboe, especially Froelich's (X). The fingerings for the highest notes are predictably different than those of Whitely (Z) or Froelich.

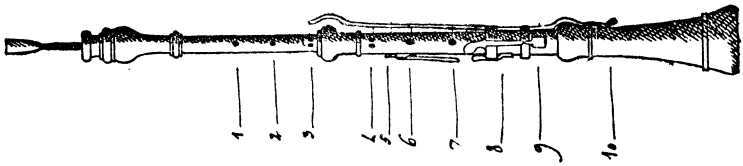

FIG. 4 *Vogt* (*Source Y*).

Z. Whitely, William. *The Instrumental Preceptor*. Utica, New York, 1816. W351. This chart resembles Fischer VI (U) but is not identical. It distinguishes the *g♯/a♭″* and *a♯/b♭″*. There are some mistakes: *f♯′/g♭′* omits 4, and presumably neither F was intended to be played 123 4.

Because the copy in the Library of Congress was not available for study, the following chart was not used for this study:

Goodale, E. *The Instrumental Director*. Hallowell, 1819. W365.

Aside from this one, the three charts that immediately follow Whitely (Z) chronologically are:

Sellner, Joseph. *Theoretisch praktische Oboe Schule*. Vienna (*c*.1825). W414.

Brod, Henri. *Méthode Pour Le Hautbois*. Paris (*c*.1826). W417.

Vény, Louise-Auguste. *Méthode Abrégé Pour Le Hautbois*. Paris (*c*.1828). W428.

These charts are for oboes with respectively 10, 8, and 8 or 15 keys, and their fingering systems are thus fundamentally different than those studied here.

The gradual addition of keys to the oboe in the late 18th and early 19th centuries is an obvious indication of which notes (i.e. fingerings) were considered problematic on the two- or three-keyed instrument, although the arguments of the first proponents for keys suggest from their tone that many of their contemporary colleagues were not easily convinced of their necessity.[41] That there were technical difficulties inherent in the two- or three-keyed oboe is clear; improvements most often cited by advocates of keys were (1) equality of sound on all notes and an evenness of blowing technique (by eliminating cross-fingerings);[42] (2) ease of slurring to the upper register (what we now term the 'octave key' was first called a '*Schleifklappe*'—'slur key'—by Sellner),[43] and a concommitant ability to play softly in the upper register;[44] (3) improvements in intonation, primarily on the low *f♯′*;[45] (4) finger facility in passagework;[46] (5) the ability to play in all tonalities, even remote ones;[47] and (6) increase of compass, namely the addition of low *b* and *c♯′*.[48]

Although by the 19th century all writers were advocating the addition of some keys to the oboe, there was a sharp controversy as to whether the number should be limited.[49] This may be at least partially explained as a question of whether to consider the oboe of that time as an 18th-century oboe in essence, refined and perfected, but retaining its character and advantages[50] (cf. the many 18th-century oboes now exant with later additions of keys), or whether the oboe should be fundamentally re-invented as a bore capable of receiving an unlimited number of keys, in order to make it as easy to play as possible.[51] As keymaking technique was gradually perfected by such masters as Koch in Vienna[52] and the demands on the instrument changed, the objections of the conservatives (often based on the malfunction of keys) disappeared.

We have already noted that the new fingerings for the upper notes which appeared about 1770 reflected a basic change in technique, and probably oboe construction. The appearance of charts for oboes with more keys and fundamentally altered fingerings, beginning about 1820, can be considered another turning point in oboe playing technique. This is borne out by our (at present unfortunately too limited) understanding of the dates of the appearance of the first oboes with gradually more keys and altered bores.[53]

COLLATIONS OF FINGERING CHARTS

There is a denfinite break in fingering usage between the early charts ending with Eisel in 1738, and the late 18th-century sources, beginning with Fischer *c.*1770. The differences are naturally not completely clear-cut, but an obvious trend can be seen in the following fingerings: *d*″: the use of 1 with this fingering was standard on earlier charts with the exception of Hotteterre, who uses the traverso 23 456, and Talbot, who gives ~~1~~; from Fischer I onewards, all charts omit 1 except Corrette and Verschuere (Garnier and Froelich give 1 and ~~1~~ as alternates). *f*″: used with 7 in the early charts, except the two French ones; later, 7 is only present with this note in L, and as an alternate in S. *g*♯/*a*♭″: an enharmonic fingering distinction between these two notes (*g*♯″: 123; *a*♭″: 12 4) is proportionally more common in early charts than in later ones.

The clearest indication of this break can be seen in the use of 'harmonic' rather than simple fingerings for the *b*♭″ and *c*‴. Early charts invariably give 1 3 for *b*♭″; beginning with Fischer I (H), this becomes 12 456, and with few exceptions remains so. Froelich in 1810 even comments that the use of 1 3 6, which he gives as an alternate, is

'seldom useful, and then only in passage work'. The same is true of the *c'''*: given as '0' (all open) by most early sources, it definitively becomes 23 45(67) after 1770 and is never again given in its early form.

The range, as would be expected, gradually crept upwards, the *d'''* coming in at the beginning of the 18th century, the *d♯'''* (first in Italy) in 1770, the *e'''* shortly afterwards, the *f'''* first in 1785, and *f♯'''* and *g'''* at the end of the century, in 1792 (Wragg). The lower end of the range was apparently considered adequate, as there is little evidence of serious work on developing low *b* or *b♭*, or a convincing *c♯'*, until after the period under consideration.

The attitude of early charts towards the use or non-use of enharmonic fingerings, primarily to lower leading notes or thirds, is interesting. The most striking example of a clear differentiation is the fingering in most of the early charts for *g♯''* (123) and *a♭''* (12 4), where the former fingering gives a lower pitch. This tendency is also observable in the lower octave on these notes. Generally, however, enharmonic fingerings seem less applicable to the oboe with its flexible embouchure than to the traverso or especially the recorder. On this point, Poncein (D) comments: 'I have not here distinguished between major and minor semitones because, on instruments where the ear controls the intonation, one tends instinctively to render them correctly; also because intervals may then be pitched as accurately from either kind of semitone as from the natural notes themselves'.[54]

Several charts are very consistent in the use of the *Stützfinger*, a system which helps support the instrument by keeping one of the lower right-hand holes (either 6 closed or 7 open) whenever possible. In rare cases this can affect the tone quality or pitch of certain notes, but it was no doubt primarily used, as Halfpenny points out,[55] to eliminate unnecessary finger shifts and ease smoothness of passagework.

A curious use of both keys simultaneously (i.e. 7 open and 8 closed) is recorded in Artaria for *d'''*, Garnier for *b♭'*, *c♯'''*, and *f'''*, and in Froelich for *a♯/b♭'* and *e♯/f'''*. This may suggest a solution to the problem, often encountered in oboe parts by J. S. Bach, of quick shifts from low *e♭'* to low *c'*: leaving the finger on the touches of both keys with a slight pressure first on 7, and then on 8.

General Collation of all 24 Charts:

( ) indicates alternative fingerings given by a source.

First Octave:

b. Omitted in all charts except G and Y. G gives 123 456 8, probably lipped. Y has a special key. Basically non-existant: a trick fingering.

c′. 123 456 8. Always. Like the other non-accidentals in the low register, this has not changed even on the modern oboe.

c♯′. 123 456 8 'louder' or 'pinch' in B, G and S.[56]
123 456 8(half) in A, D.
Rarely given and unsatisfactory at best. With one exception, none of the later sources, which are otherwise very thorough, bother to give a fingering.

d♭′. 123 456 8 'force' in J, K, S.
123 456 8(half) in D.
123 456 in G (presumably with loose embouchure). Not included in other charts.

d′. 123 456 always.

d♯′. 123 456 7 always.[57]

e♭′. 123 456 7 always.[58]

e′. 123 45 always.[59]

e♯′. 123 4 6 in only D, G, J, K, R, S, T, U, X, Y.

f♭′ 123 45 in only D, G, K, S, X, Y.
123 45 7 in J.

f′. 123 4 6 in A, D, E, G, H, J, K, N–Z.
123 4 6 7 in B, C, F, L, M, (S).
Apparent mistakes: A: 23 4 6; W, Z: 123 4. The use or non-use of 7 for *f′* is still undecided on the modern oboe.

f♯′. 123 4 7 in all charts, except:
123 ~~4~~ 6 in A, D, (E).
123 ~~4~~ in B, (M), (S).
123 5 in F, (S) (Both of these are given also in the upper octave).
123 56 in (M), (N), S.
123 4 in Q.
Vogt uses a new key; Whitely's 123 probably a mistake of omission. In the upper octave, this note is more commonly fingered 123 56, rather than, as here, 123 4 7.

g♭′. 123 4 7 in G, J, K, P, R, (S), T, U, X.
123 ~~4~~ 6 in D, E.
123 56 in M, S.
123 ~~4~~ in (S).
123 5 in (S).
Vogt uses a new key; Whitely's 123 probably a mistake.

g′. 123 in all charts, except:
123 6 in C, D, G, X.
123 7 in J, K, L.

g♯′. 123 in all charts, except:
plus 6 in D, X.

plus 7 in J, K.
12 4 in F, M, S (the latter two give 123 as alt.).
12 4 7 in L.

a♭′. 123 in A, B, E, G, L, N–R, (S), T–V, Y, Z.
plus 6 in D, X.
plus 7 in J, K.
12 4 in C, M, S.
No fingering in F, L, W.
Note the enharmonic distinction made by C between *g♯′* and *a♭′*; the fingering for the latter is higher in pitch, as it should be.

a′. 12 in all charts, except:
plus 6 in C, D, G, X, Z.
plus 7 in J, K, L.

a♯′. 1 3 in all charts except:
1 3 7 in H, J, K, L, N, V.
1 3 6 in G.
1 3 4 6 in B.
1 3 4 6 8 in (Y).
1 3 4 6 7 8 in (X).
1 3 56 8 in (Y).
No fingering in A, C, F, W.

b♭′. 1 3 in all charts except:
1 3 6 in C, G, X.
1 3 6 7 in H, N, V.
1 3 7 in J, K, L.
1 3 4 6 8 in Q, (Y).
1 3 4 6 7 8 in T, (X).
1 3 4 6 in B.
1 3 56 8 in (Y).
No fingering in W.

b′. 1 in all charts except:
plus 6 in C, D, G, X.
plus 7 in J, K, L. Y.
23 in (M), (S).

b♯′. 2 in R, S, U, Y.
2 6 in D, G, X.
2 7 in J, K.

Second Octave:

c♭″. 1 in S, T.
1 6 in D, G, X.
1 7 in J, K, Y.

c″. 2 in all charts except:

plus 6 in C, D, G, X.
plus 7 in J, K, N, V.
plus 45 in W.
plus 45 7 in L.
plus 3 456 in (T).
RH additions other than *Stützfinger* are rare.

c♯″. 23 456 8 in all charts except:
plus 1 in D (he misses 8 here but includes it for *d♭″*).
3 7 in F, (S).
7 only in Y, with 23 456 8 as alt.
omitted in W.

d♭″. 23 456 8 in E, G, H, J, K, M–V, X, (Y), Z.
123 456 8 in D.
7 only in Y.
3 7 in (S).
Seldom given in early charts.

d″. 23 456 in E, G, H–L, N–R, (S), T–Z.
123 456 in A, C, D, F, M, S, (T).
123 456 in B, (X).
Earlier charts usually add 1 or 1; from H on this is rare. From this point on up the scale, most early charts require louder blowing.

d♯″. 123 456 7 in all charts except:
23 456 7 in G, H, L, N, V, X.
123 456 7 in B, Y.

e♭″. 123 456 7 in all charts, except:
23 456 7 in G, H, N, V, X.
123 456 7 in B, Y.
Omitted in F, W.

e″. 123 45 in all charts except:
123 4 in M and S, probably mistakes.

e♯″. 123 4 6 in only D, G, J, K, R–U, X, Y.

f♭″. 123 45 in only D, G, J, K, S, X, Y.

f″. 123 4 6 in all charts except:
plus 7 in A–C, F, L, (S).
Z omits 6; probably a mistake.
7 used almost always early, almost never later.

f♯″. 123 56 in all charts except:
123 4 in B (called 'sharp'; 123 56 'flat' given as alt.), M, (S).
123 4 7 in (E), G, J, L, M, (S), (T), (X).
123 5 in F, (S) (both of these given also in the lower octave).
123 56 7 in Y.

123 456 in (Y).

g♭″. 123 56 in D, E, M, P, R, S–U, X, Z.
123 4 7 in G, J, K, (S), (X).
123 56 7 in Y.
123 4 in (S).
123 5 in (S).
123 456 in (Y).

g″. 123 in all charts except:
plus 6 in D, G, X.
plus 7 in J, K, L.

g♯″. 123 in all charts except:
plus 6 in D, G, X.
plus 7 in J, K, (S).
12 4 in F, M, (R), S (same as lower octave).
12 4 7 in L (same as lower octave).
12 4 6 7 in (R).
3 in (S).
123 6 8 in (S).

a♭″. 123 in E, H–K, N–R, T, V, Y.
123 6 in D, G, X.
123 7 in J, K, (S).
12 4 in A, B, C, S.
12 4 6 7 in (R), U, Z.
12 4 7 in (N).
123 6 8 in M, (S).
3 in (S).
The fingering for this note is often higher in pitch than that for *g♯″*, especially in early charts.

a″. 12 in all charts except:
plus 7 in J, K, L, (S).
plus 6 in G, X.
plus 456 8 in (T), (Y).
plus 6 8 in D.
RH rarely used.

a♯″. 1 3 in D, E, M, P, Q, (R), S, T, (Y).
1 3 6 in G, (X)
12 456 in H, L, N, V, X, Y.
12 456 7 in J, K, R, (S), U, (X), Z.
The 456 fingerings begin only after *c*.1770 with H.

b♭″. 1 3 in A–F, M, P, (R), S, (T), U, (Y), Z.
1 3 6 in G, (X).
1 3 7 in L.

12 456 in H, (L), N, (T), U, X, Y.
12 456 7 in J, K, Q, R, (S), T, (X).
The 456 fingerings are clearly used only after H (*c*.1770). Enharmonic distinction between *a*♯″ and *b*♭″ by switching from 1 3 to 12 456 in Q and T; the switch is reversed (i.e. 12 456 to 1 3) in L, U, and Z.

b″. 1 in A, E, F, H, M, N–W, Y, Z.
1 7 in J, K, (L), (S).
1 6 in G, (X).
2 in B, C, D.
1 3 456 7 in (R), (T), X, (Y).
12 45 in (N), (Y).
12 45 7 in L.
123 456 in (Q).
2 is apparently not a mistake. The harmonic fingering for this note is rarer than on *b*♭″ and *c*‴; it is usually given as an alternate.

b♯″. 23 45 in G, K, R, Y.
23 45 7 in X.
23 456 in U.
23 4 7 in J.
2 456 7 in (R).
2 in D (he gives the same fingering for B natural).
2 7 in S.

Third Octave:

c♭‴. 1 in S, T.
1 7 in J, K.
1 3 456 7 in X, Y.
1 6 in G, (X).
2 in D (he gives the same fingering for *b*″ and *b*♯″).
12 45 in (Y).

c‴. 23 45 in G, H–K, N, P–R, (S), T–V, Y, Z.
23 45 7 in L, X.
2 in M, (S).
2 7 in F, S.
2 456 7 in (N), (R), (T).
'o' or 'all open' in A–E.
456 in (E).
123 4 6 in (Q) (in combination with *b*″: 123 456).
In early sources, with one exception, given as 'o' or 2; after H, with two exceptions always more complicated fingerings.

c♯‴. 23 4 8 in (F), G, H, P, R, U, V, Z.

23 4 7 8 in (T).
23 4 7 in J, K, L, (S), X.
23 4 in N.
23 45 8 in Q, T, Y.
23 4 6 8 in D.
23 456 8 in M, (S).
456 in E (he gives the same fingering for *c'''* as an alternate; for *c*♯ he adds, 'force breath and squeeze reed'.)
3 ~~4~~ 7 in S.
3 7 in F.

d♭'''. 23 4 8 in G, P, R, (T), U, V, Z.
23 4 7 in J, K, (S), X.
23 45 8 in T, Y
23 4 6 8 in D.
23 456 8 in (S).
23 6 8 in M (cf. M's *c*♯).
456 in E (plus 'force breath and squeeze reed').
3 ~~4~~ 7 in S.

d'''. 23 8 in D, F, G, H, Q, R, U, Z.
23 6 8 in M, (S).
23 456 in E.
23 456 8 in (M).
23 4 6 in (E).
23 7 in J, K, L, N, S, V, X.
23 7 8 in P.
~~1~~23 8 in (R).
~~1~~23 5 8 in T, Y.

d♯'''. 23 8 in U, Z.
123 8 in P.
~~1~~23 8 in R.
~~1~~ 3 8 in T.
123 56 7 in G, K, M, (R), S.
~~1~~23 56 in Q.
123 7 in J.
3 7 in X.
Vogt uses a new key. This note appears first in 1754 (G).

e♭'''. 123 56 7 in M, (R), S, U.
12 56 7 in Z (used also for E natural, which agrees with four others; possibly this fingering a mistake for 123 56 7).
~~1~~23 56 in Q.
123 8 in P.
~~1~~23 8 in R, T.

3 7 in X.
Vogt uses a new key. This note appears first in 1776 (M).

e'''. 12 56 7 in M, R, U, Z.
123 56 7 in P, Q, X.
123 456 7 in T.
12 56 8 and 12 4567 in different versions of F.
123 456 7 in (Y).
Vogt uses a new key.

e♯'''. 12 4 7 in R, U
123 4 7 8 in X.
Appears first in 1792 (R).

f♭'''. 123 56 7 in X.
123 456 7 in (Y).
Vogt uses a new key.

f'''. 12 4 7 in R, U, Z.
12 45 7 in P.
123 4 7 8 in X.
12 45 7 in Y.
123 45 7 8 in T.
123 5 7 in Q.
12 56 and 12 56 7 in different versions of F.

f♯'''. 1 3 4 in R, U, Z.
12 4 8 in Y.
The similarity on such a high note is remarkable.

g♭'''. 1 3 4 in R, U, Z.
12 4 8 in Y.

g'''. 1 3 in R, U, Z.
123 4 8 in Y.
With the *f♯'''*, appears first in Wragg (1792).

Collation of Early Charts (A–F)
First Octave:

c'. 123 456 8 in all charts.
c♯'. 123 456 8(half) in A, D.
123 456 8 'louder' in B.
d♭'. 123 456 8(half) in D only.
d'. 123 456 in all charts.
d♯'. 123 456 7 in all charts.[57]
e♭'. 123 456 7 in all charts.[58]
e'. 123 45 in all charts.[59]
e♯'. 123 4 6 in D only.
f♭'. 123 45 in D only.

f′. 123 4 6 in all charts except plus 7 in B, C, F.[59]
f♯′. 123 4 7 in C, E.
123 ~~4~~ in B.
123 ~~4~~ 6 in A, D, (E).
123 5 in F (also in upper octave).
g♭′. 123 ~~4~~ 6 in D, E (Hotteterre makes a distinction between *f♯′* and *g♭′*).
g′. 123 in A, B, E, F.
123 6 in C, D.
g♯′. 123 in A, B, C, E.
123 6 in D.
12 4 in F.
a♭′. 123 in A, B, E.
123 6 in D.
12 4 in C (note distinction from *g♯′*).
No fingering in F.
a′. 12 in all charts except 12 6 in C, D.
a♯′. 1 3 in D, E.
1 3 4 6 in B.
b♭′. 1 3 in A, D, E, F.
1 3 6 in C.
1 3 4 6 in B.
b′. 1 in A, B, E, F.
1 6 in C, D.
b♯′. 2 6 in D only.

Second Octave:

c♭″. 1 6 in D only.
c″. 2 in A, B, E, F.
2 6 in C, D.
c♯″. 23 456 8 in all charts except:
~~1~~23 456 8 in D (8 missing here, but present on the *d♭″*).
3 7 in F.
d♭″. 23 456 8 in E.
~~1~~23 456 8 in D.
d″. 123 456 in A, C, D, F.
~~1~~23 456 'loud' in B.
23 456 in E (as on traverso).
Disagreement on use of 1. From this point on up the scale, B and C require louder blowing.
d♯″. 123 456 7 in all charts except ~~1~~23 456 7 in B.
e♭″. 123 456 7 in all charts except ~~1~~23 456 7 in B.
e″. 123 45 in all charts.

e♯″. 123 4 6 in D only.
f♭″. 123 45 in D only.
f″. 123 46 7 in all charts except minus 7 in D, E.
f♯″. 123 56 in all charts except:
123 4 in B (called 'sharp'; 123 56 also given by B as 'flat').
123 4 7 in (E).
g♭″. 123 56 in D, E.
g″. 123 in all charts; D adds 6.
g♯″. 123 in all charts except:
123 6 in D.
12 4 in F.
a♭″. 12 4 in all charts except 123 in D, E.
There is an enharmonic distinction between *g♯/a♭″* in most charts.
a″. 12 in all charts except 12 6 8 in D (possibly to help response)
a♯″. 1 3 in D, E.
b♭″. 1 3 in all charts. Note lack of RH.
b″. 2 in B, C, D.
1 in A, E, F.
1 is the standard traverso fingering, and the same as the lower octave. 2 does not work well unless one bites extremely for the high register. 2 is also given by D for *b♯′* and *c♭‴*, but not for *c‴*.
b♯″. 2 in D only (same fingering as for *b″* and *c♭‴*).

Third Octave:

c♭‴. 2 in D only (same fingering as for *b″* and *b♯″*).
c‴. '0'=no fingers. A and B add 'all open'; A adds 'blow hard'. In all charts except:
456 in E (this is not his traverso fingering).
2 7 in F.
c♯‴. 23 4 8 in F.
23 4 6 8 in D.
456 in E (although this is the same fingering as just given for *c‴* natural, Hotteterre adds 'force breath and squeeze reed'). Note lack of 1.
d♭‴. 23 4 6 8 in D.
456 in E ('en forcant le vent & serrant l'Anche avec les Levres'). note lack of 1.
d‴. 23 8 in D, F.
23 456 in E.
23 4 6 in (E).
Note lack of 1.

NOTES

1 W169, *c.*1790, p. 6.

2 A discussion of the charts that immediately followed Whitely will be found at the end of the section on sources.

3 With the obvious exception of Corrette's distinction between Italian and French F♯′s, to be discussed below.

4 See Bate, Philip, *The Oboe* (Third Ed.), p. 64, for information on national styles of playing and construction at the beginning of the 19th century.

5 See the annotations under source H for more details on the 'Fischer series'.

6 Although by 1810 Froelich was saying of this fingering, '. . . it speaks with difficulty, but is necessary in runs'. Vogt and Whitely after him continued to use it, however.

7 Possibly some types of early oboes respond better than others to simple high-note fingerings. An objective study of this question would be useful though difficult to make.

8 Brod in his *Méthode*, p. 108, claims credit for this invention. See Bate, p. 66.

9 Francoeur, L. J., *Diapason Général de Tous les Instruments à Vent*, Paris (1772), p. 14.

10 See the section on the first keys added to the early oboe at the end of the section on sources: improvement of the pitch of this note was one of the first objectives of the new keys. See also footnote 18.

11 Although less frequent than double holes, the single 4th hole can be found on some early oboes (see Bate, p. 49), most commonly on the English 'Type C' oboe and several exceptionally good Jacob Denners which are now being copied in large numbers. For a delineation of four general types of early English oboes, see Eric Halfpenny's 'The English 2- and 3-keyed Hautboy', *GSJ* I, p. 10.

12 Cf. Corrette's 'Italian' fingerings.

13 i.e. at hole 4.

14 Source R, pp. 4–5.

15 Froelich (X) in 1810 uses 123 4 7 with reluctance on the upper *f*♯″, calling it less useful than 123 56. (He prefers the standard 123 4 7 in the lower register, however.) Experience bears out the fact that if 123 4 7 is used for the low *f*♯′, hole 4 can be larger than if one uses 123 56 (which is always high in pitch); if hole 4 is larger, the upper *f*♯″ can be played 123 56 (i.e. minus 7), and this has the added benefit that the upper *g*″ is high enough that it does not need to be pinched (often a cause of poor response on this note). Enlarging hole 5, incidentally, does not seem to affect the pitch of the Fs very much. Quantz (pp. 44–45) uses both 123 4 and 123 56 for *f*♯′, depending on the situation; his advice is also applicable to the oboe.

16 See Sellner, Joseph, *Theoretisch praktische Oboe Schule* (*c.*1825), p. 5, and Boyden, David D., *The History of Violin Playing*, p. 186.

17 Sellner, p. 5.

18 For background on this subject, see Koch, H. C., *Musikalisches Lexikon*, Frankfurt a/M, 1802, p. 1082, Reilly, Edward R., *Quantz and his Versuch*,

p. 55, and Quantz, J. J., *Versuch*, 1752, tr. E. R. Reilly, pp. 43 and 46.

19 In these cases, obviously 7 can be omitted, as its influence on the pitch of the *f*♯′ is in any case slight.

20 Contrary to earlier surmises, it now appears that there is a sizeable literature of 18th century chamber music for these two instruments in combination; twenty-six collections or single trio-sonatas originally written for traverso, oboe, and b.c., and even some duets without bass, are known to me. This is exclusive of the popular combination of traverso/oboe d'amore.

21 Detroit 1967.

22 See footnote 11.

23 For an example of this type, see the illustration from Diderot.

24 Quantz, p. 48. Among other sources, Quantz may have been criticizing Joseph Majer's *Museum Musicum*, p. 34, for making this too glib equation between the two instruments.

25 Quantz, p. 39.

26 In my experience, the *e*♭′ on most original oboes is rather low; could this be explained by considering the so-called E♭ key a D♯ key, as on the traverso, the D♯ necessarily being lower than the E♭, as Quantz explains on p. 46? The second key which Quantz added to the traverso to keep the two notes 'untempered' was, interestingly, apparently never attempted on the oboe, perhaps for the reason explained by Poncein (note 54).

27 In 'The French Hautboy: A Technical Survey', *GSJ* VI, p. 23, and VIII p. 50. This quotation on p. 54.

28 Halfpenny, in the 'Survey', p. 52, agrees that the *d*♯′ in source C and the *e*′ in source A are mistakes, but does not include the *e*♭′ fingering.

29 *The Sprightly Companion* is studied at length by Halfpenny in 'A Seventeenth-Century Tutor for the Hautboy', *Music and Letters*, October 1949 (vol. XXX, no. 4), p. 355. Its fingerings are also dealt with by James Grush in *A Guide to the Study of the Classical Oboe*, Boston, 1972 (University Microfilms), p. 60–61.

30 Halfpenny agrees on these mistakes: 'Survey', p. 52.

31 See also Grush, p. 62.

32 See also Grush, p. 66–67.

33 See Halfpenny's 'Survey', p. 25 for cautionary comments on Hotteterre's fingerings.

34 For further background, see Halfpenny's 'Survey', p. 25, and Grush, p. 63–64.

35 Warner, under number 116, p. 29. Stanesby's dates based on Langwill, Lyndesay G., *An Index of Musical Wind-Instrument Makers*, 3rd ed., 1972.

36 Thomas Gainsborough, who was Fischer's father-in-law, painted a fine portrait of him which hangs now at Buckingham Palace. See Bell, Mrs. Arthur: *Thomas Gainsborough: A Record of his Life and Works*, London 1897, p. 49.

37 *Grove*, 5th ed., article 'Artaria', p. 234.

38 The notes above *d*‴, however, are not considered part of the ordinary range of the oboe by Vanderhagen, and their fingerings are not fixed.

39 Grush, p. 65.

40 Evans, K. G., *Instructional Materials for the Oboe, 1695–c.1800*, State Univ. of Iowa, 1963 (Univ. Microfilms), p. 43.

41 Sellner, p. 7, and Vény, Louis-Auguste, *Méthode Abrégée* (*c.*1828), pp. 30, 32.

42 Vény, p. 30, and Sellner, p. 4.

43 Sellner, pp. 6 and 8.

44 Koch, p. 1082 ff., and Vény, p. 32.

45 Vogt (source Y), p. 15 ff., Koch, p. 1082, and Sellner, p. 5.

46 Vogt, p. 16, Vény, p. 30, and Sellner, p. 5.

47 Vény, p. 30. On p. 54, Grush points out that '. . . the technical limit of the two or three keyed oboe is reached with a signature or musical situation which requires the player to cross the interval C-sharp to D-sharp, for which there is no provision as there is on the modern oboe'.

48 Vogt, p. 18, Braun, Wilhelm, 'Bemerkungen über die richtige Behandlung und Blasart der Oboe', in *Allgemeine Musikalische Zeitung* 25 (1823), p. 168, repeated by an anonymous writer in the *Quarterly Musical Magazine*, vol. 9, 1827, in an article entitled 'The Rise and Progress of the Hautboy', p. 466, Koch, p. 1084, and Sellner, p. 5.

49 Vogt (p. 15ff.) and Braun (p. 168), reiterated by the *Quarterly Musical Magazine* (p. 466) were among the conservatives.

50 For instance, the use of boxwood for the sake of tone quality, which because of its instability is impractical for keeping keywork of any complexity in adjustment.

51 Among the progressives were Brod, Vény, and Sellner.

52 See Sellner, p. 6. Koch instruments which have survived are impressive for their fine craftsmanship, especially in keywork. A history of the development of key-making technique can be found in 'The Woodwind' by James A. MacGillivray, in *Musical Instruments Through the Ages*, ed. Baines, p. 252.

53 See Bate, p. 60, for a tentative chronology of key additions to the oboe.

54 Quoted from Halfpenny's translation in 'Survey', p. 30.

55 'Survey', p. 51.

56 In 'Survey', p. 51, Halfpenny states that source B uses 123 456 8(half) for *c♯′*.

57 Presumably the 123 45 7 in source C is a mistake. See notes under C.

58 See notes under A, B, and C on the probable mistake in this fingering.

59 See notes under A for probable mistake.