

# TRAVERSO

HISTORICAL FLUTE NEWSLETTER

## A Fake Grenser Flute by J.G. Otto, Dated 1798

by Ardal Powell

**T**HIS article continues my occasional series entitled *Things Are Not Always As They Seem (When You Look a Little More Closely)*. It presents an eighteenth-century flute which carries the spurious signature of a famous maker. That alone does not make it interesting: many late eighteenth-century flutes were sold under false stamps to take advantage of market conditions. However the flute discussed here is far more fascinating than if it were just another Grenser flute, or even just another *fake* Grenser flute.

Over the last decade of studying historical flutes I have learned that the methods and workmanship of a maker combine to provide a kind of personal “signature”. This instrument provides an opportunity to show how I quantify and record that “signature”. An instrument’s “signature” and its stamp usually confirm one another, but this case is rare in that one quite clearly contradicts the other. Despite his attempt to hide his name by forging another stamp, the maker reveals his true identity clearly and unmistakably to the careful observer through the instrument’s design, manufacture and mark.

The instrument in question is a four-joint ebony (or other black wood) flute with three *corps de rechange*, ivory mounts and screw-cap, and a silver key (Fig. 1). It is catalogued as No. 3574 at the Shrine to Music Museum in Vermillion SD, and until recently was attributed on the basis of its stamp to August Grenser (Dresden, 1720-1807). The stamp itself (Fig. 2) reads: [crossed swords]/A. GRENSER, with the addition of a number (1-3) and a star on the *corps de rechange*, a star alone on the head and heartpiece, and DRESDEN/1798 on the foot (the museum read this date as 1793).

On seeing the flute in 1994 I noticed it did not look quite like the other Grenser flutes I had seen at that time. I had learned by then not to rely on appearances: I was well aware that makers or shops produced instruments in a variety of different styles, and were perfectly free to alter the materials, decoration or styling of their instruments without affecting the fundamental acoustical models on which their work was based. By measuring several hundred instruments and analysing the data, I had learned to focus on these acoustical models, of which some groups and types were becoming clear, before being swayed by the instrument’s mere appearance. I noticed that even when flutes from the same workshop looked different, they nearly always conformed closely to the same

set of critical measurements—dimensions that affected the way they worked as musical instruments (see sidebar on p 2 and Tables 1 and 2).

Within an hour or so of first seeing Shrine 3574, I had measured it and was able to make a graph of its bore on my laptop computer so as to compare it with a dozen other A. Grenser flutes I had studied (Figs. 5-7). Woodwind bores change over time, to be sure—but not as much as in Figure 6! The range of measurements

from other flutes with the A. GRENSER stamp (Fig. 5) was much smaller than the difference between Shrine 3574 and any one of them. In the Grenser flutes one could even recognise the shapes of the reamers that were habitually used in the workshop to cut the internal profile.

Then there were other details that made Shrine 3574 stand apart. The key, the materials, the workmanship, the tonehole undercutting, and the playing qualities of the Shrine’s flute were all unusual for a Grenser instrument. Of course, these details can be misleading: keys are not always the original ones, toneholes can be altered by later hands, and the way instruments are treated can destroy evidence of their original finish. However the Shrine flute was in excellent condition and

showed no signs of later alteration. In fact, from the first moment I saw the flute in its glass case (and despite all the caution I could muster!) I had recognised many of these superficial features from the work of another maker whose flutes I knew, Johann Georg Otto (Neukirchen, 1762-1821). I had details of two Otto flutes (D-Leipzig: 1252 and US-Washington DC: Miller 386) in my computer. And the Shrine had a third one of its very own, No. 2668, to compare with No. 3574 side by side.

Comparing these three Otto flute bores, they matched each other almost as closely as those of the Grenser workshop. And that of Shrine 3574 matched the three Otto flutes far better than it did any of the Grensers I could compare it with (Figs. 6, 7). No. 3574’s key was a dead ringer for that of Otto 2668, except that it was in silver rather than brass (Fig. 4). When a Grenser flute I had measured and found to be genuine (Shrine 3573) was placed beside the “Grenser” No. 3574 and the Otto No. 2668, a peculiar feature of the “signature” became apparent. All three used a crossed-swords device in the stamp, the badge of Saxony at that time. However, Otto’s crossed swords (Fig. 2) were not the same as Grenser’s (Fig. 3): their blades were larger, and shown in outline rather than as a



Figure 1 US-Vermillion SD: Shrine 3574

## How to read the bore graphs

The figures on this page are simple diagrams of the empty space inside the flute, with the diameter exaggerated in relation to the length by a factor of 10. The horizontal scale, labeled in millimeters, gives the distance from the top (blowing) end of the flute, located at the zero point. (The actual acoustical length of the tube is shorter, as the cork forms the stopped end of the tube. However since the cork is movable, the end of the flute is a better basis for comparing one instrument to another.) The upper end of each section of the flute is shown by a vertical line: in Figs. 5 and 7 below, the headjoints begin at the same point (0), the middle joints likewise begin at about 200, but because the two flutes compared in those figures have middle joints of different lengths for different pitches, the two vertical lines for the lower joints do not coincide.

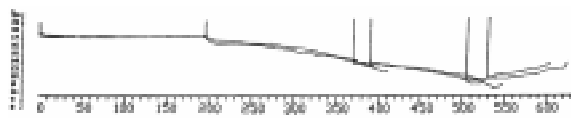


Figure 5 A. Grenser US-Washington DC: Miller 140 and A. Grenser D-Leipzig: 3145. Notice the similarity of these two graphs, typical of the consistency of Grenser flutes, even those made many decades apart.

The vertical scale gives the diameter in tenths of a millimeter (about 2 thousandths of an inch), with a maximum value of 20.6mm at the top of the scale and diminishing values below that. Any graph line that looks horizontal represents a conical section of bore: the diameter is the same at both ends, and at all points along the line. A line that descends from left to right represents a bore decreasing in diameter along its length: in other words, it is conical, or tapered. The bore of the footjoint is a reverse taper, or flare.



Figure 6 Shrine 3574 and Grenser Miller 140. The bore of the Shrine flute is far narrower than that of a typical Grenser instrument.

Fig. 5 shows the bores of two flutes from the Grenser workshop. Notice how the two lines overlap in many places, and how some small details of the curve are similar from one to the other. Fig. 6 shows the bore of Shrine 3574 (the lower line, representing smaller values on the vertical scale) compared with Miller 140, a typical Grenser flute. Although the lines are roughly parallel, the Shrine flute is consistently a millimetre smaller than the Grenser, or even more in some places. Now see in Fig. 7 how alike the bore of Shrine 3574 and that of another Otto flute are.



Figure 7 Shrine 3574, stamped A.GRENSER and Shrine 2668, stamped OTTO

solid impression in the wood. It was as though Otto had wanted to make sure there could be no mistake who made *this* "Grenser" flute!

Another method I use to study instruments, comparing tonehole locations and sizes, provided less unequivocal results. This shows, I believe, that no *single* attribute is supremely important in learning about an historic instrument: if we have not considered everything inside, outside and around the object, we have not finished looking. In flutes at the same pitch by the same workshop, we have already come to expect their bores to be fairly consistent from one to another. Manufacture of flutes is most efficient when variation and experimentation are minimized during production: if the maker has to adjust the bore to change tuning, tone or response, his results will be inconsistent and his time will not be well spent. (Modern makers who "nip and tuck" the bores of their instruments to alter the way they play are not following a widespread historical practice.) Even early eighteenth-century makers, according to my studies of three-joint flutes, had used standardized bores designed to achieve specific results, and by mid-century, workshops in most markets were producing flutes with scarcely a hairs-breadth of variation in this parameter. Consequently the positions, sizes and undercutting of toneholes could be made within equally close tolerances. The tonehole positions of the Otto and Grenser instruments compared as in Table 1 are, unexpectedly, rather similar. Table 2, which compares the sizes of the holes, suggests despite some irregularity that Otto's instruments had toneholes smaller than Grenser's to go along with their smaller bore.

Tabulating tonehole data is not much use when considering instruments of different bores. And there are many other imponderables which make measuring old instruments and analysing the data dangerous for the inexperienced and full of traps for the unwary. Nevertheless I believe these methods of analysing historical flutes are essential even when their attributions are not in doubt. We are dealing with musical instruments, not pieces of furniture: what is most significant about them is not how they look but how they play. Clearly, instrument makers in the centuries before our own developed their own individual designs



Figure 2  
Maker's mark of Shrine 3574



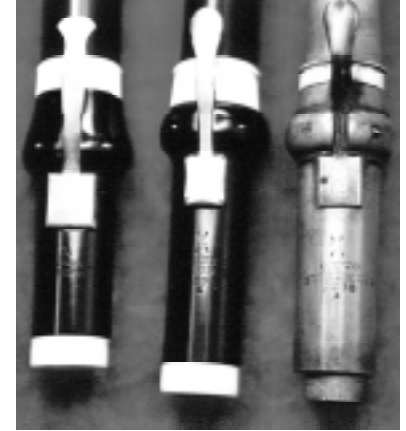
Figure 3  
Maker's mark of D-Cologne: Ossenbrünnner

rather than imitating a universally-accepted pattern, so that in plotting the measurements of their instruments we can draw a kind of map to help us visualize the technical specifications of individual designs. These maps extend our modes of looking at an instrument to include essential but non-visible aspects as well as the more obvious features of its appearance.

TABLE 1 Tonehole Locations	Fake Grenser Shrine 3574	Otto Shrine 2668	Grenser Miller 140
Tonehole 1	222.2	221.6	223.1
Tonehole 2	258.3	256.9	259.1
Tonehole 3	295.4	293.8	295.0
Tonehole 4	355.6	353.9	353.6
Tonehole 5	388.8	387.1	390.4
Tonehole 6	425.4	422.9	426.4
Tonehole 7	438.8	481.6	485.1

TABLE 2 Tonehole Sizes	Fake Grenser Shrine 3574	Otto Shrine 2668	Grenser Miller 140
Embouchure	9.7 x 8.5	9.6 x 9.2	altered
Tonehole 1	5.8	6.4 x 6.7	6.5
Tonehole 2	5.8	5.9	6.4
Tonehole 3	4.8	5.4 x 5.7	5.7
Tonehole 4	5.5	5.4	5.8
Tonehole 5	5.4	5.1	5.7
Tonehole 6	4.6	4.4	4.4
Tonehole 7	6.2	N/A	6.8

Figure 4 Footjoints and keys of three flutes in the Shrine to Music Museum. Left: the footjoint of Grenser flute No. 3573, with its distinctive key, typical of the Grenser workshop in the 1790s when flutes like this one stamped H. GRENSER first appeared. Middle: No. 3574, stamped A. GRENSER. Right: No. 2668, stamped OTTO. Obvious similarities between the middle and right examples are: the dished key, rather than the typical flat one of the Grenser; the distinctive shape of the touchpiece; the unusual shape of the key-mount turning; and finally the crossed-swords stamp (larger view at left in Figs. 2 and 3)



*Ardal Powell, editor of TRAVERSO, has been a student of historical flutes and flute-playing since the late 1970s, participating in the making of over 600 copies of twenty different original models as a partner in Folkers & Powell. He will develop the topic of this article in a paper entitled, "One of These Things in Not Like the Others: Identifying Forgeries and Copies of Eighteenth-Century Flutes," at the forthcoming annual meeting of the American Musical Instrument Society in Washington DC, May 15-18, 1997.*

**ANITA MILLER-RIEDER** was recently appointed Visiting Assistant Professor of Flute at the University of Iowa School of Music. She holds a Master of Music degree and Performer's Certificate from Indiana University, and is completing a Doctoral degree in flute performance at Northwestern University. Anita is just back from a year in London studying on a Fulbright Scholarship.

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**A NEW** production system has delayed this issue of *TRAVERSO*. Mechanical paste-up has been replaced by an entirely electronic process, resulting in lower production cost for photographs and other artwork, and higher print resolution for the whole publication. (Headaches for the editor, a by-product of the change, are only temporary, one hopes). Another benefit of the new system is that electronic distribution on the World Wide Web is in the offing, perhaps at a reduced subscription price. Please let me know whether or not you would take advantage of this option. Send e-mail to <ardal@taconic.net>.

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