

No. 859,714.

PATENTED JULY 9, 1907.

E. H. WURLITZER.
FLUTE.

APPLICATION FILED DEC. 7, 1906.

Fig. 1.

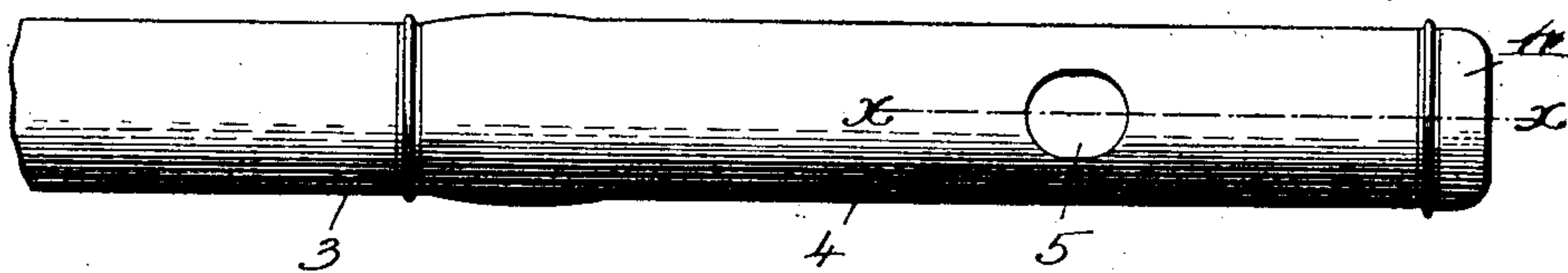
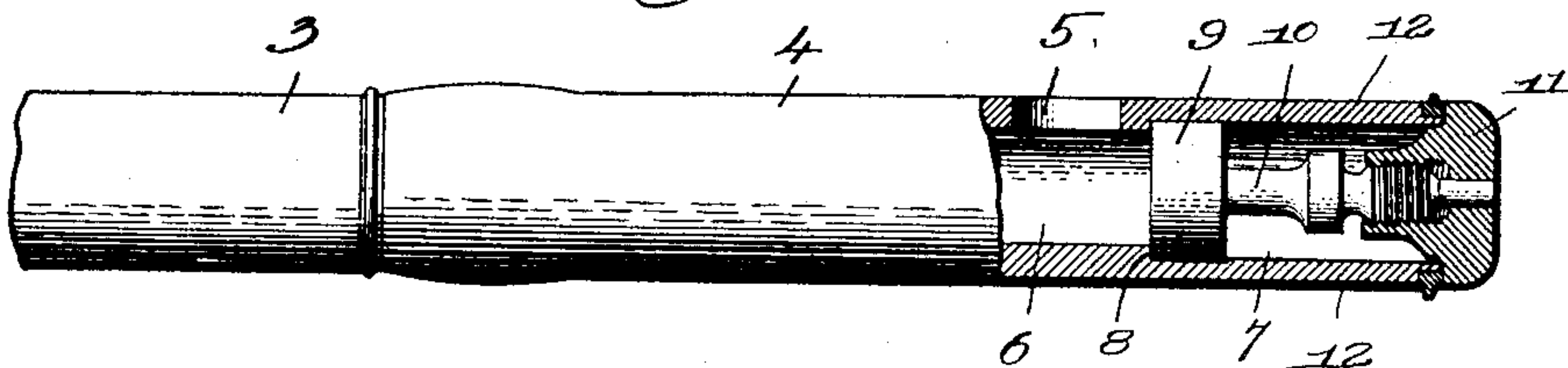


Fig. 2.



Witnesses:
Fred S. Grumb of
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UNITED STATES PATENT OFFICE.

EDUARD H. WURLITZER, OF BOSTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO HARRY BETTONEY, OF BOSTON, MASSACHUSETTS.

FLUTE.

No. 859,714.

Specification of Letters Patent.

Patented July 9, 1907.

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To all whom it may concern:

Be it known that I, EDUARD H. WURLITZER, a subject of the Emperor of Germany, residing in Boston, county of Suffolk, and State of Massachusetts, have invented an Improvement in Flutes, of which the following description, in connection with the accompanying drawing, is a specification, like letters on the drawing representing like parts.

Flutes are commonly made with the central passage having a smooth interior extending clear through the body of the flute at the head thereof, and the end of this passage at the end of the flute is closed by a plug which is usually made removable to permit the flute to be cleaned, etc. It is essential that this removable plug should be always situated at a predetermined distance from the blow hole, for if the plug is moved to one side or the other of this predetermined position the flute will be out of tune.

With the construction now commonly employed in making flutes the correct placing of the plug in the central passage after it has been removed for any purpose is always an uncertain operation as very few performers are familiar with the correct measurements.

One of the objects of my present invention is to provide a flute of such a construction that the correct placing of the removable plug can always be insured without any adjustment thereof.

Another object is to provide a construction by which the sonorous and resonant qualities of the notes of the flute are increased.

In the drawings wherein I have shown one embodiment of my invention, Figure 1 is a plan view of part of a flute embodying my said invention; and Fig. 2 is a part elevation and part longitudinal section through the head joint of the flute on the line $x-x$, Fig. 1.

The body 3 of the flute may have any suitable or usual construction, and the head joint 4 thereof is provided with the usual blow hole 5 and central passage 6. In most flutes this central passage 6, which extends clear through the head joint of the flute, is smooth on its interior and is closed within the head joint beyond the blow hole 5 by a removable plug which must be placed at a predetermined distance from the blow hole in order that the flute may be properly tuned.

According to my invention I counterbore or enlarge the end of the central passage 6, as at 7, to form a shoulder 8 between the two portions of the passage of different diameter, and this shoulder 8 acts as a positioning stop for the removable plug 9 which closes the end of the passage.

In constructing the flute the shoulder 8 is so placed that when the plug 9 is positioned thereby said plug will be in the correct predetermined position with reference to the blow-hole, and because of this shoulder this correct position of the plug may be readily found by merely inserting the plug in the end 7 of the central passage until it meets the shoulder 8.

As herein shown the plug 9 has extending therefrom a stem 10 which preferably carries at its end a head or button 11 that closes the end of the enlarged portion 7 of the passage and forms the end of the flute. This button 11 may either be rigid with the stem or adjustably mounted thereon, as desired.

The removability of the plug 9 permits the flute to be cleaned in the same way that flutes usually are, and the presence of the shoulder 8 insures that the plug 9 can always be properly positioned without any experimenting on or testing of the flute to see if the correct position has been secured. I have also found that by making the side walls 12 of the flute which surround the central passage thinner at the end of the flute by enlarging the bore of the central passage at 7 the sonorous and resonant qualities of the flute are increased to a marked degree, so that a flute embodying my invention not only has a more sonorous and resonant quality but may be easily kept in tune by keeping the plug 9 against the positioning shoulder 8.

Having described my invention what I claim as new and desire to secure by Letters Patent is:—

A flute having its central passage enlarged from the end of the head to a point between said end and the blow hole to form a positioning shoulder at said point, and a removable plug fitting said enlarged portion of the passage and seated against said shoulder.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

EDUARD H. WURLITZER.

Witnesses:

LOUIS C. SMITH,
BERTHA F. HEUSER.