

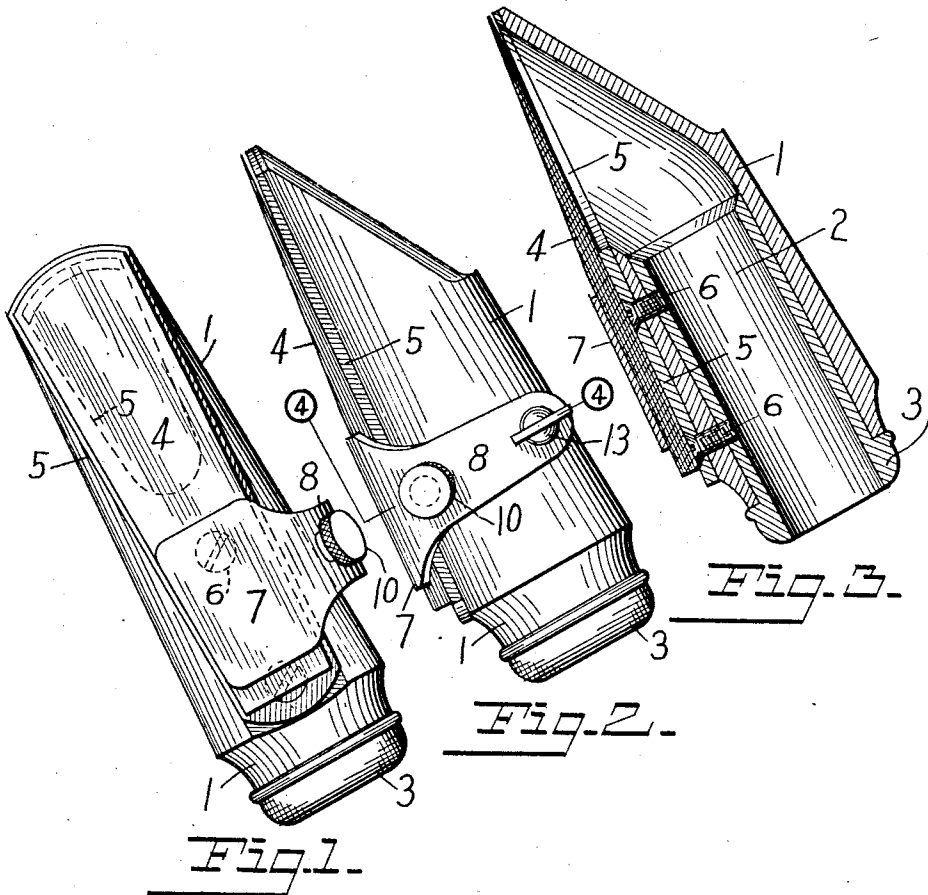
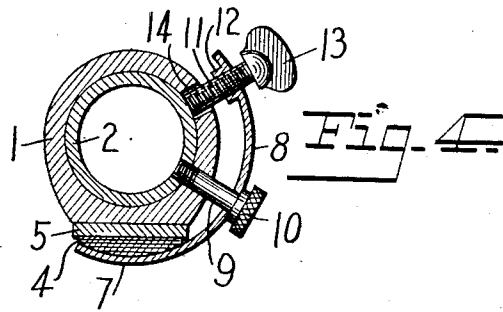
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A. J. SINCLAIR

MOUTHPIECE

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MOUTHPIECE.

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To all whom it may concern:

Be it known that I, ALFRED J. SINCLAIR, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Mouthpieces, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to mouthpieces for musical wind instruments and more particularly to a mouthpiece of the type commonly used in connection with clarinets, saxophones, and the like.

Mouthpieces of this type are usually made of non-metallic material, such as hard rubber, or wood. This material is subject to distortion or warping and is easily broken. Further, it does not form a satisfactory base on which to mount attachments or parts in connection with the mouthpiece. For example, a screw seated in the hard rubber will quickly loosen or the threads will be stripped from the rubber if any considerable pressure is applied to the screw.

One object of the invention is to provide a mouthpiece of this kind which will be provided with a metallic reinforcement to strengthen the same and to form a base to which to secure attachments.

A further object of the invention is to provide such a mouthpiece having a lay plate rigidly secured to the metallic reinforcement.

A further object of the invention is to provide a mouthpiece with a reed clamp which will be securely mounted on the mouthpiece and easily actuated to clamp or release the reed.

Other objects of the invention will appear as the device is described in detail.

In the accompanying drawings Fig. 1 is a bottom plan view of a mouthpiece embodying my invention; Fig. 2 is a side elevation of the same; Fig. 3 is a longitudinal section taken centrally through such a mouthpiece; and Fig. 4 is a section taken on the line 4—4 of Fig. 2.

In these drawings I have illustrated one embodiment of my invention and have shown the same as applied to a saxophone mouthpiece, but it will be understood that this particular embodiment has been chosen for the purposes of illustration only and that

the invention may be applied to a variety of mouthpieces or the like and that the invention itself may take various forms without departing from the spirit thereof.

As here shown, the mouthpiece comprises a body portion, or shell, 1 which may be formed of hard rubber, or any other suitable material. Mounted within this shell is a metallic reinforcement which is here shown in the form of a bushing 2 firmly seated in the bore of the shell, preferably by pressing the same into the bore. This bushing is provided at its lower end with a collar or enlarged portion 3 which bears against the end of the shell to control the position of the bushing relatively thereto and to give the mouthpiece a finished appearance.

A non-metallic mouthpiece is liable to distortion or warping, and in order that the reed, which is shown at 4, may have a uniform support on the mouthpiece it is sometimes provided with a metal lay plate 5. Various means have been provided for attaching such a plate to a non-metallic mouthpiece, but much difficulty has been encountered in so mounting the plate that it will not loosen. In the present construction I have secured the lay plate to the mouthpiece by means of screws 6 which extend through the plate and the shell and are threaded into the metallic reinforcement, or bushing 2, thus providing a very firm, rigid support for the plate and effectually preventing the same from becoming loose. By slightly arching the plate before it is secured to the mouthpiece and then drawing the same down snugly against the mouthpiece by means of screws, a permanently tight joint may be secured between the plate and the mouthpiece at all points of contact.

Various means have been provided for attaching the reed to the mouthpiece in such a manner that it can be readily removed and replaced. The most common device is a ligature consisting of a split collar which extends about the mouthpiece and the reed and is provided with means for tightening the same to clamp the reed in place. Such a device is open to various objections, such as the fact that it is not permanently connected with the mouthpiece and that it can only be used on one size of mouthpiece,

thus making it necessary to fit the ligature to the mouthpiece before the reed can be attached. In the present device I have provided a reed clamp which is permanently mounted on the mouthpiece and is easily manipulated to clamp or release the reed. Preferably, this clamp comprises a clamping member, or plate, 7, which is provided with a fulcrum attached to the mouthpiece and in the present instance seated in the metallic bushing. A suitable actuating device is provided for imparting movement to the clamping plate. In the present construction the clamping member, or plate, has connected therewith and preferably formed integral therewith, an arm 8 through which extends a fulcrum pin 9, the inner portion of which extends through the shell 1 and is screw threaded into the bushing 2. The outer end of the pin is provided with a head 10 which retains the arm thereon and by means of which the screw can be adjusted in the mouthpiece. The clamping member is preferably curved to conform to the base of the outer surface of the reed and the fulcrum is so arranged that the clamping plate will firmly contact with the reed across its entire width, thus holding it firmly in place. Any suitable device may be provided for actuating the clamping device, but I have here shown the clamping device as comprising a screw 11 which is threaded into the arm 8 and bears against the mouthpiece. Preferably the arm is provided with a boss 12 to provide a larger threaded area to receive the screw and the screw is provided with a head 13 by means of which it can be rotated. In the present construction the screw extends loosely through an opening 14 in the non-metallic shell and bears against the bushing, which forms a firm, unyielding seat therefor which will be subjected to very little wear. The range of movement of the arm on the actuating screw is such that the movement imparted to the clamping member or plate 7 will permit any ordinary reed to be inserted or removed from the clamp, but in the event a reed of unusual size should be employed the limits of movement of the clamping member may be varied by adjusting the fulcrum with relation to the mouthpiece.

While I have shown and described one embodiment of my invention I wish it to be understood that I do not desire to be limited to the details thereof as various modifications may occur to a person skilled in the art.

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

1. In a mouthpiece for a wind instrument, a non-metallic shell, a metallic bushing fitted snugly within the bore of said shell, an attachment mounted on said shell, and means

for securing said attachment to said bushing.

2. In a mouthpiece for a wind instrument, a non-metallic shell, a metallic bushing fitting snugly within the bore of said shell, a lay plate, and a screw extending through said plate and said shell and threaded into said bushing.

3. In a mouthpiece for a wind instrument, a non-metallic shell and a metallic reinforcement arranged within said shell, a lay plate, and an attaching device extending through said plate and said shell and seated in said metallic reinforcement.

4. The combination with a mouthpiece for a wind instrument, of a reed clamp permanently but movably mounted on said mouthpiece, and an actuating device engaging said mouthpiece and said clamp to impart movement to said clamp.

5. The combination with a mouthpiece for a wind instrument, of a reed clamp pivotally mounted on said mouthpiece, and an actuating device to move said clamp about its axis and to regulate the pressure of said clamp on the reed.

6. The combination with a mouthpiece for a wind instrument, of a reed clamp pivotally mounted on said mouthpiece, and a device operatively connected with said clamp and said mouthpiece to move said clamp about its axis.

7. The combination with a mouthpiece for a wind instrument, of a reed clamp comprising a clamping member, an arm carrying said clamping member and pivotally mounted on said mouthpiece, and means interposed between said arm and said mouthpiece to move said arm about its axis.

8. The combination with a mouthpiece for a wind instrument, of a reed clamp comprising an arm pivotally mounted between its ends on said mouthpiece, a clamping member connected with one end of said arm, and an actuating device connected with the other end of said arm.

9. The combination with a mouthpiece for a wind instrument, of a reed clamp comprising a clamping member, an arm connected therewith, a fulcrum for said arm screw threaded into said mouthpiece, and an actuating device screw threaded into said arm and bearing against said mouthpiece.

10. The combination with a mouthpiece for a wind instrument comprising a non-metallic shell, and a metallic reinforcement within said shell, of a clamping member, a fulcrum for said clamping member mounted on said metallic reinforcement, and means to actuate said clamping member.

11. The combination with a mouthpiece for a wind instrument comprising a non-metallic shell and a metallic bushing mounted in said shell, a fulcrum for said member mounted in said shell and supported on said

bushing, and means to actuate said clamping member.

12. The combination with a mouthpiece for a wind instrument, comprising a non-metallic shell and a metallic bushing mounted in said shell, of an arm, a fulcrum pin for said arm mounted on said bushing, a

clamping plate carried by said arm, and an actuating device screw threaded into said arm, extending through said shell and engaging said bushing. 10

In testimony whereof, I affix my signature hereto.

ALFRED J. SINCLAIR.