To all whom it may concern:

Be it known that we, WILLIAM NAUJOKS and EVERETT MLAUGHLIN, citizens of the United States, and residents of Los Angeles, in the county of Los Angeles and State of California, have invented certain new and useful Improvements in Mouthpieces for Wood-Wind Musical Instruments, of which the following is a specification.

This invention relates to mouthpieces of the character employed in wood wind musical instruments, for example, clarinets and saxophones.

An object of the invention is to so construct the mouthpiece that the heat of the player's mouth will not soften the mouthpiece to such an extent as to cause the wall thereof to get out of shape.

In the clarinet and some other types of wood wind musical instruments, the bore of the mouthpiece is small with respect to the outside diameter, so that the walls are comparatively thick and are not readily softened by the heat of the player's mouth. Therefore, in this type of instrument there is very little tendency for the shape or size of the mouthpiece bore to be changed or for the lay of the reed to be affected. On the contrary, it is necessary to make the bore of the mouthpiece of a saxophone relatively large, thus entailing comparatively thin walls which are subjected to softening, by the heat of the player's mouth, to such a degree that after being used a short time the shape and size of the bore change and the lay of the reed is affected, thus making it necessary to throw away the mouthpiece and substitute a new one therefor.

Another object of this invention is to prevent change of shape and size of the mouthpiece bore and of the lay of the reed.

To effect the foregoing objects, a metal insert is provided on which the reed is mounted and vibrates. While it is not new to employ a metal insert for clarinets and other instruments having small bore mouthpieces, it has not been possible hitherto to employ the metal insert for the mouthpieces of saxophones for the reason that the existing inserts are not so constructed as to admit of a relatively large bore for the mouthpieces. By this invention we make possible the application of a metal insert to the mouthpieces of saxophones. Though the invention is especially useful in connection with saxophones, for the reasons given above, it is to be understood that it is not limited thereto but that it can be used to advantage with other wood wind instruments such as clarinets.

The accompanying drawings illustrate the invention:

Figure 1 is a side elevation, partly in section, of a mouthpiece constructed in accordance with the provisions of this invention.

Figure 2 is an elevation from the right of Figure 1.

Figure 3 is a perspective view of the insert detached.

Figure 4 is a longitudinal mid-section of the insert.

There is provided a chambered body 1 of hard rubber or other non-metallic material of the character preferred for the construction of the mouthpieces of wood wind musical instruments, the upper portion of the body forming a plane face 2 to receive the plane face 3 of a metal insert indicated in general by the character 4. This insert 4 may be made of german silver or any other suitable metal. The metal insert 4 is fastened by pins 5 or any other suitable means to the body 1 and is provided with an opening 6 over which the reed, not shown, extends in a manner well understood in this art. As is well known, it is necessary for the lay of the reed to be such that there is more or less space between it and the mouthpiece opening so that the reed will be caused to vibrate when the player blows through the mouthpiece. This necessary space for vibration of the reed is ordinarily secured by slightly beveling off the face against which the reed vibrates, that is to say, the face of the body of the mouthpiece or, in the case of the metal insert of clarinet mouthpieces, the outer face of such insert.

The insert 4 is provided with a slightly beveled face 7 of this description, the thicker portion of the insert being substantially midway between the ends of the opening 6 as indicated at 8. It will be understood from the construction hereinafter to be described that this beveled face is not absolutely necessary and that it may be increased by the user of the instrument at any time by filing or grinding it off.

The construction thus far described is not new. To provide for a desirable amount of space between the reed and the tip of the insert, without the necessity of beveling the face 7 to too great a degree, we reduce the
thickness of the insert from the portion 8 to the rear end of the insert or, in other words, bevel the insert towards its rear end as shown at 9 so as to elevate the forward end of the reed when it is in place on the insert, and thus space the forward end of the reed from the forward end of the insert, even though the beveling of the front end of the unit be omitted. If the tip of the insert were beveled to a comparatively thin edge, there would not be sufficient metal to be afterwards removed by the owner of the instrument in the event that he so desired.

By the construction just described, we are enabled to leave sufficient metal at the tip so that it can be subsequently made thinner, and at the same time we have provided for initially spacing the tip of the reed from the tip of the insert without thickening the insert to such degree as would cut down the diameter of the bore 9 of the mouthpiece or increase the outside diameter of the mouthpiece.

A mouthpiece constructed as above described will last for many years without the shape and diameter of the bore or the lay of the reed being in the least affected by the warmth of the player’s mouth. This is of considerable advantage, for the reason that once the player has established the lay of the reed to suit him it will remain perfectly adjusted, whereas with the saxophone mouthpieces at present employed it is necessary for the players to constantly replace them and re-adjust the lay of the reeds every time new mouthpieces are adopted.

We claim:

1. In a mouthpiece of the character described, the combination of a body having a bore and cut away on its upper face, and a metal insert mounted on said upper face and provided with an opening communicating with the bore, said insert being reduced in thickness from a point lying between the ends of the opening to the rear end of the insert.

2. In a mouthpiece of the character described, the combination of a body having a bore and having a flat upper face, and a metal insert provided with a plane face 50 seated on the flat face of the body, the insert being provided with an opening communicating with the bore, and the insert being reduced in thickness from a point lying between the ends of the opening to the rear end of the insert.

3. In a mouthpiece of the character described, the combination of a body having a bore and having a flat upper face, and a metal insert provided with a plane face 50 seated on the flat face of the body, the insert being provided with an opening communicating with the bore and the insert having its outer face beveled from a point lying between the ends of the opening to the opposite ends of the insert.

4. In a mouthpiece of the character described, the combination of a body having a bore and cut away on its upper face, and a metal insert mounted on said upper face and provided with an opening communicating with the bore, said insert being thicker adjacent the opening and having a beveled outer face extending from the thicker portion to the rear end of the insert so as to elevate the front end of a reed mounted on said beveled face.

Signed at Los Angeles, California, this 5th day of May, 1921.

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Witnesses:

GEORGE H. HILES,
L. BELLE WEAVER.