Nov. 19, 1946. M. MACCAFERRI 2,411,380

LIGATURE FOR SAXAPHONE MOUTHPIECES

Filed Nov. 22, 1944

Fig. 1.

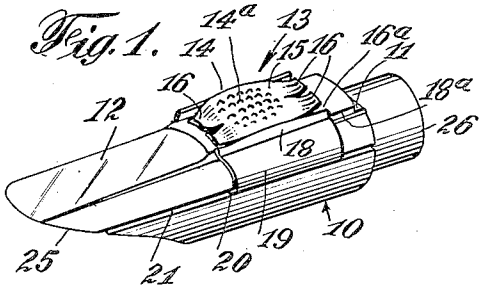


Fig. 2.

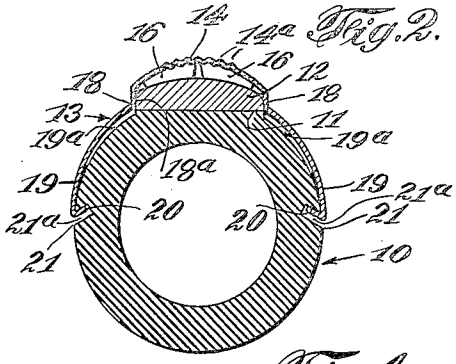


Fig. 3.

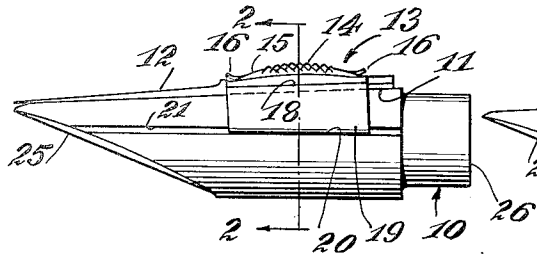


Fig. 4.

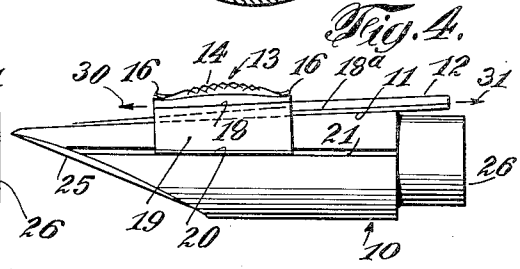


Fig. 5.

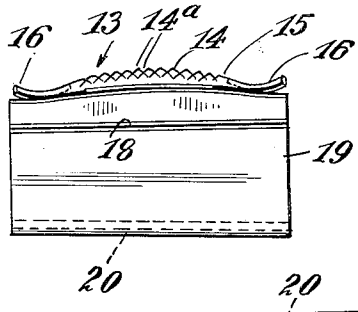


Fig. 6.

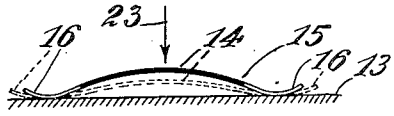
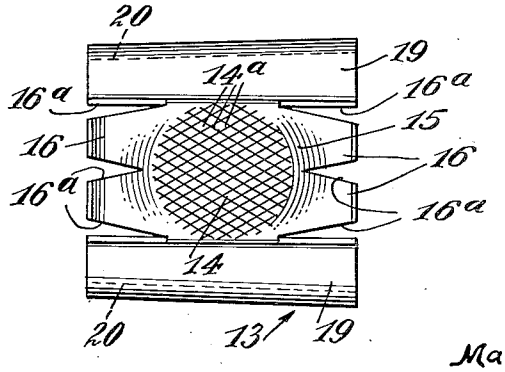


Fig. 7.



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LIGATURE FOR SAXOPHONE MOUTHPIECES

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Application November 22, 1944, Serial No. 564,600

2 Claims. (Cl. 84—383)

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This invention relates to ligatures for saxophones, clarinets, etc.

The invention has for its object to provide a ligature of simple construction, which may be easily applied to a mouthpiece, without the mouthpiece being specially formed, and which may be readily adjusted to hold the reed in position.

The invention consists of a ligature having lateral arms extending downwardly along the sides of the mouthpiece, to engage grooves in the mouthpiece, said grooves and the plane of the surface supporting the reed, being at an inclination to each other. Also, the ligature is provided with a longitudinally arranged tension member pressing on the upper surface of the reed, which assists in holding the reed in a position for use.

The improved ligature may be readily applied to a known form of mouthpiece, by simply providing the mouthpiece with grooves, one at each side thereof, and enclosing the reed on the mouthpiece, and then moving the mouthpiece to a position to clamp the reed firmly in the proper position. The reed may be readily adjusted or replaced by a movement of the ligature along the mouthpiece.

The invention will be more fully described hereinafter, embodiments thereof shown in the drawing, and the invention will be finally pointed out in the claims.

In the accompanying drawing,

Fig. 1 is a perspective view of a mouthpiece with my improved ligature applied thereto;

Fig. 2 is a transverse section on lines 2—2 of Fig. 3;

Fig. 3 is a side view of Fig. 1;

Fig. 4 is a side view of Fig. 1 with the ligature in released position;

Fig. 5 is a side view of the ligature;

Fig. 6 is a diagrammatic view of a part of the ligature to show the pressure action, and

Fig. 7 is a plan view of the ligature.

Similar characters of reference indicate corresponding parts throughout the various views.

Referring to the drawing, the usual mouthpiece of a saxophone, or clarinet, is shown. It is made preferably of a molded material, and is generally indicated by 10. It may, however, be made of metal, rubber, etc., as known. Its upper surface 11 is flat to permit the to and fro movement of the reed 12 of cane, plastic or other materials. This is well known.

The improvement consists in a new type of ligature generally indicated by 13. It consists, in the embodiment shown, of a semi-circular metal

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band covering the top portion of the reed, which extends laterally downwardly at each side of the reed and has inwardly bent portions 20. The central portion 14 of this band, consists of a longitudinally arranged spring portion 15, which extends longitudinally over the top of the reed 12. Its curvature is convex-concave, with the inner concavity corresponding to the outer convex portion. Tongues 16 extend in both directions from the central portion 14. Cutouts 16a are formed in the portion to enable the formation of these tongues 16. Transversely thereto and at both sides of the central portion 14, shoulders 18 are formed, the inner parts of which ride upon the lateral sides 18a of the reed 12. From these shoulders, there extend downwardly extending arms 19, which have a curvature generally corresponding to the curvature of the sides of the mouthpiece, allowing, however, for a space 19a, as shown. At the free ends of the arms 19, bent portions 20 at acute angles are formed, which bent portions extend inwardly. These bent portions 20, are arranged to enter grooves 21 along the sides of the mouthpiece body. The grooves 21 are also inclined. Space 21a is shown between the lower walls of the grooves and the bent portions.

In Figure 3, the reed 12 is shown as placed on the mouthpiece 10, as in playing position, and the ligature 13 is in a position to clamp the reed 12 in playing position. This clamping position of the ligature 13 is secured by moving the ligature 13 as far back as possible, whereby the arms 19 hold the central portion against the reed, and the tongues 16 are subjected to a tension action, reacting to press the reed against the mouthpiece.

To release the ligature 13, a pressure is applied to the central portion 14, which is preferably knurled at 14a to give a good grip to the thumb. In Figure 6, the arrow 23 indicates the pressure, and shows in the dotted line position as the pressed position. This pressure at the same time moves the ligature 13 downwardly, and causes the bent portions 20 to move to the walls of the grooves 21. Thereby the ligature is freed of its gripping action and may be moved longitudinally in the direction of the arrow 30. The reed being released may be moved in the direction of the arrow 31. It will be noted that the top surface or reed supporting surface 11 of the mouthpiece is at an angle to the plane of the grooves 21, and in consequence, when the ligature 13 is longitudinally moved towards the tip 25, the space between the ligature 13 and reed 12, becomes larger and larger, giving ample room to remove or re-

place a reed. Contrariwise, when the ligature is moved towards the outlet end 26, a tighter and tighter hold is obtained. The loosened position is shown in Figure 4.

It will be noted that the ligature cannot turn around the mouthpiece. The reed cannot slide laterally of the mouthpiece, because of the shoulders 18 acting to embrace the sides of the reed. The grooves 21, can be disposed at the position shown, or above or below the same, the arms 19 being shortened or lengthened accordingly. No screws or like mechanical tightening are necessary. The spring tongue action permits loosening with a minimum of effort, because of the facility of pushing against the spring tongues, pressing the ligature downwardly in the manner described, and then moving the ligature towards the tapering portion.

From the foregoing it appears that the ligature consists of a spring pressed member and extending hook portions, and in the combination of such a ligature with a grooved mouthpiece.

I have described several forms of my invention, but obviously various changes may be made in the details disclosed without departing from the spirit of the invention as set out in the following claims.

I claim:

1. A single piece integral ligature for a reed supporting mouthpiece, comprising a central pressure member extending the width of the reed and curved upwardly therefrom and having longitudinally extending tension fingers adapted to press upon the back of the reed, and having at each of its lateral sides a shoulder parallel with the lateral parallel side of the reed, said shoulders being spaced apart a distance equal to the width of the reed, and each shoulder having a curved extension substantially concentric with the transverse contour of the mouthpiece and each extension having a hook to engage a groove in said mouthpiece to clamp the reed to the mouthpiece.

2. A single piece integral ligature for a reed supporting mouthpiece, comprising a central pressure member extending the width of the reed and curved upwardly therefrom and having longitudinally extending tension fingers adapted to press upon the back of the reed, and having at each of its lateral sides a shoulder parallel with the lateral parallel side of the reed, said shoulders being spaced apart a distance equal to the width of the reed, and each shoulder having a curved extension substantially concentric with the transverse contour of the mouthpiece and each extension having a hook to engage a groove in said mouthpiece to clamp the reed to the mouthpiece, part of each extension being spaced from the sides of the mouthpiece and each hook portion.

MARIO MACCAFERRI.