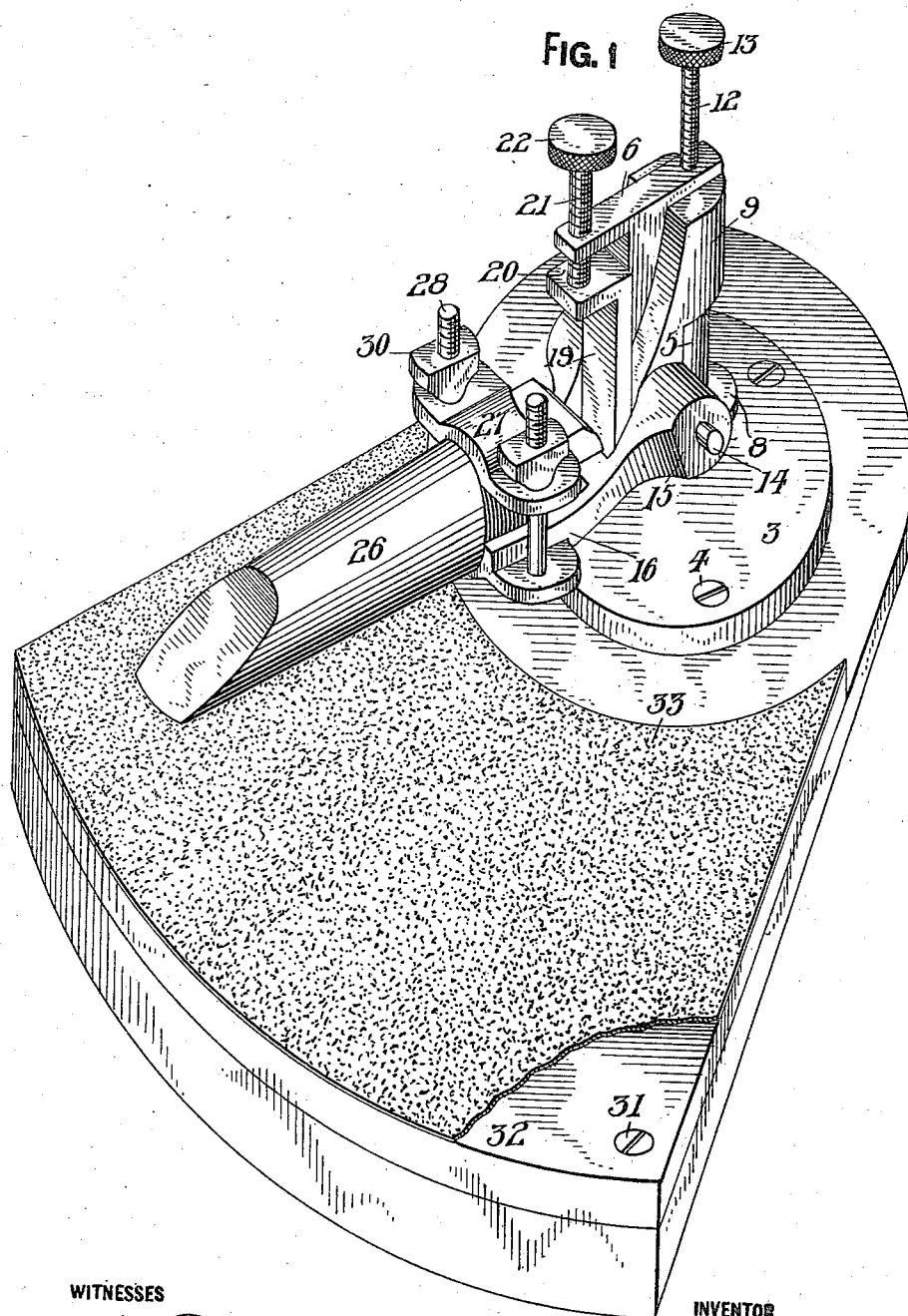


C. H. LIND.
GRINDING, FACING, AND POLISHING DEVICE FOR MOUTHPIECES.
APPLICATION FILED DEC. 29, 1910.

987,383.

Patented Mar. 21, 1911.

2 SHEETS-SHEET 1.



WITNESSES

J. C. Hoffman
R. H. Butler

INVENTOR

C. H. LIND.

By

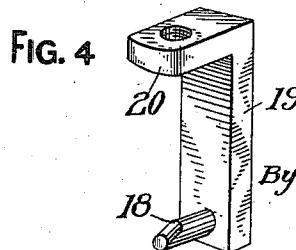
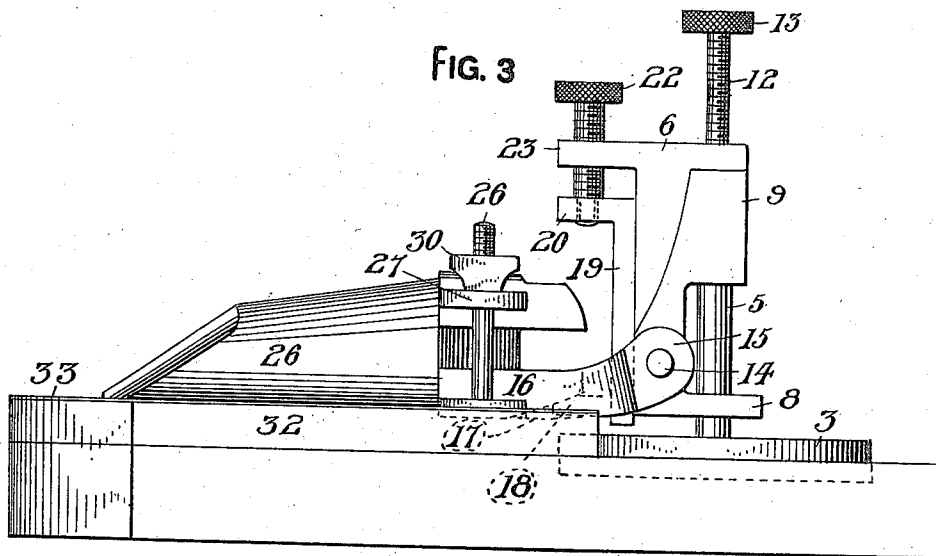
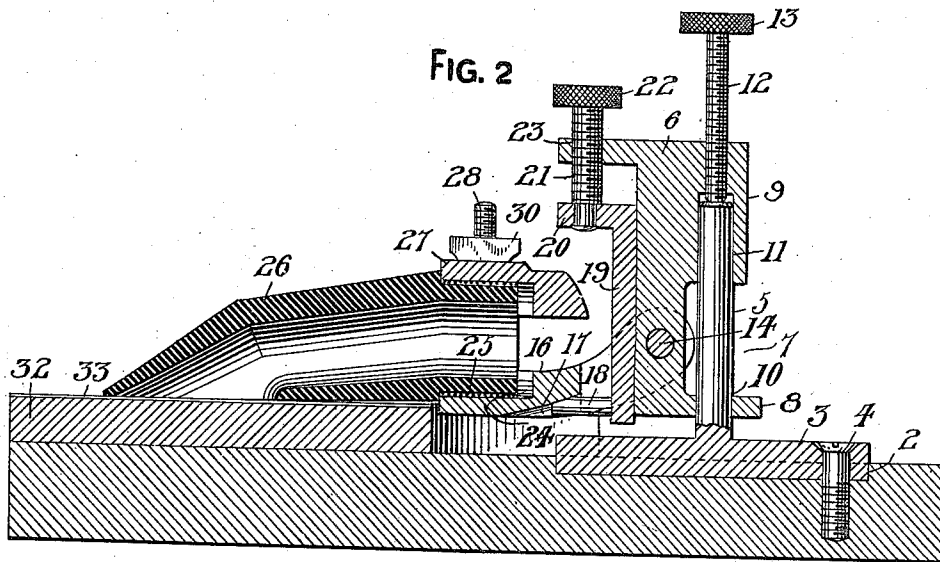
H. C. Emerson

Attorneys

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WITNESSES
J. P. Appleman,
K. H. Butler

INVENTOR
C. H. LIND,

By *A. C. Everett & Co.*

Attorneys

UNITED STATES PATENT OFFICE

CHARLES H. LIND, OF WARREN, PENNSYLVANIA.

GRINDING, FACING, AND POLISHING DEVICE FOR MOUTHPIECES.

987,383.

Specification of Letters Patent.

Patented Mar. 21, 1911.

Application filed December 29, 1910. Serial No. 599,834.

To all whom it may concern:

Be it known that I, CHARLES H. LIND, a citizen of the United States of America, residing at Warren, in the county of Warren and State of Pennsylvania, have invented certain new and useful Improvements in Grinding, Facing, and Polishing Devices for Mouthpieces, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to a grinding, facing, and polishing device for mouth pieces, and the objects of the invention are to provide a device with means in a manner as will be hereinafter set forth for making a perfect lay or foundation for the reed of a musical instrument, as a clarinet, whereby a player can evenly face his own mouth pieces to obtain perfection in producing a tone desired, and to furnish a device of the above type with novel adjustments whereby a mouth piece can be accurately faced and a lay of any desired angle obtained.

It is the present practice to face all mouth pieces by hand by placing them in a vise or clamp and filing them off with a file held in the hand, and in consequence of such operation it is almost impossible for the file always to be held in the same position or at the same angle, consequently considerable time and experience is required to properly face a mouth piece to provide a lay or seat for the reed. The device which I have devised obviates such extreme care upon the part of an operator and insures a rapid and economic reduction of a mouth piece to accommodate a reed.

The facing device will be hereinafter specifically described and then claimed, and reference will now be had to the drawings, wherein like numerals of reference designate corresponding parts throughout the several views, in which:

Figure 1 is a perspective view of the device. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a side elevation of the device, and Fig. 4 is a perspective view of a detached yoke adjusting member.

1 denotes a sector-shaped plate having the small or tapered end thereof provided with a circular seat 2 for a circular base plate 3 that is secured to the plate 1 by a plurality of screws or other fastening means 4. The plate 1 has the small or tapered end thereof rounded whereby the seat 2 will be concentric relatively to the end of

the plate 1, for a purpose that will presently appear. The base plate 3 is provided with a central post 5 and mounted upon said post is an oscillatory bearing block 6 having the rear side thereof cut away, as at 7, to provide bearings 8 and 9, the former having an opening 10 to receive the post 5 and the latter a socket 11 to receive the upper end of said post. The bearing 9 is provided with a block adjusting device, comprising a large set screw 12 adjustably mounted in the bearing 9, said screw having the upper end thereof provided with a head 13 whereby it can be easily rotated to engage the upper end of the post 5 and thereby vertically adjust the block 6 upon said post. Pivottally connected to the lower end of the block 6 by a pin 14 are the apertured arms 15 of a yoke 16, said yoke having the under side thereof at the rear edge grooved or cut away, as at 17, to receive the beveled pin 18 of a yoke adjusting member 19. The upper end of the member 19 has a lateral lug 20 and rotatably mounted in said lug is a set screw 21 having a head 22, said screw being adjustably mounted in an apertured extension 23, carried by the forward upper edge of the block 6. It is through the medium of the screw 21 and the member 19 that the yoke 16 can have the forward end thereof raised and lowered relatively to the block 6, and the pin 18 of the member 19 is beveled whereby it will easily engage in the grooved or cut-away portion 17 of said yoke.

The forward upper edge of the yoke 16 is recessed, as at 24, to receive the reduced wrapped end 25 of a mouth piece 26, said mouth piece being retained in the recess 24 by a clamping strap 27. The clamping strap 27 is held by vertical stud bolts 28, carried by oppositely disposed lugs 29 of the yoke 16, the upper ends of the stud bolts 28 having nuts 30 adapted to be screwed to engage the clamping strap 27 and bind said strap upon the reduced end of the mouth piece.

Secured to the outer end of the plate 1 by screws or other fastening means 31 is a segment-shaped block 32 and glued or otherwise secured to the upper face of this segment-shaped block is a piece of sand paper or emery cloth 33, but in lieu of the sand paper and the segment-shaped block 32 a piece of file steel or other material having a grinding surface can be used.

To place a mouth piece in position to be

ground or faced, the bearing block 6 is removed from the post 5, the reduced end 25 of the mouth piece placed in the recess 24 and the nuts 30 adjusted to clamp the strap 27 upon the reduced end of the mouth piece. The bearing block 6 is then replaced upon the post 5 and the set screw 12 adjusted until the mouth piece 26 rests upon the sand paper or abrasive material 33.

Should the mouth piece 26 unevenly rest upon the sand paper 33, as shown in Fig. 2 of the drawings, the bearing block 6 can be oscillated until the forward end of the mouth piece is ground and gradually assumes the position shown in Fig. 3 of the drawings, where it will be observed that the underneath side of the mouth piece is in parallelism with the surface of the sand paper 33.

It is through the medium of the yoke adjusting member 19 that the mouth piece can be tilted at any desired angle relatively to the sand paper 33, whereby either the forward end or the rear end of said mouth piece can be ground, and as said mouth piece is ground the set screw 12 can be adjusted to lower the block 3, whereby the weight of the yoke and the mouth piece will be principally supported by the sand paper and consequently produce more friction between the sand paper and the mouth piece as the bearing block 6 is oscillated.

From the foregoing it will be observed that after the mouth piece is clamped to the yoke 16, that said yoke and the bearing block thereof can be easily adjusted whereby the mouth piece will be correctly presented to the abrasive material, and it is obvious that after the adjustments have been made that an oscillatory movement of the bearing block 6 will evenly grind and face the mouth piece and provide a lay or seat for the reed.

The device is portable, easy to operate, simple in construction, durable, and can be finished to present a neat appearance.

While in the drawings there is illustrated a preferred embodiment of the invention, I reserve the right to make such changes in the structural elements as are permissible by the appended claims.

What I claim, is:

1. In a facing device, a plate, abrasive material carried thereby, an oscillatory bearing detachably mounted upon said plate, a yoke pivotally connected to said bearing and adapted to support a mouth piece to be ground by said abrasive material, and ver-

tically movable means carried by said bearing and including a member engaging with the yoke for adjusting it on its pivot.

2. In a facing device, a plate, abrasive material carried thereby, an oscillatory bearing detachably mounted upon said plate, a yoke pivotally connected to said bearing and adapted to support a mouth piece to be ground by said abrasive material, vertically movable means carried by said bearing and including an angularly-disposed member engaging with the yoke for adjusting it on its pivot, and means including a clamp adapted to retain a mouth piece upon said yoke.

3. In a device of the type described, a plate, abrasive material carried thereby, a post supported by said plate, an oscillatory bearing block adjustably mounted upon said post, and an adjustable pivoted yoke carried by said block and adapted to support a mouth piece relatively to said abrasive material.

4. In a machine of the type described, a plate, abrasive material carried thereby, an oscillatory bearing block adjustable relatively to said plate, an adjustable pivoted yoke carried by said block and adapted to support a mouth piece relatively to said abrasive material, and means adapted to clamp a mouth piece to said yoke.

5. In a machine of the type described, a plate, abrasive material carried thereby, and means including an oscillatory bearing block and a pivoted adjustable yoke carried thereby adapted to support a mouth piece relatively to said abrasive material.

6. A device of the type described comprising a plate, abrasive material carried thereby, a post supported by said plate, an oscillatory bearing block adjustably mounted upon said post, a yoke pivotally connected to said bearing block, and means adapted to clamp a mouth piece to said yoke.

7. A device of the type described comprising a plate, abrasive material carried thereby, a post supported by said plate, an oscillatory bearing block adjustably mounted upon said post, a yoke pivotally connected to said bearing block, means adapted to clamp a mouth piece to said yoke, and means carried by said bearing block and adapted to adjust said yoke.

In testimony whereof I affix my signature in the presence of two witnesses.

CHARLES H. LIND.

Witnesses:

G. E. HOMER,
LOUIS HARTWEG.