

1,401,872.

Fig. 1.

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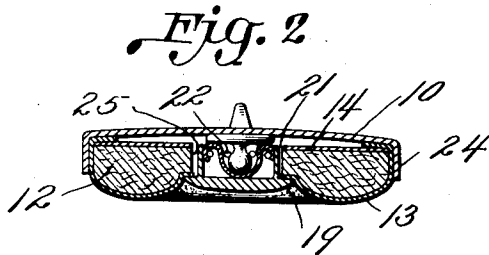


Fig. 2

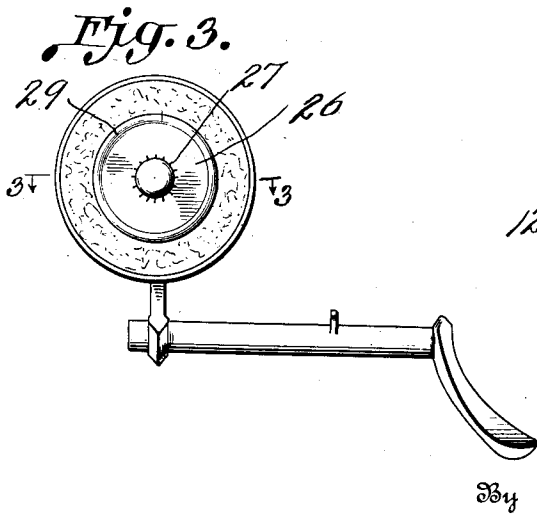
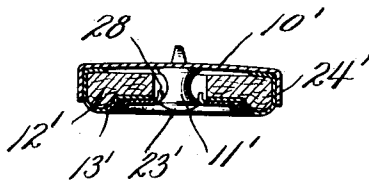


Fig. 4.



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By

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UNITED STATES PATENT OFFICE.

FERDINAND A. BUESCHER, OF ELKHART, INDIANA.

KEY-PAD FOR WIND MUSICAL INSTRUMENTS.

1,401,872.

Specification of Letters Patent. Patented Dec. 27, 1921.

Application filed February 28, 1921. Serial No. 448,534.

To all whom it may concern:

Be it known that I, FERDINAND A. BUESCHER, a citizen of the United States, residing at Elkhart, in the county of Elkhart and State of Indiana, have invented new and useful Improvements in Key-Pads for Wind Musical Instruments, of which the following is a specification.

My invention relates to key pads for wind musical instruments of the saxophone type and the means for securing said pads to the keys of the instrument.

The main object of the invention is to provide a simple means for fastening a pad on a key of the instrument so that the same may be readily removed and replaced by the musician. It has been found that most of the saxophones sent back to the factory for repairs need only repadding. By my invention the player may easily replace the pads of his own instrument.

My invention also provides a pad which is maintained in place out to the edge of the key by a rear disk or plate of substantially the same dimension as the key whereby the pad is prevented, to a large degree, from warping and shrinking out of shape. The pads are therefore able to cover the valve openings properly.

Other objects of the invention whereby a neat and simple fastening device for the key pads is provided will become apparent as the description proceeds.

The invention is described in connection with the accompanying drawings, in which:—

Figure 1 is a perspective view of the preferred form of my invention showing the various parts in disassembled relation.

Fig. 2 is a cross section on the line 2—2 of Fig. 1, showing a key and key pad in assembled relation.

Fig. 3 is a plan view of a modified form of fastening device and pad.

Fig. 4 is a cross section on the line 3—3 of Fig. 3 looking in the direction of the arrows.

Referring to Figs. 1 and 2, the numeral 10 represents the usual cup-shaped key having secured thereto the stud part 11 of a snap fastener. This stud part is preferably secured to the inside of the back plate of the key at substantially the central portion thereof by soldering or the like. The pad is composed of a body of compressible material such as wool felt 12, the front surface of

which is covered with yieldable material as kid skin 13. A metal or fiber back is provided in the rear of the wool felt and as shown in Figs. 1 and 2 the back is in the form of a disk 14 of substantially the same diameter as the body 12, in order to keep the outer edge of the body in place. The kid skin cover 13 extends over the edge of the disk 14 and its edge is gathered and drawn by the threads 15 forming loops, and the drawing string 16 which is fastened by means of a knot at 17. The kid skin, the wool felt, and the back plate 14 are formed with central apertures adapted to aline axially with the stud part 11 of the snap fastener. A button having a recessed stem 18 is provided with a flanged head 19. The socket member 20 of the snap fastener is placed in the recessed stem 18 and retained therein by spinning over or rounding the inner edge of the stem as shown at 21. The snap fastener employed may be of any commercial variety, the form illustrated having the spring element 22 adapted to engage over the rounded head 23 of the stud part 11 of the fastener for the purpose of detachably securing the pad to the key of the instrument.

To attach a pad of this form, the pad, consisting of the body of wool felt with its cover of kid skin and its backing plate, is inserted in the cup of the key so that the outer edge thereof fits snugly in the annular flange 24 of the key and the central aperture of the assembled key pad is in axial alignment with the stud part 11 of the snap fastener. The stem 18 of the button is then inserted in the central aperture 25 and the flanged head 19 of the button comes into contact with the portion of the cover immediately surrounding the central aperture and compresses the wool felt until the spring of the socket member snaps over the rounded head 23 of the snap fastener whereby the pad is detachably secured to the key. In this position the flange 19, as shown in Fig. 2, compresses the pad at its center so as to evenly distribute the felt between the center and the periphery of the pad and thus cause that portion of the pad which lies between its center and its periphery to assume a shape which is substantially semi-circular in cross-section. Pads so formed have good seating qualities with relation to the sockets of the instrument.

Referring now to Figs. 3 and 4 wherein

a modified form of the invention is shown, the numeral 10' designates a key similar to the key 10 above described, with the exception that the stud part 11' of the snap fastener has an enlarged head 23' and a concave stem portion which is secured to the back of the key by soldering or the like. The key pad in this case is shown as comprising a body of wool felt 12' and a cover 13' of kid skin, the metal backing being omitted and the kid secured directly over the felt by means of gathering and drawing as above described. In this form of my invention a fastening plate 26 is utilized, the central portion of which is split at a number of places indicated at 27 and punched inwardly so as to provide a plurality of resilient fingers 28 which are adapted to be forced over the head 23' to yieldingly engage under the head for the purpose of retaining the pad on the key. The plate 26 is preferably formed with an annular corrugation 29 for the purpose of adding rigidity thereto.

In placing the pad on the key, the periphery thereof fits snugly within the flange 24' and the retaining plate 26 is then applied by forcing the yielding fingers 28 over the head of the stud 11' for detachably maintaining the pad on the key. This retaining plate may be readily removed by inserting the edge of a tool or the finger nail under the outer edge thereof and pressing outwardly with sufficient force to release the spring fingers from engagement with the stud 11'. The spring fingers ordinarily maintain the pad on the key and the retaining plate can be removed only by direct pressure applied in a manner similar to that above described.

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

1. In a wind musical instrument, the combination of a key, a pad therefor, and a mechanical fastening device for compressing a portion of the pad and detachably securing the pad to the key.

2. In a wind musical instrument, the combination of a key, a pad therefor and a snap fastener for detachably securing the pad to the key.

3. In a wind musical instrument, the combination of a key, a pad therefor having an aperture formed therein, and a mechanical fastening device for securing said pad to the key comprising a part attached to the key and a member adapted to be inserted in said aperture and detachably engage said part.

4. In a wind musical instrument, the combination of a key, a pad therefor having an aperture formed therein, and a mechanical fastening device for securing said pad to the key comprising a stud permanently attached to the key and a socket member adapted to be inserted in said aperture and detachably engage said stud.

5. In a wind musical instrument, the combination of a key, a pad therefor having an aperture formed therein, a button having a flanged head and a recessed stem, and a mechanical fastening device for securing said pad to the key comprising a part attached to the key and a member located in said recessed stem for detachably engaging said part when said stem is inserted in said aperture.

6. In a wind musical instrument, the combination of a key, a pad for said key having a hole formed therethrough, and a fastening device having a part passing through said hole for detachably connecting the pad to said key.

7. A pad for the keys of a wind musical instrument comprising a body of compressible material, a yieldable cover for said body, a thin disk of substantially the same diameter as the body located at the rear face of the latter, said body, cover and disk being formed with alining apertures to receive means for securing said pad to a key, and means for holding said body, cover and disk in assembled relation.

8. A pad for the keys of a wind musical instrument comprising a body of compressible material, a yieldable cover for said body, said body and cover being formed with alining apertures to receive means for securing said pad to a key, and means for holding said pad and cover in assembled relation.

9. In a wind musical instrument, the combination of a key, a pad therefor comprising a body, a cover and a back plate formed with alining apertures, and a fastening device adapted to pass through said alining apertures for detachably connecting the pad to said key.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

FERDINAND A. BUESCHER,

Witnesses:

HARRY W. LEWIS,
O. E. BEERS,