No. 771,950. PATENTED OCT. 11, 1904.

A. VOGES.

INTERCHANGEABLE KEY OR BUTTON FOR TYPE WRITING MACHINES.

APPLICATION FILED OCT. 6, 1903.

NO MODEL.

Fig. 1.

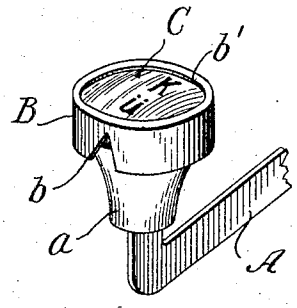


Fig. 2.

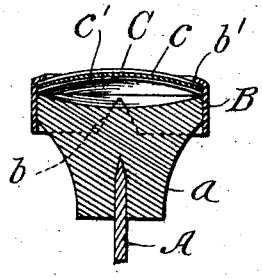


Fig. 3.

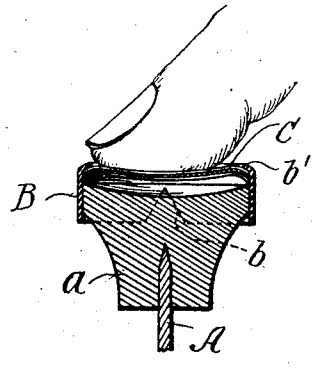


Fig. 4.

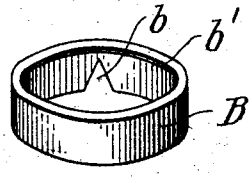
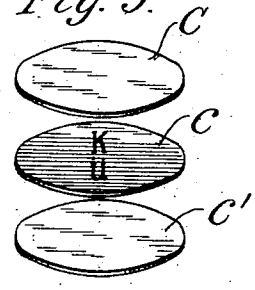


Fig. 5.



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Patented October 11, 1904.

UNITED STATES PATENT OFFICE.

AUGUST VOGES, OF CHICAGO, ILLINOIS.

INTERCHANGEABLE KEY OR BUTTON FOR TYPE-WRITING MACHINES.

SPECIFICATION forming part of Letters Patent No. 771,950, dated October 11, 1904.

Application filed October 5, 1903. Serial No. 175,770. (No model.)

To all whom it may concern:

Be it known that I, AUGUST VOGES, a citizen of the United States, and a resident of Chicago, Cook county, Illinois, have invented certain new and useful Improvements in Interchangeable Keys or Buttons for Type-Writing Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Type-writing machines in which revoluble type-wheels are used are adaptable for printing in any language or with any desired characters by substituting a type-wheel with the desired characters for that before used. This of course necessitates a corresponding change in the type-button, inasmuch as the characters used in different languages and for different purposes vary. It follows that heretofore it has usually been necessary to send the machine to the shop for the purpose of removing the key-buttons and substituting keys bearing characters corresponding with those on the type-wheel. It therefore is highly important to provide means whereby the keys or buttons themselves may be made interchangeable and to provide means whereby the operator can quickly change the buttons on his machine to print in any desired language.

The object of this invention is to provide a removable cap or key-button having removably secured therein a representation of the character or characters corresponding with that on the type-wheel brought into operation by the actuation of said key and to provide means whereby the character represented in any individual cap may be quickly changed.

It is also an object of the invention to provide a resilient upper surface to the key or button, thereby affording a desirable contact-face for the fingers of the operator.

The invention consists in the matters hereinafter described, and more fully pointed out and defined in the appended claims.

In the drawings, Figure 1 is a perspective view of a key bar and button provided with an interchangeable cap embodying my invention. Fig. 2 is a vertical section of the same. Fig. 3 is a similar view illustrating the resiliency of the contact-surface of the cap. Fig. 4 is a perspective view of the retaining-band for the cap. Fig. 5 is a perspective view of the resilient contact-plate and character-disk, showing the same removed from the cap and separated.

As shown in said drawings, A indicates the key-bar and *a* the key or button secured thereon in the usual or any desired manner and adapted for engagement by the fingers of the operator. Said keys or buttons, as shown, are of the usual form and are, as usual, concave on the upper or touch surface, in which is printed a character corresponding to that brought into operation by the actuation of the key. Said button, as shown, is circular at the top and for a short distance below the top is cylindric, from which point it tapers to the base. As the machine is sold the character printed on the key or button of course corresponds with the character actuated thereby on the type-wheel of the machine—as, for instance, that printing the language to be most usually printed by said machine—and when the type-wheel is changed for one having a different arrangement of characters thereon it is necessary to also change the characters on the key, and for this purpose a resilient cap is removably secured thereon.

Said cap comprises an annular band B, of pressed metal or other resilient material, provided at its top with an inturned peripheral flange *b'*, into which is forced a disk or plate C, of celluloid, mica, or other resilient transparent material, to afford the contact with the fingers of the operator, as shown in Fig. 3. Said contact-plate is cut sufficiently larger than the interior of said band B to cause the same when forced to position to assume the externally-convex form, as shown in Figs. 1 and 2. Below said contact-plate is secured one or more character-disks *c*. Said character-disks are of any opaque material, and the character printed or marked thereon may of course be of any desired nature or form corresponding with the character actuated by said key on the type-wheel with which the type-wheel having characters represented normally

on the button is adapted to be replaced. Below said opaque character-disk is usually secured a retaining-disk c', of any desired material, but preferably transparent and of the same material as the contact-plate to enable the same to be used interchangeably therewith above the character-disk, as preferred. As shown, a V-shaped notch b is cut at the lower edge of the retaining-band B and extends upwardly therein to near the middle of said band, thereby increasing the resiliency of the band and permitting the bottom thereof to spread outward sufficiently to be passed over the top of the button, as shown in Figs. 1, 2, and 3.

The operation is as follows: When for any cause it becomes necessary to change the character on the keys, the character-disks bearing the appropriate characters are secured in the retaining-bands, as shown in Figs. 1, 2, and 3, usually with the resilient retaining-disk c' below the same, all of said disks being of sufficiently greater diameter than the retaining-band to hold the disks upwardly, as shown in Fig. 2. The cap when so arranged is forced downwardly over the top, and the character-disk in the cap being opaque of course conceals the character on the key and its character can be plainly seen through the contact-disk. In this way all the characters on the keyboard may be changed in a few moments, and the new type-wheel having been placed in position the machine is ready to operate, printing the characters represented in the caps.

The resiliency of the contact-disk in the cap affords a cushion to touch of the operator. Obviously the number of key-caps required need not exceed the number of keys on the keyboard, and each of said key-caps may, if preferred, be provided with a set of character-disks, any one of which may be arranged uppermost and exposed beneath the transparent contact-disk. Should it be desired to use the caps merely for their resiliency, the character-disks may be omitted altogether, and the character marked on the key or button can be then plainly seen through the transparent media or disk secured in the top of the cap.

Obviously many details of construction may be varied without departing from the principles of this invention.

I claim as my invention—

1. A resilient cap for type-writer keys comprising an expansible retaining-band adapted to frictionally engage said keys, a transparent upwardly-arched resilient contact-disk secured in the top thereof and an opaque disk having a character indicated thereon secured below the same.

2. A resilient cap for type-writer keys comprising an expansible resilient band adapted to grip the periphery of the key, an inturned flange at the top of the same and resilient disks fitting tightly in said band under pressure and curving upwardly therein, one of said disks having indicated thereon a character.

3. In a device of the class described the combination with a resilient band, having a notch in one side thereof adapted to engage over a key-button of an inturned peripheral flange on the top thereof, a transparent contact-disk secured therein against said flange under pressure and curving upwardly and one or more character-disks secured beneath said contact-disk one of which is discernible therethrough.

In testimony whereof I have hereunto subscribed my name in the presence of two subscribing witnesses.

AUGUST VOGES.

Witnesses:
A. C. ODELL,
W. W. WITHENBURY.