

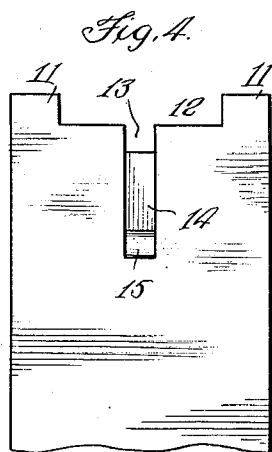
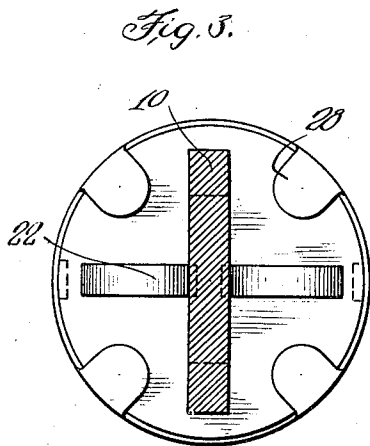
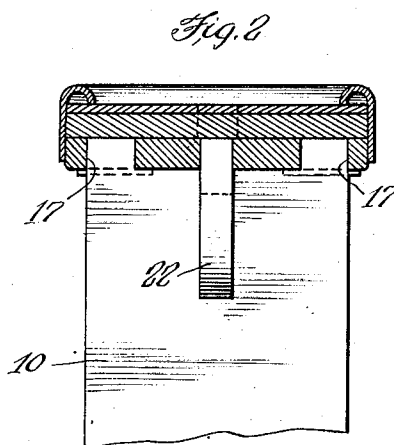
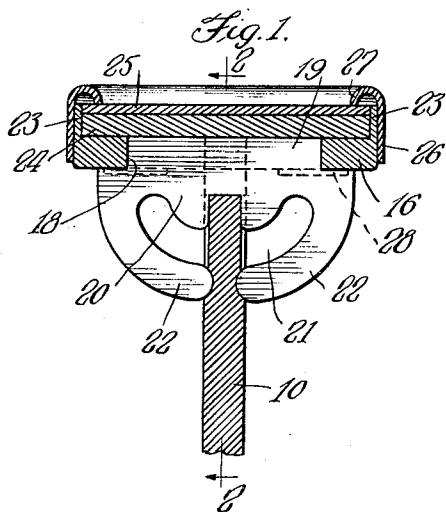
M. H. MANDELBAUM AND B. R. WEBSTER.

KEY FOR OFFICE DEVICES.

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1,376,958.

Patented May 3, 1921.



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UNITED STATES PATENT OFFICE.

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KEY FOR OFFICE DEVICES.

1,376,958.

Specification of Letters Patent.

Patented May 3, 1921.

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To all whom it may concern:

Be it known that we, MAURICE H. MANDELBAUM and BESTER R. WEBSTER, citizens of the United States, and residents of Chicago, in the county of Cook, State of Illinois, and Elgin, in the county of Kane, State of Illinois, have invented certain new and useful Improvements in a Key for Office Devices, of which the following is a specification.

Our invention relates to keys for accounting and typing machines, and particularly to a novel construction in which a removable button is employed.

It is found desirable in the use of many machines adapted for office work to provide for the removal of the key buttons. Not only is this sometimes useful in operation but in other cases is essential in the manufacturing operation. To that end we have devised a key of this character in which the button or disk which is secured to the end of the stem or shank of the key, is firmly held in position by the use of very simple means.

We have furthermore, improved the means by which the symbol disk is secured to the key button. This disk is commonly formed of celluloid or paper backed by a cushion member such as cardboard and covered in some instances by a circular piece of glass. A difficulty has been experienced in so mounting these symbol disks that they will not rotate in practice. To that end we have provided interengaging lugs and notches on the parts, these serving the purpose of preventing rotation in service and assisting in locating the symbols in proper relation when assembling.

The invention will be more readily understood by reference to the accompanying drawings, wherein,

Figure 1 is a vertical sectional view through a key constructed in accordance with my invention;

Fig. 2 is a sectional view on the line 2—2 of Fig. 1;

Fig. 3 is a bottom plan view of the key, and,

Fig. 4 is a side elevation of the stem or shank of the key.

In the drawings it will be seen that the shank 10, is provided at its upper extremity with two lugs 11, the formation of which

results in a recess 12. A second shallow recess 13, is provided at the middle portion of the shank, this recess being in register with side grooves 14, on the stem. The side grooves terminate in notches 15, having rounded bottoms, as best shown in Figs. 1 and 4.

The key button comprises a disk 16, having recesses 17, therein, adapted to accommodate the lugs 11, and provided also with a central elongated recess 18, which accommodates a projection 19, from a web 20, which projects downwardly from the disk. This web is centrally notched or recessed as at 21, to provide spring-arms 22, having rounded ends, these arms being adapted to be guided in the grooves 14, and be snapped into the notches 15, in the sides of the stem. The projection 19, on the web is swaged or otherwise permanently fixed in position. The notch 13 in the stem engages with the central portion of the web which is not cut away. Thus it will be seen that while the button is removable it is firmly held in its position against the possibility of accidental displacement.

In practice the downwardly projecting web 20, is punched to provide the recess 21, the space allowed between the terminal portions of the arms 22, being slightly less than the thickness of the shank at the guide grooves 14; thus in order to seat the key the arms 22, must be slightly forced apart while passing along the grooves to the recess 15, the natural resiliency of the metal making this possible. Of course, it is entirely practical to omit the notches 15, in the shank, and to rely on the binding effect of the side arms on the shank for holding the button in place. This is particularly practical in view of the interengagement of the button and shank at three different points and the bracing of the button by the use of the arms which engage the shank at a considerable distance from the disk.

Projecting upwardly from the disk 16, are peripheral side lugs 23, and mounted on the upper face of the disk of the button is a cardboard disk 24, and a celluloid disk 25, these two being secured together by gluing. One or both of the disks 24, 25, are notched at their peripheries to correspond to the positions of the lugs 23, the interengaging lugs and recesses thus serving as a means

for assisting in locating the disks in assembling and preventing rotation thereof in service. The disks may be held in position by a ring or band 26, having a beaded margin 5 27, and held in position by ears 28, in the well known manner.

A key constructed in the manner described will be found to possess many advantages not present in those heretofore suggested. 10 Modifications may be made therein and such changes as are within the scope of our claims we consider to be within the spirit of our invention.

We claim:

15 1. A readily removable key for accounting and typing machines, comprising in combination, a shank having lugs at its extremity and a notch at a point removed from the end, a disk having recesses adapted to 20 accommodate the shank lugs, and said disk having a resilient, downwardly projecting arm adapted to slide along said shank and engage the notch therein whereby the disk is firmly and removably held in engagement 25 with the shank, substantially as described

2. In a key, the combination of a stem having a plurality of lugs projecting from the end thereof, a disk having recesses adapted to accommodate said lugs, and a web

projecting downwardly from the center of 30 said disk, said web being transversely divided to provide spring-arms, said stem being notched at a point removed from the end thereof, said arms being adapted to engage the notches to removably hold the disk 35 against endwise removal, substantially as described.

3. In a key, the combination of a stem having end projections, a disk having recesses adapted to accommodate said projec- 40 tions, said disk being provided with a downwardly projecting web arranged in a plane at right angles to that of the stem, the stem being provided with a central guiding slot terminating in a notch at its lower end 45 and said web being vertically notched to permit engagement with the stem, the stem being guided and held in position by engagement of the extremities of the notched web with the guide and notch in the stem, 50 substantially as described.

Signed at Chicago, Illinois, this 19th day of December, 1919.

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