

No. 824,841.

PATENTED JULY 3, 1906.

E. J. BRANDT.

PUSH DEVICE.

APPLICATION FILED OCT. 23, 1905.

Fig. 2.

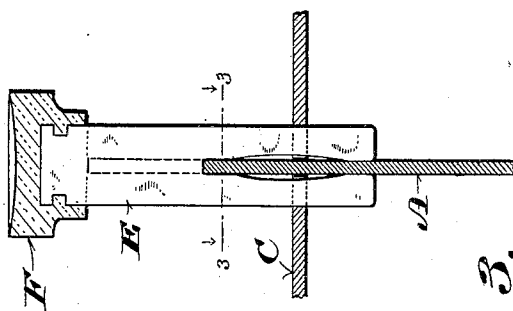


Fig. 3.

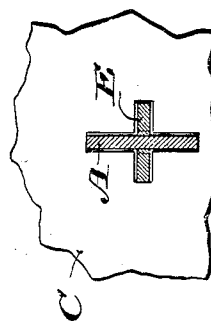
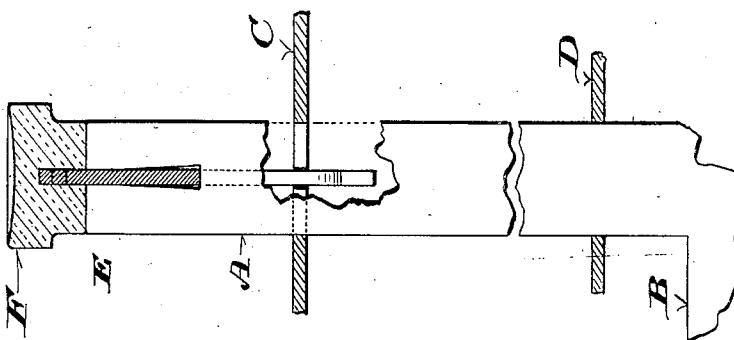


Fig. 1.



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UNITED STATES PATENT OFFICE.

EDWARD J. BRANDT, OF WATERTOWN, WISCONSIN, ASSIGNOR TO BRANDT CASHIER COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

PUSH DEVICE.

No. 824,841.

Specification of Letters Patent.

Patented July 3, 1906.

Application filed October 23, 1905. Serial No. 284,015.

To all whom it may concern:

Be it known that I, EDWARD J. BRANDT, a citizen of the United States, and a resident of Watertown, in the county of Jefferson and State of Wisconsin, have invented certain new and useful Improvements in Push Devices; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention consists in what is hereinafter particularly set forth with reference to the accompanying drawings and subsequently claimed, its object being to obviate shake, sticking, marring, and rusting of flat shanks for push-buttons in various machines, particularly coin-delivery machines similar to what is shown in my Patent No. 658,828, granted October 2, 1900, and other patents noted in the one aforesaid, and to provide push-buttons having stems for detachable cross engagement with the aforesaid shanks to reciprocate therewith in cruciform guide-slots.

Figure 1 of the drawings represents a side elevation of a partly-broken flat shank of a plate or lever, guide-plates for the same, partly in section, and a push-button having the stem thereof in cross engagement with said shank and movable therewith in a cruciform slot of the upper guide-plate, said button and its stem being in section; Fig. 2, a side elevation of the push-button stem in the arrangement above specified, the aforesaid shank, upper guide-plate, and the button being in section; and Fig. 3, a horizontal section indicated by line 3 3 in Fig. 2.

Referring by letter to the drawings, A indicates a plate or lever having a flat shank B guided in registering slots, with which horizontal plates C D at different elevations are provided. Heretofore a shank of the kind described has been rigidly attached at its upper end to a push-button, and its tendency is to shake in its engagement with the guide-plates and at times to either stick or rub on one side or the other against said plates. Being of nickel-plated steel, the contact of either or both sides of the shank with the guide-plates causes a wearing away of the nickel, and under some climatic conditions the steel is attacked by rust, with the usual detrimental result.

The flat spring-steel shank herein shown is provided at its upper end with a longitudinal central slot that is preferably widened at its

lower extremity, the remainder of this slot being of a width approximating the thickness of a flat spring-steel stem E, having a push-button F in rigid connection with its upper end. The slot in the shank coincides with a central longitudinal slot in the stem E, and the slots permit of a cross engagement of said stem with said shank. The stem is guided in a slot of the upper plate C, which slot intercepts the slot for the aforesaid shank at right angles thereto, the two forming what is herein termed a "cruciform" slot or guide. The edges of the combined shank and stem have contact with the cruciform slot, and the several branches of said slot are sufficiently wide to give ample clearance for the sides of said shank and stem.

The slot of the stem is narrowed at its lower end and widened midway of its length, as clearly shown in Fig. 2, the remainder of said slot being of a width approximating the thickness of the aforesaid stem. Owing to the preferred peculiar formation of the stem-slot and the narrowing of the upper end of the shank-slot to a width slightly less than the thickness of the stem and shank themselves, there is a wedging engagement of said stem and shank sufficient to insure a gripping of each one of them upon the other when the two are of spring-steel, and thus insure the aforesaid stem against accidental displacement.

The stem herein shown is provided with edge notches adjacent to its upper end, and material of the push-button F, molded on said stem, is caught in the notches to anchor said button. The stem and push-button constitute a key, and in case of fracture or loss of the key another one can be readily substituted without entailing the loss of the shank, this being one of the features of advantage of my invention.

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

1. A push-button having a longitudinally-slotted flat stem and a correspondingly-slotted flat shank in cross engagement with the stem, the two being engageable with a cruciform guide.

2. A push-button having a flat stem of spring material provided with a longitudinal slot narrowed at its inner end and widened midway of its length, and a longitudinally-

slotted flat shank in cross engagement with the stem, the two being engageable with a cruciform guide.

3. A push-button having a flat stem of
5 spring material provided with a longitudinal slot, and a flat shank of like material provided with a longitudinal slot that is widened at its inner extremity, but is otherwise of a width approximating the thickness of said
10 stem with which it has gripping cross engagement, the two being engageable with a cruciform guide.

4. A push-button having a flat stem of
15 spring material provided with a longitudinal slot, and a flat shank of like material having

a coinciding slot, whereby cross engagement of said stem and shank may be had to work together in a cruciform guide, the contour of the slots being such that there is grip of the aforesaid stem and shank one upon the other 20 when the same are engaged.

In testimony that I claim the foregoing I have hereunto set my hand, at Chicago, in the county of Cook and State of Illinois, in the presence of two witnesses.

EDWARD J. BRANDT.

Witnesses:

FREDERICK C. GOODWIN,
M. H. MANDELBAUM.