

No. 666,855.

Patented Jan. 29, 1901.

W. U. RAINE.
DETACHABLE BUTTON.

(Application filed July 18, 1900.)

(No Model.)

Fig. 1.

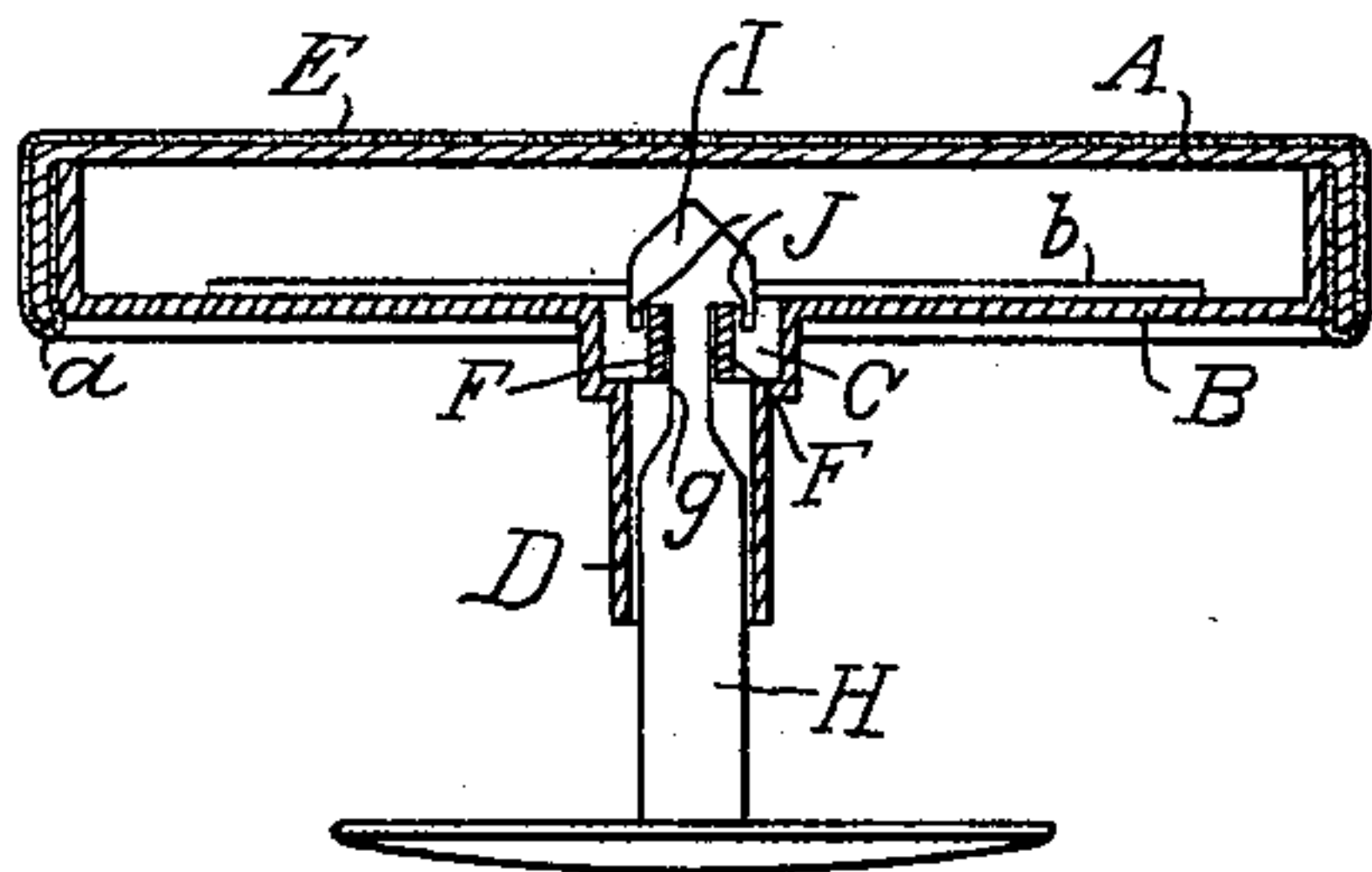


Fig. 2.

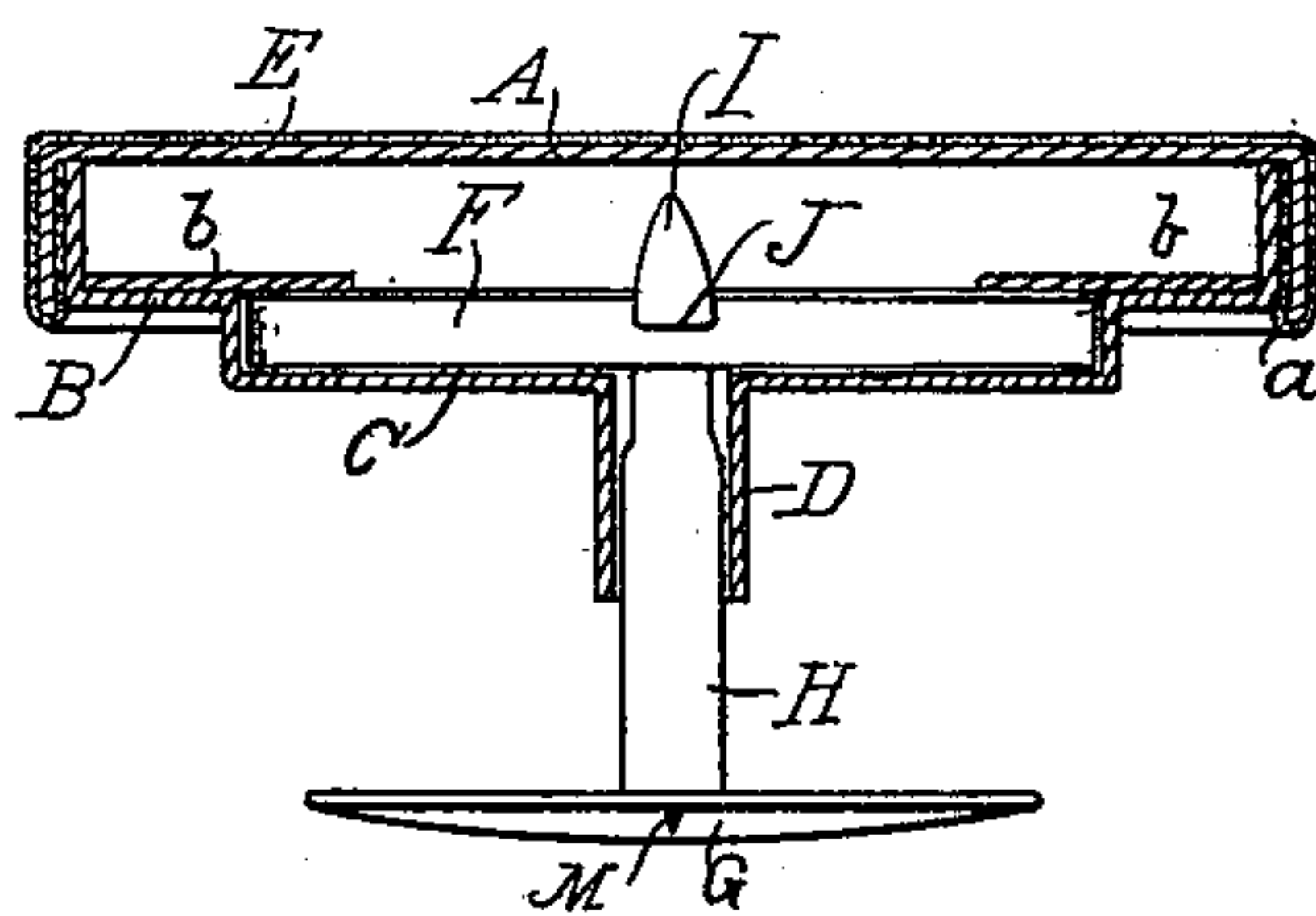


Fig. 3.

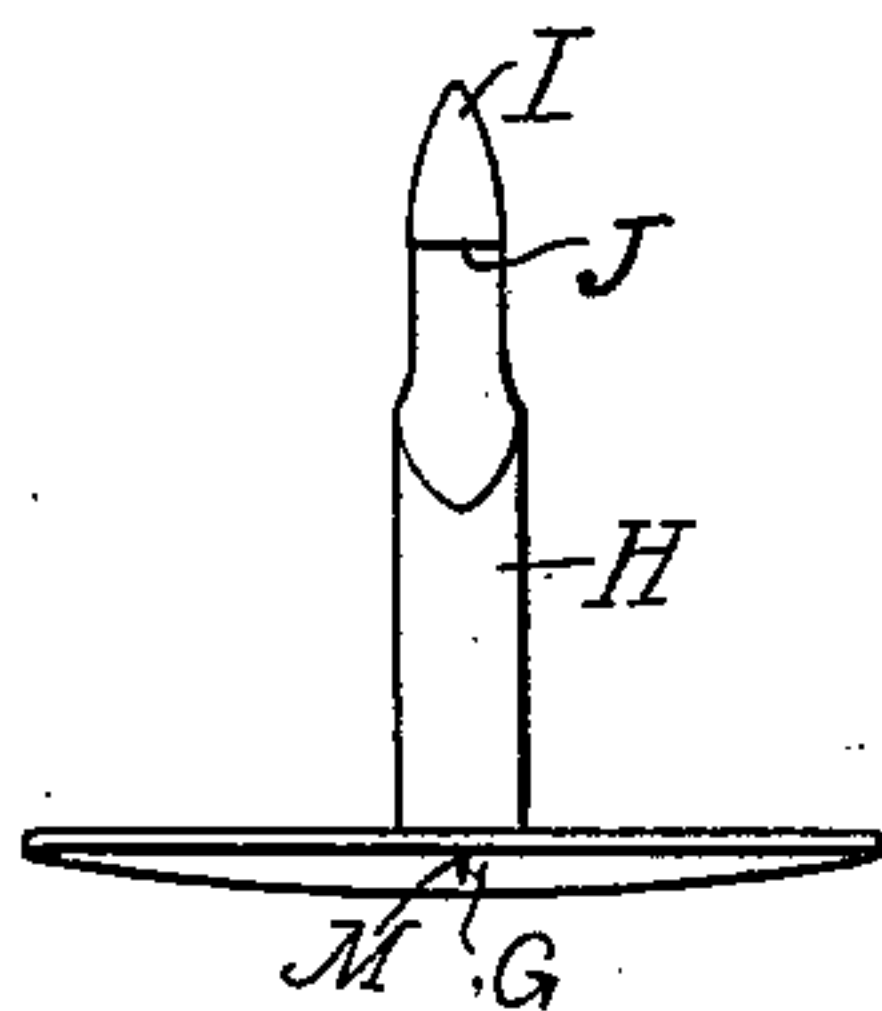
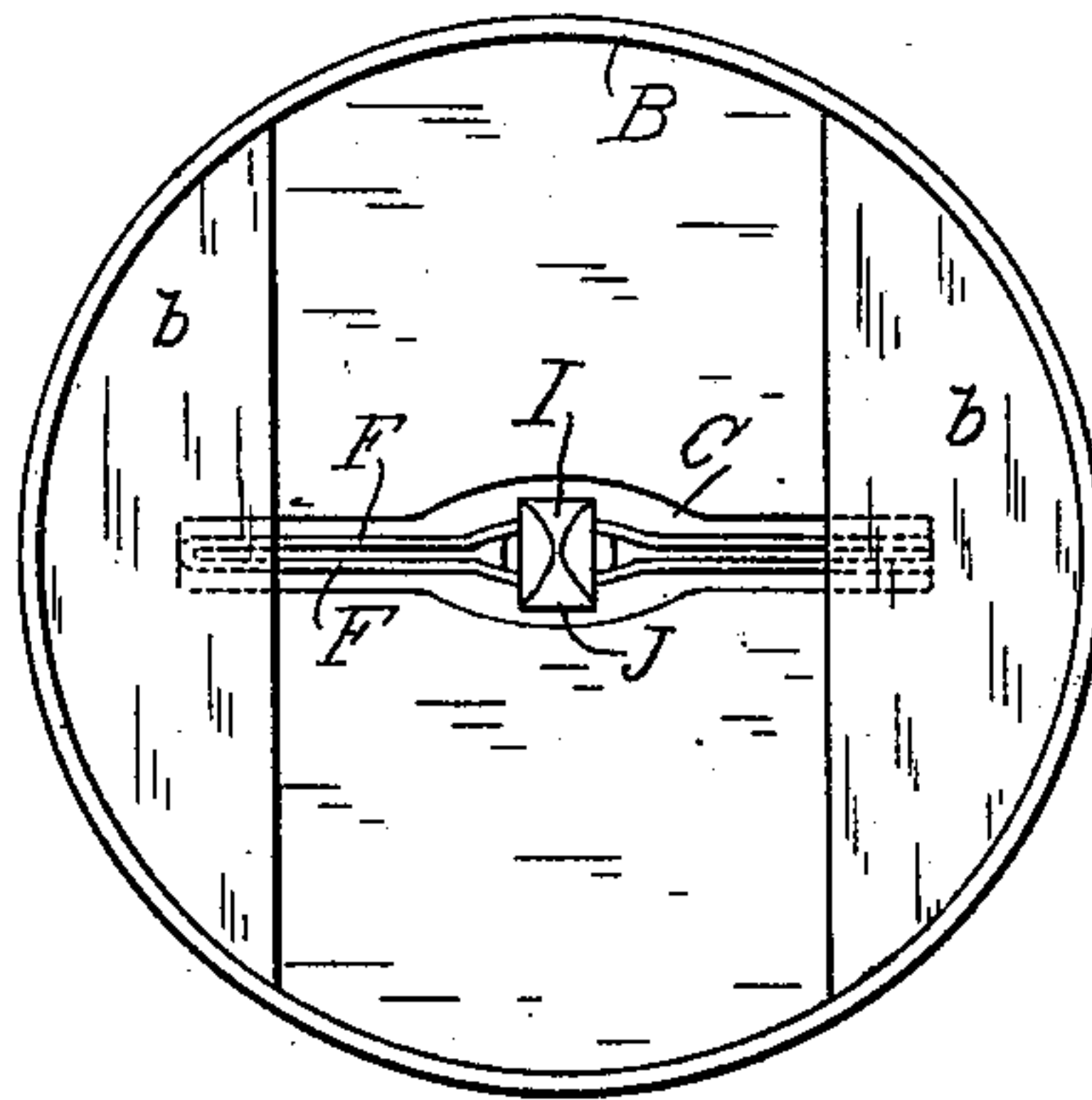


Fig. 4.



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM U. RAINE, OF MILWAUKEE, WISCONSIN.

DETACHABLE BUTTON.

SPECIFICATION forming part of Letters Patent No. 666,855, dated January 29, 1901.

Application filed July 16, 1900. Serial No. 23,760. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM U. RAINE, a citizen of the United States, residing at Milwaukee, county of Milwaukee, and State of Wisconsin, have invented new and useful Improvements in Detachable Buttons, of which the following is a specification.

My invention relates to improvements in detachable buttons.

The object of my invention is to provide more reliable holding devices than those heretofore used and to adapt such devices for use on cloth-covered buttons, regard being also had for neatness of appearance and simplicity of construction.

In the following description reference is had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a central sectional view of my improved button, drawn on a line crossing the spring-retaining channel. Fig. 2 is a similar view taken at right angles to that of Fig. 1. Fig. 3 is a view of the shank and base-plate. Fig. 4 is a top view with the cap removed.

Like parts are identified by the same reference-letters throughout the several views.

The head of the button is composed of the cap A and a holding-plate B, the latter being provided with a channel C and stem-tube D. The cap A is adapted to fit over the holding-plate B, as shown in Figs. 1 and 2, and where the cap is covered with cloth E the edges of the latter are inserted between the parts A and B, and thereby securely held in place. The edge of the cap A is turned in at *a* after the holding-plate B is adjusted in position, thus preventing the removal of the latter.

A flat spring is doubled upon itself to form the spring-arms F and arranged on edge in the channel C, as best shown in Figs. 1 and 4. This spring is preferably formed with a central bulge in its respective arms to facilitate the entrance of the shank. The edges *b* of the holding-plate B are preferably turned downwardly, Fig. 4, to cover the ends of the spring and hold the latter in the channel.

Referring to Fig. 3, it will be observed that the base G is formed with a shank H, having its sides tapered at *g* near its upper end and its end provided with a head I, having barbs J. The sides of the head I are also tapered,

as shown in Fig. 2, thus giving it a wedge shape, which facilitates its insertion between the arms F of the spring.

When it is desired to unite the parts of the button, the shank H is inserted through the stem or shank tube D, with the barbs in a plane parallel with the sides of the spring-arms F. Owing to the wedge-shaped contour of the shank-head I the spring-arms are easily separated to permit the passage of the shank, which is given a quarter-turn as soon as the barbs J have cleared the spring-arms. The latter are then permitted to spring inwardly against the tapered sides *g* of the shank, when a slight backward movement of the latter causes the barbs to engage over the sides of the spring-arms, as shown in Fig. 1.

When it is desired to release the button, the base and shank are pressed inwardly and turned a quarter-turn, thus separating the springs and bringing the barbs into a position for withdrawal. The base is preferably provided with a notch M, indicating the position for withdrawal.

I am aware that it is not new to provide buttons with holding-springs and headed shanks; but I believe I am the first to provide a shank with a barbed head in combination with holding-springs adapted to be engaged thereby.

What I claim as new, and desire to secure by Letters Patent, is—

1. A detachable button, comprising a holding-plate, provided with a channel therein and a central tubular aperture; a cap covering said holding-plate and channel; spring-arms located in said channel; and a base provided with a shank having backwardly-projecting barbs, adapted to enter said tubular aperture and permit the engagement of said barbs with said spring.

2. A detachable button comprising a holding-plate; a cap covering the same; a cloth covering for the cap-plate, having its edges engaged between the holding-plate and the cover-plate; a base provided with a shank adapted to enter the holding-plate, and having backwardly-projecting barbs; and flat spring-arms supported on edge by the holding-plate, and adapted to be engaged by the barbs of said shank.

3. A detachable button, comprising a hold-

ing-plate; a cap therefor; interposed spring-arms; and a base provided with a shank having backwardly-projecting barbs adapted to engage the arms, said shank being tapered
5 below the barbs, and said spring-arms being arranged to press elastically against the tapered sides of the shank.

4. A detachable button, comprising a channeled holding-plate; a cap therefor; spring-
10 arms supported on edge in the channel of the

holding-plate; and a base provided with a shank having backwardly-projecting barbs adapted to enter the channel between the spring-arms, and to engage the same.

In testimony whereof I affix my signature 15
in the presence of two witnesses.

WILLIAM U. RAINE.

Witnesses:

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