(No Model.)

P. W. TILLINGHAST.

BUTTON.

No. 359,648. Patented Mar. 22, 1887.

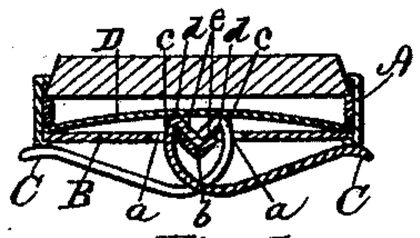

Fig. 1.

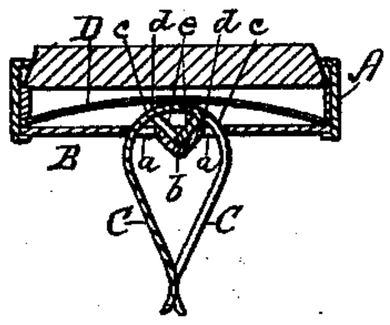

Fig. 2.

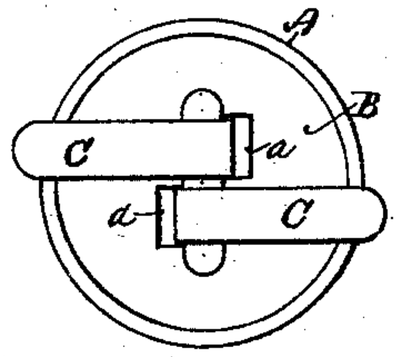

Fig. 3.

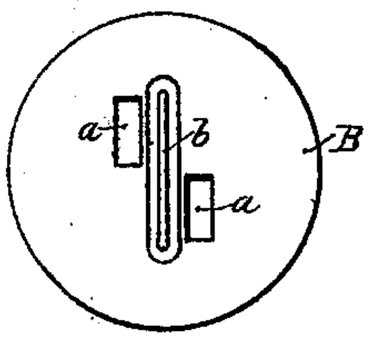

Fig. 4.

Witnesses.
Mark A. Heath
James W. Beaman

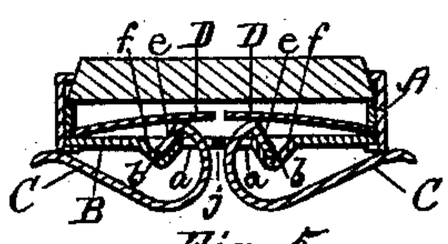

Fig. 5.

Inventor.
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UNITED STATES PATENT OFFICE.

PARDON W. TILLINGHAST, OF PROVIDENCE, RHODE ISLAND.

BUTTON.

SPECIFICATION forming part of Letters Patent No. 359,648, dated March 22, 1887.

Application filed August 21, 1886. Serial No. 211,570. (No model.)

To all whom it may concern:

Be it known that I, PARDON W. TILLINGHAST, a citizen of the United States, residing at Providence, in the State of Rhode Island, have invented a new and useful Improvement in Buttons, of which the following is a specification.

My invention consists in the improved construction of the lever-arms of the button, and in the combination of the same with the springs, and a back plate provided with one or more fulcrum-grooves to receive the fulcrum end of the lever-arms, as hereinafter fully set forth.

Figure 1 is a section of the button, taken in the line of the axis of one of the lever-arms, and showing the said lever-arms in their locking position. Fig. 2 is a similar section showing the lever-arms in their proper position for insertion into the button-hole. Fig. 3 is a plan view of the back of the button, showing the relative position of the lever-arms with each other. Fig. 4 is a plan view of the inner side of the back plate of the button separate from the head, showing the perforations and the continuous fulcrum-groove to receive the fulcrum ends of the lever-arms. Fig. 5 is a section showing a modification, in which the lever-arms are placed in line with each other, the back plate being provided with separate fulcrum-grooves for each of the lever-arms.

In the accompanying drawings, A is the head of the button; B, the back plate, which is provided with the perforations *a a*, adapted to receive the lever-arms C C, which serve to hold the button in the button-hole, and with the groove *b*, formed by indentation of the metal plate, the contracted bottom of which groove is adapted to form a turning fulcrum for the hook-formed end *c* of the lever-arms.

The lever-arms C C are preferably curved, as shown in the drawings, and provided at their hook ends *c* with the angle *d* and the straight portion *e*, and the fulcrum-bearing end of the lever-arm C is held at the bottom of the groove *b* by means of the flat spring D, which is firmly secured within the head of the button, a separate spring being provided for each of the lever-arms.

The outer surface of the lever-arm C may be made to strike the edge of the perforation *a* in the back plate, as shown in Fig. 2, to form a backward stop for the lever-arm when in its position for insertion into the button-hole, and the opposite stop for the lever-arms may be formed by the outer end of the lever-arm, which strikes against the back of the button-head, as shown in Fig. 1.

A modification of my invention is shown in Fig. 5, which shows a button in which the lever-arms are set in line with each other, instead of being out of line, as in the former figures, and in this case the fulcrum-grooves *b* are made separate for each of the lever-arms, and a bridge-piece, *j*, is preferably left in the back plate between the lever-arms, in order to form a guiding-stop for the same at their proper position for insertion into the button-hole; but such bridge-piece can be omitted, and in this case the contact of the straight portion *e* of the lever-arm with the side or corner *f* of the groove *b* will serve to form the desired stop.

I am aware that buttons of this class have been heretofore constructed in which the opposite lever-arms have been held in their engaging positions by means of the pressure of a flat spring upon a pivot of square form held in a groove in the back plate; but the revolving corners of such pivots soon wear off, and thus interfere with the proper action of the button. In my invention, however, instead of a revolving pivot of square cross-section, as heretofore, I employ a simple fulcrum-edge at the end of the lever-arm, thus avoiding the above-stated wear at the pivot-corners, which rapidly tends to loosen the lever-arm with the head of the button.

I claim as my invention—

In combination, the perforated back plate of the button provided with a fulcrum-groove for each of the oppositely-arranged lever-arms, the springs, and the oppositely-arranged lever-arms formed without lateral projections or pivots, and having their inner ends bent in hook form, and being each held to turn upon its end edge within the fulcrum-groove under the action of the spring, substantially as described.

PARDON W. TILLINGHAST.

Witnesses:
SOCRATES SCHOLFIELD,
JOSEPH J. SCHOLFIELD.