

(Model.)

W. P. DOLLOFF.  
Separable Button and Stud.

No. 230,115.

Patented July 20, 1880.

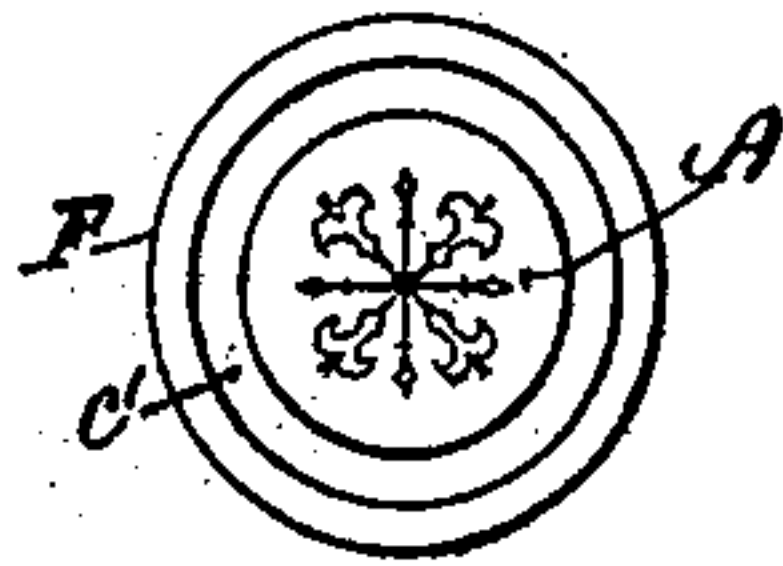


Fig. 1.

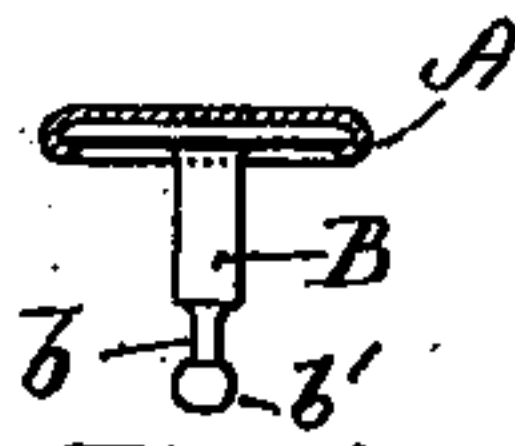


Fig. 4.



Fig. 5.

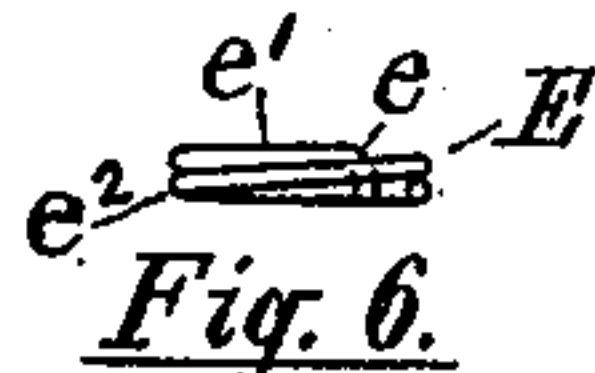


Fig. 6.

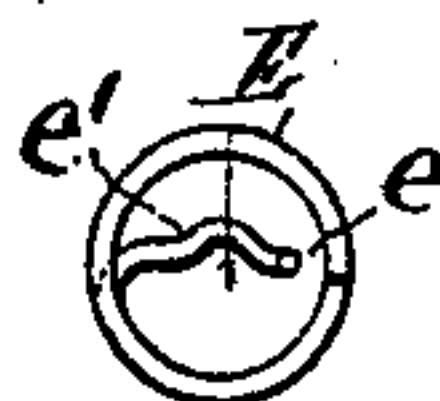


Fig. 7.

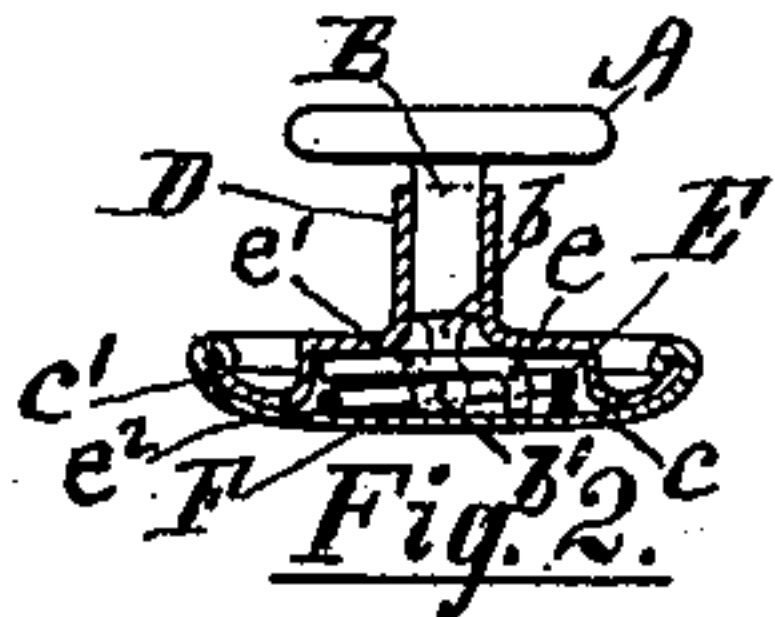


Fig. 8.

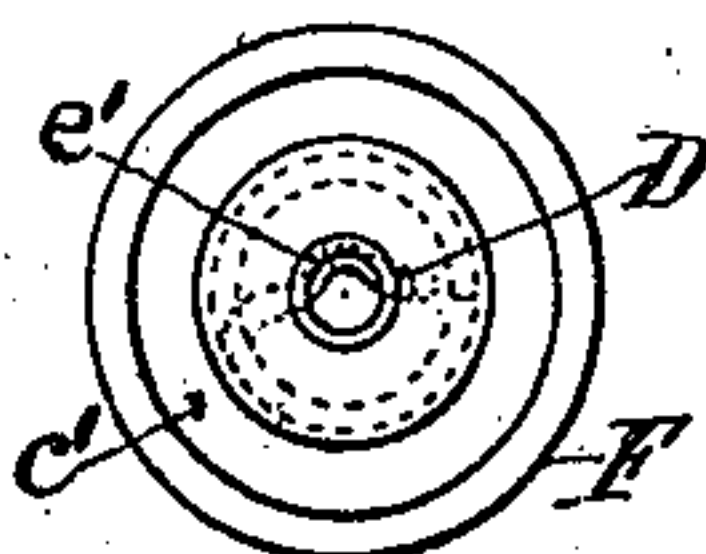


Fig. 3.

Witnesses.

W. W. Hubbard.  
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Inventor.

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# UNITED STATES PATENT OFFICE.

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## SEPARABLE BUTTON AND STUD.

SPECIFICATION forming part of Letters Patent No. 230,115, dated July 20, 1880.

Application filed May 27, 1880. (Model.)

*To all whom it may concern:*

Be it known that I, WELLINGTON P. DOLLOFF, of Providence, in the State of Rhode Island, have invented an Improvement in Separable Buttons and Studs, of which the following is a specification.

My invention relates to that class of separable buttons and studs where the two parts are held together by means of a spring friction-catch without pushers; and it consists in an improved construction and arrangement of the operating-spring.

Figure 1 is a plan view of the stud. Fig. 2 shows a side elevation of the front of the stud with an attached solid post, and also a vertical section of the shoe and hollow post with the spring for securing the two parts of the stud to each other. Fig. 3 is a plan view of the inner side of the shoe. Fig. 4 is a side elevation and partial section of the front portion of the stud and the solid post. Fig. 5 is an elevation of the cup-formed plate and hollow post, forming a portion of the shoe of the stud. Fig. 6 is an edge view of the spring which serves to connect the two parts of the button. Fig. 7 is a plan view of the under side of the spring.

In the accompanying drawings, A is the front plate or portion of the stud, to which is firmly secured the solid post B, provided with a transverse groove, *b*, near its lower end. The plate C is struck up so as to form an inclosed chamber, *c*, at the base of the hollow post D, to receive the coiled-wire spring E, having its end *e* turned downward, so as to rest against the back plate or cap, F, of the shoe. The edge of the cap F is turned over the edge of the rim *e'* of the plate C, thus forming a closed chamber, *c*, for holding the spring E. The arm *e'* of the spring, which serves to catch into the notch *b* of the post B, is curved, so as to properly fit against the side of the grooved post B. The curved portion of the spring-arm *e'* is to be arranged so as to spring slightly within the range of the bore of the hollow post D, as shown in Fig. 3, so that upon the insertion of the solid grooved post B within the post D the curved arm *e'* of the spring E will spring back into the notch *b* of the solid post, thus securing the two parts of the stud. The

arm *e'* of the spring is supported above the cap-plate F of the shoe by the lower coil, *e*<sup>2</sup>, and by the turned-down end *e*, in order that the head *b'* of the solid post may pass below the spring-arm *e'*, so that the spring-arm may pass into the groove *b*, the head *b'* serving to press the spring-arm *e'* to one side as the post is forced downward.

When the two parts of the stud are thus locked together they may be separated by pulling sharply upon the front portion of the stud in the direction of the post.

Buttons and studs have been made having a plate extending above the cap F of the shoe, so as to form a closed chamber of the full dimensions of the two plates, for the purpose of holding the locking-spring; but by stamping a recess in the plate C, just sufficiently large to inclose the spring, I am enabled to use thinner stock to form the upper plate of the shoe and support the hollow post, than where the chamber occupies all of the space included within the rim of the cap F.

I claim as my invention—

1. In a separable button or stud, the coiled spring E, making more than one complete turn, with an arm, *e'*, having its end *e* turned downward in order to support the arm *e'* at its proper elevation against the downward thrust of the end of the solid post B when placing the two parts of the button together.

2. In a separable button or stud, the combination of the plate C, provided with the stamped recess *c* for holding the coiled locking-spring E, with an encircling-rim, *c'*, for the attachment of the cap F, and the hollow post D, for receiving and supporting the solid post B, substantially as described.

3. In a separable button or stud, the combination of the hollow post D, having an enlarged chamber, C, at its base, and having a coiled spring, E, constructed as shown and described, adapted to said chamber, with the cap F, solid grooved post B, and plate A, all substantially as described.

WELLINGTON P. DOLLOFF,

Witnesses:

HARMON S. BABCOCK,  
JOSEPH J. SCHOLFIELD.