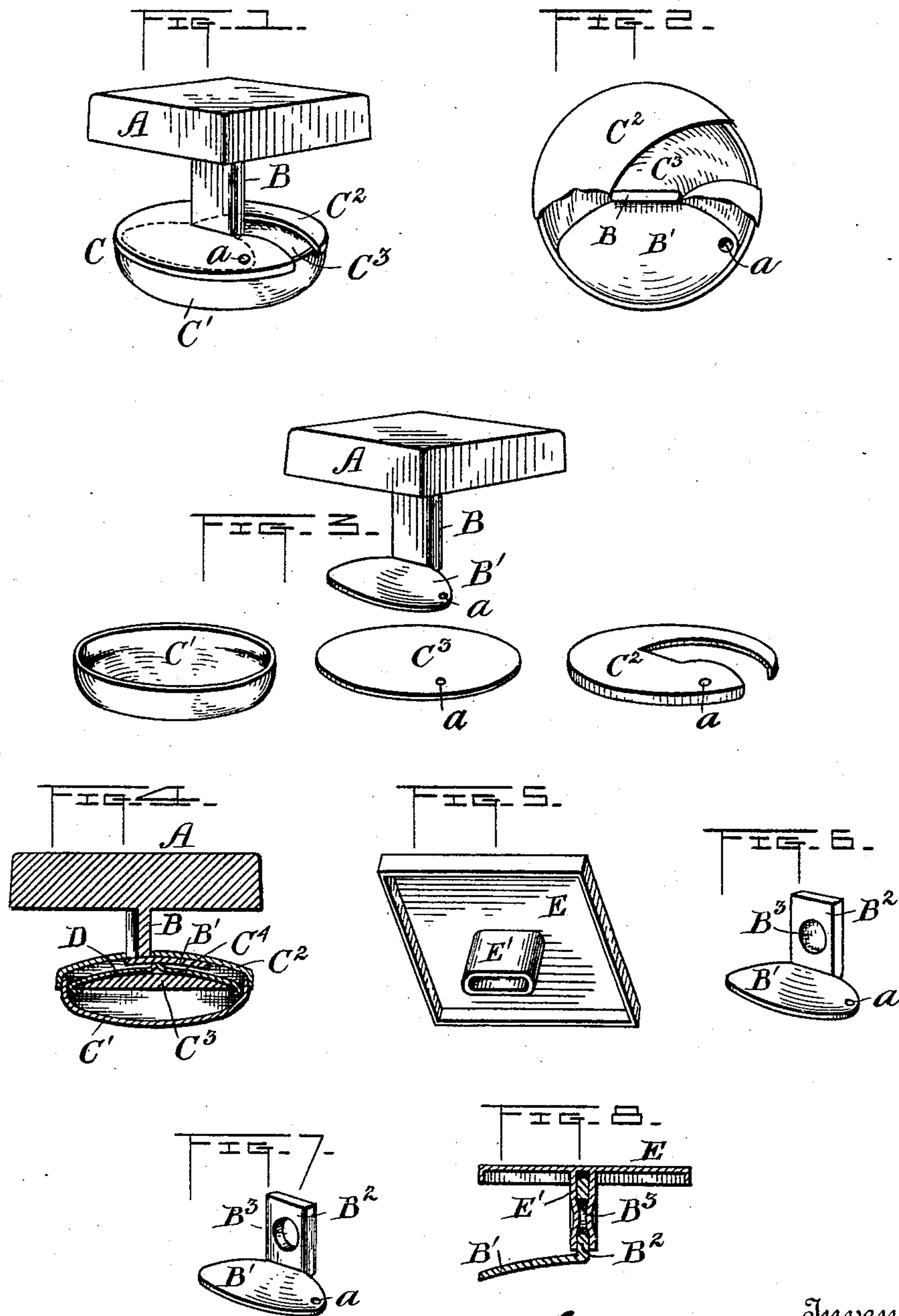


(No Model.)

F. E. WILLIAMS.  
BUTTON.

No. 453,974.

Patented June 9, 1891.



Witness  
J. H. Barnard.

Inventor  
Frank E. Williams  
by Charles S. Hoyer  
Attorney



# UNITED STATES PATENT OFFICE.

FRANK E. WILLIAMS, OF NEW YORK, ASSIGNOR OF ONE-HALF TO JAMES E. HILLS, OF BROOKLYN, NEW YORK.

## BUTTON.

SPECIFICATION forming part of Letters Patent No. 453,974, dated June 9, 1891.

Application filed February 28, 1891. Serial No. 383,285. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK E. WILLIAMS, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Buttons or Studs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to buttons or studs; and it consists of improvements on the device set forth in application for Letters Patent filed by me January 17, 1891, bearing Serial No. 378,140, and allowed February 25, 1891, as will be more fully hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 represents a perspective view, on an enlarged scale, of a button or stud embodying my invention and showing parts of the shoe in dotted lines. Fig. 2 represents a top plan view, on an enlarged scale, of the shoe, shown broken away. Fig. 3 shows a detail perspective view of the button or stud, head, shank, and foot with the parts of the shoe disconnected. Fig. 4 shows a sectional view of a modified form. Fig. 5 represents a detail perspective view of the lining-plate of a button or stud having a hollow portion in connection therewith to form a part of the shank. Fig. 6 represents a similar view of the foot and a part of the shank. Fig. 7 represents a similar view of a slight modification. Fig. 8 represents a vertical section of the two parts shown by Figs. 6, 7, and 8 as joined and the manner of connecting the same.

Referring to the drawings, A designates a head of any suitable shape and design, having a shank B provided with a foot B' wider than said shank. In this instance, however, the shank is not cut away to provide a close fitting with the edge of the shoe, nor are shoulders used, other means, hereinafter set forth, being provided to accomplish the same results.

The shoe C comprises a back-plate C', a slotted cap-plate C<sup>2</sup>, and a plate C<sup>3</sup>, inclosed and held in position by said plates C' and C<sup>2</sup>. In Fig. 4 said plate C<sup>3</sup> is shown formed with

a groove C<sup>4</sup> to receive a spring D of suitable construction, having a struck-up portion at or near the center thereof to engage with the front and back edges of the foot B' to lock said foot against accidental movement when the shoe is operated to be inserted in a button or stud hole, or after it has been therein inserted. The foot B' in this instance is fulcrumed or hinged adjacent to the periphery of the shoe, as at *a*, and is of such extent and shape as to readily and practically adapt itself to the bearing-face in the shoe on which it moves, the latter being shown either with a convex or a straight or plane surface.

It will be understood that in connecting the shoe with the foot B' the said foot is mounted in position in the plate C<sup>3</sup>, and the cap-plate C<sup>2</sup> fitted in place, whereby said parts are movably held together. As shown more distinctly in Figs. 5 and 8, the lining-plate E of the head of the button or stud is provided with a socket E', which constitutes part of the shank, and, as seen in Figs. 6, 7, and 8, the foot is bent up at one end, as at B<sup>2</sup>, to form the remaining part of the shank which is fitted in said socket E'. The said bent portion B<sup>2</sup> of the foot is cut away to form a depression or an opening B<sup>3</sup> therein, and when said portion B<sup>2</sup> is fitted into socket E' the latter is compressed into said depression or opening B<sup>3</sup> to thereby securely connect said parts. The said socket E' and bent portion B<sup>2</sup> may be of any form in cross-section. It will be understood, however, that the tubular or socket portion of the shank might be formed with the foot, and the lining-plate E provided with the solid part of said shank, said arrangement being the reverse of that before set forth. When the said parts are thus united, the lower end of the socket lies adjacent to or upon the cap-plate C<sup>2</sup> and forms a shoulder to fit over the edge of the shoe when the latter is turned to one side.

It will be understood that the shoe is slid to one side of the post or shank when inserted in the button or stud hole, and after insertion is moved back to a central position to prevent withdrawal.

Having thus described my invention, what I claim as new is—

1. A button or stud having a shank with a

foot at an angle thereto, and a shoe to which said foot is connected by a single pivot located at one side thereof, near the periphery of the shoe, to permit a swinging movement of said shoe, substantially as described.

2. A button or stud having a shank with a foot at an angle thereto, a shoe having a plate therein on which said foot is pivoted at one side, near the periphery of the shoe, to have a swinging movement, and a slotted cap-plate, substantially as described.

3. A button or stud having a shank with a foot at an angle thereto, and a shoe to which said foot is connected by a pivot and having a slotted cap-plate and another plate bearing against the foot to sustain the shoe in its adjusted positions, substantially as described.

4. A button or stud with an angular foot pivoted to a shoe and having a part of the post or shank depending therefrom, and the shoe having another part of the post or shank extending upward therefrom, one of said parts of the post or shank being solid and cut away and the other part tubular and fitted over and compressed into the cut-away portion of said solid part, substantially as described.

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

FRANK E. WILLIAMS.

Witnesses:

CHARLES S. HYER,  
F. W. BARNACLO.