F. E. WILLIAMS.
Button.

No. 212,418. Patented Feb. 18, 1879.

Fig. 1.

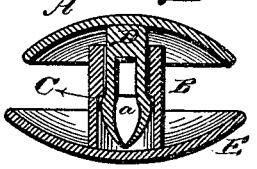

Fig. 2.

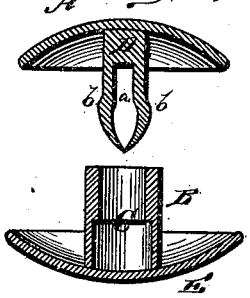

Fig. 3.

Fig. 4.

Fig. 5.

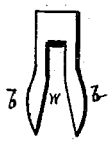

Fig. 6.

Fig. 7.

WITNESSES
E. H. Bates
Eugene Adamson

INVENTOR
Frank E. Williams.

UNITED STATES PATENT OFFICE.

FRANK E. WILLIAMS, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF HIS RIGHT TO HORTON, ANGELL & CO., OF ATTLEBOROUGH, MASS.

IMPROVEMENT IN BUTTONS.

Specification forming part of Letters Patent No. **212,418**, dated February 18, 1879; application filed June 3, 1878.

To all whom it may concern:

Be it known that I, FRANK E. WILLIAMS, of New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Fastenings for Buttons, Studs, &c.; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and the letters of reference marked thereon, which form a part of this specification.

My invention relates to that class of sleeve-buttons, studs, and similar articles which are made principally of two parts, and connected together by spring-fastenings; and it consists in the construction and arrangement of the spring-fastening for holding the two parts of the button together, and also in the combination of parts, as will be hereinafter more fully set forth.

In the annexed drawings, Figure 1 represents, in section, a button embodying my invention, and showing the parts connected together. Fig. 2 shows, in section, the button with the two parts disconnected; and Figs. 3 to 7 are detailed views of parts, showing construction thereof.

A represents the top part of a button, made in any desired form and size, to the under or inner side of which is soldered or otherwise permanently fastened the spring-post D, the construction of which is as follows: The post is first made in substantially the shape as shown in Fig. 3, of brass, German silver, or other suitable spring-metal. The slot *a*, of the required width and depth, is then cut lengthwise into the post, as shown in Fig. 4. The ends of the prongs *b b* of the post D are then forced apart as far as required by the introduction of a wedge at *w*, as shown in Fig. 5, which is there held, while the points of *b b* are bent together until they touch. The wedge is then removed, and the spring-post is then in the shape as shown in Fig. 6.

The object in pressing the points together is to admit of the easy introduction of the spring-post D into the hollow post B without catching upon the rim of same, as would often happen if the said points were left apart, as in Fig. 4, and which is a decided objection in other buttons of a somewhat similar construction.

As fastening the spring-post D to the button-top A by means of hard solder would tend to injure the spring action thereof by the great heat necessary, a short slot can be made in the upper end of the spring-post D, and the resulting short prongs *d d* bent down at right or other suitable angles, as shown in Fig. 7, thus giving sufficient surface to this end of the post, so that it may be securely fastened by soft solder.

Before the hollow post B is soldered to the shoe or inner button, E, its inside surface is drilled out uniformly from the bottom to a sufficient distance, thus making the inside bottom part of the hollow post of larger diameter than the upper portion, thus forming a circumferential shoulder or catch at C; and when the spring-post D (which at its bulging part is of somewhat greater diameter than the inside of hollow post B, above the shoulder C) is pressed into said hollow post, the bulging part thereof engages with the shoulder C by a snapping action, and the two parts of the button are thereby connected. By drilling out the lower inner surface of the hollow post B, the shoulder or catch C is obtained without changing any part of the outer diameter of said hollow post B, and allows said shoulder or catch C to be made far enough up in the hollow post B so that the bulging part of the spring-post D (which engages with the shoulder C) can extend far enough from the tapering point to admit of a good spring action.

I am aware that buttons have been made in two parts, one of which parts is provided with a bifurcated shank having spring action, and the other part provided with a shouldered tube; but I am not aware that a bifurcated post has been made before in which the two points are normally in contact.

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

The button herein described, formed of two

parts, consisting of the back E, provided with hollow post B, having shoulder C, and the front A, provided with bifurcated post D, having its points normally in contact and bent outwardly, as shown, to form the shoulders *b b* and increase the tension of the spring, substantially as specified.

In testimony that I claim the foregoing as my own I herewith affix my signature in presence of witnesses.

FRANK E. WILLIAMS.

Witnesses:

WHITFIELD TERRIBERRY,

C. P. SCHLICHER.