G. PITTS.

Stud and Button.

No. 198,149. Patented Dec. 11, 1877.

Fig. 1

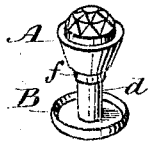

Fig. 2.

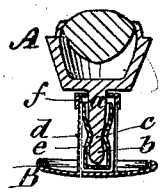

Fig. 3.

Witnesses:
Philip F. Larner
A. B. Cauldwell

Inventor:
George Pitts,
By Wm. C. Hood
Attorney.

UNITED STATES PATENT OFFICE.

GEORGE PITTS, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR OF TWO-THIRDS HIS RIGHT TO JOHN L. MASON AND GEORGE L. MASON, OF SAME PLACE.

IMPROVEMENT IN STUDS AND BUTTONS.

Specification forming part of Letters Patent No. **198,149**, dated December 11, 1877; application filed October 13, 1877.

To all whom it may concern:

Be it known that I, GEORGE PITTS, of the city and county of Providence, in the State of Rhode Island, have invented certain new and useful Improvements in Studs and Buttons; and I do hereby declare that the following specification, taken in connection with the drawings furnished and forming a part of the same, is a true, clear, and complete description of my invention.

My invention relates to that general class of studs or buttons which have a separable back and front, and to that particular class in which these parts are held together by the aid of a spring.

Split posts, in various forms, and radially-cut disks, have been heretofore employed in combination with one portion of the button, and arranged to engage with an entering member attached to the other part of the button, so that a slight pressure of the two parts will unite the back and front, and a corresponding opposite strain separate them.

The object of my invention is to produce economically a button or stud of this class, which, while the parts are reasonably secure against loss by accidental separation, are readily coupled and uncoupled, and are much more durable than when the split disks or split posts are employed; and my invention consists in the combination, with a back and a front, of a solid stem, provided with a head and neck, a tubular post, and a tubular spring, centrally reduced in diameter, longitudinally secured within the post, and arranged to receive and engage with the head and neck of the solid stem.

With this construction I am also enabled to have, as is desired for some styles of studs and buttons, a much thinner and lighter back and front than is possible with the disk-spring, and a much more reliable fastening than is attainable with the split post.

To more particularly describe my invention, I will refer to the accompanying drawings, in which—

Figure 1 represents, in perspective, a collar-button embodying my invention. Fig. 2 represents the same in central longitudinal section. Fig. 3 represents, in perspective, the tubular spring detached.

A and B denote, respectively, the front and the back of the button. Their form and style will be varied according to whether a bosom-stud, cuff-button, or collar-button is required. In this instance, the front A is provided with the solid stem *a*, having a head, as at *b*, and a neck, as at *c*. The back B in this instance is provided with a tubular post, *d*.

While I prefer that the stem and post be attached, respectively, to the front and back, it is obvious that the post may be applied to the front and the stem to the back without materially affecting their co-operative relations.

Within the tubular post is a tubular spring, *e*, which may or may not be attached at its foot to the post, leaving its upper end free.

The tubular spring may be varied in construction; but it is essential that it have a capacity to receive the stem *a* by expansion until the head is fully entered, and then to close in and around the neck of the stem.

In this instance the spring has four upright arms, equidistant from each other, and inclosing the space for the reception of the stem. Each arm midway is bent inward, so that the spring is centrally reduced in diameter, and, as a whole, somewhat resembles an hour-glass in form.

It is desirable that the spring should bear on all sides of the stem; but this can be effected by three upright arms, or even two, if they be of such a form as will enable them to receive and embrace the stem.

The upper end of the spring is free, so as to permit the prolongation incident to the lateral displacement when the stem is entered and withdrawn.

I prefer that the spring be not attached at its foot to the post, but that it be longitudinally confined therein by means of a collar on the end of the post, as at *f*, having an inwardly-projecting flange, with the under side of which the free end of the spring engages when the stem is withdrawn. The end of the post itself may, however, be turned inward, to form the spring-retaining flange, which will render the separate collar unnecessary.

A tubular spring of this general character is long-lived, simple in its construction, and effective and reliable in its operation.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The combination, with the back and the front of a button or stud, of a solid stem, provided with a head and neck, a tubular post, and a tubular spring, which is centrally reduced in diameter, longitudinally secured within the post, and fitted to receive and engage with the head and neck of the stem, substantially as described.

GEORGE PITTS.

Witnesses:
EDWIN S. CASE,
HENRY W. LITTLE.

1000 words.