

C. G. BLOOMER.  
Buttons and Studs.

No. 215,868.

Patented May 27, 1879.

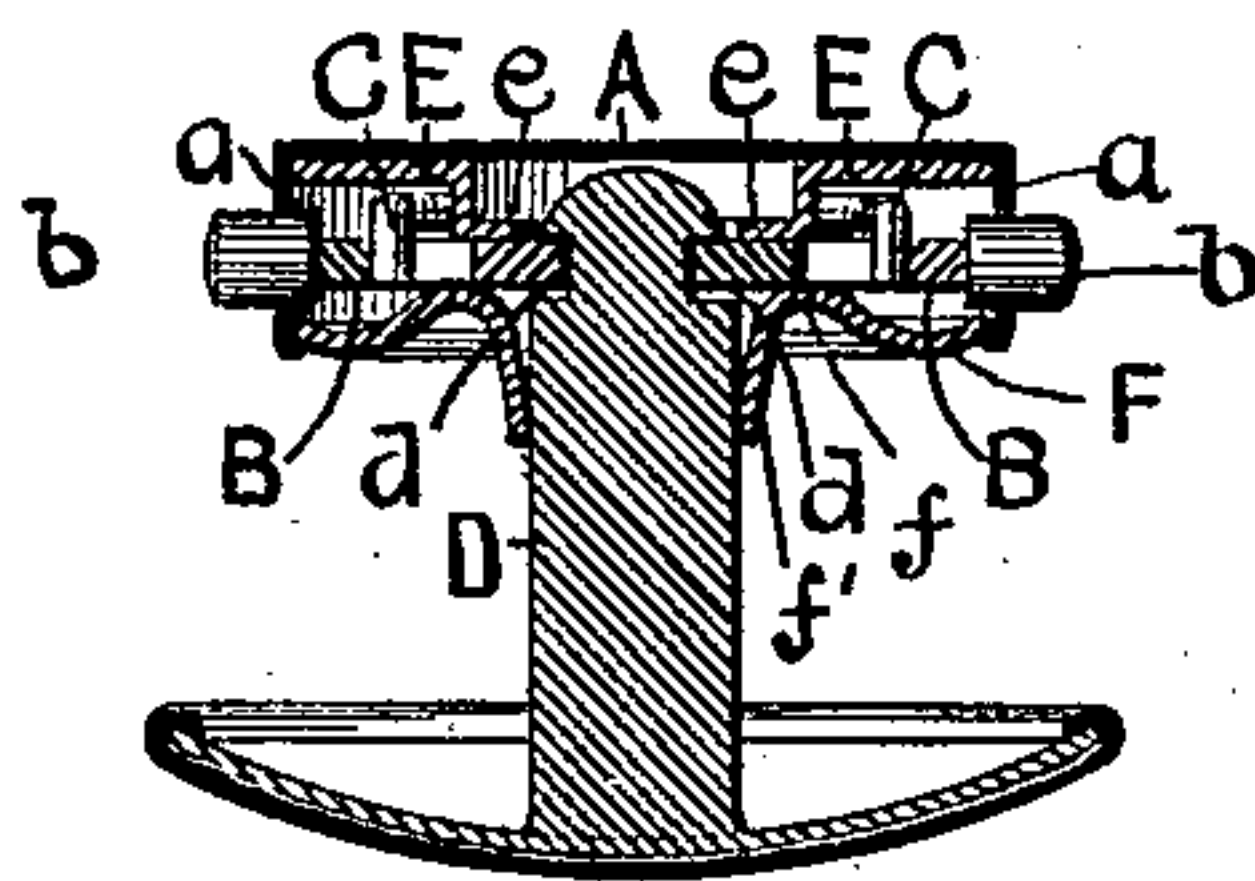


FIG. 1.

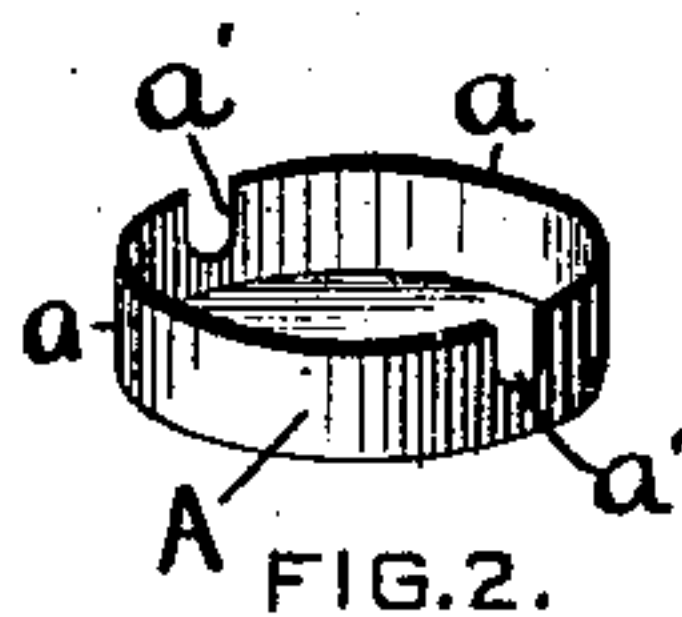


FIG. 2.

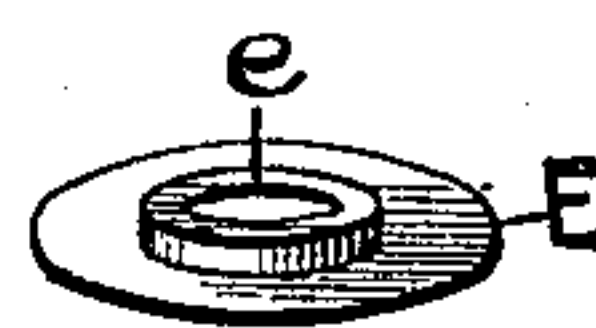


FIG. 3.

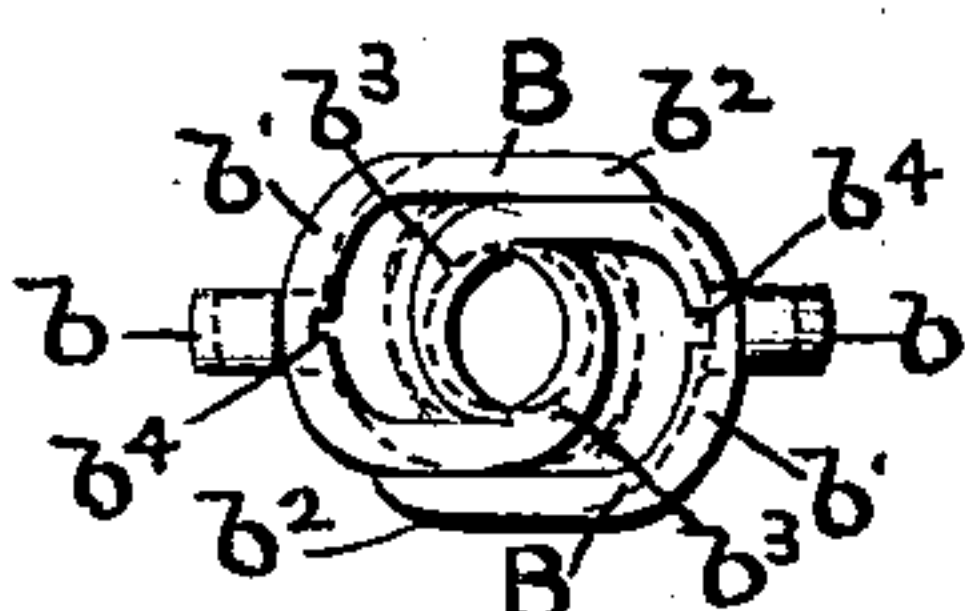


FIG. 4.



FIG. 5.



FIG. 6.

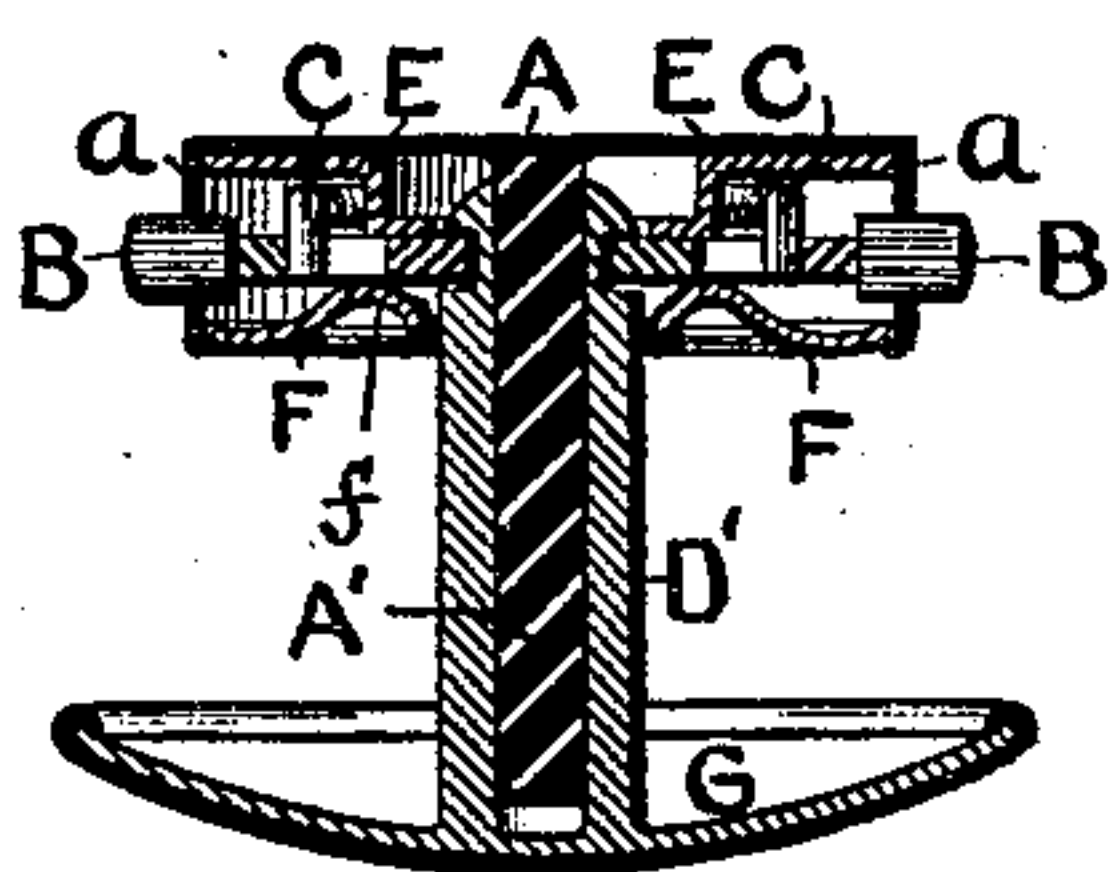


FIG. 7.

WITNESSES.

*Otis A. Hunt*

*W. H. Thurston.*

INVENTOR.

*C. G. Bloomer*

# UNITED STATES PATENT OFFICE.

CHARLES G. BLOOMER, OF PAWTUXET, RHODE ISLAND.

## IMPROVEMENT IN BUTTONS AND STUDS.

Specification forming part of Letters Patent No. **215,868**, dated May 27, 1879; application filed March 31, 1879.

*To all whom it may concern:*

Be it known that I, CHARLES G. BLOOMER, of Pawtuxet, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Buttons and Studs; and I do hereby declare that the following specification, taken in connection with the accompanying drawings, forming a part of the same, is a full, clear, and exact description thereof.

The invention hereinafter described relates to that class of buttons and studs which are made in two separable parts for the convenience of application and removal, and to that variety in which locking devices are employed, whose inner ends engage the post to prevent the separation of the parts, and whose outer ends project radially beyond the head of the button, so as to be operated by the fingers when the parts are to be combined or separated.

My improvement consists in the employment of sliding fastening devices, constructed so as to laterally support and guide each other, in combination with the other members of the structure, as hereinafter described.

Referring to the drawings, Figure 1 represents a collar-button of my improved construction in vertical section. Fig. 2 shows, in perspective, the shell forming a portion of the head of said button. Fig. 3 represents, in perspective, the disk for supporting the fastening devices. Fig. 4 shows the fastening devices. Fig. 5 represents, in perspective, the spring controlling said devices. Fig. 6 shows the cap-disk which confines the fastening devices in place, and acts as a support to the post of the button; and Fig. 7 represents, in vertical section, my improved button, in which a tubular post and solid stem are employed.

My improvement is applicable to collar-buttons, sleeve-buttons, and studs; but for the purpose of illustrating my invention I have chosen a button of the first variety.

A represents the shell which forms the front of the button-head. This shell is made of sheet metal, and formed into the shape shown in Fig. 2 by dies. The rim *a* is of sufficient width to accommodate the working parts of the button, hereinafter described, and is slotted on opposite sides, as at *a'*, the slots acting as

guides for the outer ends, *b*, of the fastening devices B. These devices are formed of sheet metal and are counterparts, as shown in Fig. 4. Each has a semicircular portion, *b<sup>1</sup>*, from which arms *b<sup>2</sup>* *b<sup>3</sup>* extend, the former arm being straight, and the latter terminating in a hook portion.

When placed in proper relation to each other the devices B furnish a lateral support, each for the other, and act as mutual guides. The semicircular portion *b<sup>1</sup>* of each is slotted, as at *b<sup>4</sup>*, for the purpose of receiving the ends of a spring, C, which acts to move the devices B longitudinally, and keep them in engagement with a peripheral groove, *d*, in the post D, as shown in Fig. 1.

For supporting and retaining the fastening devices in their proper position in the head of the button the disks E and F are employed. The former disk is located in the button-head in contact with the shell A, and has a raised central portion, *e*, upon which the devices B take bearing. The portion *e* is of less diameter than the shell A, for the purpose of accommodating the spring C, which, when the parts are in position, partially encircles the said portion, as shown in Fig. 1. The portion *e* is also centrally perforated to admit the end of the post D when the same is locked to the button-head.

As above stated, the disk F acts in conjunction with the disk E to retain the devices B in position, and for this purpose it is provided with a countersunk ring, *f*, which engages said devices when the disk is in its place. The disk F is secured to the shell A by burnishing the shell-rim *a* over upon the disk, as shown in Fig. 1, and for the purpose of properly supporting the head upon the post the said disk is provided with an extended tubular portion, *f'*, which engages the periphery of the post when the latter is inserted in the head.

Although, as shown in Fig. 1, a solid post is employed, and the head is supported in position by the tubular extension *f'* on the disk F, yet this construction may be varied, as shown in Fig. 7, where a tubular post, D', is combined with the shoe G, and a stem, A', soldered to the shell A, is employed to support the head in a plane at right angles to the axis of the post, the portion *f'* of the disk F being removed.



In either case the hook portions  $b^3$  of the fastening devices B will engage the groove  $d$  in the post by the force of the spring C, and the parts will be held against separation until the ends  $b$  are pressed by the fingers. When this is done the devices B are moved longitudinally, as shown by dotted lines in Fig. 4, sliding upon and mutually guiding each other into a position which will allow the post D to be withdrawn.

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

1. The combination, in a separable button or stud, of a notched or grooved post, D, the sliding plates or locking devices B B, laterally supported and guided by each other, and the actuating-spring C, substantially as described.

2. The combination of the shell A, the disk E, inclosed therein, furnished with a centrally-elevated portion,  $e'$ , perforated to receive the

end of the post D or D', the spring C, the cap or disk F, and the sliding fastening devices B B, laterally supported and guided by each other and operated by suitable pushers  $b$   $b$ , substantially as described.

3. The combination, in a separable button or stud, of the shoe G, supplied with a post having an annular groove thereon, a compound button-head, constructed as described, and spring holding-plates B B, laterally supported and guided by each other, contained within the head, and arranged to engage with the groove in the post and hold the two parts of the button or stud together, substantially as described.

CHAS. G. BLOOMER.

Witnesses:

OTIS A. HAWKINS,  
W. H. THURSTON.