(No Model.)

G. E. ADAMS.

BUTTON OR STUD.

No. 300,551. Patented June 17, 1884.

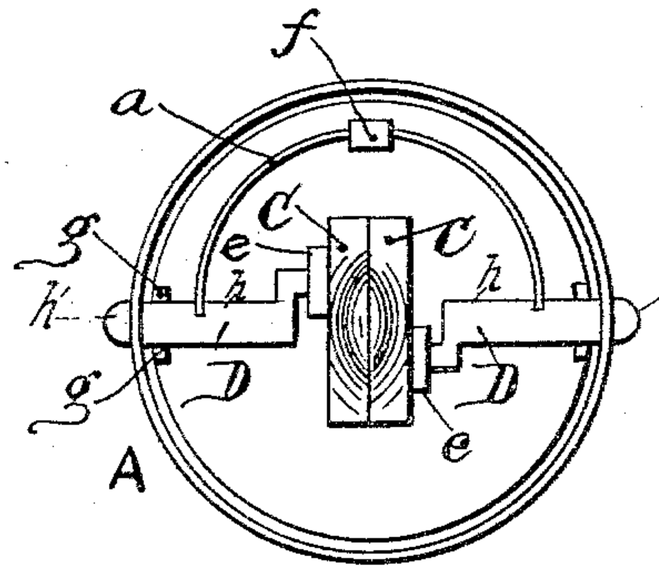


FIG. 2.

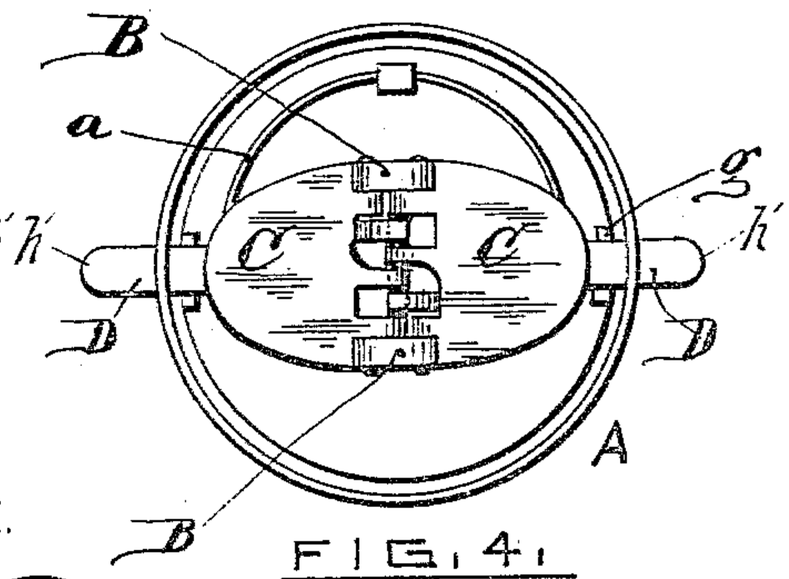


FIG. 4.

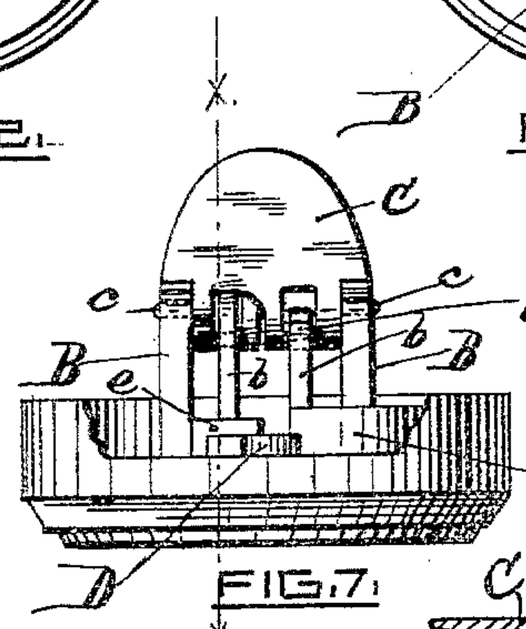


FIG. 7.

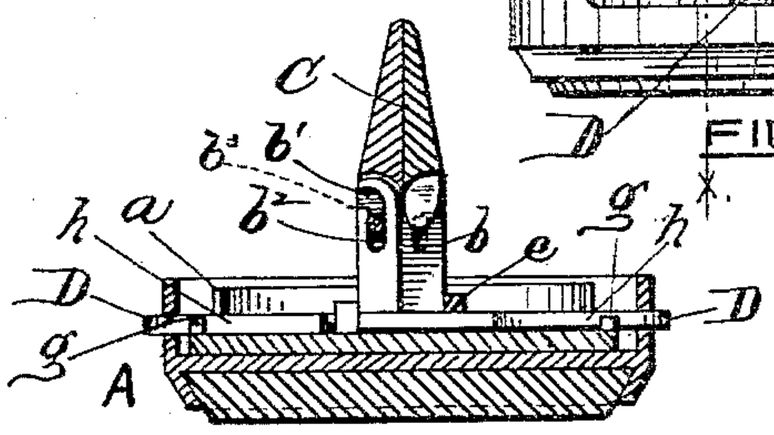


FIG. 1.

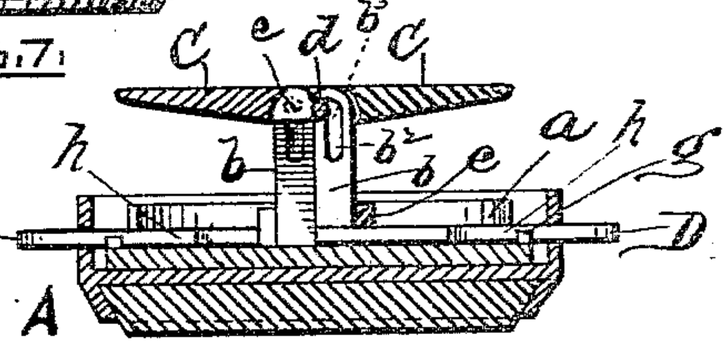


FIG. 3.

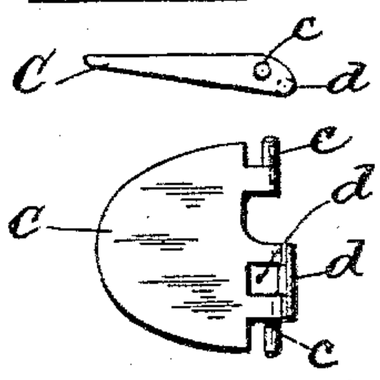
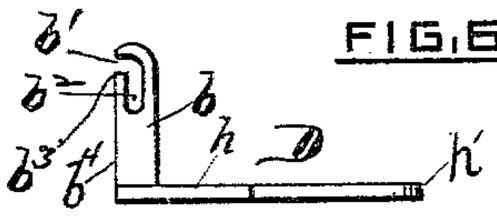


FIG. 5.

FIG. 6.



WITNESSES.

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Charles B. Mason

INVENTOR.

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UNITED STATES PATENT OFFICE.

GEORGE E. ADAMS, OF PROVIDENCE, RHODE ISLAND.

BUTTON OR STUD.

SPECIFICATION forming part of Letters Patent No. 300,551, dated June 17, 1884.

Application filed February 11, 1884. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. ADAMS, of the city and county of Providence, in the State of Rhode Island, have invented a new and useful Improvement in Buttons and Studs, of which the following is a specification, reference being had to the accompanying drawings.

Figure 1 is a transverse section of the button, showing the arms or lobes of the shoe closed. Fig. 2 is an inverted plan view showing arms closed. Fig. 3 is a transverse section showing arms open. Fig. 4 is an inverted plan view showing arms open. Fig. 5 is a detailed view showing side and plan views of the arm. Fig. 6 is a detailed view showing plan and side view of pusher. Fig. 7 is a side elevation showing post and closed arms.

My invention relates to hinged buttons, so constructed that the lateral extensions of the shoe may be easily formed into an extension or continuation of the post, whereby its insertion into or through an aperture is facilitated, and wherein it may be secured by the replacement of the extensions in their normal position at right angles with the post by the pressure of a spring or other self-acting device.

In the accompanying drawings, A is the head of the button; B B, arms or projections constituting the post; C C, arms or lobes constituting the shoe; D D, the pushers; *a*, the spring; *b b*, the vertical or upright portions of the pushers; *b'*, the upper portion of the slot in the vertical part of the pusher; b^2, the lower part of the slot; b^3, the arm or standard in the upright part of the pusher, which aids in locking or securing the arms when open; *c c*, pivots of the arms of the shoe; *d*, the bearing or pivot which operates within the slot of the pusher; *d'*, the perforation or aperture of the arm inclosed by the pivot *d e*, and *g* lugs or guides for the pushers; *f*, a loop or band for securing the spring; *h*, the main or horizontal part of the pusher; *h'*, the outer or free end of the pusher.

The post B B, Fig. 7, may be made integral or in two or more parts. It may be fastened to the interior of the front of the button by soldering or otherwise. If desired, it may be secured to a plate attached to the interior of the front of the button. It is preferably at right angles with the plane of such plate or interior surface. Perforations or indentations are made through or in the upper or free ends of the post, at or near the points marked by the letters *c c*, Fig. 7, designed to receive and secure the pivots *c c*.

The arms C C, made of any suitable material, are of any desired shape, preferably somewhat flattened, with oval or rounded edges. They may be struck from a single piece of material. The axis of the pivots *c c* is eccentric to the axis of the pivot *d*. The latter may be upon the same plane with the former, or upon a different plane, as desired. Instead of securing the arms by integral pivots, they may be secured by means of rivets or pins inserted into or through indentations or perforations of the arms and post. The pushers, made of any suitable material, may be struck from a single piece, if desired. The parts *h* are preferably made of such a length that the outer or free ends thereof will project through or beyond the sides of the button, and extend therefrom as far as desired. They are made of any desired shape, preferably flat, with shouldered or curved edges, in order that the ends thereof will project from the edge of the button at diametrically-opposite points. The upright part *b* is furnished with a slot, *b' b²*, Figs. 1 and 6, at or near the upper or free end thereof, designed to receive the pivot *d*, Fig. 5, and when secured to the button it is of a proper length to engage with the pivot *d*. In the formation of the slot, an arm or standard, which may be formed in cutting the slot, is produced within or upon the arm *b*, designed to immovably secure the arm when open, as hereinafter described. If the extension of the pushers beyond the edge of the button is prevented by such edge, depressions or perforations may be made therein, designed to receive and allow of the passage of the pushers.

The pushers may be secured to the button as follows: The flat surface of the part *h* is placed upon the under surface of the front of the button, or of the plate thereon, in such manner that the ends *h' h'* will project from the depressions or perforations in the edge of the button, and the arms *b* will extend between and parallel with the standards B B of the post. They are held in position and guided by the depressions or perforations aforesaid, and by the lugs or guides *e* and *g*, or by bands or bridges, all of which may be integral with

the inner surface of the front of the button or the plate thereon.

The spring *a* may be composed of steel or other suitable material, and may be flat, round, or of any desired shape. It is preferably bent in a circular shape. It may be secured to the inner surface of the front of the button, or to the plate thereon, by a loop or band attached to such front or plate, or integral therewith, passing over or upon the spring at or near the center thereof. The ends of the spring may be secured to the parts *h* of the pushers by means of slots therein, by means of soldering, or otherwise. If found desirable, more than one spring may be used in place of the one mentioned.

When the parts of the button are placed and secured as described, the constant outward lateral pressure of the spring upon the pushers causes the latter to project as far as possible or desirable beyond the edge of the button, whereby the arms or lobes C C are caused to extend horizontally or at nearly right angles with the post, and the end of the arm or standard b^3 is brought in contact with the pivot *d*, Fig. 3, directly underneath the same, by means whereof the arms C C are securely locked and immovably held open or at right angles with the post. Each pusher operates the arm opposite it, or farthest removed from it. The arms are closed and formed into a practical extension of or addition to the post, and thus prepared for insertion into an aperture by pressing the outer ends, *h' h'*, of the pushers D D between the thumb and finger, whereby the pivot *d* is forced from its position in the upper part, *b'*, of the slot in the arm *b* to the lower part, b^2, of said slot, thereby raising the arms to a perpendicular position and extending them parallel with the post, as shown in Fig. 1. The shoe is secured within an aperture by removing the lateral pressure aforesaid from the pushers, whereupon, by the outward lateral pressure of the spring exerted upon the pushers, the latter assume their former position. The pivot *d* is forced back upon its bearing or support b^3, whereby the arms C C are opened and immovably secured at right angles with the post, as shown in Fig. 3.

The parts of this button are few, cheaply manufactured, and easy of construction and adjustment. It is so simply and easily operated that a mere child can understand and use it. It overcomes many of the difficulties experienced in the use of all other buttons, both separable and non-separable.

I claim as a novel and useful invention and desire to secure by Letters Patent—

1. In a button or stud having the posts or standards B B, the combination, with the shoe-lobes C C, pivoted in said standards and provided with bearings *d* and apertures *d'*, of the pushers D D, having vertical arms *b b*, provided with slots b^2 and locking-lugs b^3, substantially as described.

2. In a button or stud, the combination of the head A, having guides *e g*, the standards B B, the shoe-lobes C C, pivoted in the standards and provided with bearings *d* and apertures *d'*, the pushers D D, having vertical arms *b*, provided with slots b^2 and locking-lugs b^3, and the spring *a*, engaging said pushers, substantially as described.

GEO. E. ADAMS.

Witnesses:
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