

No. 708,181.

Patented Sept. 2, 1902.

J. L. VREDENBURGH.  
SEPARABLE BUTTON OR STUD.

(Application filed June 11, 1902.)

(No Model.)

Fig. 1.

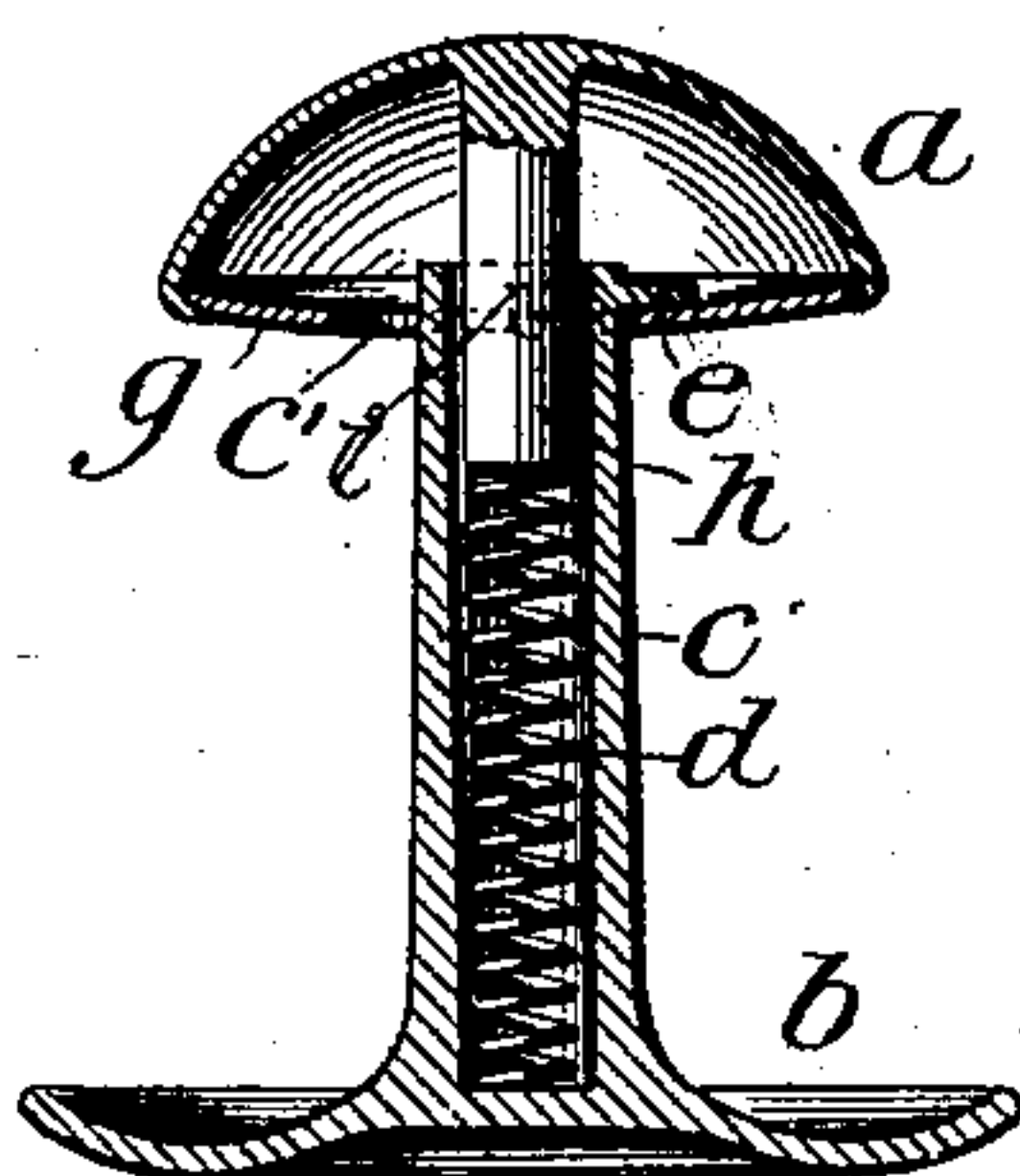


Fig. 2.

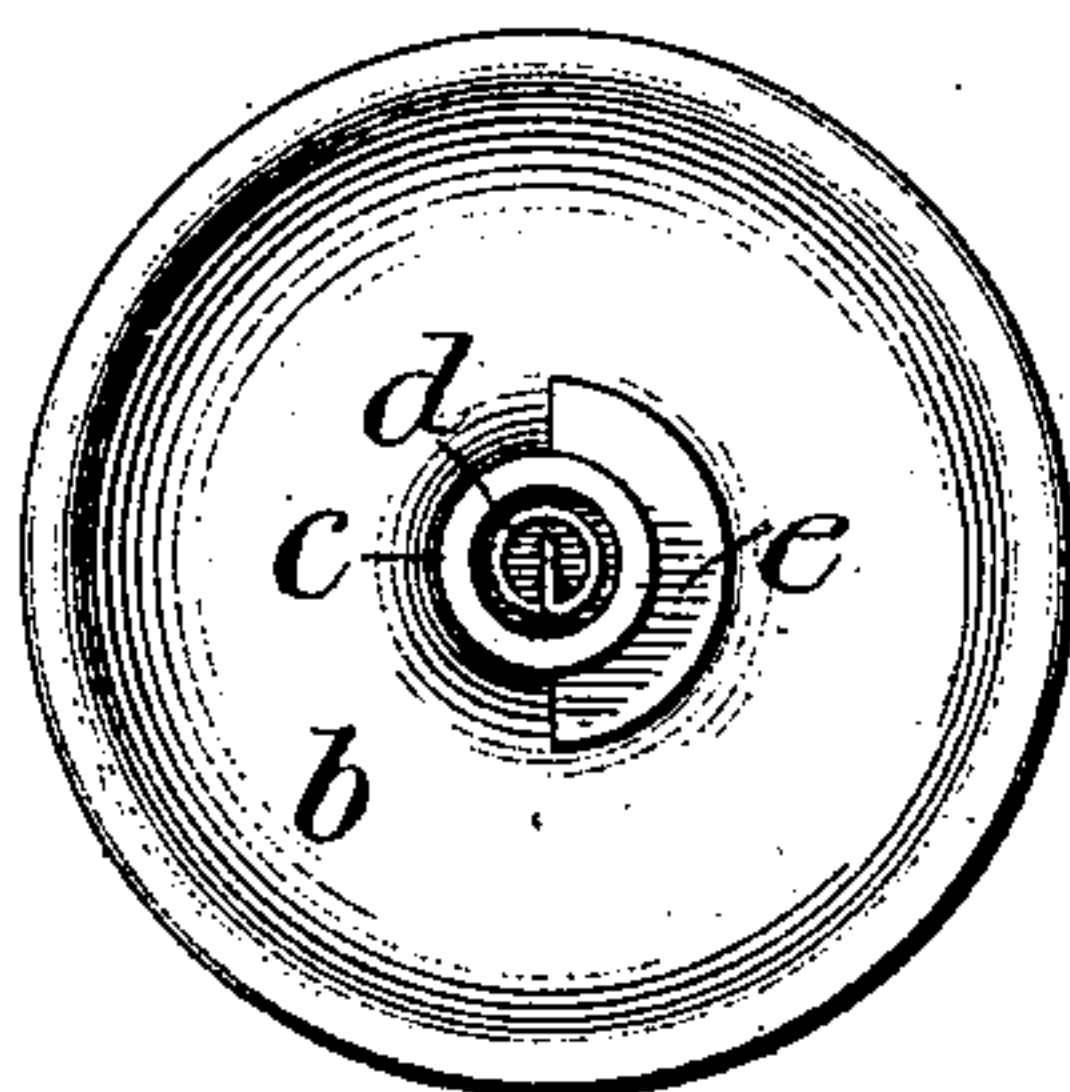


Fig. 3.

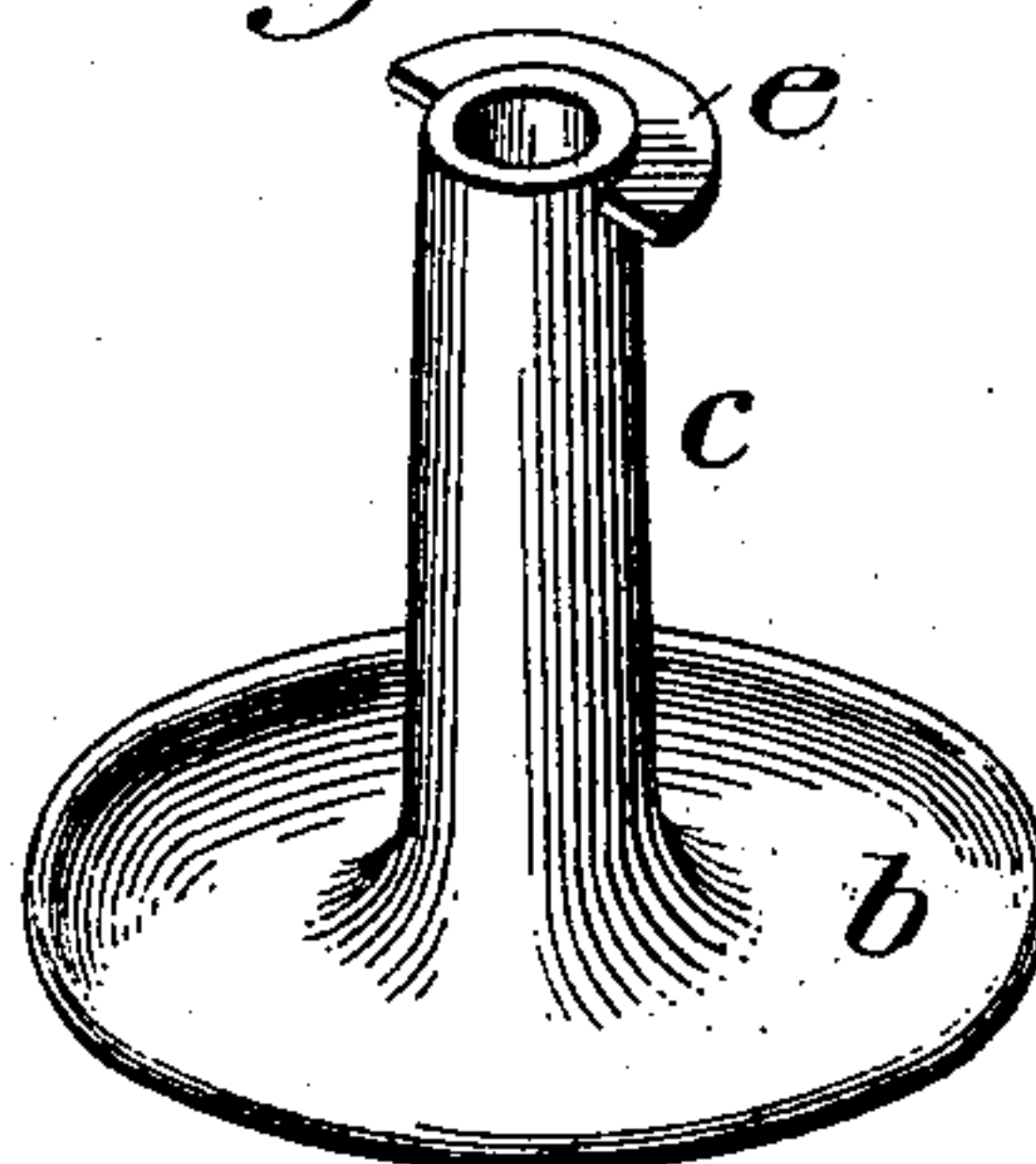


Fig. 4.

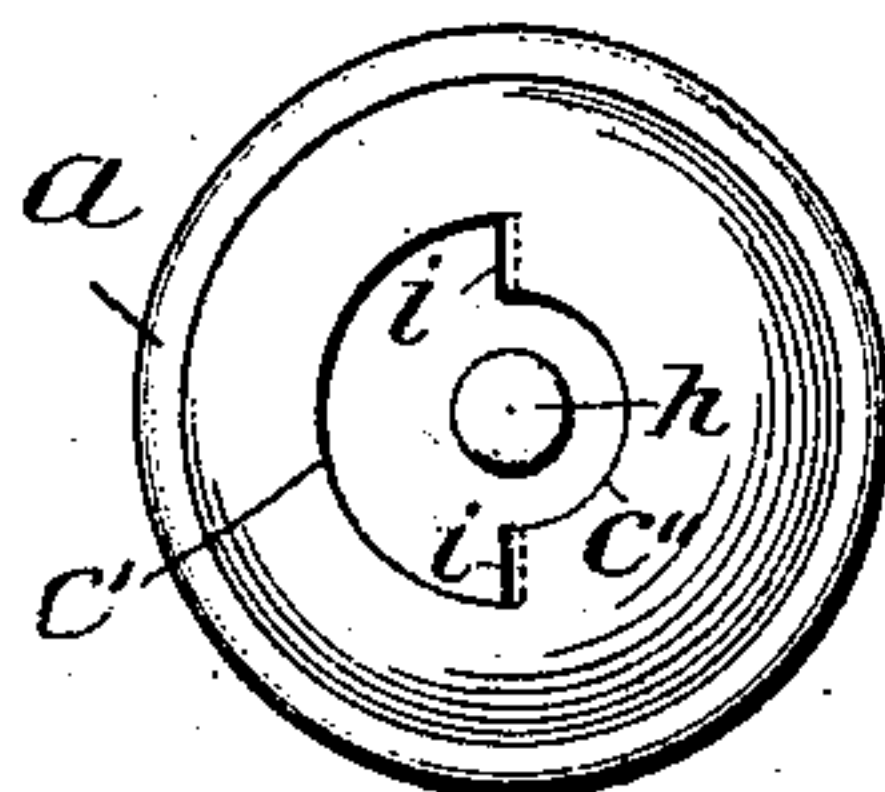


Fig. 5.

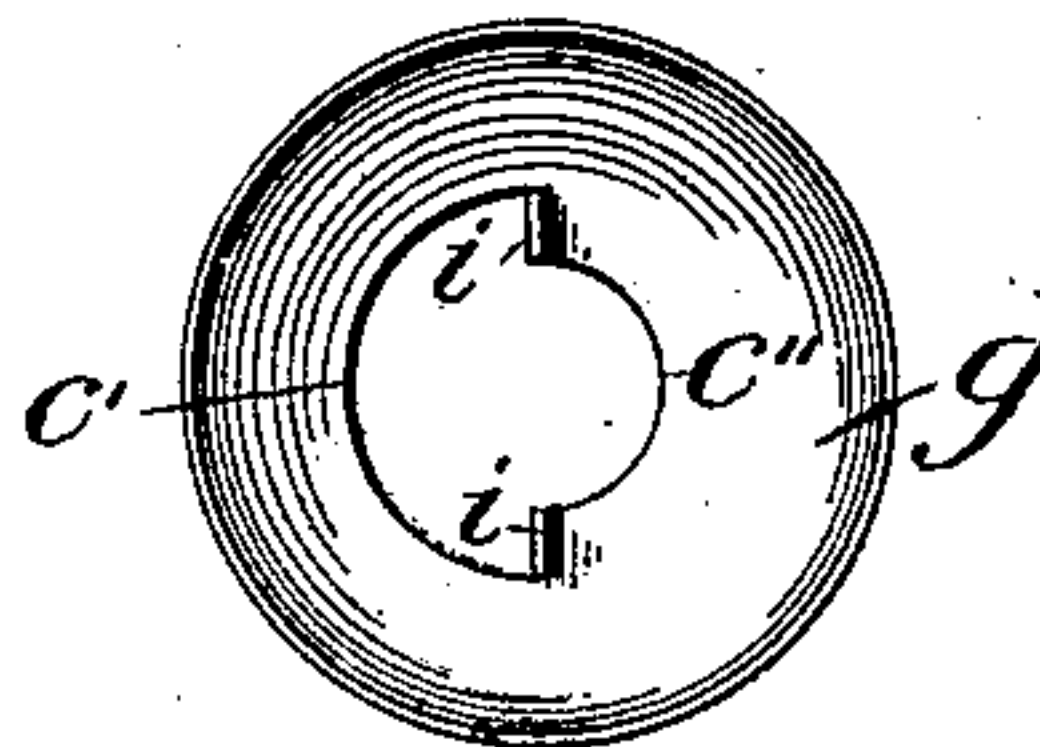
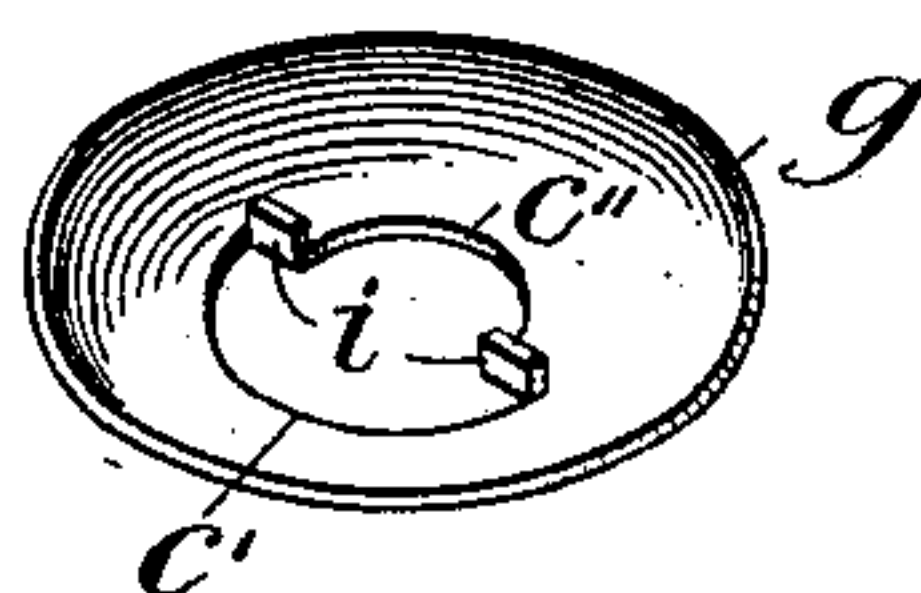


Fig. 6.



Witnesses:

*[Signature]*  
W. R. Piton

Inventor:

J. L. Vredenburg.  
By *[Signature]*  
Att'y.



# UNITED STATES PATENT OFFICE.

JOHN L. VREDENBURGH, OF AUSTIN, TEXAS.

## SEPARABLE BUTTON OR STUD.

SPECIFICATION forming part of Letters Patent No. 708,181, dated September 2, 1902.

Application filed June 11, 1902. Serial No. 111,177. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN L. VREDENBURGH, a citizen of the United States, residing at Austin, in the county of Travis and State of Texas, have invented certain new and useful Improvements in Separable Buttons or Studs, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to separable buttons or studs—such as collar and cuff buttons, shirt-studs, and the like—of that type in which the article comprises a back or base portion provided with a stem and coupling member and a head provided with means to coact therewith, whereby the parts may be coupled when properly held by a relative axial movement followed by a turning movement and uncoupled by a reverse operation and in which means are provided to lock the parts when coupled against accidental relative turning, whereby the accidental uncoupling or separation of the head from the base and stem is prevented.

The object of the invention is to provide a strong durable button or stud constructed of parts which may be quickly and cheaply made and assembled, whereby the cost of manufacture of the article is reduced to the minimum and in which the separable parts may be easily manipulated to couple or uncouple the same and will be securely locked in the former condition against accidental separation.

To this end the invention comprises the construction and arrangement of the two parts of a separable button or stud, as will be hereinafter described, and particularly pointed out in the claims.

One embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a vertical sectional view of a button embodying the invention, drawn to a greatly-enlarged scale. Fig. 2 is a plan view of the back of the button. Fig. 3 is a perspective view of the same. Fig. 4 is an inverted plan view of the head. Fig. 5 is a plan view of the inner face of the plate forming the base of the head, and Fig. 6 is a perspective view of the same.

In this embodiment of the invention the head of the button is indicated by the letter

*a* and the back thereof, which may be separated from the head, by the letter *b*. The latter is provided with an axially-arranged stem *c*, having a central bore which receives a coiled spring *d* and being further provided at or near its end with a laterally-extending flange *e*, forming a locking member, as will be hereinafter described.

The head *a* is preferably convex in form and provided with a dished base-plate *g*, secured at its edge in any suitable manner to the edge of the head proper, and secured to the under side of the latter and projecting therefrom is an axially-arranged short stud *h*, which is of a diameter which will permit it to enter the bore of the stem *c* when the parts are coupled. The plate *g* is provided with an opening *c'* about said stud to permit of the passage of the end of the stem *c*, and a concentric extension *c'*, conforming in shape to the contour of the flange *e*, through which the same may be passed in the coupling action.

In coupling the two parts of the button the stud *h* is inserted in the bore of stem *c*, its end bearing upon the spring *d* and the opening *c'* brought to register with the flange *e*. The parts are then pressed together against the tension of the spring *d*, the latter being compressed between the end of the stud *h* and the bottom of the bore of the stem *c* until the flange *e* passes through the opening *c'* and occupies a position within the head *a*. With the parts held in this position they are turned relatively to each other to bring the flange *e* out of register with the opening *c'*, when the compression on said parts is relieved. The spring *d* then exerts a tension upon the parts to force them apart; but as the flange *e* is out of register with opening *c'* the separation thereof cannot take place.

In actual use both the head and the back of a button are subject to more or less rubbing, which in a button of this type tends to turn or twist the parts, and if no means were provided to prevent this movement the opening *c'* in the plate *g* and the flange *e* might accidentally be brought into register, when the parts would separate. In the present invention a very simple and inexpensive arrangement or construction is provided to lock the parts when coupled against accidental separation. This locking means comprises



two small lugs, which are struck up from the plate *g* on the inside thereof, and are, in fact, formed by bending up at right angles a part of the material displaced in forming the opening *c'*. These lugs *i* are formed at the juncture of the openings *c'* and *c''* and extend from the wall of one to the wall of the other. They are thus located on diametrically opposite sides of the center of the arc formed by the walls of said slots. When the head is pressed on the stem, as before described, and given a half-turn and the parts relieved of pressure, the spring *d* tends, as premised, to force the parts apart, and the flange is thus drawn down behind said lugs, the radial edges thereof abutting the vertical faces of the same, so that the turning of the parts in either direction is prevented. The flange *e* forms an arc of slightly less than one hundred and eighty degrees, so that when turned in locking position it accurately fits behind said lugs and looseness or play of the head is prevented. By making this locking part in the form of a single piece and of the shape described it will in the relative turning movement of the parts ride upon the upper ends of the lugs during the turning movement of the parts in either direction from the very beginning of said movement until it either drops down behind the same in locked position or in front of the same and is ejected by the force of spring *h* through opening *c'* and the parts uncoupled.

I am aware that it is not novel to provide a separable button or stud comprising a base with a stem having locking projections and a head having means associated therewith adapted to interlock with said projection by giving the parts relative axial movement followed by relative turning movement to couple the parts together and to separate the parts by a similar movement, the means in the head being arranged to prevent the accidental relative turning when the parts are coupled, and I do not claim the same broadly. Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. In combination in a separable button, a base provided with a stem, a locking projection thereon and a head provided with a plate having an opening therein to permit of the passage of the stem and projection, said parts being adapted to be turned to couple the head and stem, and oppositely-disposed lugs struck up from the plate designed to coact with said projection to prevent the relative rotation of the parts when in coupled position.

2. In a separable button or stud of the type described, a back or base member, a stem extending therefrom, a locking member projecting laterally from the stem having two radial locking edges, a head, a plate carried thereby designed to interlock with said projection, and two interlocking lugs on said plate adapted to provide a bearing for the projection on the stem in the relative turning movement of the parts, and to confine

said projection between the same when in locked position with the radial edges of said projection abutting said lugs, and a tension-spring interposed between said head and said base member, substantially as described. 70

3. In a separable button, a base having a stem, an arc-shaped lateral projection carried by the stem of slightly less area than a half-circle, a head, a base-plate secured thereto having an opening therethrough of the contour of the end of said stem and projection, to permit of the passage of the same when in register, and lugs arranged on the plate on diametrically opposite sides of the opening for the stem, said lugs being adapted to coact with the radial edges of the lateral projection to lock the head and stem against relative turning movement, substantially as described. 85

4. In a separable button, a back or base member having a stem, a flat arc-shaped projection extending laterally therefrom having radial locking edges, a head, a plate secured thereto having an opening therein conforming in contour to the end of the stem and said projection, and oppositely-arranged vertical lugs struck up from said plate on the inner face thereof, said projection being adapted to ride upon the upper edges of the lugs in the relative turning movement of the parts and to drop behind the lugs and abut thereagainst to prevent said relative turning movement, substantially as described. 90

5. In a separable button or the like, a head, a stud projecting axially therefrom, a base-plate for the head secured thereto and having an axial opening therein, and an arc-shaped concentric extension thereof, lugs projecting from the inner face of the plate at the juncture of the main opening and the extension of the same and extending from the wall of one to the wall of the other, a back or base member having an axial stem secured thereto provided with a central bore, a spring housed therein adapted to be compressed by said stud, and a laterally-projecting arc-shaped projection on said stem forming a locking member, substantially as described. 100

6. In a separable stud or the like, the combination with a back or base member having an axial stem and a projection thereon, of a head including a plate having an opening therethrough conforming in contour to the end of the stem and the projection carried thereby, and lugs struck up from the metal displaced from said opening and extended at right angles to the plate on the inner face thereof, said lugs coacting with said projection to provide a lock, and a spring for seating the projection behind said lugs, substantially as described. 115

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

JOHN L. VREDENBURGH.

Witnesses:

PAUL H. SMITH,  
T. A. ROSE.