

No. 855,173.

PATENTED MAY 28, 1907.

C. E. HANSEN.
BUTTON OR STUD.
APPLICATION FILED JUNE 28, 1906.

Fig. 1.

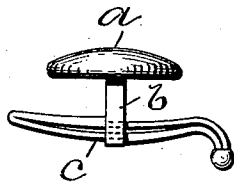


Fig. 2.

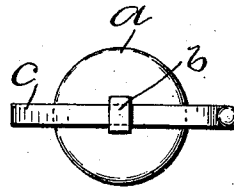


Fig. 3.

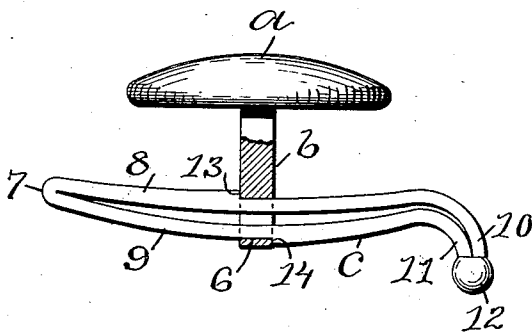


Fig. 4.

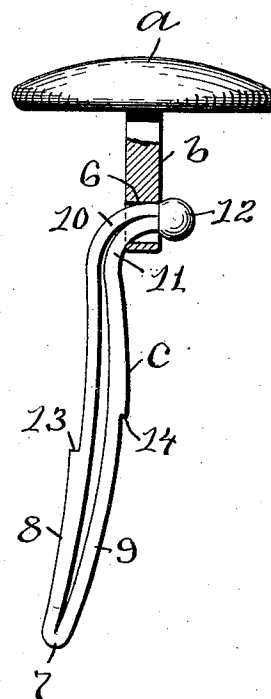
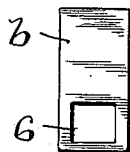


Fig. 5.



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BUTTON OR STUD.

No. 855,173.

Specification of Letters Patent.

Patented May 28, 1907.

Application filed June 28, 1906. Serial No. 323,840.

To all whom it may concern:

Be it known that I, CHARLES E. HANSEN, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Buttons or Studs, of which the following is a specification.

This invention has reference to an improvement in buttons or studs and more particularly to an improvement in the means for detachably securing a button or stud to wearing apparel.

The object of my invention is to improve the construction of a non-separable button or stud whereby the button or stud is easily inserted into different articles of wearing apparel and manipulated so as to be securely fastened or quickly removed from the same.

My invention consists in the peculiar and novel construction of a button or stud having details of construction, as will be more fully set forth hereinafter and claimed.

Figure 1 is a side view of my improved non-separable button or stud, showing the shoe in the closed position. Fig. 2 is a plan view of the stud or button looking at the under side with the shoe in the closed position. Fig. 3 is an enlarged side view, showing the shank partly in section and the shoe in the closed position. Fig. 4 is a side view similar to Fig. 3, showing the shoe in the open or extended position, and Fig. 5 is a detail face view of the shank showing the square hole in the outer end of the shank for the shoe.

In the drawings, *a* indicates the head, *b* the shank, and *c* the shoe of my improved button or stud. The head *a* may be of any material, design or configuration desired. The metal shank *b* is rectangular in cross section and has the square hole 6 extending transversely through the shank adjacent its outer end, as shown in Figs 3 and 5, and is secured at its opposite end centrally to the back of the head *a* by solder or other means. The shoe *c* is in the form of a split spring bar shaped in cross section to fit the square hole 6 in the shank *b*, and is constructed to have the closed rounded end 7, the inner and outer concavo-convex spring arms 8 and 9 merging into the outwardly-curved hook-shaped ends 10 and 11 on which is a stop knob 12. The inner spring arm 8 gradually increases

in thickness from the end 7 to the shank *b* to form the stop shoulder 13, and the outer spring arm 9 gradually increases in thickness from the hook-shaped end 11 to the shank *b* to form the oppositely-disposed stop shoulder 14, the space between the stop shoulders 13 and 14 being equal to the thickness of the shank *b*, as shown in Figs. 3 and 4. The shoe *c* may be formed integral or from flat spring wire bent as shown and the stop knob secured to the ends 11 and 12 by solder. The spring arms 8 and 9 are slightly separated when in their normal position by the spring tension of the arms and the concave face of the arms are preferably toward the head *a* of the button or stud, as shown in Figs. 1 and 3.

In the operation of my improved button or stud the shoe *c* is held in its closed or transverse position by the stop shoulders 13 and 14 engaging with the opposite sides of the shank at the edges of the hole 6 in the shank through the tension of the spring arms 8 and 9, as shown in Fig. 3. The shoe is opened or extended into a position to form a continuation of the shank *b* by an inward pressure on the knob stop 12 or by pressing the spring arm 9 between the hook-shaped end 11 and the shank *b* toward the spring arm 8 to release the stop shoulder 14 and then pushing the shoe through the hole 6 in the shank until the stop knob 12 comes to a stop against the shank *b*, when the shoe assumes the position as shown in Fig. 4. The shoe *c* and shank *b* can now be readily inserted through a button, stud, or similar hole in wearing apparel and the button or stud secured by pushing the shoe back in the reverse direction, when the stop shoulder 14 will automatically snap over the edge of the hole 6 in the shank and firmly hold the shoe in the closed position.

I do not wish to confine myself to any one particular use as my improved construction can be applied to collar buttons, shirt studs or any form of a button adapted to be detachably secured to wearing apparel.

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

A button composed of a head, a shank having a hole transversely through its outer end, a shoe composed of two spaced concavo-

convex spring arms one overlying the other
and being connected to one another at each
of their ends, and being passed through said
hole, a shoulder on the outer face of the up-
5 per arm engaging said shank at a point above
said hole, and a shoulder on the outer face
of the lower arm to engage the opposite side
of said shank below said hole.

In testimony whereof I have signed my
name to this specification in the presence of 10
two subscribing witnesses.

CHARLES E. HANSEN.

Witnesses:

ADA E. HAGERTY,
J. A. MILLER.