(No Model.)

W. HEEREN.

BUTTON OR STUD.

No. 249,349. Patented Nov. 8, 1881.

Fig. 1.

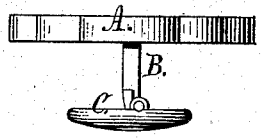


Fig. 2.

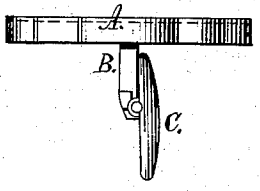


Fig. 3.

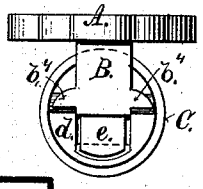


Fig. 4.

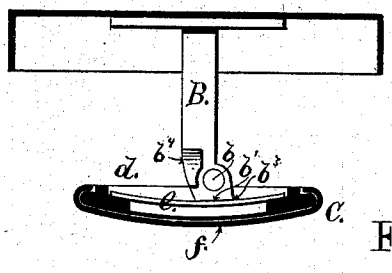


Fig. 5.

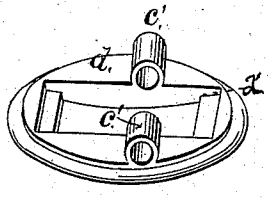


Fig. 6.

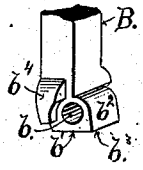
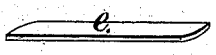


Fig. 7.



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UNITED STATES PATENT OFFICE.

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BUTTON OR STUD.

SPECIFICATION forming part of Letters Patent No. 249,349, dated November 8, 1881.

Application filed April 20, 1881. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HEEREN, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Buttons and Studs; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention has reference to that class of buttons or studs in which a shoe is secured to the post, so that the same can be placed on a line with the post to facilitate the entering of the same into the button-hole, or at right angles with the post, so as to secure the button.

This invention consists, first, in the peculiar and novel construction of the post by which the hinge is placed on one side of the center of the post; second, in the construction of the shoe by which the spring is placed into the shoe and concealed, the plate on which the eyes for the hinge are secured by the upsetting of the metal forming the face of the shoe, the eyes for the hinge placed on one side of the center of the shoe, and the spring is supported on bearings at each end, as will be more fully set forth hereinafter.

Ornamental buttons or studs used for sleeves, collars, shirt-fronts, or other similar purposes have to be removed from the apparel. It is desirable that these buttons shall enter the button-holes without difficulty, be secured therein with ease, and that the button and shoe shall be secured together, not liable to separate, so that part of the same may be lost.

Figure 1 is a side view of the button, showing the shoe in the position occupied when the button is secured. Fig. 2 is a side view of the button, showing the shoe in the position occupied when the button is to be entered into the button-hole. Fig. 3 is an end view of the button, showing the shoe turned against the post, as in Fig. 2. Fig. 4 is a sectional view of the shoe and post. Fig. 5 is a perspective view of the shoe, the spring being removed so as to show the recess in which the spring is held more clearly. Fig. 6 is a perspective view of the end of the post to which the shoe is hinged. Fig. 7 is a view of the spring.

In the drawings, which are made on an enlarged scale, so as to show the parts more clearly, A represents the front of the button, B the post or shank, and C the shoe of the button. The post B is secured to the front or head A of the button in any suitable manner, the invention being confined to the construction of the shoe and the hinge end of the post.

Referring to the drawings, it will be observed that the hinge is placed on one side of the center of the post, and that the post is curved toward the pivot on one face and projects on the opposite face, and that the hinges on the shoe project beyond the inner face of the shoe. Instead of placing the hinge on one side of the center of the post, the hinges or pivotal bearings on the shoe may be made to extend farther from the face of the shoe, and the pivots forming the hinge on the post may be placed in the center of the post, and in either case the operation of the shoe will be the same. The end of the post B is provided with the pivot b, on which the shoe is hinged, and with the two bearing-surfaces—b' at the extreme end and b^2 on one side—forming at b^3 an angle which is farther from the pivotal center than either of the bearing-surfaces.

c' c' are the bearings or sleeves for the pivot b, which with the same form the hinge. They are placed on one side of the center of the shoe, on the plate d, so that when the shoe is turned parallel with the post, as shown in Fig. 2, there will be room for two or more thicknesses of linen or cloth without making the post as long as it would have to be were the shoe hinged in the center.

The shoe C consists of the disk-plate d, provided in the center, between the pivot-sleeves c' c', with the recess d', to receive the spring e and allow the end of the post B to pass below the surface of the plate and bear on the spring e, as is shown in Fig. 4.

f is the convex disk forming the face of the shoe. The disk f is secured to the disk-plate d by upsetting the disk f over the edge of the disk-plate d in a die. The spring e is supported on both ends and suspended in the center, so as to allow the same to be depressed.

b^4 are projecting ears or prongs formed on

the two sides of the post B. They form a shoulder or bearing for the shoe when the button is locked, as is shown in Figs. 1 and 4.

It will be observed that the length of the post must be sufficient to allow the hinged shoe to be inserted through the button-holes of, say, two thicknesses of the cuffs, or through the two thicknesses of the bands of a shirt, and the two thicknesses of the collar when used as a collar-button. Either a long post or a small shoe must therefore be employed, and when the shoe is turned to lock the button the post is usually too long, the space between the shoe and button being more than is required for the thicknesses of cloth to be secured. To reduce the distance I prefer to make the button A with an inwardly-projecting rim, into which the cloths may be pressed when turning the shoe to lock the button. I do not wish to confine myself, however, to this mode of construction, as a practical and useful button can be made with a flat back to the button.

The operation of the button is as follows: When the shoe is secured to the post the spring *e* is pressed firmly down, so as to bear against the post. The hinged shoe cannot be turned without the angle b^3 depressing the spring considerably. This angle, therefore, forms a lock, by which the shoe is held in either the locked or unlocked position. The spring *e* is concealed within the shoe, is prevented from moving endwise, can be readily replaced by a new one, or turned over by removing the pivot forming the hinge. No part of the button can be lost, and, no matter what the strain, the button cannot be released by accident.

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

1. In a sleeve-button or stud, the post B, provided with the pivot *b*, placed on one side of the center of the post, adapted to be pivotally connected with the shoe, as described.

2. A sleeve-button or stud consisting of a post secured to the button-front and pivotally connected with a shoe in which a spring is concealed, constructed to act on the end of the post so as to hold the shoe in the open and locked position, as described.

3. The combination, with the post B, of the shoe C, hinged to the post and provided with a slot in which a spring is concealed, and in which the end of the post swings, constructed to retain the shoe in the locked position, as described.

4. The combination, with the post B, of the shoe C, composed of the disk *f*, the slotted plate *d*, and the spring *e*, supported on each end, constructed to bear against the end of the post and lock the shoe, as described.

5. The combination, with the button-front A and the post B, having the pivot *b*, the bearing-surface b' at its end, and the angle b^3, of the hinged shoe C, provided with the slotted plate *d* and the spring *e*, adapted to lock the shoe parallel with or at right angles to the post, as described.

6. In a sleeve-button or stud, the post B, provided with the pivot *b*, and having its end formed to extend on one side, so as to place the pivot on one side of the center of the post, adapted to be pivotally connected to the shoe, as described.

7. The combination, with the post B, adapted to be hinged to a shoe, of the slotted plate *d*, provided with a bearing for the pivot, so as to form a hinge, placed on one side of the center of the shoe, as described.

8. In a sleeve-button or stud, the post B, provided with the pivot *b* and the wings b^4, adapted to be pivotally connected with a shoe, as described.

9. The combination, in a detachable button, with a post provided with a hinged shoe, of a face or front having an inwardly-projecting rim, substantially as and for the purpose described.

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Witnesses:
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P. BAUMANN.