H. H. HELWIG.

BUTTON.

APPLICATION FILED APR. 7, 1919.

1,349,761. Patented Aug. 17, 1920.

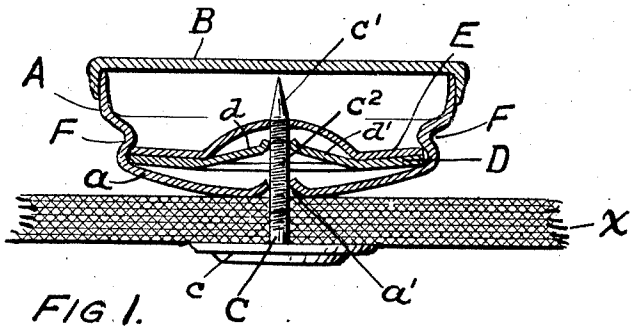


FIG. 1.

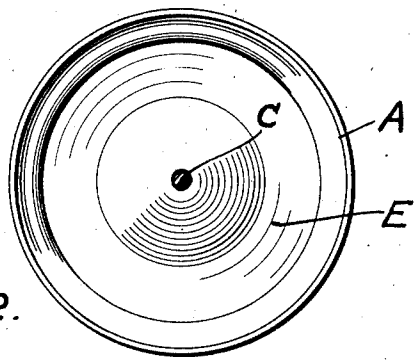


FIG. 2.

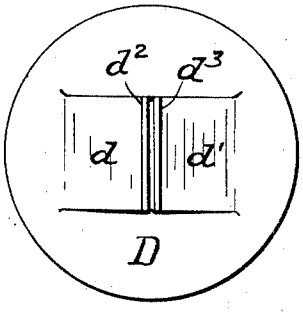


FIG. 3.

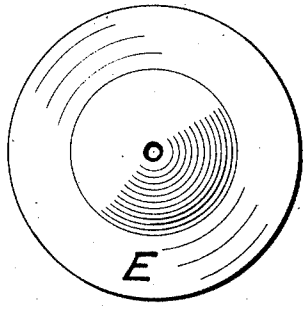


FIG. 4.

WITNESS:

Robt. R. Ritchel.

INVENTOR

Herman H. Helwig.

BY

Augustus B. Stoughton

ATTORNEY.

UNITED STATES PATENT OFFICE.

HERMAN H. HELWIG, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE PIVOT BUTTON COMPANY, INC., OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF NEW JERSEY.

BUTTON.

1,349,761. Specification of Letters Patent. Patented Aug. 17, 1920.

Application filed April 7, 1919. Serial No. 287,984.

To all whom it may concern:

Be it known that I, HERMAN H. HELWIG, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Buttons, of which the following is a specification.

This invention relates to buttons of the kind which are fastened to a garment or other material by means of a stud or the like which extends through the material and is secured to the body portion of the button.

The objects of the invention are to produce a button of this kind which is so constructed as to greatly increase the strength thereof; also to produce a button of this kind which is provided with means of improved construction for holding the stud in the body portion of the button so that the stud can be repeatedly removed without weakening the holding means; also to improve the construction of buttons of this kind in other respects hereinafter specified.

In the accompanying drawings:

Figure 1, is a central sectional view drawn to an enlarged scale and illustrating features of the invention.

Fig. 2, is a top or plan view with the front plate removed.

Fig. 3, is a plan view of a spring plate for retaining the securing stud, and

Fig. 4, is a top or plan view of the washer detached.

The button shown in the accompanying drawings includes the usual rear shell A which is covered by means of a front plate or the like B and which has a reduced rear or shouldered portion a in which the securing or holding means for a stud C are secured, the shell A being for this purpose provided with a hole a^1 through which the stud is adapted to pass. The stud also is of the usual construction, including a head c and a shank portion having a point c^1 which is adapted to be forced through the material x, to which the button is to be secured and a screw-threaded portion c^2 which is adapted to engage the stud-holding device. All of these parts may be of any usual or suitable construction and of themselves constitute no part of this invention.

The means for holding the stud in place on the body portion of the button include the usual spring plate or disk D which is secured in the rear portion a of the rear shell A of the button and which is slitted to form two oppositely arranged spring lips or fingers d d^1, which extend from the outer portion of the plate or disk toward the middle portion thereof and have oppositely arranged edges d^2 d^3 between which the shank of the stud C is adapted to enter in such a manner that the opposed edges of the spring lips will engage the screw-threaded portions of the shank of the stud. The spring lips or fingers are bent toward the front of the button so as to permit the shank of the stud to be forced inwardly in a direction lengthwise of the stud between the opposed edges of the spring lips, causing the spring lips to be bent forwardly by the shank of the stud and preventing the withdrawal of the stud. In order to remove the stud from the body portion of the button, the stud is turned so as to unscrew the shank portion thereof from engagement with the spring fingers. The opposing edges of the spring lips or fingers are preferably rectilinear, as shown in the drawings, and are not provided with indentations or recesses into which the shank portion of the stud enters, as has been done in spring holding plates as heretofore made. The rectilinear edges have been found to be more effective in gripping the screw threaded shank of the stud and greatly increase the life of buttons of this kind since the stud can be repeatedly removed from its operative position in the button and reinserted without decreasing the gripping action of the spring lips.

The spring plates are preferably reinforced by an annular metal washer E which is secured to the shell A of the button in front of the spring plate D. The washer reinforces the spring lips so that the life of the button is greatly increased by adding the washer. The washer may, however, be omitted.

The spring plate D and the washer E, if the same is used, are made of such a diameter as to fit within the reduced rear portion a of the shell A of the button and are held in

place therein by forming an annular groove in the reduced rear portion *a*, this groove indenting the metal to form a holding ridge or bead F which securely holds the spring plate and washer in their operative positions. The ridge or bead F not only forms a secure holding means for the spring plate by engaging the same throughout the periphery thereof but also does not in any way weaken the shell of the button, so that a very strong button is produced by means of this structure. The bead has the advantage that the groove forms good holding means for the edges of a button hole with which the button is to coöperate. The holding bead F makes it possible to produce a button which is flatter than those heretofore made, so that the button extends outwardly from the garment to a less extent.

I claim as my invention:

1. In a button, the combination of a shell having a shouldered rear portion, a stud adapted to be inserted into said shell, a holding device for said stud arranged in said shell in engagement with said shouldered portion, and an annular bead formed in said shell by means of which the holding device is held in place against said shouldered portion.

2. In a button, the combination of a shell having a shouldered portion, a stud adapted to be inserted into said shell, a substantially circular plate in said shell against said shouldered portion and provided with means for engaging said stud, and an annular bead formed in said shell and extending into the same and engaging said circular plate for holding the plate in said shell and against said shouldered portion.

3. In a button, the combination of a shell having an annular rear portion of reduced diameter, a stud adapted to be inserted into said shell, a holding device for said stud arranged in said reduced portion of the shell, and an annular bead formed in the reduced portion of said shell by means of which the holding device is held between said reduced portion and said bead.

4. In a button, the combination with a shell and a securing stud adapted to be inserted into said shell, of a holding plate arranged in said shell, said plate having a pair of oppositely arranged spring lips having substantially rectilinear edges adapted to engage said stud to hold the same against endwise movement out of said shell, and means for holding said plate in said shell.

5. In a button, the combination with a shell and a securing stud having a threaded shank portion adapted to be inserted into said shell, of a holding device arranged in said shell including a pair of spring lips having substantially rectilinear opposed edges between which the threaded portion of said stud is adapted to enter and which hold the stud against movement endwise out of said shell, and means for securing said holding device in said shell.

6. In a button, the combination with a shell and a securing stud having a shank portion adapted to be inserted into said shell, of a holding device arranged in said shell including a pair of spring lips having opposed edges between which the threaded portion of said stud is adapted to enter and which hold the stud against endwise movement out of said shell, a washer in said shell for reinforcing the outer parts of said holding device, and means for securing said washer and holding device in said shell.

7. In a button, the combination with a shell and a securing stud adapted to be inserted into said shell, of a holding plate arranged in said shell, said plate having a pair of oppositely arranged spring lips having substantially rectilinear edges adapted to engage said stud to hold the same against endwise movement out of said shell, a washer arranged in front of said holding plate and adapted to reinforce the spring lips thereof, and means for holding said plate and washer in said shell.

8. In a button, the combination with a shell and a securing stud adapted to be inserted into said shell, of a holding plate arranged in said shell, said plate having a pair of oppositely arranged spring lips having substantially rectilinear edges adapted to engage said stud to hold the same against endwise movement out of said shell, a washer arranged in front of said holding plate and adapted to reinforce the spring lips thereof, and an annular bead on said shell for holding said washer and holding plate in said shell.

9. In a button, the combination with a shell and a securing stud adapted to be inserted into said shell, of a holding plate arranged in said shell, said plate having a pair of spring lips adapted to engage said stud to hold the same against endwise movement out of said shell, and a washer arranged in front of said holding plate and adapted to reinforce the spring lips thereof.

10. In a button, the combination of a shell, a stud adapted to be passed through the goods to which said button is to be secured and to be inserted into said shell, a holding device for a stud arranged in said shell and provided with means for gripping said stud to prevent endwise withdrawal thereof, and an annular bead formed in said shell at a distance from the edge thereof for securing said holding device in said shell.

11. In a button, the combination of a shell, a stud adapted to be passed through

the goods to which said button is to be secured and to be inserted into said shell, a holding device for said stud provided with lips adapted to engage said stud when inserted into said shell and to permit the stud to move endwise into said shell and to prevent endwise withdrawal of said stud except by turning the same, and a bead on said shell at a distance from the edge thereof extending inwardly into a position to engage said holding device to secure the same in said shell.

HERMAN H. HELWIG.