(No Model.)

G. PENDLETON, Jr.

BUTTON FASTENER.

No. 453,656. Patented June 9, 1891.

Fig. 1.

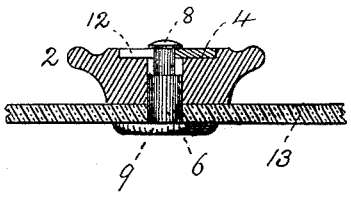


Fig. 3.

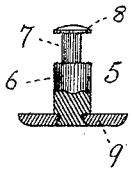


Fig. 6.

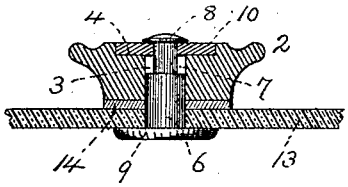
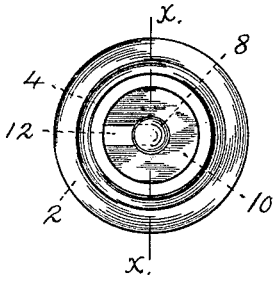


Fig. 2.



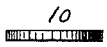


Fig. 4.

Fig. 5.

Witnesses.
E. K. Augustus
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UNITED STATES PATENT OFFICE.

GURDON PENDLETON, JR., OF MELROSE, MASSACHUSETTS.

BUTTON-FASTENER.

SPECIFICATION forming part of Letters Patent No. 453,656, dated June 9, 1891.

Application filed January 15, 1891. Serial No. 377,826. (No model.)

To all whom it may concern:

Be it known that I, GURDON PENDLETON, Jr., a citizen of the United States, residing at Melrose, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Removable Button-Fasteners; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to figures of reference marked thereon, which form a part of this specification.

This invention relates to that class of button-fasteners which permit of removal of the button without injury from the fabric to which it is secured, and thus allows of its being changed in position, or from one garment to a different one.

My fastener consists, in brief, of a flanged stud with a reduced portion, which is to pass centrally through the button, while a fastening-disk with a radial aperture is adapted to engage the reduced portion and rests within a recess formed in the button-top, the inherent elasticity of the fabric to which the fastener is attached being sufficient to retain the fastening-disk within the recessed portion of the button, the stud being made so short that the material or fabric is always slightly compressed, all as hereinafter more fully described and claimed.

The drawings represent, in Figure 1, a central vertical sectional elevation of a button secured to a fabric with a fastener containing my invention. Fig. 2 is a plan. Fig. 3 is a sectional elevation of the stud member. Fig. 4 is an edge view of the fastening-disk. Fig. 5 is a plan of the same. Fig. 6 is a sectional elevation on line *xx* of Fig. 2, showing an elastic washer between the button and the fabric.

In said drawings, 2 represents a button of any desired shape or style, in the present instance circular in plan view, having a central bore 3 and a recessed portion 4 upon its upper surface. These buttons may be of any material, hard rubber, bone, metal, or other substances, and the fastener works equally well with all. This button-fastener is shown at 5 as composed of a central shaft or stud 6, adapted to fit the bore of the button, and formed with a reduced upper end or neck 7. The latter is surmounted by a cap or band 8, preferably of the same diameter as that of the stud. The lower end of the latter is flanged or formed with a circular plate 9 to act as a washer and rest upon the under side of the fabric to prevent the latter from tearing out and the button coming off.

In connection with the fastener 5 is a circular disk 10, having a radial aperture 12, extending from the center to the circumference. This aperture is of a width equal to or slightly larger than the neck portion 7 of the stud, while the size of the recess in the button is the same as the diameter of the disk 10, and of a depth about equal to the thickness of said plate, so that when the button is fastened to the garment or other fabric the upper surface of said button 2 and disk 10 are flush, or thereabout. This assemblage of parts cooperate as follows: Presuming a button is now to be secured to a fabric, represented at 13, having previously punched or formed a hole in the fabric, the stud is pushed from the under side up through the fabric. The button is then inserted over the projecting end portion of said stud and rests upon the upper side of the fabric. The button and fabric are now pressed against each other in order to compress the fabric sufficiently to bring the reduced part or neck of the stud above the top surface of the button. While this pressure is continued the fastening-disk is adjusted in position upon the top of the button, but on one side of the latter, and then pushed transversely of the stud, the neck of the latter entering the aperture 12 until it contacts against the end. At this moment the said disk 10 is in adjustment above the recess in the button and drops therein. This act completed, the pressure is removed, when the inherent elasticity of the fabric causes the stud to retreat until the cap 8 engages against the upper side of the plate. No ordinary movement of the wearer can now possibly disengage the parts and the button is held securely attached until removal is desired. This is accomplished as follows: The garment or other article at the point where the button is attached is held preferably in a vertical position, or in any event obliquely to the horizontal, with the aperture 12 above the stud.

Pressure is now applied to compress the fabric sufficiently to permit the stud to advance through the button and allow the fastener-disk 10 to move out from the recess in the button. When its under side is slightly above the upper surface of the button, it is free to disengage from the stud and drops off through the action of gravity. In the event of the stud being too long when used upon a thin fabric an elastic medium, as a washer 14, may be employed. (See Fig. 6.) This enhances the security of the fastener. It is evident that by the use of one or more washers the varying thicknesses of fabrics are readily compensated for and a uniform length of fastener may be employed, except perhaps in exceptional instances.

I do not desire to be limited to the precise form of fastening-disk nor to the recess in the button which contains it, since they may be varied, but both be similar in shape.

What I claim is—

A removable button consisting of the stud 6, having the elongated neck 7, the cap or flange 8, and the plate 9, combined with the head or button proper 2, having a recess 4 in its outer face, and the fastening disk or plate 10, of proper size and shape to fit in said recess and provided with the radial aperture 12, said neck 7 being of greater length than the thickness of said plate or disk 10, substantially as set forth.

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

GURDON PENDLETON, JR.

Witnesses:

H. E. LODGE,

JOHN A. DOUGHERTY.