

(No Model.)

W. L. KING.
SEPARABLE BUTTON.

No. 546,162.

Patented Sept. 10, 1895.

Fig. 1.

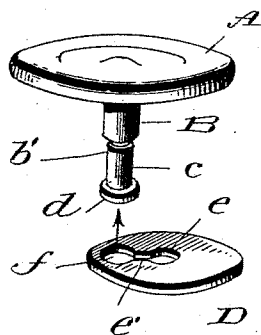


Fig. 2.

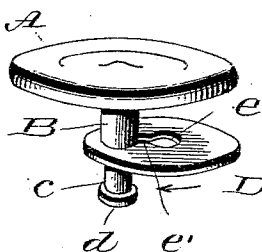


Fig. 3.

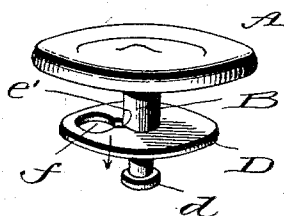


Fig. 4.

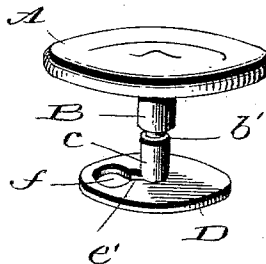
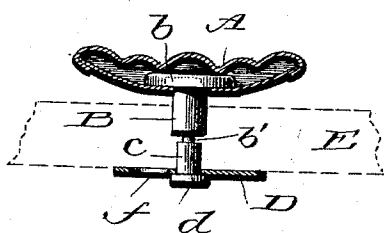


Fig. 5.



Witnesses:

L. C. Hills.
E. R. Bond

Inventor:

William L. King.
by E. B. Stocking
Attorney

UNITED STATES PATENT OFFICE.

WILLIAM L. KING, OF WINSTON, NORTH CAROLINA, ASSIGNOR OF ONE-HALF TO THE PHOENIX MANUFACTURING COMPANY, OF NEWARK, NEW JERSEY.

SEPARABLE BUTTON.

SPECIFICATION forming part of Letters Patent No. 546,162, dated September 10, 1895.

Application filed August 11, 1894. Serial No. 520,070. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM L. KING, a citizen of the United States, residing at Winston, in the county of Forsyth, State of North Carolina, have invented certain new and useful Improvements in Separable Buttons, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in separable buttons of that class in which the head of the button has a shank adapted to be engaged by a plate with a radial slot enlarged at one end and so arranged as to fasten the button to the fabric; and it has for its objects, among others, to provide a simple and efficient button in which the fastening is but a single disk of metal and which cannot become accidentally disengaged from the shank of the button after being once secured to the fabric. The fastening-plate is formed with a radial slot having at each end an enlargement, said enlargements being of different sizes, and the shank of the button having two portions of different diameters with an annular groove between them and the head having a shoulder for preventing the lock-plate from slipping about on the shank.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be specifically defined by the appended claim.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a perspective view of the button and its fastening-plate separated and the shank about to enter the larger opening in the fastening-plate. Fig. 2 is a similar view showing the plate with the slot opposite the groove in the shank and about to be moved laterally in the direction of the arrow. Fig. 3 is a like view showing the plate thus moved and in position to be moved outward on the shank. Fig. 4 is a similar view with the fastening-plate in its outermost position. Fig. 5

is a sectional view with parts in elevation with the button attached to the fabric.

Like letters of reference indicate like parts throughout the several views.

Referring now to the details of the drawings by letter, A designates the head of the button provided with a shank B. This head may be of any desired shape and as ornamental or fanciful in appearance as may be required. The shank may be affixed thereto in any suitable manner. In Fig. 5 the shank is shown as provided with a head *b*, which is confined between the two parts of the head of the button, as shown. This, however, is but one of the many ways in which the shank and head may be united. The shank is provided at a point about midway of its length with an annular groove *b'*, beyond which the shank is reduced in diameter, as seen at *c*, and the end of this reduced portion is provided with a flange *d*, as seen in the various views, which serves to prevent displacement and undue movement of the fastening-plate.

D is the fastening-plate. It is provided with a central circular opening *e*, which communicates by the narrow radial slot *e'* with a larger opening *f* nearer the periphery of the plate, as seen best in Figs. 1 and 2. The circumference of the opening *f* is like that of the larger portion of the shank of the button or that part thereof between the head and the groove, while the circumference of the smaller opening *e* is the same as that of the smaller portion of the shank or that portion between the groove and the flange *d*.

With the parts constructed substantially as above set forth, the operation is as follows: The shank is passed through the material E in the usual way, as by a threading-thimble or the like, and then the free end of the said shank is passed through the larger hole *f* in the fastening or lock plate D until the plate comes opposite the groove *b'* in the shank, when the plate may be moved laterally, its portion or slot *e'* moving between the opposite walls of the groove, and the plate moved until the shank is in line with the central and smaller hole *e* of the plate, when the plate

may be moved outward until it engages the head *d* on the shank, the reduced portion *c* of the shank moving in the smaller hole of plate, as seen in Fig. 4. A slight pull on the button, even such as would be caused through applying the suspender, would cause the reduced portion of the shank to pass back through the material. The material would then separate the fastening-plate from the groove of the shank, as seen in Fig. 5, and the plate could not become detached, as, in order to become disengaged from the shank, it has to move lengthwise of the shank till opposite the groove of the latter, and then it must move laterally till the shank comes coincident with the larger hole of the plate, which movements cannot take place under any circumstances.

I deem it important that the annular groove in the shank be of a length equal to the thickness of the fastening-plate, as shown, so that the fastening-plate cannot become distorted or at an angle other than a right angle to the shank, and hence all danger of separation is avoided. Furthermore, this construction provides for some play of the goods upon the shank between the plate and the button-head and dispenses with the employment of a rubber sleeve, which has heretofore been employed in connection with this form of fas-

tening-plate, as in the patent to Gengembre, No. 45,400, dated December 13, 1864, the construction of which I hereby disclaim.

What is claimed as new is—

The improved separable button herein described, consisting of a button head having permanently attached thereto a shank having at its outer end a head, a reduced portion adjacent to said head with a portion of larger diameter adjacent to the button head and an annular groove between the reduced and larger portion of the shank and of a length substantially equal to the thickness of the fastening plate, and a fastening plate having a central opening of a diameter substantially that of the reduced portion of the shank, a larger opening substantially the diameter of the larger portion and head of the shank and a passage connecting said openings and of a dimension substantially that of the shank opposite the annular groove, whereby the fastening plate is held at right angles to the shank, substantially as shown and described.

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

WILLIAM L. KING.

Witnesses:

H. MONTAGUE,

J. A. VALENTINE.