

J. H. REED.
CONSTRUCTION OF BUTTONHOLES AND REINFORCEMENT THEREOF.
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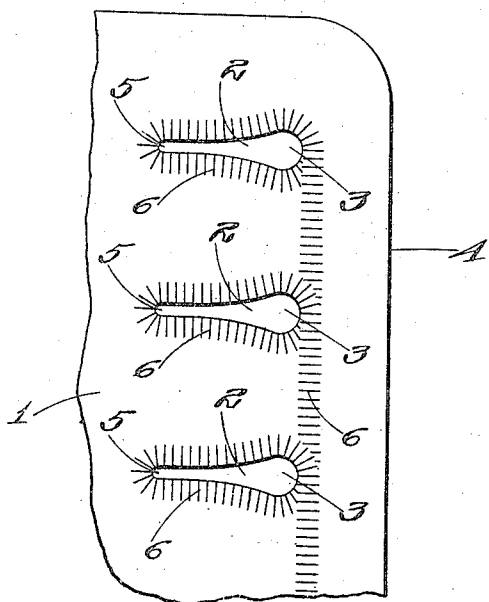


Fig. 1.

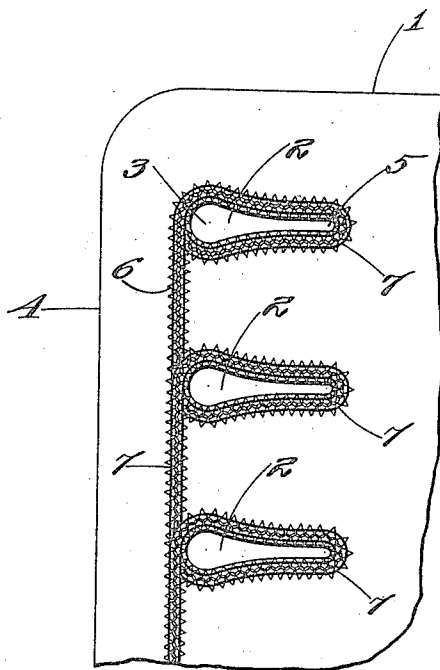


Fig. 2.

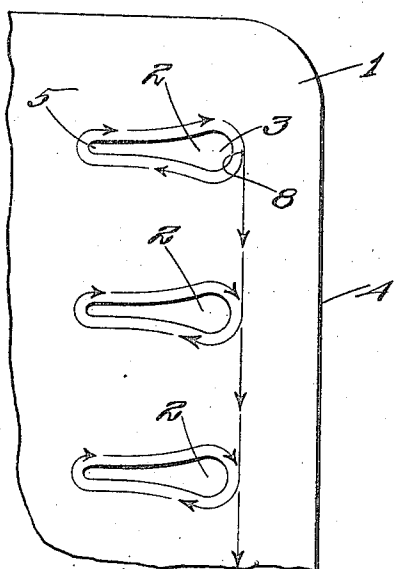


Fig. 3.

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CONSTRUCTION OF BUTTONHOLES AND REINFORCEMENT THEREOF.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JAMES H. REED, a citizen of the United States, residing at Swampscott, county of Essex, State of Massachusetts, have invented a certain new and useful Improvement in Construction of Buttonholes and Reinforcement Thereof, of which the following is a specification, reference being had therein to the accompanying drawings.

In the usual form of button holes for shoes and for some garments, the button hole is somewhat bulb or pear shaped, that is, the outer end is rounded, forming an eye, and the sides of the button hole from the eye portion toward the inner end of the button hole are closer together and nearly or quite parallel. When the button holes are sewed by machine, it is usually customary to begin the sewing at the inner end of one leg or side of the button hole, then running around the outer or rounded end and back on the other side of the button hole, terminating at the inner end of the second side of the button hole. A cord is usually fed under the line of stitches to strengthen the button hole and form a button edge. If done by machine, it is usual after one button hole is sewed, to feed the material along far enough to bring the next button hole to the sewing mechanism without breaking the thread or the reinforcing cord and leaving the thread and cord lying exposed on the back face of the material, and then to start the stitching for the second button hole at the inner end of one leg and then run around the second button hole as was done to the first button hole, and so on through the whole series of button holes which are to be sewed. After all the button holes have been sewed, the material in which the button holes are being made is run through another machine to have the cord and thread between the button holes whip-sewed so as to fasten them to the material and not leave them exposed.

It is a well known fact that greater wear and strain come on the outer end or eye of the button hole than on the inner end because that is where the strain comes, as the shank of the button is constantly pulling on the eye of the button hole, and also the material often becomes stretched between the button holes, near the edge, and forms puckers.

One object of the present invention is to reinforce the eye of the button hole by form-

ing a continuous line of stitches around each button hole, and from each button hole to the next button hole.

Another feature of the invention is to begin and terminate the stitching of the button hole at the eye or outer end instead of at the inner end of the button hole, and to run the cord preferably from eye to eye, that is from the outer end of one to the outer end of the next hole, and also to utilize the line of stitching from eye to eye to stitch the cord to the material so that the cord is whip-sewed during the feeding operation between the button holes, thus avoiding the necessity of putting the material through a second machine to whip-sew the cord. This construction not only stitches each particular button hole but it also reduces the strain on the button hole and prevents stretching of the material between the button holes and produces an ornamental line of stitching between the eyes of the button holes.

In the following specification, I have described my buttonhole as forming part of a series of button-holes such for instance as is found on the button fly of a shoe, but it will be understood that the invention may also be embodied in a single buttonhole, as for instance for clothing, in which case there will be a line of stitching extending away from the button-hole on one or both sides, preferably at the ends, said line of stitching crossing itself at the starting point.

The invention will be fully understood when taken in connection with the accompanying drawings, and the novel features will be pointed out and clearly defined at the close of this specification.

In the drawings, Figure 1 is a plan view of the front face of a button fly showing a series of button holes made according to the invention.

Fig. 2 is a plan view of the rear face of the article shown in Fig. 1, showing how the button holes look on the rear face when constructed in accordance with the invention.

Fig. 3 is a front face view similar to Fig. 1, showing in diagram the path followed in sewing the button hole.

Referring now to the drawings, 1 represents a button fly in which the button holes 2 are formed, said button holes as already described being of a somewhat bulb or pear shape. The eye 3 of the button hole is toward the front edge 4 of the material. The rear or inner end 5 of the button hole is

also slightly rounded, the sides of the button hole, however, being closer together at this end than they are at the front around the eye 3. The line of stitches 6, extends continuously entirely around the button hole, following around both ends, crossing itself at the front end of the eye, and also extends across from the eye of one button hole to the eye of the next button hole. A cord 7 is preferably employed as a core to follow around the edge of the button hole, the stitches being looped around said cord, and is extended from the eye of one button hole to the eye of the next button hole and is sewed to the material by the line of stitches 6. In extending the cord from one button hole to the next it lies along the back face of the material as shown in Fig. 2 so that the cord itself and the locks of the stitches appear on the back face, and the face line of stitches 6 appears on the front face. The stitches are preferably locked on the back face as shown in Fig. 2.

The stitching of each button hole begins preferably at the middle of the rounded end as shown at 8, then goes around on the lower side of the button hole, following the path indicated by the arrows in Fig. 3, passing around the inner end, thence back over the upper side, thence back past the point of beginning at 8, thence down to the second button hole, at the outer end of the eye, thence around on the under side to the inner end, and back over the upper side to the outer end of the eye, and thence down to the third button hole and so on. It will be seen that because the line of stitches doubles back on itself at the end of the eye the button hole will be strengthened where it is double sewed, and this is just where the most strain comes. Furthermore, the reinforcing cord and line of stitches strengthens the button fly between the ends of the button holes, so that the button fly is much less likely to tear.

Not only is the button hole thus made stronger and more attractive in appearance but it enables the entire work of sewing the series of button holes to be performed by one machine at a single operation instead of being obliged to put the material a second time through the same or a different machine.

What I claim is:

1. An article having a series of button holes, and a line of stitching which extends around the edge of each button hole and from each button hole to the next adjacent

button hole in the series, the said line of stitching being continuous and integral from the first button hole to the last in the series.

2. An article having a series of button holes, a cord extending around the edge of the first button hole and thence to and around the edge of the next adjacent button hole and so on successively around each button hole and across the space between all the button holes in the series, and an unbroken line of stitching securing the cord to the article around each button hole and between the button holes.

3. An article having a series of button holes, a continuous line of stitches which extends around the edge of each button hole and between the outer ends of all of the button holes, said line of stitching beginning with the outer end of the first button hole in the series, thence extending along one side edge of the button hole, around the inner end, and thence back along the other side edge of the button hole to the outer end, at the point of beginning crossing the first line of stitching at the front and forming a double stitching at that end, thence extending as a line of stitches to the outer end of the next adjacent button hole, thence around the entire edge of said second button hole, and so on through the remaining button holes in the series.

4. An article having a series of button holes, a continuous line of stitches which extends around the edge of each button hole and between the outer ends of all the button holes, said line of stitching beginning with the outer end of the first button hole in the series, thence extending along one side edge of the button hole, around the inner end, and thence back along the other side edge of the button hole to the outer end at the point of beginning, thence extending as a line of stitches to the outer end of the next adjacent button hole, thence around the edge of said second button hole, and so on through the remaining button holes in the series, and a cord extending continuously around the edge of each button hole and between the adjacent button holes, said cord being inclosed as a core in said line of stitches.

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

JAMES H. REED.

Witnesses:

GEORGE P. DIKE,

ALICE H. MORRISON.