(No Model.)

J. STONE.

BUTTON HOLE STRIP AND METHOD OP MAKING THE SAME.

No. 414,602. Patented Nov. 5, 1889.

Fig 4

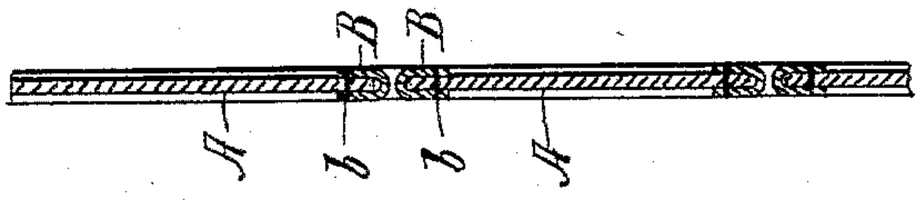


Fig 9

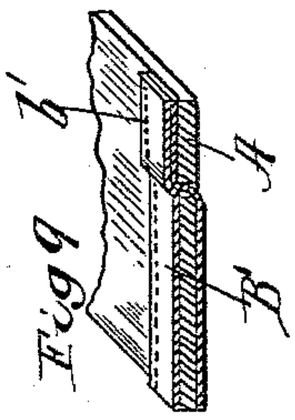


Fig 8

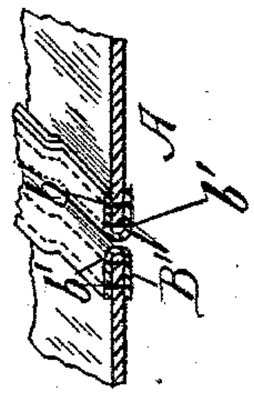


Fig 3

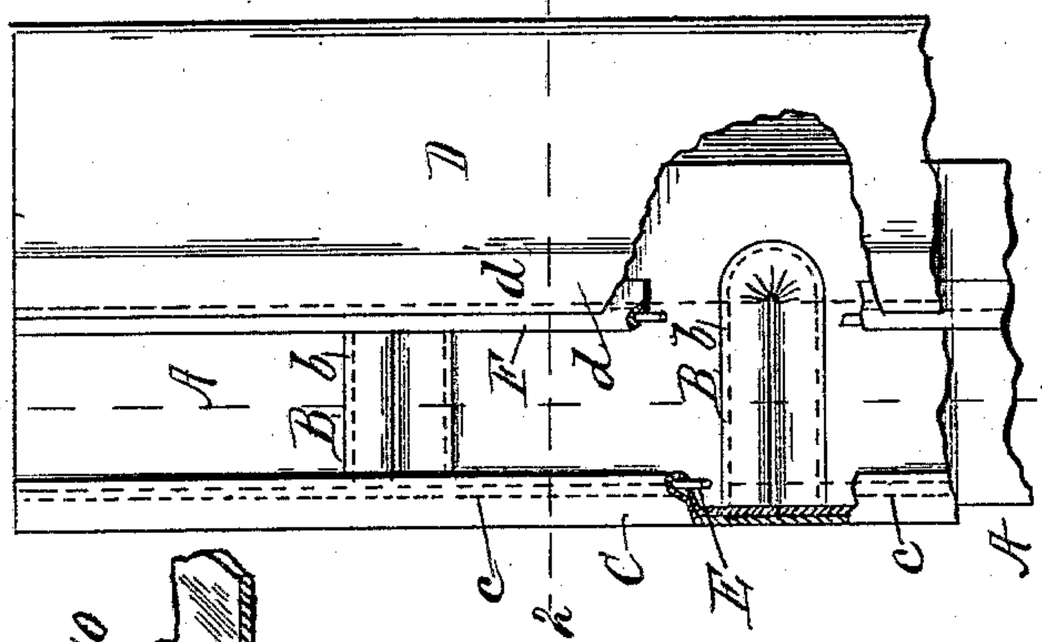


Fig 10

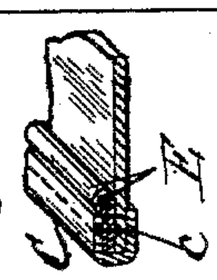


Fig 5

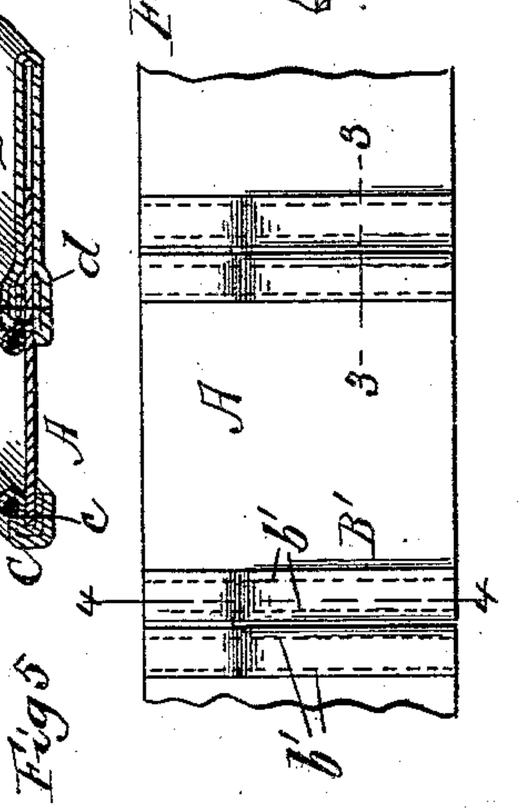


Fig 2

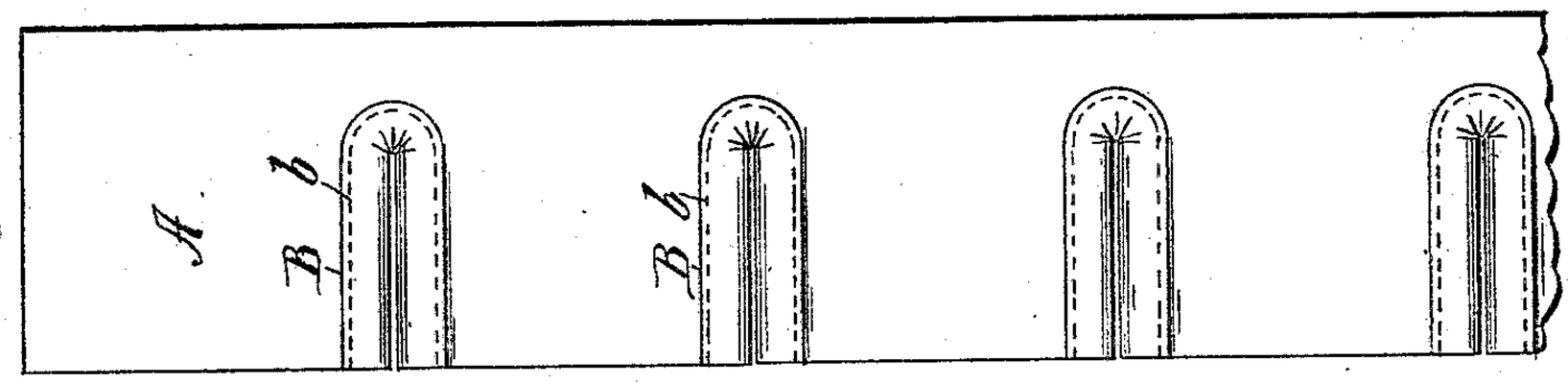
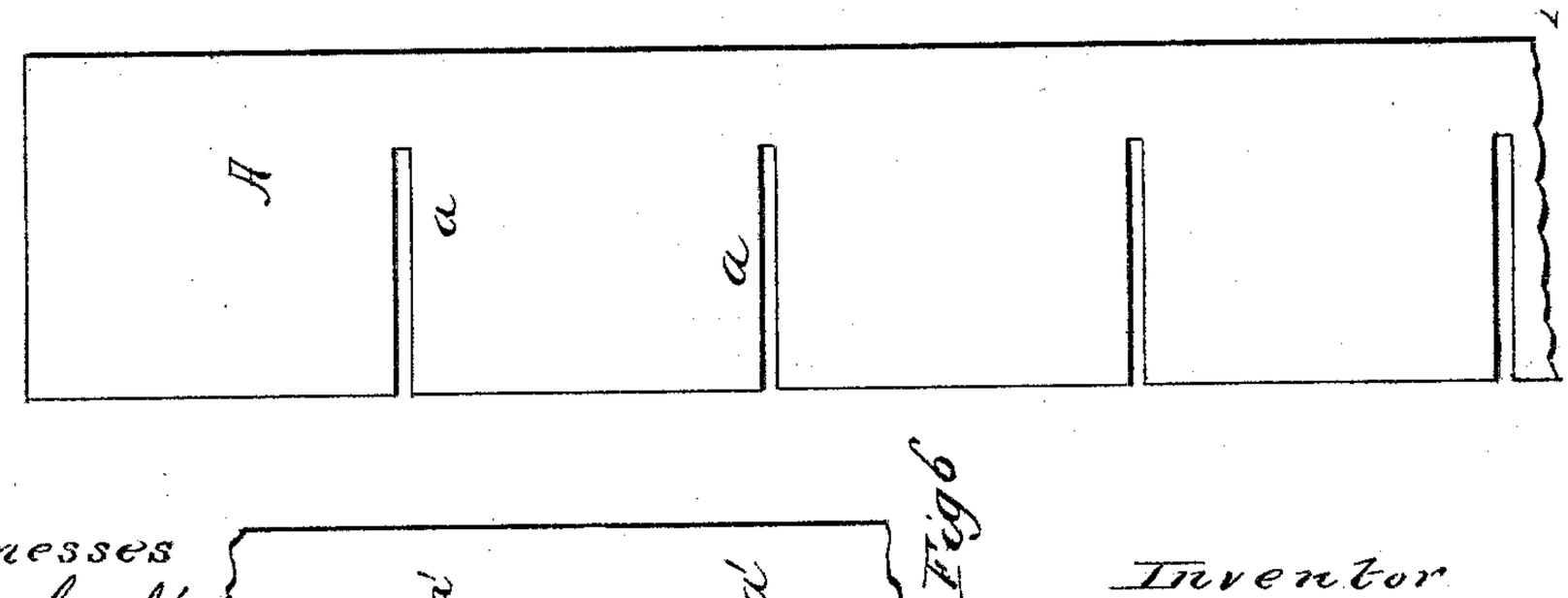


Fig 1



Witnesses
W. C. Corlies
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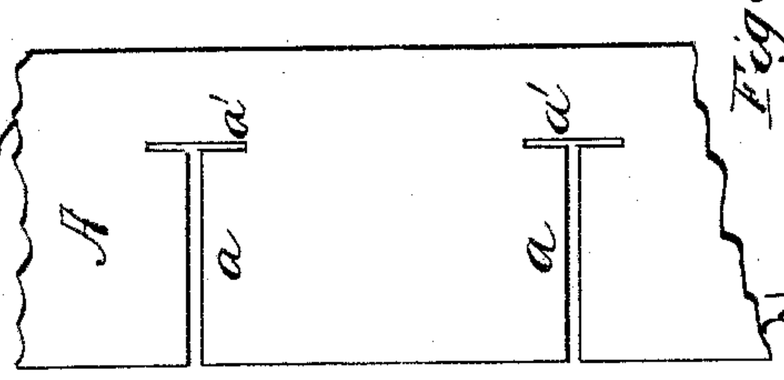
Fig



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James Stone
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UNITED STATES PATENT OFFICE.

JAMES STONE, OF AURORA, ILLINOIS, ASSIGNOR OF TWO-THIRDS TO ALICE M. BALL, OF SAME PLACE, AND ELIZABETH FLORSHEIM, OF CHICAGO, ILLINOIS.

BUTTON-HOLE STRIP AND METHOD OF MAKING THE SAME.

SPECIFICATION forming part of Letters Patent No. 414,602, dated November 5, 1889.

Application filed May 21, 1887. Serial No. 239,013. (No model.)

To all whom it may concern:

Be it known that I, JAMES STONE, a citizen of the United States, residing at Aurora, in the county of Kane and State of Illinois, have invented a certain new and useful Improvement in Button-Hole Strips and Making Button-Holes, which is fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 is a face view of a strip in the first stage of manufacture, having the button-hole slits formed therein; Fig. 2, a similar view of the same at a more advanced stage, the slits being bound; Fig. 3, a similar view showing the completed strip applied to the garment; Fig. 4, a sectional view taken on the line 1 1 of Fig. 3; Fig. 5, a sectional view taken on the line 2 2 of Fig. 3, and seen in perspective; Fig. 6, a view of a modified form in the stage of manufacture corresponding to that shown in Fig. 1; Fig. 7, a view of the same in the stage corresponding to that shown in Fig. 2; Fig. 8, a detail sectional view taken on the line 3 3 of Fig. 7; Fig. 9, a detail sectional view taken on the line 4 4 of Fig. 7, and viewed in perspective; and Fig. 10, a detail sectional view of a modification of a portion of the construction shown in Fig. 5.

Like letters refer to like parts in all the figures of the drawings.

My invention relates to button-hole strips and to the art of making the same; and it has for its object to produce in a rapid and economical manner a practicable and durable button-hole strip.

To these ends my invention consists in certain improvements in the mode of making button-hole strips and in the article produced by said mode, which improvements I will now proceed to describe, and will then particularly point out in the claims.

In carrying out my invention a strip A, of cloth of any suitable texture and length, is slit transversely at predetermined intervals, the slits, as shown at *a* in Fig. 1, being formed by cutting in from one edge of the said strip some distance into but not entirely across the same. A binding B is then applied to the edges of each slit *a*, being preferably of cloth folded longitudinally to receive the edge of the slit within the fold, and being secured by means of a line of stitching *b*. In the form shown in Figs. 1 to 5, inclusive, of the drawings this binding B is formed of a single piece, and is curved around the inner end of the slit *a*. If desired, however, I may form at the inner end of the slit *a* a slit *a'*, transverse thereto, as shown in Fig. 6 of the drawings, and in this case the binding consists of separate strips B'. These strips are arranged one on each side of the slit *a*, each strip being folded so as to embrace the edge of the slit from the margin of the strip A to the transverse slit *a'*, at which point the under portion of the binding-strip B' is brought through the slit *a'* to the upper side of the cloth, as shown in Figs. 7, 8, and 9. Lines of stitching *b'* serve to secure the binding-strips B' in position, these lines also closing the slits *a'* in an obvious manner. By this construction I am enabled to avoid the increase in bulk caused by the curving of the cloth around the end of the slit in the construction shown in Figs. 2 and 3.

The strip in the form shown in Figs. 2 and 7 may be attached to the garment in that form, the edge where the slits *a* terminate being sewed onto or sewed into the fabric in any suitable manner. In practice, however, I prefer to close the slits *a* by stitching to the said edge a binder C, of any suitable fabric or material, folded longitudinally to receive the edge of the strip A, and secured by means of a line of stitching *c*. In this case the button-hole strip is preferably secured to the garment D by its other edge, which, as shown in Figs. 3 and 5 of the drawings, is secured between the layers *d* of the fabric composing the garment by means of a line of stitching *d'*. The strip may of course be secured to the garment in any suitable manner, and by either edge.

In order to provide a strengthening device for that end of the button-holes against which the strain of the buttons comes, when the garment is in use, I employ, to form an abutment for the buttons, a cord E, extending along the outer edge of the strip A, parallel

to said edge, and crossing the button-holes in the manner shown. This cord is preferably secured to the strip in the manner shown in Figs. 3 and 5 of the drawings, in which the binder C is first folded upon itself longitudinally, the cord being placed within the fold, after which the free ends of the binder are folded around the edge of the strip A, so that the line of stitching *c* passes through the whole and secures both the binder and the cord E in position. This is, however, but one way of securing this cord to the strip, as it may be secured in the manner shown in Fig. 10, in which it is shown as stitched to the strip A independently of the binder C.

In order to prevent the button-hole strip A from being either inserted too far into the garment D or allowed to project too far therefrom, I employ a gage-strip F, consisting, preferably, of a corded longitudinal strip stitched to the button-hole strip A, and serving to accurately gage or determine the precise position of the said strip during the operation of connecting the same to the garment. This device, however, forms the subject-matter of a separate application filed May 17, 1887, No. 238,447, and I make no claim to the same in the present application.

It will be seen that by the method which I have devised, and by the construction produced thereby, I am enabled to provide a simple, strong, and effective button-hole strip, which can be made at a minimum cost of material and labor, the whole being adapted to be constructed upon an ordinary sewing-machine, without necessitating the employment of special devices or specially-trained labor.

It is obvious that various modifications, both in the process described and in the resulting product, may be made without departing from the principle of my invention; and I therefore do not wish to be understood as limiting myself strictly to the precise details hereinbefore described, and shown in the drawings.

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

1. The hereinbefore-described mode of making button-hole-strip blanks, which consists in slitting transversely a suitable strip of cloth or other fabric at intervals by cutting into the same from one edge partly but not entirely across the said strip, substantially as and for the purposes specified.

2. The hereinbefore-described mode of making button-hole-strip blanks, which consists in slitting transversely a suitable strip of cloth or other material at intervals by cutting into the same from one edge partly but not entirely across the said strip and then applying to the edge of the slit a suitable binding, substantially as and for the purposes specified.

3. The hereinbefore-described mode of making button-holes, which consists in slitting transversely a suitable strip of cloth or other material at intervals by cutting into the same from one edge partly but not entirely across the said strip and then sewing the said edge to a suitable base or binding, substantially as and for the purposes specified.

4. The hereinbefore-described button-hole-strip blank, consisting of the strip A, having transverse slits *a* extending from one edge partly across the strip, substantially as and for the purposes specified.

5. The hereinbefore-described button-hole-strip blank, consisting of the strip A, having transverse slits *a* at suitable intervals extending from one edge partly across the said strip, the edge of each slit being provided with a suitable binding, substantially as and for the purposes specified.

6. The hereinbefore-described button-hole strip, consisting of the strip A, having a series of transverse slits *a* at suitable intervals extending from one edge of the strip partly across the same, in combination with a suitable binding for the edge of each slit and a continuous binder C, extending along the slitted edge, embracing the same and secured thereto by a line of stitching *c*, substantially as and for the purposes specified.

7. The combination, with a button-hole strip, of a continuous abutment for the buttons, extending along the free margin of the strip transversely to the button-holes and over the same, substantially as and for the purposes specified.

8. The combination, with the button-hole strip A, provided with a series of button-holes, of the cord E, suitably secured to the said strip near its free margin and extending parallel to the said margin and transversely to the button-holes and over the same, substantially as and for the purposes specified.

JAMES STONE.

Witnesses:
IRVINE MILLER,
ORSON H. BROOKE.