(No Model.)

A. M. HEATH.
BUTTONHOLE CASING.

No. 604,470.

Patented May 24, 1898.

Fig. 1,

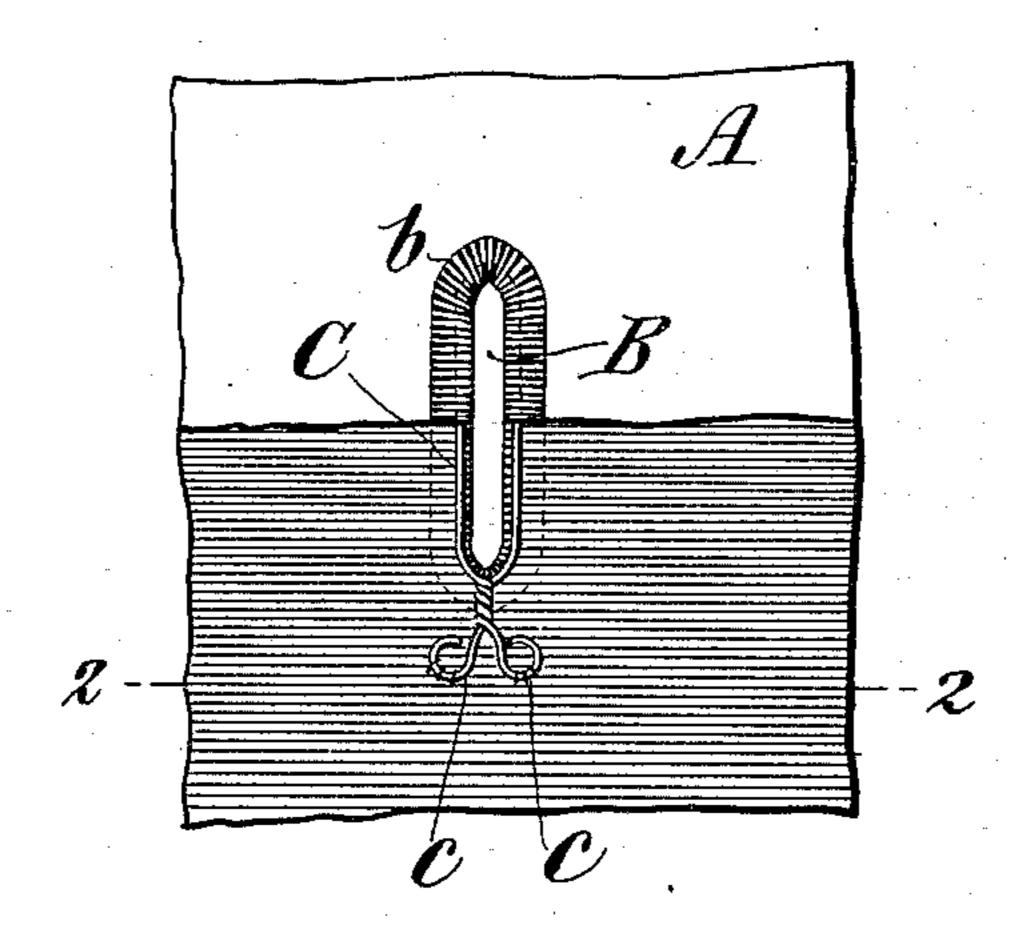


Fig.Z,

WITNESSES:

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inventoria Heath.

BY Witter & Kluyon ATTORNEYS

THE NORRIS PETERS CO. PHOTO-LITHO., WASHINGTON, O. C.

## United States Patent Office.

ANNIE MARIA HEATH, OF LONDON, ENGLAND.

## BUTTONHOLE-CASING.

SPECIFICATION forming part of Letters Patent No. 604,470, dated May 24, 1898.

Application filed September 17, 1896. Renewed April 23, 1897. Serial No. 678,668. (No model.)

To all whom it may concern:

Be it known that I, Annie Maria Heath, a subject of the Queen of Great Britain, residing at 14 Colville Mansions, Bayswater, London, England, have invented certain new and useful Improvements in the Construction of Buttonholes, of which the following is a specification.

This invention relates to improvements in 10 the construction of buttonholes and studholes, and especially those used in wearingapparel; and it consists of the construction hereinafter pointed out. As ordinarily made in wearing-apparel buttonholes and stud-15 holes are provided with a row of stitching around the edge to prevent tearing of the fabric and to preserve the shape of the buttonhole. It is well known, however, that this row of stitching soon wears out or tears the 20 fabric around the hole, especially at that part of the hole where comes the greatest strain or wear. In many cases, and especially in the case of small buttonholes in thin goods, the stitching is entirely unable to preserve 25 the shape of the buttonhole when the buttonhole is under strain, and thus the button easily slips out; and in starched articles such as shirts, collars, cuffs, &c.—the button and stud holes quickly wear out beyond re-30 pair in the process of laundering. Attempts have been made to overcome these defects by providing the button and stud holes with shields; but these are generally cumbersome and require extra labor and additional fas-35 tening means to secure them in place and in many cases cause an inconvenient thickness, which makes these shields objectionable and in many cases entirely unsuitable, as in shirts, collars, cuffs, &c.

In accordance with this invention I greatly strengthen and preserve the shape of the buttonhole or stud-hole by very simple means that does not require extra labor or extra fastening means to secure it in place and need not occasion any inconvenient thickness of the fabric in which the buttonhole or stud-

hole is made.

Referring now to the drawings, showing several embodiments of my invention, form-

ing part of this specification, and in which 50 like letters of reference designate corresponding parts in both figures—

Figure 1 is a plan view, partly broken away, showing one embodiment of my invention. Fig. 2 is a sectional elevation on the 55

line 2 2 of Fig. 1.

A is a piece of fabric in which is formed the buttonhole B, made in accordance with my invention. This fabric may be made of one or more layers of material, and, as shown 60 in the drawings, especially in Fig. 2, it has three layers a',  $a^2$ , and  $a^3$ . The buttonhole B is cut in the usual way, and around its edge is run the ordinary row of buttonhole-stitching b. Inside of this stitching and held in 65 place thereby is a thin flexible metallic ring C, which may be made of a single strand of wire the ends of which, after being twisted together, are formed into separate loops c c, and these loops are stitched to the fabric, 70 preferably to the intermediate layer, if there be one, as in Fig. 2, so as to hold the ring in place while the buttonhole-stitching is being made. The presence of these loops or eyes is a great assistance in enabling the ready 75 stitching of the buttonhole, and especially where the wire is placed between two or more layers of fabric. The strain on the buttonhole, which has heretofore been almost, if not entirely, localized at one end of the button-80 hole, is by the employment of the metallic ring distributed to all parts of the buttonhole. The buttonhole is thus enabled to last much longer and to withstand much greater strain without damage to the fabric. Moreover, the 85 ring prevents the buttonhole-stitching from tearing the fabric, and when the stitching becomes worn out it can be repaired before damage is done to the fabric. The ring need not increase the thickness of the fabric at the 90 buttonhole or stud-hole even to the least appreciable degree nor interfere with the perfect laundering of the fabric. The ring should be made of or plated with a non-corroding metal, especially for wash goods, and instead 95 of being made of a single strand it may be made of several strands twisted together or otherwise built up. In order to prevent undue

thickness at the button or stud hole, the ring should be as thin and flat as possible consistent with durability, and it should be flexible.

What I claim as new, and desire to secure

5 by Letters Patent, is—

A fabric provided with a buttonhole or studhole, provided with the usual stitching, reinforced by a metallic ring composed of wire or similar material, the ends of said wire being

twisted together and formed into separate 10 loops or eyes c c, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ANNIE MARIA HEATH.

Witnesses:

FERDINAND J. HOLE, HARRY W. HUNTER.