

(No Model.)

J. BECK.

BUTTON HOLE IN INDIA RUBBER GOODS.

No. 308,029.

Patented Nov. 11, 1884.

Fig. 1

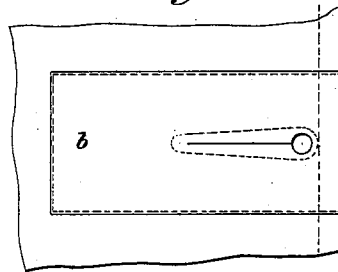


Fig. 2

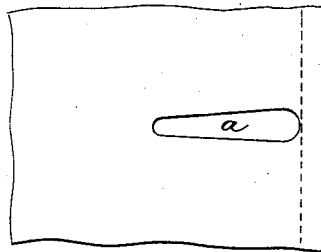


Fig. 3

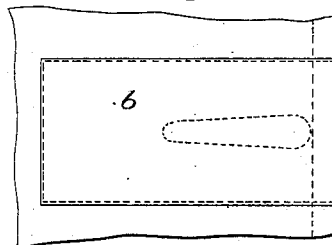


Fig. 4



Fig. 5



Fig. 7

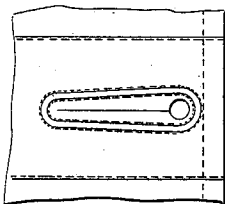


Fig. 6

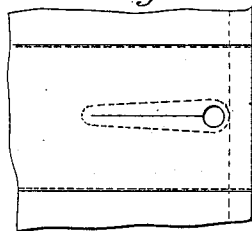
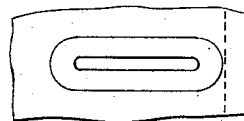


Fig. 8



Fig. 9



Witnesses.
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UNITED STATES PATENT OFFICE.

JOSEPH BECK, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO THE METZGER RUBBER CO., OF SAME PLACE.

BUTTON-HOLE IN INDIA-RUBBER GOODS.

SPECIFICATION forming part of Letters Patent No. 308,029, dated November 11, 1884.

Application filed April 7, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH BECK, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Button-Holes in India-Rubber Goods; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a portion of an india-rubber article showing the button-hole complete; Fig. 2, the hole cut in the rubber fabric preparatory to binding; Fig. 3, the overlay applied to the button-hole cut as in Fig. 2; Fig. 4, transverse section through the overlay and fabric; Fig. 5, section through the button-hole at right angles to the section Fig. 4; Fig. 6, the overlay or binding-slit through the hole; Fig. 7, the button-hole with a cord applied; Fig. 8, transverse section, and Fig. 9 face view, of a binding of pure rubber doubled around the edge of the hole.

This invention relates to an improvement in button-holes for india-rubber goods—such as coats and other articles where button-holes or holes of like character are desirable. In the more general construction of this class of button-holes the hole has been cut directly through the india-rubber coated fabric, leaving the edge of the fabric exposed. In some cases a cord has been introduced around the button-hole at a little distance from the edge; but in that case the raw edge of the material has been exposed, and so that the frequent buttoning of the garment will wear away the edge of the button-hole, soon giving to it a rough and unfinished appearance.

The object of my invention is to protect the fabric from which the button-hole is cut from such wear by presenting a pure-rubber edge to the button, and which will not “fray” out or wear away, as in the case of raw fabric, and in such a construction of button-hole, as more fully hereinafter described, and particularly recited in the claim, my invention consists. I first cut the button-hole *a* in the

50 fabric in the usual manner and as seen in Fig. 2. Then over this hole, and before vulcanization, I place a band, *b*, of clear rubber, as seen in Fig. 3, the button-hole indicated in broken lines. This band I turn around the edge of the article, and so as to cover both surfaces, as seen in Fig. 4, and press the two thicknesses of rubber together through the button-hole, as seen in Fig. 5, whereby they become firmly united as if the material within the hole were solid rubber. This done, before or after vulcanization I cut a slit in the hole, as seen in Fig. 6, and as indicated in broken lines, Fig. 5. This slit permits the introduction of the button through the hole. The pure-rubber material within the cut-away portion of the body of the article is elastic, and readily yields for the introduction of the button, and presents to the button a pure-rubber edge, which will not wear away from the constant buttoning and unbuttoning as will the edges of the fibrous material, this rubber band or covering forming a pure-rubber binding around the button-hole, which protects the edge of the body of the material.

To strengthen the button-hole a cord may be laid around the edge of the hole, as seen in Fig. 7, then the band laid over this and closed within the cord, as before, and the slit cut therein in like manner.

Instead of binding the edge of the hole by means of a strip upon the two sides united through the hole, it may be made by doubling a strip of pure rubber around the edge of the button-hole, as seen in Fig. 8, this strip overlapping both sides of the material around the hole, and as seen in Fig. 9, the binding being secured by the process of vulcanizing the article, and whereby it becomes substantially an integral part of the article or garment in which the button-hole is made. By this construction the button-hole is not only securely protected, but is elastic. The cost of the binding is very little, not sufficient to add to the price of the article.

The strips, bands, or binding-pieces may be made of ornamental shape, so as to appear as an ornament around the button-hole.

By the term “pure rubber” I wish to be

understood as using that term in its general sense as meaning the gum alone in contradistinction to fabric coated with gum.

I claim—

- 5 The herein-described improvement in the manufacture of rubber goods provided with button-holes, consisting in applying a binding

of pure rubber inclosing the edge of the button-hole and secured in the process of vulcanization, substantially as described.

JOSEPH BECK.

Witnesses:

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J. H. SHUMWAY.