

March 22, 1927.

H. J. MOORE

1,622,250

FABRIC

Filed May 15, 1925

Fig. 1.

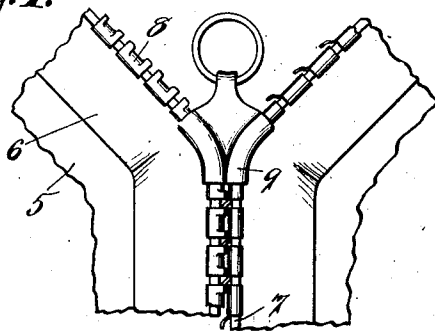


Fig. 2.

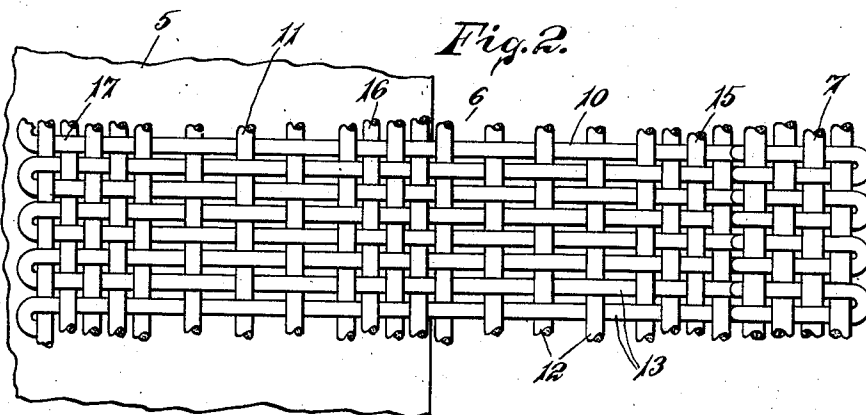


Fig. 3.

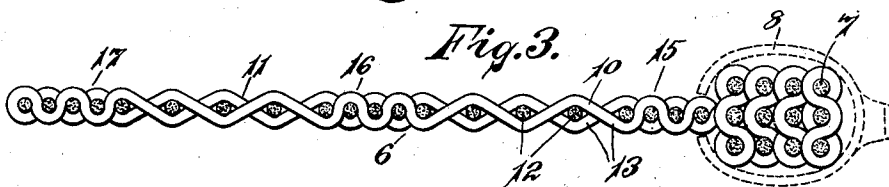
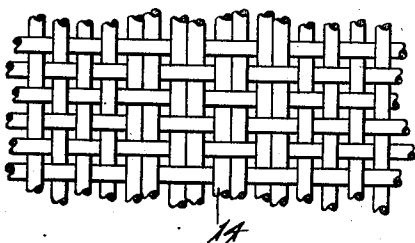


Fig. 4.



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UNITED STATES PATENT OFFICE.

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FABRIC.

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My invention relates to that class of fabrics that are more commonly employed at the meeting edges of material for closing openings, as in overshoes, garments and the like, and an object of my invention, among others, is the production of a fabric that shall possess extreme durability and, therefore, that will effectually withstand the severe conditions placed upon it under ordinary use.

A fabric embodying my invention and in the construction and use of which the objects herein set out, as well as others, may be attained, is illustrated in the accompanying drawings, in which—

Figure 1 is a view illustrating the meeting edges of two pieces of material comprising my improved fabric.

Figure 2 is a face view, scale enlarged, of a fabric embodying my invention.

Figure 3 is a view in cross section through a portion of said fabric.

Figure 4 is a face view of a fabric embodying my invention in a slightly different form.

In order to clearly illustrate the invention it has seemed advisable to exaggerate the showing, especially as to Figures 2, 3 and 4, concerning the spaces between and the relative locations of the threads.

It is common practice at the present time to close the meeting edges of articles of wearing apparel and other devices by means of a metallic member that is slidably attached to guiding and locking strips, also usually of metal, that in some instances are fastened to comparatively narrow pieces separately formed and attached to the borders of the fabrics at such meeting edges, these guiding strips having interlocking means at certain points to secure such meeting edges after the slidable member has passed such points in its sliding movement. This means of fastening is commonly employed in overshoes and other articles of wearing apparel, as well as other devices. Those parts of the articles to which the closing members are attached are usually composed of fabric, and a difficulty has arisen in the use of this means of fastening, by reason of the breaking or tearing of the fabric adjacent to and outside of the edge of the guiding and locking strip. Further trouble has arisen by reason of a puckering of that portion of the bordering piece that is over-

lapped on and secured to the main fabric comprising the article provided with the closing means. This is especially true in the case of overshoes and other articles composed of a somewhat heavy fabric.

It is the purpose of this invention to overcome these difficulties by so constructing the fabric that this tearing or breaking under ordinary conditions of use and the puckering and unevenness of one piece secured to another will be eliminated. In effecting this purpose I provide a bordering strip of woven fabric that is attached to the edges of the fabric comprising the article to which the fastening device is to be attached, this bordering strip having a thickened edge to receive the fastening structure and an opposite or selvage edge to provide a finish. Between this border and selvage I provide a section or sections of a comparatively loose weave extending lengthwise of the strip, this section or these sections being bounded by stiffer and more rigid sections. There may be a single section loosely woven, pliable and flexible bounded by the stiffer border and selvage, or by a stiffer or more closely woven fabric between the bounding edge and loosely woven section or sections, and, as above mentioned, when more than a single loosely woven section is employed they will be supported by strips of the stiffer and more closely woven fabric. In prior structures in which there has been a thickened edge extending along the border, the body of the fabric has been uniformly woven from such thickened edge to the opposite or selvage edge. A result of this construction is that the entire body of the bordering strip is so stiff and unpliable that the forces applied to the sliding structures in fastening and unfastening the meeting edges of the article cause the fabric back of the thickened edge to be ruptured and broken with a result that the fastening soon becomes unfit for use.

I have found that by providing a yielding or flexible section or yielding and flexible sections back of the thickened edge which will yield and offer a certain flexibility in the operation of the fastening devices this liability to rupture is removed.

It has also been noted that in securing a bordering strip of a uniformly stiff weave to the fabric comprising the article as by means of an adhesive, which is a common method for securing the bordering strip in

place, the bordering strip becomes puckered and, therefore, uneven, and I have found that in the use of my improved fabric with a section or sections more flexible than the adjacent sections this liability to pucker is removed with a result that the bordering fabric may be nicely and evenly secured in place.

My improved fabric, constructed as hereinabove outlined, and having the advantages set forth, is illustrated in the drawings herein in which the numeral 5 indicates a portion of the main fabric of the article, as an overshoe, to which my improved bordering strip 6 is attached.

My improved fabric comprising this bordering strip may be woven in any desired manner and may embody any of the well known weaves employed in fabrics designed for certain uses, my invention residing in employing well known weaves for forming certain pliable and flexible sections relatively to stiff and comparatively unpliant sections, and it will, therefore, be noted that the invention is not limited to a fabric woven, as to the different sections, in any distinct manner.

My improved bordering strip comprises a thickened edge 7 that may be woven in any desired manner and that preferably comprises a plurality of layers of warp threads suitably united by filling or weft threads and to which thickened edge a row 8 of guiding and locking members are secured for the reception of a slidable member 9, the guiding and locking members being secured in place by bending them around the thickened edge.

Back of the thickened edge I provide one or more flexible sections 10-11 that may be obtained in any desired form of weave. As shown in Figure 2 this weave is obtained by locating the warp threads 12 at some distance apart and uniting them by weft threads 13 extended alternately over and under the warp threads. In the structure shown in Figure 4 the flexible sections 14 are obtained by a little different arrangement of the warp and weft threads, said threads being more closely arranged, but it will be understood that these flexible sections may be obtained by any desirable weave.

In the structure herein specifically set out a stiff supporting section 15 of ordinary weave is located immediately back of the border extending to the flexible section 10, and another stiff supporting section 16 is located between the flexible sections 10

and 11, a selvage 17 bordering the second flexible section 11, and as shown in Figure 2 of the drawing.

In this arrangement the flexible sections 10 and 11 serve to obviate the injurious effects which would otherwise exist by reason of the sliding movement of the member or slider 9 in fastening and unfastening the edges of the article, and the flexible sections 11 are additionally made use of to enable this portion of the fabric to be smoothly and evenly secured to the main fabric 5.

In accordance with the provisions of the patent statutes I have described the principles of operation of my invention, together with the device which I now consider to represent the best embodiment thereof; but I desire to have it understood that the device shown is only illustrative and that the invention may be carried out by other means and applied to uses other than those above set out.

I claim—

1. An article having an opening bordered at opposite edges by a structure of fabric having thickened edges, said fabric comprising stiff supporting sections extending lengthwise of the opening with a flexible section located back of said thickened edge and between said stiff sections, a mechanical closing device slidable in a direction lengthwise of said edges and having injurious effects of such sliding movement counteracted by said flexible section and a guiding member at said edge and upon which said closing device rides.

2. An article having an opening bordered at opposite edges by a structure of fabric having thickened edges, a plurality of loosely formed flexible sections separated by stiffer supporting sections all extending lengthwise of said opening, a mechanical closing device slidable in a direction lengthwise of said edges and having injurious effects of such sliding movement counteracted by said flexible sections and a guiding member at said edge and upon which said closing device rides.

3. A bordering strip comprising a fabric having a thickened edge, a plurality of loosely formed sections located back of said thickened edge and separated by stiffer supporting sections, a mechanical closing device slidable in a direction lengthwise of said edge and a guiding member at said edge and upon which said closing device rides.

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