

Jan. 9, 1940.

G. SUNDBACK

2,186,774

METHOD OF MAKING END STOPS FOR SLIDE FASTENERS

Filed Dec. 4, 1935

Fig. 1.

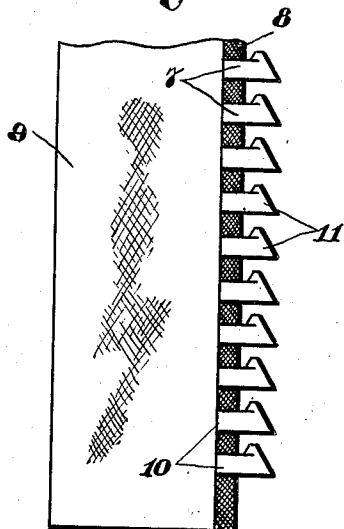


Fig. 2.

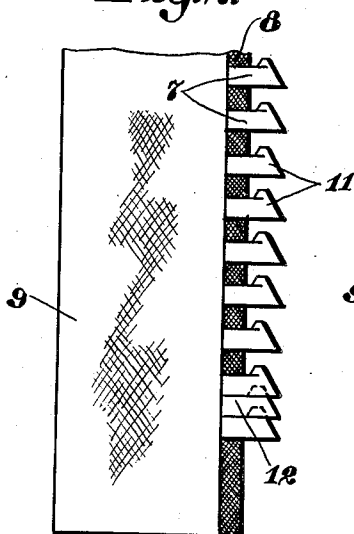


Fig. 3.

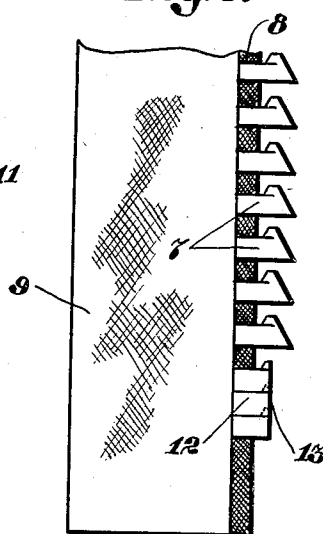


Fig. 4.

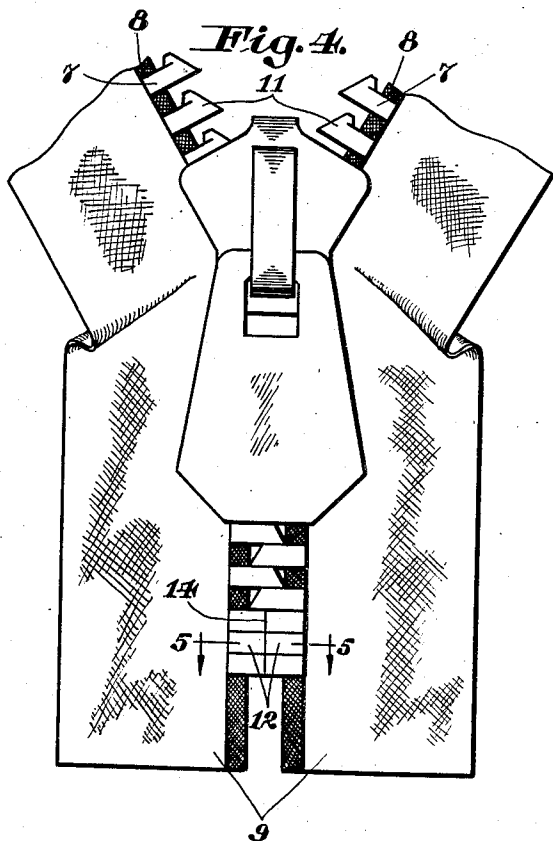


Fig. 5.

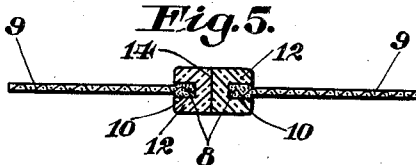
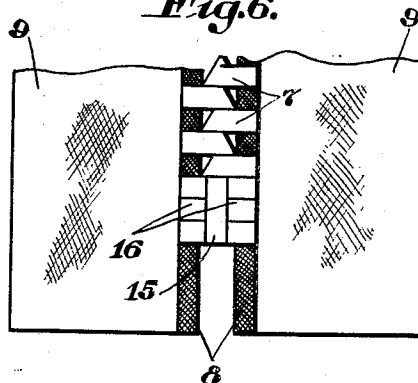


Fig. 6.



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UNITED STATES PATENT OFFICE

2,186,774

METHOD OF MAKING END STOPS FOR
SLIDE FASTENERSGideon Sundback, Meadville, Pa., assignor to
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Application December 4, 1935, Serial No. 52,837

3 Claims. (Cl. 18—59)

This invention relates to the separable fastener art and more particularly has to do with end stops for slide fasteners.

Among the objects of my invention are to provide an improved form of end stop which can be readily manufactured from non-metallic material, such as pyroxylin; and to provide an improved method of making end stops especially from pyroxylin material in which no additional machine is required for making the end stop members. Slide fasteners of the type in question usually comprise a pair of flexible stringers in the form of fabric tapes, to which are attached cooperating series of fastener elements uniformly spaced apart along the edges of the stringers.

In accordance with the invention one or more of the elements at the end of each series is made to fit directly against a similar element on the opposite series and such elements are stuck together in any suitable manner.

In the accompanying drawing I have shown for the purpose of illustration one preferred embodiment and a modification thereof which my invention may assume in practice. In the drawing:

Fig. 1 is a view of a typical fastener stringer before beginning the operations required to make the end stop;

Fig. 2 shows the same stringer with three of the fastener elements bunched together at the end of the series preparatory to making an end stop;

Fig. 3 is a similar view showing the heads of the bunched fastener elements cut off;

Fig. 4 is a plan view of a fastener with my improved end stop;

Fig. 5 is a cross-sectional view on line 5—5 of Fig. 4; and

Fig. 6 is a view showing a modified form of end stop.

My invention is particularly adapted for use in connection with the invention disclosed in the patent to Corner 1,920,138 in which the fastener elements consist of non-metallic material such as pyroxylin. In one practical method of manufacturing such fasteners the individual elements are cut to the desired shape and are then placed astride the beaded edge of a fabric stringer. The elements have U-shaped slitted ends which they are later secured to the tape and interlocking ends having any desired form for mutual interlocking with similar elements of a cooperating series. The formed fastener elements are first placed astride the edge of the tape in the relative positions shown in Fig. 1, and at

this stage the fastener elements may be easily shifted along the edge of the tape. According to the invention two or more of the fastener elements at the bottom end of the series are bunched together to provide the bunch. The heads of the fastener members are of such form that they will nest within one another when so bunched together. In order to make the bunched elements fit against a similar bunch of elements on the opposite stringer, the heads are cut off to provide the blunt surface as shown in Fig. 3, which is preferably perpendicular to the plane of the tape. This surface will abut against a similar surface on the opposite series of elements and in this position they can be directly stuck together by the use of suitable cement or solvent and the line of union is along the line 14, as shown in Fig. 4.

According to the modification as shown in Fig. 6, the elements are formed even shorter than shown in Fig. 3 and a supplemental member is inserted between the cut-off elements to unite them together. This supplemental piece may be softened with solvent and stuck firmly to the short bunched elements.

As a result of my invention an improved form of stop has been provided which is especially useful with fasteners made from pyroxylin material. Also an improved method of manufacturing end stops has been devised which is especially useful in connection with commercial methods of manufacturing pyroxylin fasteners.

While I have shown and described in this application one embodiment and a modification which my invention may assume in practice, it will be understood that this embodiment and modification are merely for the purpose of illustration and description, and that other forms may be devised within the scope of my invention as set forth in the appended claims.

What I claim as my invention is:

1. In the manufacture of slide fasteners of the type having flexible stringers and cooperating series of fastener elements arranged in uniformly spaced relation on adjacent edges of said stringers, that method of making end stops which comprises bunching a plurality of such elements at the end of the series, trimming off portions of the heads of said elements so that they will fit against similar elements on the opposite series, securing the bunched elements to their respective stringers, and sticking the bunched elements of one stringer to the bunched elements on the opposite stringer to make a permanent connection between the stringers.

2. In the manufacture of slide fasteners of the type having flexible stringers and cooperating series of fastener elements in uniformly spaced relation on the adjacent edges of said stringers, that method of making end stops which comprises arranging one pair of fastener elements adjacent the end of the stringer in opposed relation, and shaping the ends of such elements to provide abutting surfaces, securing the bunched elements to their respective stringers, and then sticking said abutting surfaces together.

3. In the manufacture of slide fasteners of the type having flexible stringers and cooperating series of fastener elements made from a soluble plastic material, and arranged in uniformly

spaced relation on adjacent edges of said stringers, that method which comprises placing a series of fastener elements in uniformly spaced relation on the edge of each of a pair of stringers, moving a plurality of the elements at the end of each series against each other, trimming off the heads of said members to provide a flat surface adapted to fit against similar bunched and trimmed elements on the opposite stringer, securing the bunched elements to their respective stringers, and sticking said elements of one stringer to the elements of the opposite stringer by the use of solvent to form in effect a solid binding member joining the ends of the two stringers.

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