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W. E. LAW

2,951,285

METHOD OF MAKING AN END STOP FOR SLIDE FASTENERS

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Fig. 1.

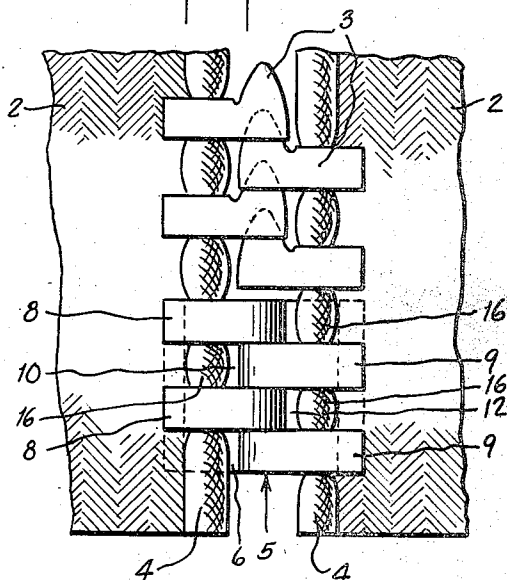


Fig. 2.

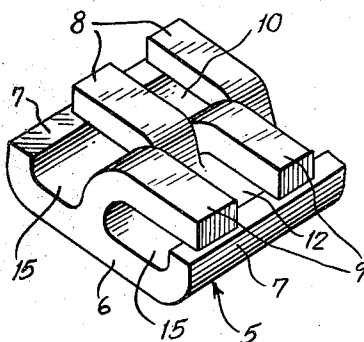


Fig. 3.

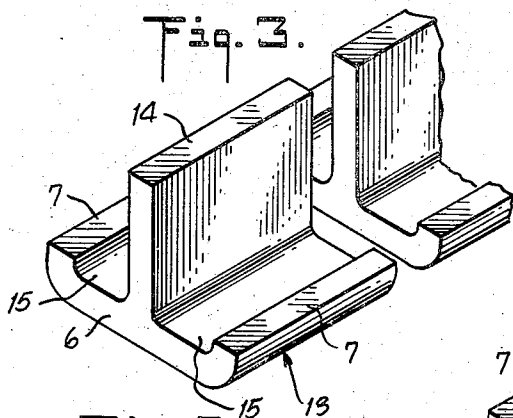


Fig. 4.

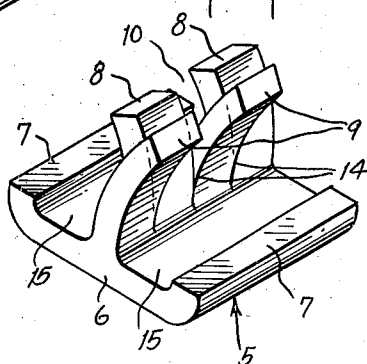
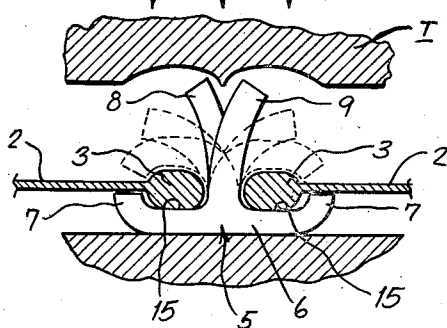


Fig. 5.



INVENTOR.
WILLIAM E. LAW
BY *R. E. Meech*
ATTORNEY

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METHOD OF MAKING AN END STOP FOR SLIDE FASTENERS

William E. Law, Meadville, Pa., assignor to Talon, Inc., a corporation of Pennsylvania

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2 Claims. (Cl. 29—408)

This invention relates to slide fasteners, and more particularly, to an improved end stop therefor and method of fabricating the same and attaching it to the stringer tapes of the fastener.

It is the general practice in the manufacture of slide fasteners, as is well known to those skilled in the art, to provide end stops at each end of the stringer tapes adjacent the endmost fastener element thereof for the purpose of limiting the opening and closing movement of the slider along the fastener. It is to an end stop positioned at the lower end of the fastener commonly known as a bottom stop that the present invention relates although it may be used at the upper end as a bridge stop if desired. Such a stop engages the beaded edges of the opposed stringer tapes thereby securing them together.

It is the general object of this invention to provide an improved method of fabricating and attaching a pre-formed end stop to the fastener stringer tapes which is simple and inexpensive and, at the same time, provides an end stop which is strong and rugged in its construction.

Various other objects and advantages of this invention will be more apparent in the course of the following specification, and will be particularly pointed out in the appended claims.

In the accompanying drawings, there is shown for the purpose of illustration, an embodiment which my invention may assume in practice.

In these drawings:

Fig. 1 is a fragmentary plan view of a slide fastener having the improved end stop of the present invention incorporated therewith,

Fig. 2 is a perspective view of the end stop of my invention showing the tines thereof substantially in the position they assume when the end stop is attached to the stringer tapes,

Fig. 3 is a perspective view of the end of the end stop stock showing an end stop blank cut therefrom,

Fig. 4 is a perspective view of my improved end stop member before it is attached to the stringer tapes, and

Fig. 5 is an end elevational view showing how my improved end stop is clamped to the beaded edges of the stringer tapes.

Referring more particularly to the drawings, there is shown in Fig. 1, a fragmentary view of a conventional slide fastener consisting of a pair of stringer tapes 2 having a series of spaced apart, interlocking fastener elements 3 attached to the opposed beaded edges 4 thereof. Adjacent the lowermost fastener elements 3 there is attached to the beaded edges 4 of the stringer tapes the improved end stop 5 of my invention.

As more clearly shown in Figs. 2, 4 and 5 of the drawings, the end stop of the present invention consists of a rectangular-shaped plate-like portion 6 having longitudinally extending marginal flanges 7. Centrally of this plate-like portion 6 there is arranged in staggered relation, a series of gripping tines or clamping finger-like portions 8 and 9, with the tines 8 extending in one direction and the tines 9 extending in the opposite direction, so as to

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provide spaces 10 and 12, respectively, therebetween. These tines 8 and 9 co-operate with the inner wall of the plate-like portion 6 and the marginal flanges 7 carried thereby to clamp securely the end stop to the beaded edges 4 of the stringer tapes. That is, the tines 8 co-operate with the inner wall of the plate-like member and marginal flange on one side thereof to clamp the end stop to the beaded edge 3 of one of the stringer tapes and the tines 9 co-operate with the inner wall and marginal flange on the opposite side of the plate-like portion 6 to clamp the end stop to the beaded edge of the other stringer tape thereby securely joining the stringer tapes together.

When the end stop is clamped to the beaded edges 4 of the stringer tapes, it will be seen that that portion of the beaded edges opposite the spaces 10 and 12 between the tines 8 and 9 will tend to expand into these spaces 10 and 12 thereby acting to prevent displacement of the end stop in a direction longitudinally along the stringer tapes which is an important aspect of the present invention.

My improved end stop may be fabricated in any suitable manner but it is preferably made from rolled metallic stock. The stock is first rolled to a substantially T-shape cross section, as shown in Fig. 3 of the drawings, and end stop blanks 13 of the desired length are then cut therefrom so as to provide a blank having a plate-like portion 6 with marginal flanges 7 and a longitudinally extending central rib-like portion 14. As shown in Fig. 4 of the drawings, this rib-like portion 13 of the blank is then cut at equally spaced apart intervals, as at 14, so as to provide the tines 8 and 9. The tines 8 are then bent slightly in one direction laterally of the blank and the tines 9 are bent laterally slightly in the opposite direction so as to provide a completed end stop member, as shown in Fig. 4.

To assemble the end stop member on the fastener chain the tines 8 and 9 are inserted and positioned between the opposed beaded edges 3 of the stringer tapes 2 with the beaded edges positioned in the channels 15 of the plate-like portion 6 on either side of the tines 8 and 9 and on the inner side of the marginal flanges 7, as shown in Fig. 5 of the drawings. In such position it will be seen that the plate-like portion 6 is disposed on one side of the beaded edges 3 of the stringer tapes and abutting the same with the tines 8 and 9 extending outwardly beyond the beaded edges on the opposite side thereof. The tines 8 and 9 are then bent inwardly toward the plate-like portion 6 by a suitable tool T, securely into engagement with the beaded edges 3 on the side opposite that from the plate-like portion 6 and into substantially parallelism therewith, as shown in the broken lines of Fig. 5. That is, the tines 8 are bent in one direction as before, and the tines 9 are bent in the opposite direction. As a result, it will be seen that there is provided a clamping action on the beaded edges of the tape by the co-operation of the tines 8 and 9 with the respective sides of the plate-like portion 6 so as to attach securely the end stop member to the beaded edges of the stringer tapes.

As a result of my invention, it will be seen that there is provided an end stop for slide fasteners which can be easily and inexpensively fabricated and attached to the stringer tapes. It will also be seen that the finger-like portions 8 and 9 in co-operation with the plate-like portion 6 effectively clamp the beaded edges of the stringer tapes. In so doing, it will be seen that the beaded edge portions of the tape opposite the spaces 10 and 12 between the finger-like portions 8 and 9, respectively, will tend to expand in the respective spaces, as at 16, thereby further acting to prevent accidental displacement of the end stop downwardly along the beaded edges of the tapes.

While I have shown and described an embodiment which my invention may assume in practice, it will be understood that this embodiment is merely for the pur-

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pose of illustration and description, and that other forms may be devised within the scope of my invention as defined in the appended claims.

What I claim as my invention is:

1. The method of forming an end stop for slide fastener tapes for limiting the movement of the slide therealong which comprises providing a body member substantially T-shape in cross-section having a plate-like portion with marginal flange portions and a plurality of finger-like portions arranged centrally thereof and extending outwardly therefrom so as to provide a channel to either side thereof, inserting the finger-like portions between the opposed beaded edges of the fastener tapes so that said plate-like portion is disposed on one side thereof with the beaded edges positioned in said channels, and finally bending 15 alternate finger-like portions in opposite directions substantially at their junction with said plate-like member around and into engagement with said beaded edges into substantially parallelism with said plate-like portions to clamp securely the beaded edges in said channels and whereby a space is provided between adjacent finger-like portion opposite the respective beaded edges into which spaces the beaded edges are adapted to expand to aid in preventing longitudinal displacement of the end stop along the fastener tapes. 20

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2. The method of forming an end stop for slide fasteners which comprises providing a body member substantially T-shaped in cross section having a plate-like portion and marginal flange portions arranged therealong and a central rib-like portion extending outwardly therefrom substantially perpendicular thereto so as to provide a channel to either side thereof, cutting the rib-like portion at spaced intervals transversely thereof so as to provide a series of adjacent finger-like clamping portions, and finally bending the finger-like portions alternately in opposite directions toward said plate-like portion. 25

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