Oct. 24, 1950 A. E. CARLILE 2,526,802

SLIDE FASTENER STOP BLANK

Filed Nov. 26, 1948

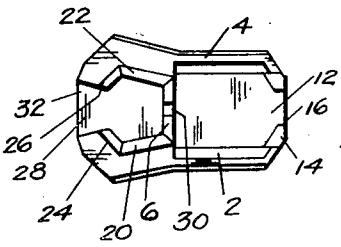


Fig. 1

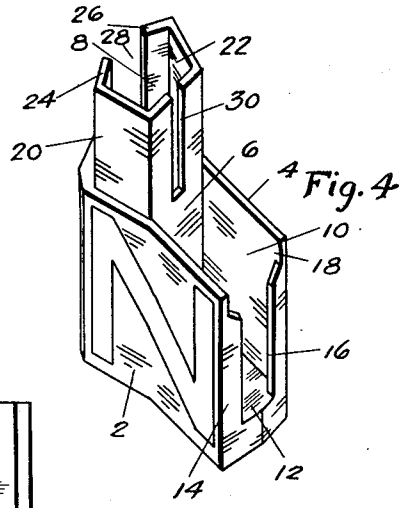


Fig. 4

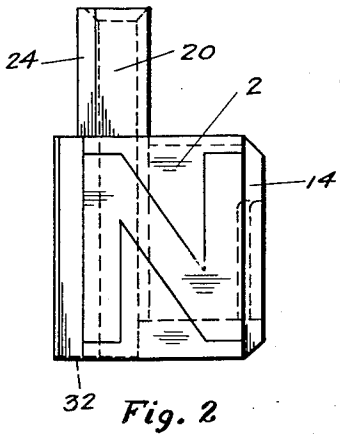


Fig. 2

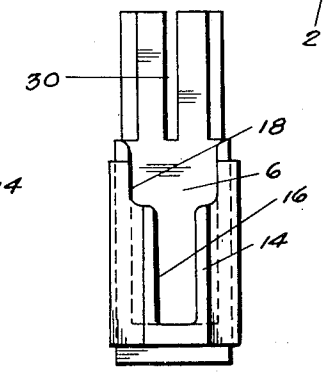


Fig. 3

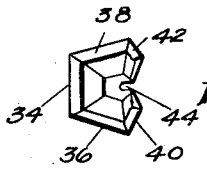


Fig. 6

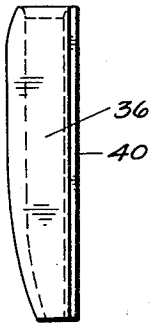


Fig. 5

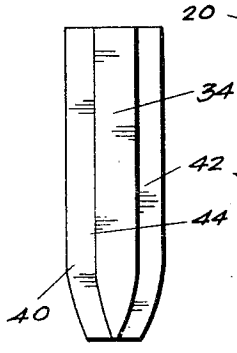


Fig. 7

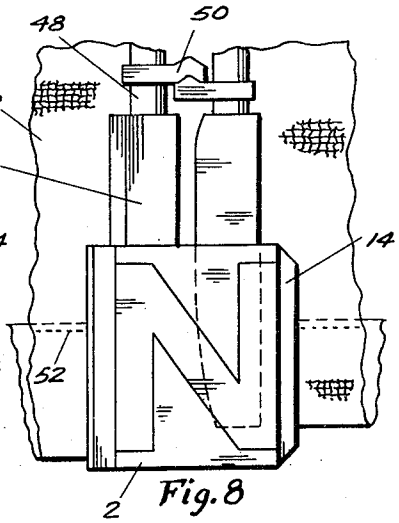


Fig. 8

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SLIDE FASTENER STOP BLANK

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1 Claim. (Cl. 29—190)

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The invention relates to slide fasteners, and more especially to the production of separable bottom end stops for such fasteners.

The primary object of the invention is to provide a separable bottom end stop construction for slide fasteners which is economical to manufacture, easy to assemble and effective in operation.

Another object of the invention is to provide a construction of this type the parts of which are die cast.

A further object of the invention is to provide, in a device of this type, a female member having means thereon for frictionally holding a slider in position when the two parts are being coupled by the user.

Still another object of the invention is to provide male and female members for a device of this type, in which there are channels for receiving the beads of the tapes, these channels being substantially closed at their lower ends, at least before assembly on the tape, so that, in assembling the parts on the tapes, the beads of the latter may be slid in as far as they will go, and then clamped on the tapes, eliminating the necessity of exact positioning of the parts on the tapes during this part of the manufacture of a complete slide fastener.

More especially, and particularly in connection with the female member, the invention contemplates that, during the die casting thereof, there shall be left across the lower end of the bead-receiving channel a thin flashing, enough to stop the movement of the tape into the channel during assembly, but thin enough to be crushed when the channel is compressed to secure the element on a tape.

Further objects and advantages of the invention will appear more fully from the following description, especially when taken in conjunction with the accompanying drawings which form a part thereof.

In the drawings:

Fig. 1 is a top plan view of a female member produced according to the invention, the member being shown as cast and before application to the tape bead;

Fig. 2 is a side elevation thereof;

Fig. 3 is an end view thereof, from the right-hand side of Fig. 2;

Fig. 4 is a perspective view thereof;

Fig. 5 is a side elevation of the male member, also as cast and before application to the tape;

Fig. 6 is a top plan view thereof;

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Fig. 7 is an end view thereof, from the right hand side of Fig. 5; and

Fig. 8 shows in side elevation the male and female members assembled on their tapes and coupled, the slider being omitted for clarity.

The female member, as die cast, includes spaced front and back walls 2, 4 connected by a transverse wall 6 separating recess 8 which is to receive the bead of the tape from recess 10 for the male member. The recess 10 has a relatively thick bottom wall 12, and inwardly directed flanges 14 leaving between them a slot 16. The upper portion 18 of this slot is wider than the lower part, since the flanges 14 are not as high as the front and back walls 2, 4.

The tape receiving portion of the female member, as cast, has the portions of walls 2, 4 divergent. These walls are considerably thicker than the portions defining well 10, and have thinner upward extensions 20, 22, of the same height as wall 6. Well 8 is further enclosed by flanges 24, 26 of the same thickness as the corresponding portions of walls 2, 4, these flanges leaving between them a slot 28. The portion of wall 6 above the main walls 2, 4 also has a vertical slot 30 extending downward from its top edge.

During the casting of the female member, the dies are so arranged (as, for example, by leaving the block which forms well 8 slightly above the block on which the bottom of the member is formed) as to leave a thin flashing 32 across the bottom of well or recess 8. This flashing is of such thickness (for example, five one-thousandths of an inch) that it will stand a moderate manually exerted pressure, as when an assembler inserts the end of a tape until it abuts against the flashing, but is weak enough to yield and be crumpled up when the assembled parts are acted on by a crimping machine to clamp the female member on a tape.

The arrangement thus provided thus forms a pair of polygonal recesses or wells for the tape and the male member.

The male member (Figs. 5 to 7) is also polygonal in cross-section. It is formed of a side wall 34, front and rear walls 36, 38, divergent from one another when cast, and flanges 40, 42 leaving between them a slot 44. Wall 34 has an inward taper at the top (Fig. 5). All the walls converge towards the bottom, so that the bottom of the channel formed by the walls is substantially closed.

In assembling a slide fastener embodying the units hereinbefore described, a tape 46 having a bead 48 and suitable fastener elements 50 is folded

at a predetermined distance below the lowest fastener element, the fold being held by stitching 52. To this end of the tape is applied the female element, the bead extending into channel 8 and the tape lying in slot 28. When the folded end of the bead strikes flashing 32, the upper end of the female element will be spaced just the proper distance below element 50. The assembled parts are then placed in a suitable device which clamps the walls of the channel 8 against the bead, the walls then lying substantially parallel and the edges of the flanges 24, 26 substantially engaging tape 46 between them.

The assembly of the male member on the tape is accomplished in a generally similar manner. The folded tape is then inserted from above until the bead, because of the substantially closed bottom of the male member, can move no further, and the male member is then clamped on the bead, the front and rear walls then occupying substantially parallel positions, and the edges of flanges 40, 42 clamping the tape. The first fastener element will then occupy the proper position with respect to the upper end of the male element.

When the female element is thus clamped on the tape, the projecting upper portion will have parallel walls on each side of the tape and on the front and rear faces thereof. The latter walls are longitudinally split. Thus when a slider is moved downward until its wings engage over the projection, it will, if the thickness of its channel is slightly less than the thickness of the projection, clamp the two divided parts of the projection towards each other. This will cause the slider to grip the projection frictionally, so as to lessen the danger of accidental upward displacement while the male member is being inserted through the slider into the female member. The proper operation of the separable bottom stop is thus made easier and more certain.

As will be evident from the foregoing, my invention facilitates the assembly of the parts of a separable bottom stop fastener, since the proper location of the male and female members on the tapes is assured simply by locating the lower edges of the tapes (as by folding or cutting) at the proper distance below the fastener elements 50. No special gauging of distance during the clamping of the elements on the tape is then necessary.

While I have described herein one embodiment of my invention, I wish it to be understood that I do not intend to limit myself thereby except within the scope of the claims hereto or hereinafter appended.

I claim:

In a die-cast element for application to a tape having a bead thereon as one of the elements of a separable bottom stop of a slide fastener, means forming a tape bead receiving channel having walls adapted to be clamped together on a tape bead, and means substantially closing the lower end of said channel so as to limit the introduction of a tape bead into the channel during the assembly of the element on the tape, said closing means comprising a thin flashing which crumples when said walls are compressed to clamp a tape in said channel.

ALFRED E. CARLILE.

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