Jan. 14, 1941. G. N. THOMPSON 2,228,422

SEPARABLE SLIDE FASTENER

Filed Feb. 23, 1939

Fig. 1.

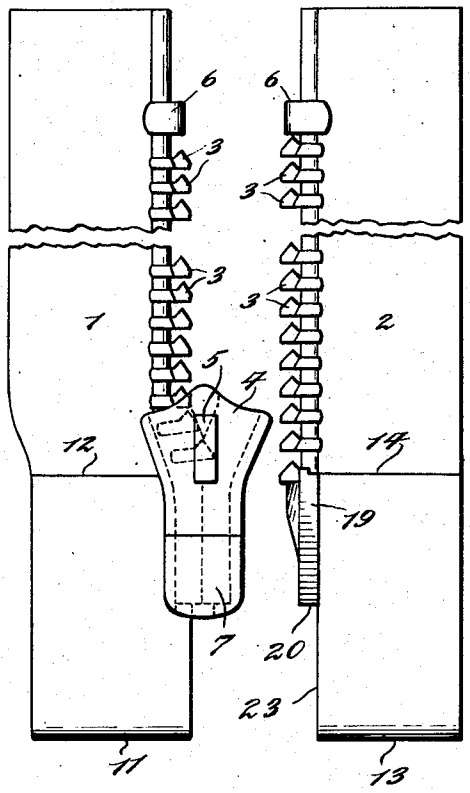


Fig. 2.

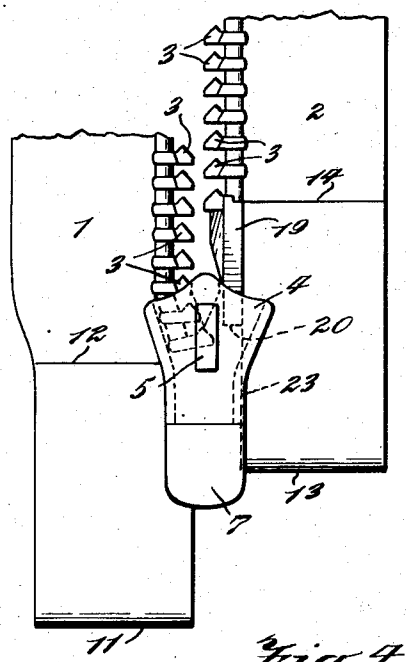


Fig. 3.

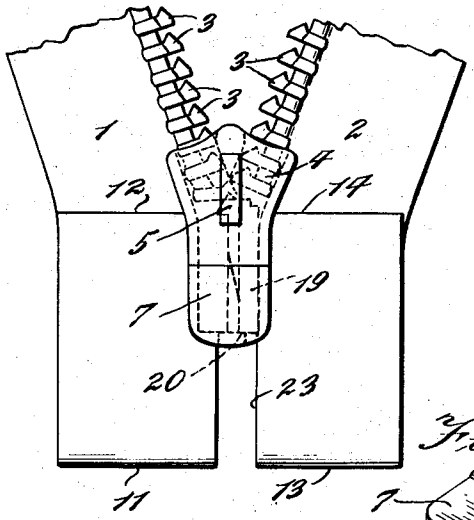


Fig. 4.

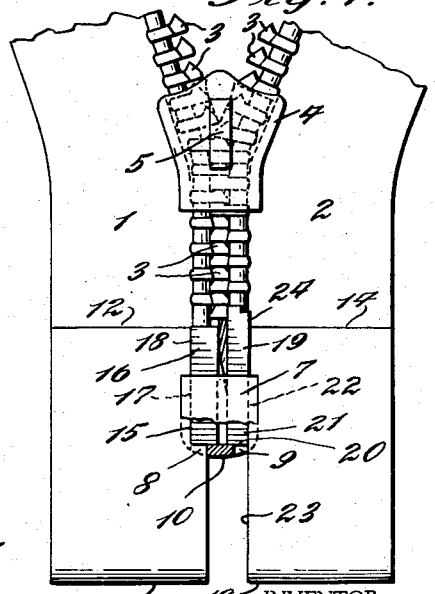
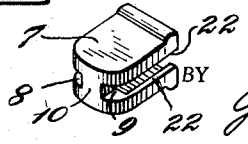


Fig. 5.



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Patented Jan. 14, 1941 2,228,422

UNITED STATES PATENT OFFICE

2,228,422

SEPARABLE SLIDE FASTENER

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Application February 23, 1939, Serial No. 257,902

1 Claim. (Cl. 24—205)

This invention relates to a novel and improved form of separable slide fastener, the novel features of which will be best understood from the following description and the annexed drawing, in which I have shown a selected embodiment of the invention and in which:

Fig. 1 is a vertical view of a slide fastener constructed according to my invention, showing the two stringers separate from each other;

Fig. 2 is a fragmentary view similar to Fig. 1 but showing the stringers in position where they are about to be connected by the bottom end stop;

Fig. 3 is a view similar to Fig. 2 but showing the stringers connected by means of the end stop;

Fig. 4 is a view similar to Fig. 3 but showing the slider after it has been slid upwardly away from the bottom end stop to connect certain of the fastening elements;

Fig. 5 is a perspective view of the bottom end stop disconnected from both stringers.

The invention is used on a separable fastener of the type comprising two stringers 1 and 2, which are usually of tape, and upon the beaded edges of which are mounted fastening elements 3, which may be of any usual or desired construction and which are caused to engage or disengage from each other by means of a slider 4 which moves over the fastening elements lengthwise of the stringers, as is well known in the art. The slider is shown as provided with a lug 5 on one surface thereof, this lug usually having a handle pivoted thereto for actuation of the slider. Since the showing of this handle is not necessary to an understanding of this invention, it has been omitted.

Separable fasteners of the class described are usually also provided with top end stops 6 to prevent the slider from becoming displaced from the fastener, and have also been provided with bottom end stops for the same purpose. In this connection it will be noted that the part of the slider shown at the upper end of Fig. 1 will be referred to as the top and that the part shown at the bottom of that figure will be referred to as the bottom part, this being the conventional way of referring to the slider and its parts, although it is to be understood that the invention is not limited by the use of that conventional language. The bottom end stop sometimes connects the two stringers permanently together, but my invention refers to the type of fastener which is entirely or completely separable and which is used, for example, on such articles of wearing apparel as coats where it is necessary or at least desirable that the two stringers shall be entirely disconnected from each other when desired.

In completely separable fasteners of the class described, it has been common practice to use a bottom end stop permanently secured to one stringer below the fastening elements on that stringer and to make this end stop of such construction that both stringers terminate at the end stop. This arrangement presents the disadvantage that when the stringers are sewn in place, for example on a garment, there is an insufficient length of stringer to firmly anchor the stringers to the garment. The portion of the fastener at and adjacent the bottom end stop is the part which gets probably the most severe treatment in the way of strain and it has been a common practice to secure the lower ends of the stringers to the garments by special devices. For example, it has been the practice to provide the bottom ends of the stringers with metal flanges adjacent the bottom end stop and to secure these flanges in place by riveting to the garment. While this arrangement and others may be efficient so far as strength is concerned, nevertheless the result is unsightly and, of course, is expensive as well.

The above objections have been overcome according to my invention by providing a special form of bottom end stop designated by the numeral 7 and in which there are provided opposite slots 8 and 9 extending completely through the bottom 10 of the stop so that the stringers 1 and 2 may extend a substantial distance beyond the bottom 10 of the end stop. For example, in the illustrated embodiment, the stringer 1 is extended through the slot 8 and then is folded back on itself at 11 and brought back through the same slot, the end of the stringer being shown at 12, but the effective end thereof being at 11. Similarly, the stringer 2 is of substantially the same length as the stringer 1 and is folded back at 13 and its end is brought to a point indicated at 14.

The slot 8 forms a continuation of a socket 15 in the end stop 7, which socket receives a pin 16 engaging a shoulder formed by the bottom 10. This pin may be die cast or otherwise secured on the beaded edge of the stringer, or, in the alternative, the bead on the stringer may stop adjacent the upper or lower end of the pin 16 and then the stringer below the pin may be beadless, as indicated in the selected embodiment. The pin 16 is permanently secured in place in the socket 15 so that the end stop 7 is permanently secured in place on the stringer 1, but with that stringer extending a substantial distance below the bot-

tom of the end stop. Of course, it will be understood that the socket 15 is provided with the usual flanges 17 to engage the outer edges 18 of the pin 16.

The stringer 2 is provided with the usual pin 19 which may be die cast or otherwise secured to the beaded edge of the stringer and then the stringer below the pin may be beadless, as indicated, but will extend a substantial distance below the lower end 20 of the pin 19, as plainly shown.

The pin 19 is received within a socket 21 of the end stop when the stringers are attached, this socket being provided with the usual flanges 22 to engage the edges 24 of the pin 19. The bottom of the socket 21, however, is open because of the slot 9, but the bottom 10 still provides a shoulder against which the end 20 of the pin 19 will come to rest, as best shown in Fig. 4.

By the above described arrangement, it is possible to provide a fastener with a completely separable end stop and at the same time provide adequate means for securely stitching or otherwise securing the stringers in place on a garment or the like. The folded over end portions of the two stringers may be cemented or otherwise secured together in such a way that the stitches may pass easily therethrough and thus the two stringers may be stitched in place with a minimum of effort and with a maximum of efficiency and in such a way as to positively and firmly secure the stringers adjacent the bottom end stop. At the same time the stringer 2 does not interfere with the operation of coupling and uncoupling the end stop 7 and pin 19. For example, as shown in Fig. 2, when the pin 19 is inserted in the usual way in a channel in the slider 4, the edge portion 23 of the stringer below the pin is in such position as not to interfere with the operation. That is to say, by removing the bead below the end 20 of the pin, it is not necessary to thread the bead or in fact any part of the stringer through the channel of the slider or, for that matter, through the socket 21 in the end stop, although, as shown in Figs. 3 and 4, this edge portion 23 may be received between the flanges 22.

The principal advantages of the invention have been pointed out above and those which have not been specifically mentioned will be apparent to those skilled in the art. I am aware that various changes in details may be made and therefore I do not intend to limit myself except by the appended claim.

I claim:

In a separable slide fastener of the type comprising two stringers having fastening elements thereon connected or disconnected by a movement of a slider, a bottom end stop permanently secured to one of said stringers below the lowermost fastening element on that stringer, said stop having openings in the bottom thereof and said stringers extending through said openings for a substantial distance below the bottom of said stop, and pins on the edges of said stringers and received in sockets in said stop, said openings forming continuations of said sockets, at least one of said sockets having a shoulder at the bottom thereof to engage the end of the pin in that socket.

GEORGE N. THOMPSON.