July 18, 1950 A. HASWELL 2,515,557

OPERATING DEVICE FOR SLIDE FASTENERS

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Fig. 1

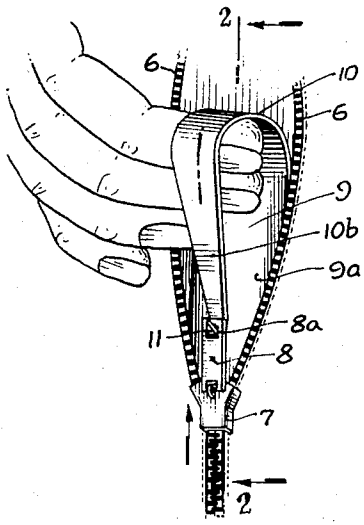


Fig. 2

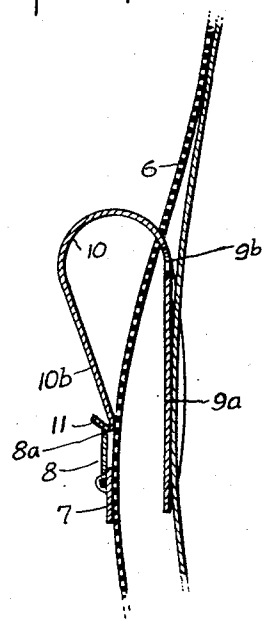


Fig. 3

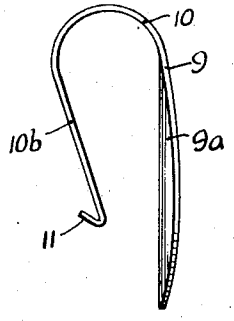


Fig. 4

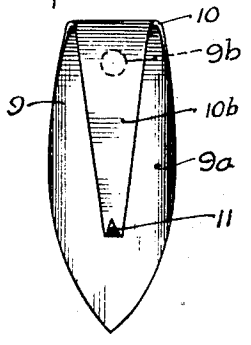
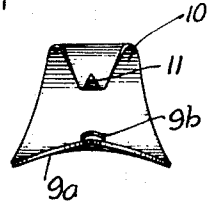


Fig. 5



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OPERATING DEVICE FOR SLIDE FASTENERS

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3 Claims. (Cl. 24—205.15)

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This invention relates to devices for facilitating the operation of slide fasteners and refers more particularly to a device including in combination a shield for preventing the fastener elements from entanglement with soft materials which might protrude between the fastener elements and a handle for the operating tool.

This type of fasteners for openings in materials such as fabrics, leather and the like have become very popular, but nevertheless, they are in some instances difficult to operate, due primarily to the shortness of the usual pull tab found upon the slider and due to the fact that soft materials such as, for example, underclothing or even the skin of the wearer of garments has a tendency to become lodged between the operating tool or slider and the fastener elements during the closing operation. This latter difficulty is especially noisome in closing zippers on snug-fitting garments as, for instance, girdles, tight-waisted dresses, boots, leggings, or the like.

It has heretofore been proposed to provide a guide attached to the backside of an operating tool to prevent entanglement of clothing, skin or the like during the closing operation. However, this has not proven entirely successful because the guide is a permanent part of the slider and due to its bulk cannot be used in some instances, and in other instances, while it may be used, it is not comfortable and is unsightly. It has also been proposed to permanently attach ribbons, leather thongs, initialed plates, and the like to the tab of the operating tool. However, these permanent attachments are objectionable for many uses because they detract from the appearance, and also because they are likely to be accidentally pulled and cause unwanted opening of the closure.

An object of this invention is to provide a device that will facilitate operation of conventional slide fasteners.

Another object is to provide a device that may be releasably attached to the tab of the operating tool for a slide fastener, which will facilitate its movement in a closing or opening direction.

A further object is to provide a device for facilitating operation of slide fasteners which may be releasably attached to the tab of the slider or operating tool and which in closing operations not only provides for easy manipulation of the operating tool, but also provides a shield to reduce the likelihood of entanglement of soft materials with the fastener elements.

Still another object is to provide a single device which may be readily but releasably connected to the operating tool of a slide fastener for facilitating operation thereof and which also may have other uses as, for example, a shoe horn.

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Other and further objects of this invention will appear from the description.

In the accompanying drawings which form a part of the instant specification and are to be read in conjunction therewith, and wherein like reference numerals are employed to designate like parts in the various views:

Fig. 1 is a diagrammatic illustration, in perspective, of a device embodying this invention showing it in position for closing a slide fastener;

Fig. 2 is a view taken along the line 2—2 in Fig. 1 in the direction of the arrows;

Fig. 3 is a side elevation of the device as shown in Figs. 1 and 2;

Fig. 4 is a front elevation of the device shown in the other figures; and

Fig. 5 is a view in end elevation of the device shown in the other figures.

Referring in detail to the drawings, the numeral 6 designates the fastener elements of a slide fastener, the operating tool or slider of which is shown at 7. The operating tool has the usual pull tab 8 pivoted thereto with a perforation 8a which also is conventional in fasteners now in common use. The device of this invention is adapted to be releasably secured to this tab 8 to facilitate its movement in opening and closing directions relative to the fastener element 6 and to shield the element 6 from entanglement with soft materials which might reside on the backside or alongside of the tool 7.

The device shown in the drawing comprises an elongate shield 9 having a ?-shaped handle portion 10 extending therefrom. The shield 9 may be shaped like a shoe horn having a portion 9a adjacent and opposed to and convex toward the fastening means or element 11 formed at the end of the handle. This portion is arcuate in transverse cross-section. The shield portion should have a substantial width adjacent the element 11 as compared with the width of the element and preferably tapers off gradually into a narrow portion at the joinder of the handle with the shield. The surface of the shield which is remote from the element 11 should be smooth to provide little resistance or friction between the device and garments within the zippered closure, but may be concave, as shown. The concave surface has the advantage of accommodating any bulk of materials that the shield might encounter in the closing operation, the

outer edges forcing the materials away from the fastener elements. The heel end of the shield preferably has a rather sharp taper, as shown in the drawings, which facilitates insertion of the shield within the V formed by the opened fastener elements 6 on tight-fitting garments or the like.

Referring to the handle 10, it will be seen that the loop provided is sufficiently large to accommodate one or more fingers of the hand. The part 10b extends inwardly towards the shield so that the fastener means 11 lies fairly closely adjacent the convex surface of shield 9. This closeness of the means 11 to the shield facilitates the insertion of the device in operative position. The fastening means 11 preferably is such as to releasably engage the tab 8 on the operating tool. The hook 11 has been found satisfactory and preferably is formed with a sharp angle as distinguished from a curve. This type of hook may be readily inserted in and disengaged from the perforation 8a of tab 8 and will positively engage the tab.

The device may be fabricated from strong plastics, steel, brass, or any other suitable material. The shield 9 may be provided with a perforation 9b in order that the device may be readily hung when not in use.

In operation the device may be used for closing slide fasteners, serving both as a pull tool and as a shield to prevent entanglement of protruding materials between the fastener elements and operating tool. The tool may be used as a pull tool to facilitate opening of the closure and in this movement no shield is required.

When the device is to be employed for closing a slide fastener, the hook is first secured to tab 8 with the shield extending substantially normally from the fastener elements 6 and parallel with the tab. Tension is maintained between the hook and tab and the device is rotated about the pivot of the tab on tool 7 during which rotation the somewhat pointed heel end of the shield is inserted within the V provided by the open fastener elements 6. In this position, the handle portion 10a will extend out from the opening. Upon application of force to the device in a closing direction, the shield moves along the material on the back side of the operating tool, smoothing it down and positively preventing it from becoming entangled in the fastener elements 6 as they are joined together. This same movement of the device pulls the operating tool 7 along to close the fastener elements in the usual and customary fashion.

Where the closure has a free edge in which both elements 6 terminate then the device of this invention is used to pull the operating tool to the extreme closed position. On the other hand, where the fasteners 6 terminate in an intermediate portion of the material in which the slide fastener is installed, the device may be rotated outwardly about the tab pivot to withdraw the shield from the opening. The hook is readily released by slacking up upon the tension between the device and tab. The slide fastener is then closed and where it is difficult to grasp the tab 8, this tab may be engaged by hook 11 with the shield outside the opening, and the device may be employed solely as a pull device to complete the closing operation.

When the slide fastener is to be opened, the device may be hooked in the manner last mentioned and by pulling the device in the opening direction, the operating tool will be shifted to the open position.

It will be seen that the objects of this invention have been accomplished. There has been provided a single tool which facilitates operation of the conventional slide fastener and which affords advantage equally to the wearer of a garment or a fitter or dresser. The device may be inexpensively manufactured and has great utility in the operation of slide fasteners, particularly where they are installed in snug fitting articles. The device is releasably secured to the slider so as not to detract from either the comfort or appearance when used for articles of clothing. A single device may be used for operating many slide fasteners and the device may be stored for convenient use when desired.

As many possible embodiments may be made of the invention without departing from the scope thereof, it is to be understood that all matter herein set forth or shown in the accompanying drawings is to be interpreted as illustrative and not in a limiting sense.

Having described the invention, what is claimed is:

1. A device of the character described comprising an elongated shield arcuate in transverse cross-section, a loop handle on one end of the shield of a size to receive an operator's finger and of narrower width than the major portion of the shield, and a short pointed hook connected to and depending from said loop and positioned in spaced juxtaposed relation to the mid portion of the convex face of said shield, said hook adapted to engage the perforated pull tab of a slider.

2. A device as in claim 1 wherein the shield has its side edges tapering to a point at its free end.

3. The device of claim 2 wherein the hook resides near the pointed end of the shield.

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REFERENCES CITED

The following references are of record in the file of this patent:

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