This invention relates to a zipper operating device, and has as its primary object the provision of a device by means of which zippers in inaccessible or inconvenient locations, such as in the middle of the back of a woman's dress, in high places on draw drapes and other places where under-material fragments might require protection in closing the zipper, may be closed and/or opened with a minimum of effort and difficulty, and bodily contortion.

An important object of this invention is the provision of such a device which includes an elongated shank of any suitable length, which is provided with a blade at its lower portion for insertion between the garment carrying the zipper and the undergarments, and a hook pivotally associated with the shank adjacent its juncture with the blade, the hook being adapted to be engaged through the conventional opening in the slide of the zipper fastener, the arrangement being such that the pull on the opposite end of the shank will serve to close or open the zipper in accordance with the direction in which the pull is exerted.

A further object of the invention is the provision of such a device wherein the hook member is pivoted and wherein the point of the hook extends inwardly at an acute angle to the shank thereof, so as to engage the opening in the zipper slide when the shank of the device is either extended upwardly or downwardly.

A still further object of the invention is the provision of a device of this character wherein the handle is comprised of a plurality of telescopically engaging members so that the effective length of the device can be varied.

Still another object of the invention is the provision of such a device which is sturdy and durable in construction, reliable and efficient in operation, and relatively simple and inexpensive to manufacture, assemble and utilize.

Still other objects reside in the combinations of elements, arrangements of parts, and features of construction, all as will be more fully pointed out hereinafter and disclosed in the accompanying drawings, wherein there is shown preferred embodiments of this inventive concept.

In the drawing:

FIGURE 1 is a perspective view of one form of operating device embodying features of the instant invention;

FIGURE 2 is an enlarged plan view, certain concealed parts thereof being indicated in dotted lines, and certain parts thereof being broken away, of the lower end portion of the device of FIGURE 1;

FIGURE 3 is a sectional view taken substantially along the line 3-3 of FIGURE 2; and

FIGURE 4 is a plan view, partially in perspective, of a modified form of construction.

Similar reference characters refer to similar parts throughout the several views of the drawing.

Having reference now to the drawings in detail, there is generally indicated at 10 one form of device embodying the instant invention, the device includes a shank 11, which at its upper end is provided with an enlarged portion 12 having a bore extending transversely therethrough, the bore being indicated at 13, for the reception of a finger engaging ring 14. The opposite end of the shank 11 comprises a blade 15, which includes a flattened portion which is inwardly concave, as at 16, and which is adapted to be inserted between the garment which carries the zipper to be operated and the body, or undergarments of the user.

A hook, generally indicated at 17, is preferably comprised of a single piece of wire which is bent upon itself, as at 18, to provide two parallel contacting hook portions 19. The double wire is then bent at 20 in a plane perpendicular to the bend 18, to form the bit portion of the hook, from which the shank 21 extends at an acute angle to the hook portion 19, the two members still contacting.

The opposed bent portions diverge at 22, and are angularly disposed shank portions 23, from which parallel portions 24 extend upwardly above the blade portion 19 to a point adjacent the juncture of the blade 15 and the shank 11.

At their upper extremities, the portions 24 are bent inwardly at right angles, as at 25, to form extending extremities 26 which engage in a suitable bore 27 formed in the shank, and extending parallel to the plane of the blade portion 15, the arrangement thus being such that the hook is pivoted to swing toward and away from the blade 15.

In the use and operation of the device, the opening 28 in the slide 29 of a conventional zipper 30, which is mounted for closing the opening of a garment 31, the latter being indicated in dotted lines in FIGURES 2 and 3, is engaged by the hook 19. The blade 15 is inserted between the garment carrying the zipper, and the body of the user, and the hook engaged in the opening 28 with the shank 11 extending upwardly. The operator then engages a finger in the hook portion 14, and by drawing the latter upwardly the zipper may be readily closed. When it is desired to open the zipper, the hook may be inserted in the opening of the zipper at the top of the slide, and the shank 11 extended downwardly, the ring 14 grasped and the zipper pulled downwardly to affect the opening of the device.

The shank 11 may be comprised of solid metal, and the bore 27 may extend entirely therethrough, or, alternatively, the shank 11 may be of tubular construction, and the bore 27 may be comprised of two oppositely aligned holes or openings in the wall thereof.

In the modified form of construction shown in FIGURE 4, the shank 11A is hollow, and has telescopically mounted therein a slidable rod member 11B, which has an enlargement 13A at its extremity, which is provided with a bore 13A which carries a ring 14A identical to the previously described ring 14. The lower portion of the shank 11A is identical to the previously described modified form and includes a blade 15 and a hook, generally indicated at 17, which is identical with the previously described hook portion of the former modification.

In the modification of FIGURES 1 and 2, the shank 11 may be made in any desired convenient length, as for example 10, 11, 12 or 14 inches, as desired, while with the modified form of construction shown in FIGURE 4, a standard length may be maintained, while the telescopically arranged rod 11B may be suitably extended to provide a device of the desired length. With the construction of FIGURE 4, the rod 11B fits relatively tightly into the shank 11A, so as to be held therein frictionally with a degree of strength in excess of that required to open and close the zipper.

Obviously the zipper operating device may be made of any desired material, such as steel, iron, aluminum, plastic, or the like and may be made in any desired size according to the requirements or use thereof.

From the foregoing it will now be seen that there is herein provided an improved zipper operating device, which accomplishes all of the objects of this invention, and others, including many advantages of great practical utility, and commercial importance.

As many embodiments may be made of this inventive concept, and as many modifications may be made in the embodiments hereinbefore shown and described, it is to be understood that all matter herein is to be interpreted merely as illustrative, and not in a limiting sense.

I claim:

An operating device for zippers comprising a long shank, a flattened inwardly concavened relatively short blade
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on one end of said shank, a ring on the other end of said shank, there being a bore in said shank adjacent the juncture of said blade and said shank, and a vertically disposed foot fabricated of a single piece of wire bent upon itself to provide two parallel contacting wire parts having a bight portion, a hook portion on one end of said bight portion extending toward said blade, and a shank having one end connected to the other end of said bight portion, a pair of angularly disposed shank portions diverting from the other end of said shank, a pair of parallel portions extending from said shank portions, and an inwardly bent right angled portion on the upper end of each of said parallel portions receivably engaged in said bore and connecting said hook to said elongated shank for swinging movement of said hook toward and away from said blade.

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