ABSTRACT
A guide for sewing invisible zippers onto fabric may be adhesively secured to underside of presser foot of sewing machine. Guide is integral piece of sheet material and includes manipulating tab.

5 Claims, 6 Drawing Figures
GUIDE FOR SEWING INVISIBLE FASTENERS

This invention relates to a guide for attachment to the underside of a pressing foot of a sewing machine to assist in the sewing of invisible zippers to fabric.

In the past, there has been recognized a need for a guide in sewing invisible fasteners by sewing machine. In many cases, such guides have been provided in the form of a package of a plurality of parts, one or two of which have been selected and used by the operator depending on the style of the sewing machine involved.

It has been recognized that the presser foot of sewing machines vary widely and, as a result, no simple, uniform, structure universally adapted for use has been available. Attempts have been made to overcome this problem. One such attempt is shown in U. S. Pat. No. 3,511,199 to Howell wherein the invisible zipper sewing guide has been in the form of a pair of spring-biased-together channels adapted to hug the presser foot from opposite. Prior constructions have proved cumbersome and awkward in use, however, because of their bulkiness. In addition, a relatively large number of parts has presented problems in that the parts became lost or broken so that the entire appliance has had to be discarded.

An object of the present invention is to provide a guide for applying invisible zippers adapted for use on virtually any standard sewing machine. It comprises a single part, or a modification of two parts which are inexpensive to make and virtually foolproof in their application to the machine and operation.

Other objects of the invention will be apparent from the following specification including the drawings which show a nonlimiting but preferred embodiment of the invention. In the drawings:

FIG. 1 is a top perspective view of a guide embodying the invention attached to the presser foot of a sewing machine and in operation;

FIG. 2 is a slightly enlarged sectional view looking from the rear toward the presser foot and guide of FIG. 1;

FIG. 3 is a top plan view of the guide;

FIG. 4 is a side elevation of the guide;

FIGS. 5 and 6 are top and side views respectively of two-sided pressure-sensitive tape adapted for use in a modified form of guide embodying the invention.

Referring more specifically to the drawings, FIG. 1 shows a sewing machine having a presser foot F pivotally mounted at the lower end of its support leg L. As is conventional, a needle N reciprocates up and down adjacent the foot F and carries a thread T and cooperates with the usual mechanism below the cloth-supporting table S.

Secured to the underside of the foot F is the guide 10. It comprises an integral element preferably stamped of sheet metal having an enlarged base 12 with a manipulating tab 14 extending therefrom preferably upward at an angle (FIG. 2). From the opposite side of the base a guiding finger 16 extends in a first upward run 18, and outward run 20, and a downward run 22. As shown in FIG. 2, the runs 18, 20, and 22 define a downwardly facing channel adapted to receive the coil C of the invisible fastener.

As shown best in FIG. 3, the base is formed adjacent the finger with a central opening 24 adapted to receive the reciprocating needle N. In order that the needle opening 24 may be as close as possible to the coil C, the finger 16 is angled slightly away from the base 12 (FIG. 2). Preferably, the angle between the base and the first run of the finger is about 100°. For proper attachment of the invisible zipper I to the garment G (FIG. 2), it is essential that the line of stitching made by the needle be as close as possible to the coil.

Means for attaching the guide 10 to the bottom of the foot is, in the preferred embodiment, a layer of pressure-sensitive adhesive 26 disposed on the upper surface of the base 12 of the guide. In packaging, this adhesive layer 26 is covered by a peel-off strip as known in the trade and the guide is applied to the foot F by simply peeling off the peel strip, placing the base 12 under the foot, lowering the needle so that it passes through the opening 24 to properly align the guide, and dropping the foot all the way. Once the preliminary attachment has been made in this manner, the foot may be raised and the operator may press upward against the bottom of the base 12 to more securely engage the adhesive. Manipulation of the guide 10 may be simply achieved during the installation of the tab 14.

In the additional embodiment, the guide may be provided without the layer of adhesive 26. Instead, a plurality of tape switches 30 (FIGS. 5 and 6) may be provided so that the guide may be used again and again. The switches each comprise a strip 32 having adhesive surfaces on both sides and peel-off strips 34 on both top and bottom. Preferably, the peel-off strips may extend beyond the adhesive strip 32, as at 34c, to facilitate the peeling operation. In the installation of the modification, one of the peel-off strips 34 is removed from the strip 32 and the adhesive surface thus exposed is pressed onto the base 12. Subsequently, as in the earlier-described installation, the other peel-off strip 34 is removed for application of the guide to the presser foot.

Once the guide is installed firmly on the bottom of the presser foot F, the installation of the invisible zipper is proceeded with as in the prior art. One of the special benefits of the invention is that through its use a row of stitching is able to be applied extremely close to the coil C of the zipper. When the installation is finished, the guide is simply disengaged from the bottom of the foot F.

There are variations possible within the invention which may be described in the following claim language.

We claim:

1. A guide for attachment to the underside of the presser foot of a sewing machine and adapted to assist in the sewing of an invisible zipper to a layer of fabric, the guide comprising an integral element having a base with a flat, foot-engaging upper surface, adhesive means on the top of said upper surface, a manipulating tab extending off from one side of the base, guiding finger means extending off the opposite side of the base, the finger extending in a first upward run, then in an outward run, then in a downward run as its distal end is approached to define a generally downwardly facing channel adapted in operation to slidingly receive a row of zipper stringer fastener elements, the guide being formed with sewing machine needle-receiving opening means in the guide closely adjacent the junction between the base and the guiding finger.
2. A guide as described in claim 1 wherein the first upward run is disposed at an angle of about 100° with respect to the base and the opening means permits such needle to pass through the guide immediately adjacent the juncture.

3. A guide as described in claim 1 wherein the adhesive means comprises a pressure-sensitive surface facing upward and covered by a removable peel strip.

4. A guide as described in claim 1 wherein the element is formed of stamped sheet metal.

5. A guide as described in claim 1 wherein the manipulating tab is upwardly inclined.

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