

Sept. 2, 1958

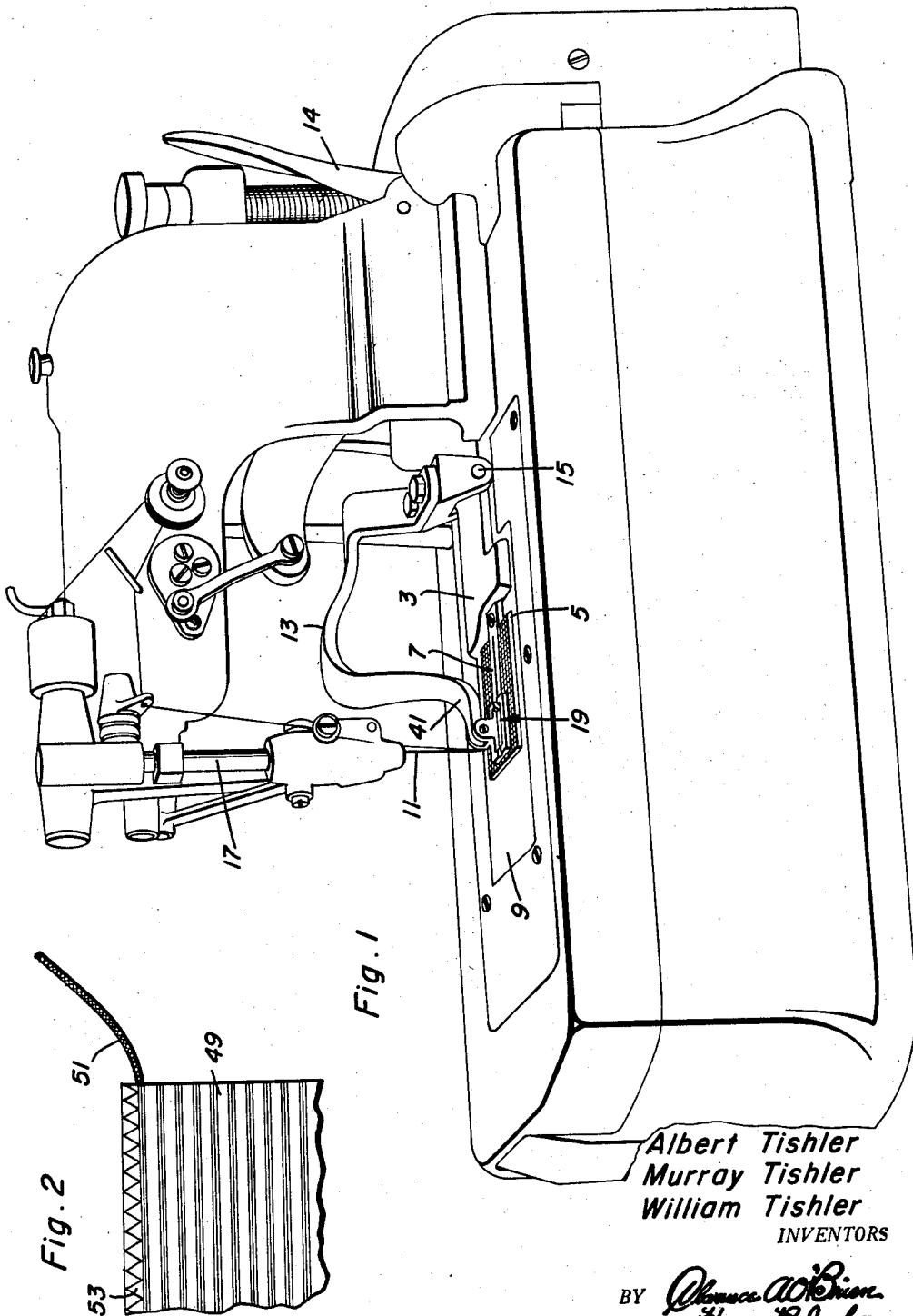
A. TISHLER ET AL

2,849,974

COMBINED PRESSER FOOT AND TACKING GUIDE FOR SEAM END FINISHING

Filed July 12, 1956

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

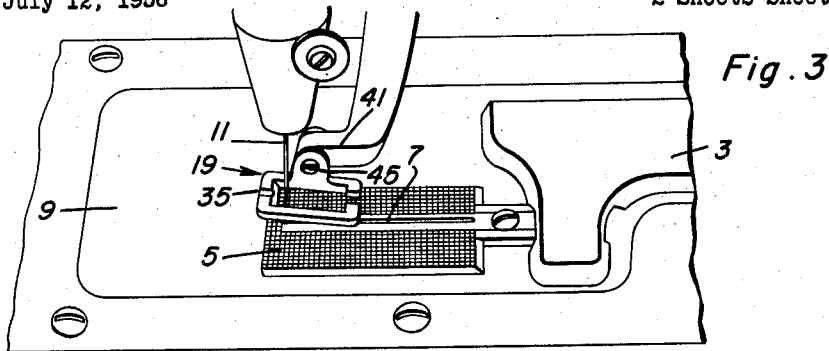


Fig. 3

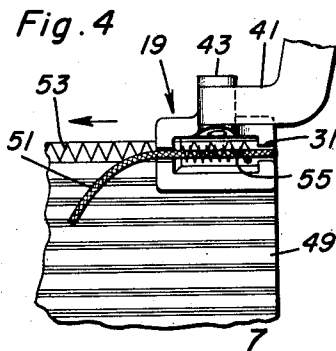


Fig. 4

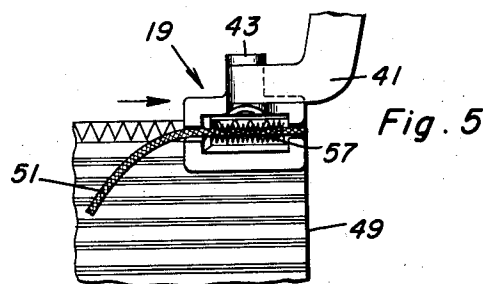


Fig. 5

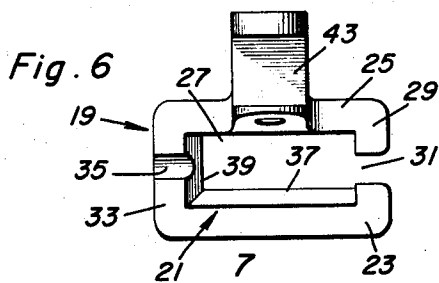


Fig. 6

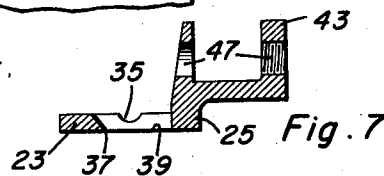


Fig. 7

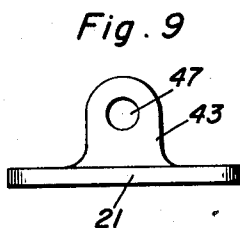


Fig. 9

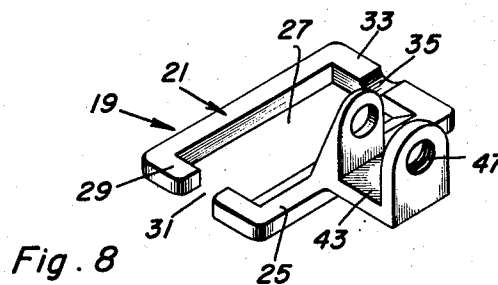


Fig. 8

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2,849,974

COMBINED PRESSER FOOT AND TACKING GUIDE FOR SEAM END FINISHING

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Application July 12, 1956, Serial No. 597,411

4 Claims. (Cl. 112—100)

Our invention relates to a combined presser foot and tacking guide for finishing overlock seam ends on tacking machines.

By way of premise, the overlock thread extends from the end of an overlock seam and is cut loose from the machine and a short free end thereof folded back over the seam and attached thereto to lock the seam for finishing. The prevalent practice is to attach the free end of the overlock thread to the seam, especially in knit goods, by use of a knitting needle and a latch to pull the free ends back into the seam. This is a time consuming, tedious operation which slows down production and results in seam ends which are not uniformly finished.

Having the foregoing in mind, the primary object of our invention is to equip a conventional tacking machine for finishing such seam ends by tacking the free end of the overlock thread to the seam, and whereby to save time and labor and obtain uniformly finished seam ends.

Another object is to provide a combined presser foot and tacking guide for attachment to such machines to equip the same for the above purpose.

Still another object is to provide a combined presser foot and tacking guide for attachment to such machines which will enable the operator to accurately center the free end of the overlock thread with the overlock seam for tacking thereto.

Still another object is to provide a combined presser foot and tacking guide for the above purposes and which embodies means for conveniently and quickly cutting the tacking thread after the tacking operation.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a perspective view of a tacking machine illustrating my improved presser foot and tacking guide attached thereto;

Figure 2 is an enlarged fragmentary plan view of a piece of work having an overlock seam with a free end of the overlock thread for tacking to the seam;

Figure 3 is an enlarged fragmentary perspective view of the machine illustrating the combined presser foot and tacking guide raised for positioning of the work under the same;

Figure 4 is an enlarged fragmentary plan view illustrating the manner in which the overlock seam and the free end of the overlock thread are positioned relative to the combined presser foot and tacking guide, and also illustrating a first step in the tacking operation;

Figure 5 is a view similar to Figure 4 illustrating a second step in the tacking operation;

Figure 6 is an enlarged view in plan of the combined presser foot and tacking guide detached;

Figure 7 is a view in vertical transverse section taken on the line 7—7 in Figure 6;

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Figure 8 is an enlarged view in perspective of the combined presser foot and tacking guide; and

Figure 9 is an enlarged view in front elevation of the same.

Referring to the drawings by numerals, our improved presser foot and tacking guide has been shown therein for the purpose of illustration as attached to a well known type of "Reece" machine of commerce such as disclosed in Patents Nos. 749,776 and 1,088,652 to C. A. Dahl and Patent No. 1,402,073 to J. Kiewicz.

This type of machine is adapted for tacking with a zig-zag overlock seam by virtue of the following construction. A work holder 3 including a work supporting plate 5 with a needle slot 7 therein is longitudinally slidably mounted on a bed plate 9 for advance and retraction longitudinally of the machine and relative to the needle 11 from and into starting position, the work holder 3 carries an overhead arm 13 pivoted thereto, as at 15, for raising and lowering to engage clamping means thereon with the work to clamp the work to the supporting plate 5, and the arm 13 is automatically raised to free the work in the starting, retracted position of the work holder 3 and is operative for lowering by a hand lever 14 all as disclosed substantially in the above numbered patents to C. A. Dahl. The needle 11 is vibrated laterally of the work holder 3 by means vibrating the needle arm 17 as disclosed for instance in the above patent No. 749,776, and the machine 10 is automatically stopped when the work holder 3 is retracted.

According to our invention the arm 13 is equipped with a combined presser foot and tacking guide, designated generally by the numeral 19 for lowering and raising by said arm 13 and which comprises an oblong rectangular frame 21.

The frame 21 includes parallel front and rear sides 23, 25 forming a longitudinal needle accommodating slot 27 therebetween, a front end 29 having a slot 31 therein relatively narrower than the slot 27 and longitudinally aligned therewith, and a closed rear end 33 having a top groove 35 therein aligned with said slots 27, 31. The slot 31 is wider than an overlock seam for obvious reasons. The groove 35 is narrower than said slots for a purpose presently appearing. The front side 23 and the rear end 33 are beveled to provide a longitudinal front cutting edge 37 and a rear end cutting edge 39 on said frame 21 within the same.

The frame 21 is attached to the free end 41 of the arm 13 to extend longitudinally of the needle slot 7 with the slots 27, 29 and the groove 35 vertically aligned with said slot 7, by means of an upstanding vertical bifurcated lug 43 on the rear side 25 offset rearwardly of said side 25 in the transverse center of the frame 21 and straddling said end 41 and having a pivot screw 45 extending through apertures 47 in said lug and through said end 41.

The attaching means described in the foregoing for the frame 21 provides for pivoting of said frame 21 about a transverse axis to exert uniform pressure against a piece of work on the supporting plate 5, and positions the frame 21 so that the needle 11 when raised in the starting position of the machine and retracted position of the work holder 3 is in the rear end of the needle accommodating slot 27.

Referring now to the use and operation of our invention, with the work holder 3 retracted so that the arm 13 is raised, the combined presser foot and tacking guide 19 is raised. A piece of work 49 is then positioned on the supporting plate 5 with the free end 51 of the overlock seam thread 53 extending longitudinally forwardly and the overlock seam 53 extending longitudinally of the needle slot 7. The arm 13 is then lowered to lower the frame 21 over the work 49 sufficiently for the operator to center the overlock seam 53 with the slots 27, 31 and

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substantially register the leading edge of the work with the front end of the frame 21 after which the arm 13 is further lowered to clamp the work 49 to the supporting plate 5. With the overlock seam 53 centered as described relative to the slot 27 and the slot 31 it is also centered over the needle slot 7. The free end 51 of the overlock thread is now folded back over the overlock seam 53 through the slot 31 into the slot 27 and laid in the groove 35 thereby centering said free end 51 over said seam 53.

When the work 49 is positioned as above described, the machine is started, by the usual means, and the work holder 3 is advanced and retracted to advance and retract the work 49 beneath the needle 11. During advance of the work 49 the free end 51 is tacked in a first tacking operation to the overlock seam 53 by a zig-zag line of stitching 55, as shown in Figure 4 and when the work 49 is retracted said free end is again tacked in a second tacking operation to the seam 53 by a zig-zag line of stitching 57, as shown in Figure 5, over the stitching 55. After retraction, the combined presser foot and tacking guide 19 is raised and the piece of work 49 released with the seam end finished. Then the operator may pull the work from under the combined presser foot and tacking guide 19 to cut the tacking thread at the cutting edges 37 or 39, as preferred. The free end 51 may then be trimmed down to the seam 53.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. In a tacking machine having a work holder slidable horizontally for advance and retraction relative to a needle and having a work supporting plate with a needle slot therein, and a pivoted overhead arm adapted for raising and lowering, a combined presser foot and guide attached to said arm and comprising an oblong rectangular frame for lowering and raising into and from clamping engagement with a piece of work positioned on said plate, said frame having a longitudinal needle accommodating slot therein aligning with said needle slot when the frame is lowered for centering of an overlock seam of the work longitudinally therebeneath to center said seam with the needle slot, said frame having a reduced slot in one end for folding of a free end of the overlock thread therethrough into said frame and over said seam for tacking to said seam during advance and retraction of the work, said frame having a longitudinal top groove in its other end narrower than said second and third named slots and aligned therewith for receiving said free end to center said free end over said seam.

2. In a tacking machine having a work holder slidable horizontally for advance and retraction relative to a needle and having a work supporting plate with a needle slot therein, and a pivoted overhead arm adapted for raising and lowering a combined presser foot and guide attached to said arm and comprising an oblong rectangular frame for lowering and raising into and from clamping engagement with a piece of work positioned on said plate, said frame having a longitudinal needle accommodating slot

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therein aligning with said needle slot when the frame is lowered for centering of an overlock seam of the work longitudinally therebeneath to center said seam with the needle slot, said frame having a reduced slot in one end for folding of a free end of the overlock thread therethrough into said frame and over said seam for tacking of said seam during advance and retraction of the work, said frame having a longitudinal top groove in its other end narrower than said second and third named slots and aligned therewith for receiving said free end to center said free end over said seam, said frame having at least one internal bevel cutting edge for cutting of the machine thread thereagainst after tacking of said free end.

3. In a tacking machine having a work holder slidable horizontally for advance and retraction relative to a needle and having a work supporting plate with a needle slot therein, and a pivoted overhead arm adapted for raising and lowering, a combined presser foot and guide attached to said arm and comprising an oblong rectangular frame for lowering and raising into and from clamping engagement with a piece of work positioned on said plate, said frame having a longitudinal needle accommodating slot therein aligning with said needle slot when the frame is lowered for centering of an overlock seam of the work longitudinally therebeneath to center said seam with the needle slot, said slot in the frame being open at one end of the frame for folding of a free end of the overlock thread therethrough into said frame and over said seam for tacking to said seam during advance and retraction of the work, said frame having a longitudinal top groove in its other end aligned with the slot in said frame for receiving said free end to center said free end over said seam.

4. In a tacking machine having a work holder slidable horizontally for advance and retraction relative to a needle and having a work supporting plate with a needle slot therein, and a pivoted overhead arm adapted for raising and lowering, a combined presser foot and guide attached to said arm and comprising an oblong rectangular frame for lowering and raising into and from clamping engagement with a piece of work positioned on said plate, said frame having a longitudinal needle accommodating slot therein aligning with said needle slot when the frame is lowered for centering of an overlock seam of the work longitudinally therebeneath to center said seam with the needle slot, said slot in the frame being open at one end of the frame for folding of a free end of the overlock thread therethrough into said frame and over said seam for tacking to said seam during advance and retraction of the work, said frame having a longitudinal top groove in its other end aligned with the slot in said frame for receiving said free end to center said free end over said seam, said frame being flat and attached to one longitudinal side thereof to said arm in laterally offset position relative to said arm.

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