Aug. 9, 1938. R. J. SAILER 2,126,507

SHIFTABLY MOUNTED WORK GUIDE

Filed April 27, 1937 2 Sheets-Sheet 1

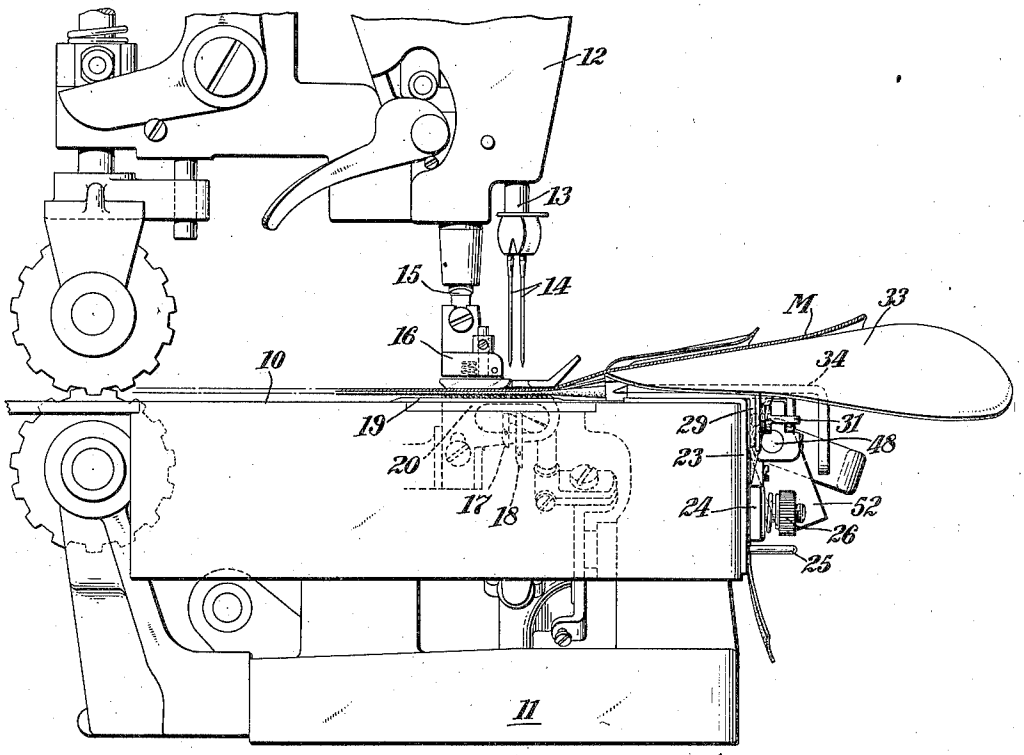


Fig. 1.

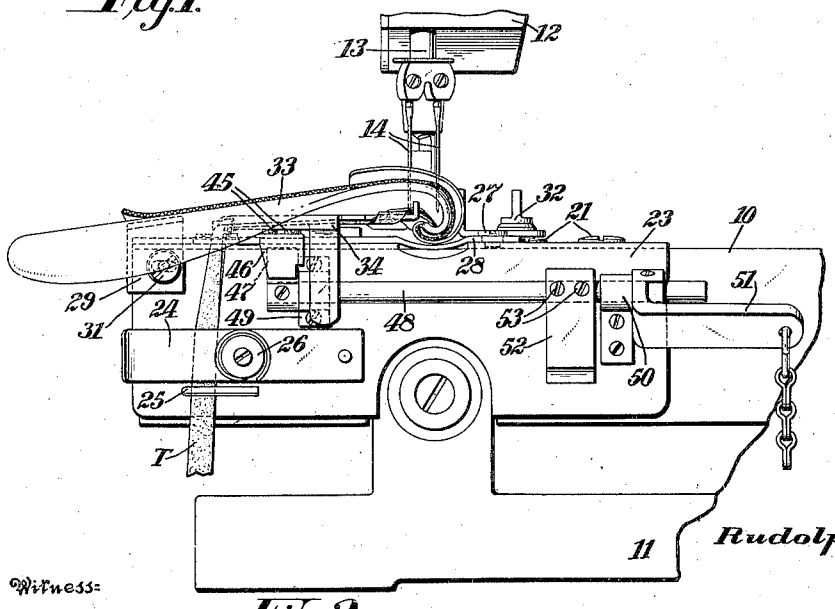


Fig. 2.

Witness:

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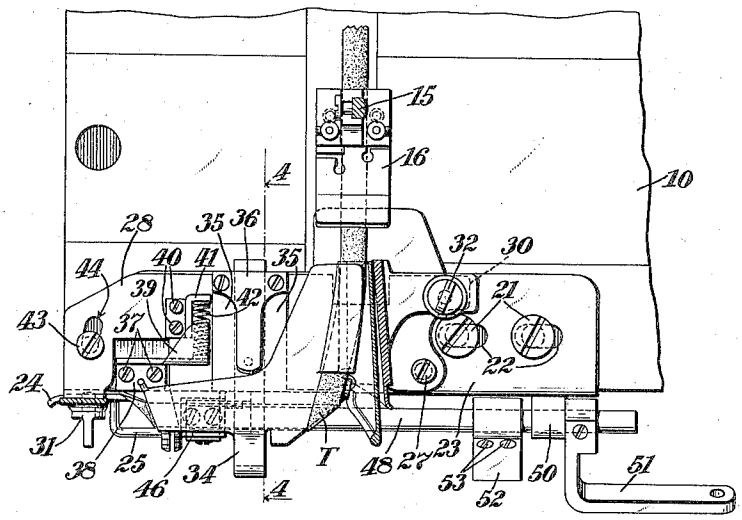


Fig. 3.

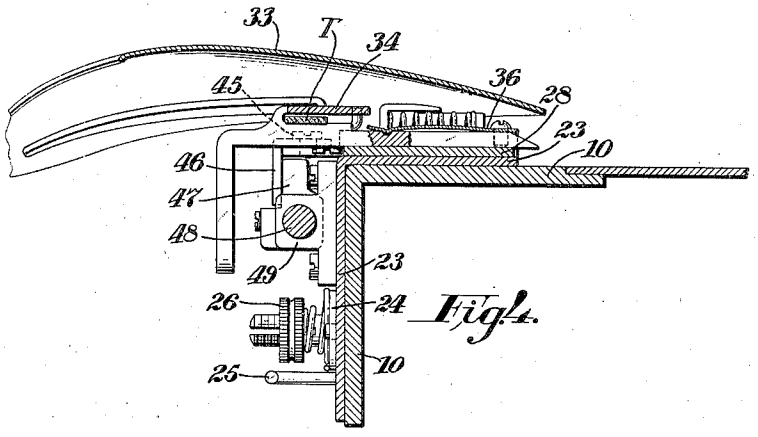


Fig. 4.

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UNITED STATES PATENT OFFICE

2,126,507

SHIFTABLY MOUNTED WORK GUIDE

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4 Claims. (Cl. 112—143)

This invention relates to improvements in work-guiding attachments for sewing machines and has for its primary object to provide means for manually swinging a work-guiding attachment laterally of the line of seam formation to vary the position of the delivery end of the work-guiding attachment relative to the stitch-forming mechanism.

The features of the present invention will be clearly understood from the following description and accompanying drawings in which:

Figure 1 is a front end elevation of a portion of a sewing machine containing the present improvement.

Figure 2 is a front side elevation of a portion of a sewing machine having the attached work-guides.

Figure 3 is a top plan view.

Figure 4 is a sectional view taken substantially along the line 4—4 of Figure 3.

In the illustrated embodiment of this invention, 10 is the cloth-plate of a sewing machine which is carried by the bed 11. Overhanging the bed is the usual hollow head 12 of the machine in which is journaled the needle-bar 13 carrying needles 14 and the presser-bar 15 carrying a presser-foot 16. Cooperating with the needles 14 in the formation of two spaced rows of chain-stitches are the thread-carrying loopers 17 and 18 which are disposed below the throat-plate 19 and actuated to move crosswise of the line of seam formation. Projecting through suitable opening in the throat-plate 19 is a work-advancing feed-dog 20. The actuating mechanisms for the loopers and feed-dog are not shown as they are old and well known.

Adjustably fixed to the cloth-plate 10 by the screws 21 and slots 22 is an L-shaped supporting plate 23 which carries a flat tension-finger 24 and an oppositely bent guide-pin 25 beneath which the tape T is led. Adjustable means 26 is provided for adjusting the amount of pressure on the tape.

Pivotally secured by the screw 27 to the supporting plate 23 is a swingable bracket 28 formed with a downwardly bent portion 29 and a laterally extending portion 30. Fixed to the portions 29 and 30 by the screws 31 and 32 is an edge-folder or hemmer 33. Also carried by the pivoted bracket 28 is a tape-guide 34 which is slidably and detachably secured to the plate 28 by the guide-blocks 35 and spring-latch 36. For a more detailed description of the folder and tape-guide reference may be had to my prior Patent No. 1,828,722, dated Oct. 20, 1931.

Fixed to the plate 23 by the screws 37 is a member 38 having a laterally bent portion 39 and fixed to the pivoted bracket 28 by the screws 40 is a member 41. A coiled compression spring 42 is interposed between the members 38 and 41 and tends to move the bracket in a clockwise direction about the pivot 27 as viewed in Figure 3. To limit the movement of the bracket 28 about its pivot 27 a shouldered screw 43 extends through a slot 44 in the bracket and is threaded into the supporting plate 23.

In the operation of the above described device an elastic tape T is led under the tension-finger 24, through the tape-guide 34, and beneath the presser-foot 16. The material is then inserted into the hemmer in the usual manner with the hem-fold embracing the tape and when the hemmer and tape-guide are in their normal positions the needles 14 are spaced apart so as to penetrate the work at opposite sides of and adjacent the tape to thereby form a pocket for the tape.

In many instances it has been found desirable to cause one of the needles to penetrate the tape at intervals and secure the same by stitches to the body material. To accomplish this there is secured to the bracket 28 by the screws 45 an L-shaped member 46, one of the legs of which extend downwardly. Cooperating with the member 46 is a cam element 47 which is secured to a rock-shaft 48 journaled in the bearings 49 and 50 carried by the plate 23. Also fixed to the rock-shaft 48 is an L-shaped actuating lever 51, the free end of which is adapted to be connected to a foot treadle or knee-lever (not shown) by means of a chain. From the above it will be understood that when the free end of the lever is pulled downwardly, the shaft 48 is rocked in a counterclockwise direction, as viewed in Figure 4, and this movement causes the element 47 to cam the member 46 to the left. The member 46 being fixed to the bracket 28 the latter is caused to move in a counterclockwise direction about its pivot 27. The hemmer and tape-guide are carried by the bracket 28 and, therefore, this movement of the bracket causes the delivery ends of the hemmer and tape-guide to shift crosswise relative to the line of seam-formation or the needles 14. As the needles are spaced apart so as to penetrate the hem-fold at opposite sides of and adjacent the tape when the folder and tape-guide are in their normal positions, the shifting of the delivery ends of the folder and tape-guide cause the hem-fold and tape to be shifted so that one of the needles will penetrate the tape and stitch it to the body

material. It will be obvious that the delivery end of the attachment may be shifted at the will of the operator, thereby permitting the tape to be stitched to the hem-fold at any time during the process of inserting the tape in the hem-fold.

The screw **43** and slot **44** are so arranged that the spring **42** will force one end of the slot **44** against the screw, thereby constantly tending to maintain the attachment in its normal position so that when the free end of the lever **51** is released the attachment will assume the position shown in Figure 3. In order to adjust the amount of shifting movement which may be imparted to the attachment a stop-member **52** is secured to the rock-shaft **48** by means of the set-screws **53**. This stop-member is adapted to engage the plate **23** to limit the movement of the free end of the lever **51**. It is obvious that the set-screws **53** may be loosened and the stop-member **52** adjusted on the shaft **48** so as to vary the limit of movement of the rock-shaft **48**.

Having thus set forth the nature of the invention, what I claim herein is:—

1. In combination, a sewing machine having a pair of spaced needles arranged in a plane transverse to the direction of feed, a hemmer for downwardly inturning the edge of the material to form a hem-fold and arranged in advance of said needles, a tape-guide for directing an elastic tape into the hem-fold, means for pivotally securing said tape-guide and hemmer to the machine, manual means under the control of the operator for simultaneously shifting said hemmer and tape-guide about said pivot to cause one of said needles to penetrate both the material and elastic tape and spring means for maintaining said hemmer and tape-guide in their normal positions.

2. An attachment for sewing machines comprising a plate adapted to be adjustably secured to the machine, a bracket pivoted to said plate, a hemmer and tape-guide carried by said bracket, a rock-shaft journaled in bearings fixed to said plate, manually controlled means for actuating said shaft, a cam element carried by said shaft and means carried by said bracket and cooperating with said lever for swinging said bracket about its pivotal connection.

3. An attachment for sewing machines comprising a supporting plate adapted to be secured to the frame of a sewing machine, a bracket pivotally secured to said plate, a hemmer adjustably secured to said bracket, a tape-guide slidably carried by said bracket, spring means for maintaining said bracket in its normal position relative to said supporting plate, manually controlled means for moving said bracket about its pivotal connection with the supporting plate and means for limiting the amount of swinging movement which may be imparted to said bracket.

4. An attachment for sewing machines comprising a supporting plate, a rock-shaft carried by said plate, a cam element fixed to said rock-shaft, a member movably carried by said plate, a hemmer fixed to said member, a lug carried by said member and cooperating with said cam element and manually controlled means for moving said rock-shaft about its longitudinal axis to cause said member and hemmer to be shifting relative to said supporting plate.

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