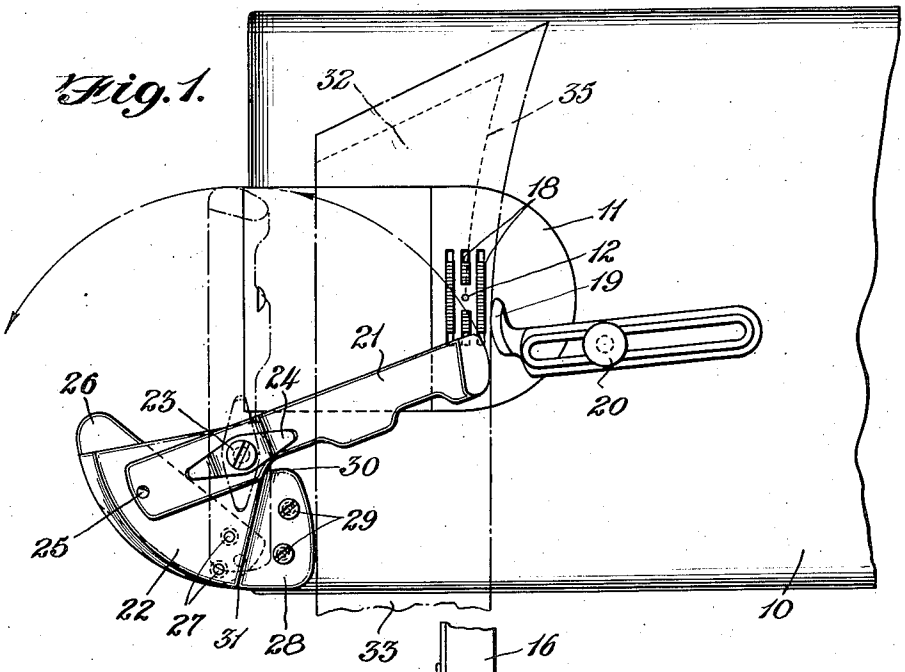
Dec. 15, 1936. N. M. CONAWAY 2,064,733

ATTACHMENT FOR SEWING MACHINES

Filed July 8, 1935

Fig. 1.



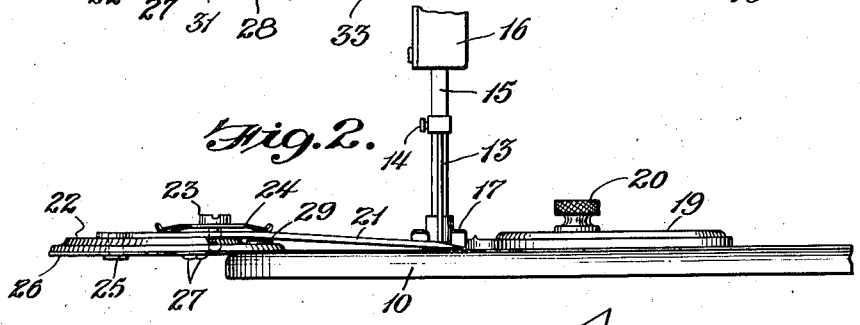


Fig. 2.

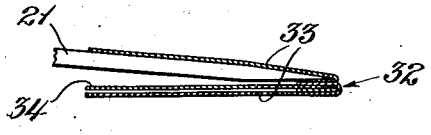


Fig. 3.

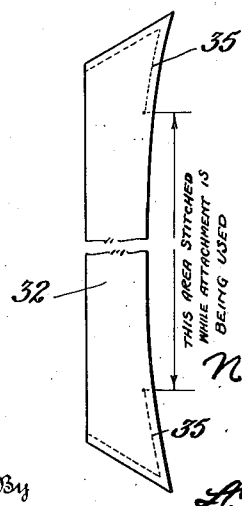


Fig. 4.

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ATTACHMENT FOR SEWING MACHINES

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7 Claims. (Cl. 112—153)

This invention relates to an attachment for sewing machines and more particularly to a guide for eliminating labor in presenting work to the needle of a sewing machine.

Heretofore in performing sewing operations with sewing machines and particularly the stitching of the collar of a collar-attached shirt, near but slightly spaced from the edge of the same and on the right side, it has been customary for the operator to manipulate the fabric in an effort to produce a French seam which is smooth, of minimum bulk and in which the full extent of the fabric is obtained. Considerable skill has been necessary in order to provide merchandise of the most desired smoothness and appearance. It has been difficult to maintain uniformity and the process has been time consuming, expensive and often resulted in injury to the operator and the production of defective articles.

It is an object of the invention to provide a simple, inexpensive and efficient attachment for sewing machines designed to reduce the amount of manual labor necessary in the production of garments of certain characters, as for example the collar of a shirt, and at the same time speed up production and by the use of which a finished article of improved characteristics can be provided.

Referring to the accompanying drawing which is made a part hereof and on which similar reference characters indicate similar parts,

Fig. 1 is a top plan view illustrating the application of the invention to a sewing machine, the head of the machine being removed,

Fig. 2, a front elevation of the structure of Fig. 1 having the addition of a head and presser foot,

Fig. 3, a section through a collar with a guide in operative position to the collar, and

Fig. 4, a view of a collar illustrating the extent of that portion of the collar which is stitched while the collar is in contact with the guide.

Referring to the drawing, a conventional sewing machine is illustrated to which the invention is attached. The sewing machine comprises a bed plate 10 provided with a throat or needle plate 11 having an aperture 12 through which a needle 13 moves during the sewing operation. The needle 13 is carried by means of a set screw 14 in a needle bar 15 mounted to reciprocate in the head 16. A presser foot 17 is also provided through which the needle reciprocates. A feed dog 18 grips the fabric and advances it as the needle alternately pierces the same during its reciprocative movement.

The parts just described are well known and form no part of the present invention.

An adjustable edge guide 19 is mounted on the bed plate 10, as for example by means of a set screw 20 projecting through a slot in the guide. The edge guide 19 is also of conventional construction and its function is well known.

The present invention provides a guide 21 in cooperative association with the edge guide 19, the free or projecting edge of the guide 21 being tapered on both flat faces to a thin curved edge in order that the same may be inserted within the fold or seam of fabric and cause the edge fabric to travel in its fully projected position in contact with the edge guide 19 as the fabric is carried past the needle 13.

The guide 21 is pivotally mounted on the base plate 22 by means of a set screw 23, a spring clip 24 being disposed beneath the head of the set screw for frictionally holding the guide in a definite position while permitting movement of the guide against the action of the spring 24. The heel of the guide 21 has a pin or latch 25 projecting therethrough and which pin projects through the base plate 22 and is carried by means of a leaf spring having a finger manipulating portion 26. The leaf spring is secured by means of rivets or other desired fastening means 27 to the underside of the base plate 22. It will be apparent that when the manipulating portion 26 of the leaf spring is pressed downwardly, the pin 25 carried thereby is depressed and is withdrawn from the guide 21 and the guide can be turned. Rotation of the guide 21 on its pivot 23 permits the guide to be swung counterclockwise out of engagement with the work. In the position shown in Fig. 1 the guide is in its operative position to guide the work during stitching operation and when moved counterclockwise to the dotted line position of this figure the work can be passed on through the machine. After it has passed through the machine continued counterclockwise movement of the guide will bring the same around into position between the folds of the next succeeding article to be operated upon.

It is necessary in order to obtain maximum service from the guide 21 that it be mounted so that its thin operating extremity is in sufficiently close proximity to the adjustable edge guide 19 that it will properly perform the functions for which it is intended and at the same time swing clear of the needle. In order to accomplish this and to permit necessary adjustment, the base plate 22 is attached to the bed plate of the machine by means of a measuring

and attaching flange 28, fastened in place by screws or other fastening elements 29 which are shown extending through openings in the attaching flange 28 somewhat larger than the screws. The extremity 30 of the attaching flange 28 serves as a measuring point so that when a portion of the work such as for example, the tip of a collar reaches this position the operator knows it is necessary to depress the manipulating portion 26 of the leaf spring and move the guide 21 to the dotted line position and thus permit the work to pass on through the machine.

As shown a shoulder or step 31 is provided between the base plate and its attaching flange by forming the flange of a thickness corresponding to only about half of the base plate. This should facilitate the guiding of the work through the machine when the work, as the collar of a shirt, is curved, and particularly when the last part of the collar passes the needle.

As illustrated the work may be a collar 32 which consists of a pair of outer folds 33 and an inner stiffening member 34 which is adapted to be steamed or otherwise treated to provide a stiffening effect. The collar 32 is provided with corner stitching 35 which is done before the guide 21 is brought into use, the collar being adapted to be sewed between the stitchings 35 which extend along the longitudinal dimension of the collar when the guide 21 is located as shown in Fig. 3 between the folds of the fabric along its longitudinal dimension and between the longitudinal stitchings 35.

In operation the collar 32 is stitched from its straight inner edge along the end of the collar and then longitudinally parallel to the outer edge of the collar until the guide 21 is swung into the folds of the fabric by clockwise motion in which position it is substantially as shown in full lines in Fig. 1. Then the operator grasps the extremities of the collar and operates the machine to perform the stitching operation as the collar is moved endwise through the machine with the edge of the collar in contact with the extremity of the edge guide 19.

The collar is advanced until the longitudinal stitching is near completion when the manipulating extremity 26 of the leaf spring is depressed to withdraw the pin or latch 25 from the aperture in the heel of the guide and the guide is then swung to the dotted line position of Fig. 1. The guide 21 is swung to the dotted line position from the full line position when the point of the collar formed by the inner edge and the end of the collar reaches the extremity 30 of the attaching flange 28. When in the dotted line position the stitching can be continued along the longitudinal edge of the collar and the collar turned and the stitching completed across the end of the collar whereupon another collar to be sewed is fed into the machine and the stitching across the end and down the longitudinal dimension is performed and the guide swung into position to permit the stitching of the intermediate longitudinal portion of the collar.

The presser foot 17 is lowered to cause the fabric to rest upon the needle plate over the slots through which the portion of the feed dog projects so that feed dog may press the fabric against the presser foot and advance the same through the machine. It will be necessary, of course before the swinging of the guide 21 from the full line to the dotted line position shown in Fig. 1 to raise the presser foot and likewise the presser foot may or may not be raised when one collar passes from the needle and the other passes to the needle.

It will be readily apparent from the foregoing that means is provided for reducing the cost of manufacture of a shirt or other article and that at the same time an increase in precision and thereby an improved article obtained. In actual operation it has been found to save several cents per dozen in the cost of manufacture of shirt collars.

It will be obvious to those skilled in the art that various changes may be made in my device without departing from the spirit of the invention and therefore I do not limit myself to what is shown in the drawing and described in the specification, but only as indicated by the appended claims.

I claim:—

1. An attachment for sewing machines for engaging fabric being stitched and for guiding the same during the stitching operation, said attachment comprising an elongated relatively narrow guide pivoted toward the side of the line of travel of the work adapted to be operated upon and swingable clear of the needle from an operative to an inoperative position and being further swingable from said last mentioned inoperative position in a continung arc back to operative position, and latching means for fastening said guide in its operative position, said guide having its work engaging extremity tapered to a thin curved edge, the curvature of which substantially corresponds to the arc formed by the operative end of the guide, a base plate supporting said guide, and means for latching said guide in fixed relation to its support, said base plate having an attaching flange, said attaching flange having its extremity constructed to provide a measuring device for determining the time of swinging of the guide from operative to inoperative position.

2. An attachment for sewing machines for engaging fabric being stitched and for guiding the same during the stitching operation, said attachment comprising an elongated relatively narrow guide pivoted toward the side of the line of travel of the work adapted to be operated upon and swingable clear of the needle from an operative to an inoperative position and being further swingable from said last mentioned inoperative position in a continuing arc back to operative position, and latching means for fastening said guide in its operative position, said guide having its work engaging extremity tapered to a thin curved edge, the curvature of which substantially corresponds to the arc formed by the operative end of the guide, a base plate supporting said guide, and means for latching said guide in fixed relation to its support, said base plate having an attaching flange, said attaching flange having its extremity constructed to provide a measuring device for determining the time of swinging of the guide from operative to inoperative position, said latching means comprising a leaf spring and a pin carried by said leaf spring and engageable with said guide.

3. In combination with a sewing machine including a bed plate, a presser foot and a needle, a device for causing cloth to be stitched to be presented to said needle by said presser foot in a definite manner and comprising an attachment including a body, means for adjustably attaching said body to said base plate, a blade pivotally mounted on said body and having its extremity tapered to a thin rounded edge adapted

to pass between folds of cloth to present the said folds to said needle, means for locking said blade in a definite position, said means comprising a flexibly mounted detent for engaging the blade, said detent being retractable to permit counterclockwise rotation of the blade to position the same out of the path of the movement of the the fabric being operated upon, and being further rotatable in the same direction to swing the blade back into operative position to present the cloth to the needle.

4. In combination with a sewing machine having a bed plate and a needle for performing the sewing operation, means for guiding the material operated upon in a definite manner to said needle, said means comprising an adjustable guide having a portion disposed in proximity to said needle for causing the material sewed to pass within a definite path to the needle for limiting the movement of the material in one direction, and having a relatively blunt curved extremity, a second means having a correspondingly curved thin substantially knife-edged blade disposed in opposition to the blunt end of the other means, said knife edge being adapted to pass between folds of the fabric as the fabric traverses the same for extending said fabric and causing it to be sewn in a flat condition, a supporting plate for said blade, means for adjustably fastening said blade in fixed relation on said body plate on said machine, said blade having a curved shoulder substantially conforming to the path of movement of the fabric being operated upon, and said blade having an extremity providing a gage for fabric fastened to the machine, and resilient means for locking said blade in operative fabric projecting and guiding position and permitting force applied to the blade in a contraclockwise direction to swing the blade from operative position and further similar movement to swing the blade again into operative position.

5. A guide for a sewing machine comprising an elongated blade having guiding means adjacent one end, means for pivotally supporting said blade intermediate its ends on said machine, said blade being rotatable on its support for moving it to operative position in front of the needle and into inoperative position behind the needle, and means adjacent the end of said blade opposite said guiding means for releasably latching said blade in operative position.

6. A guide for a sewing machine comprising an elongated blade having guiding means adjacent one end, means for pivotally supporting said blade intermediate its ends on said machine, said blade being rotatable substantially three hundred and sixty degrees on its support for moving it to operative and inoperative positions, and means adjacent the end of said blade opposite said guiding means for releasably latching said blade in operative position.

7. A detachable guide for a sewing machine designed to extend the edge of material to be sewn, said guide comprising a relatively thin elongated blade having guiding means adjacent one end for engaging and extending fabric to be sewn, means for pivotally supporting said blade intermediate its ends on the sewing machine, said blade being rotatable on its support for moving its guiding portion into position in front of the needle and into inoperative position behind the needle out of engagement with the fabric in a manner to cause the fabric to be extended for sewing, and means adjacent the end of the blade opposite said guiding means for releasably latching said blade in a position such that its guiding portion is in position for extending material to be sewn coming in contact therewith.

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