

F. A. SUTTON.
 BINDING ATTACHMENT FOR SEWING MACHINES.
 APPLICATION FILED FEB. 4, 1911.

1,011,877.

Patented Dec. 12, 1911.

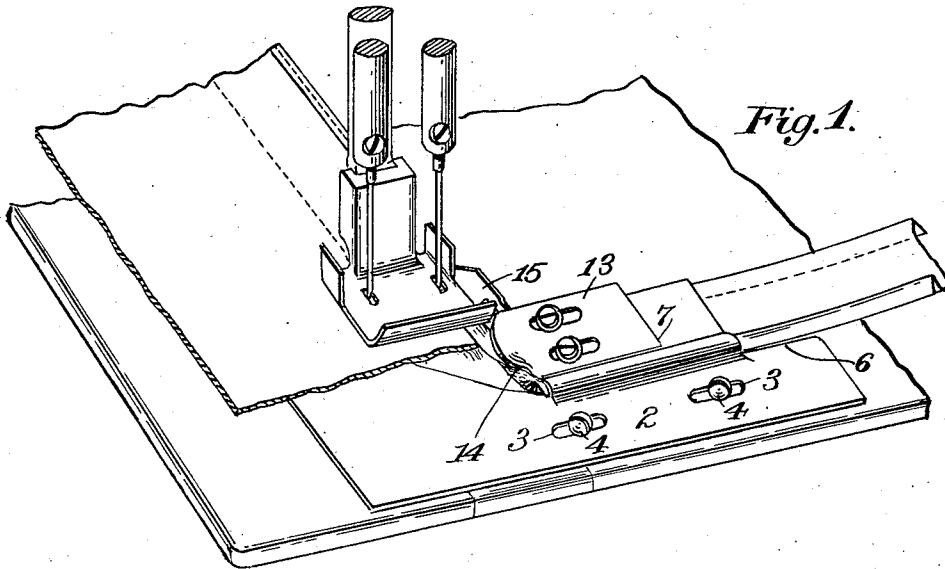


Fig. 1.

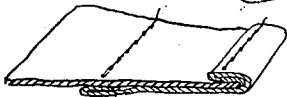


Fig. 2.

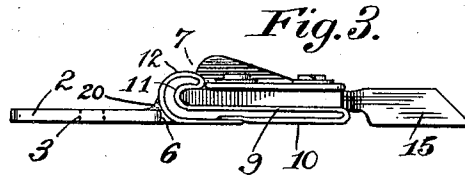


Fig. 3.

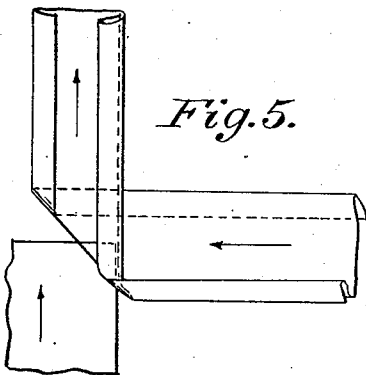


Fig. 5.

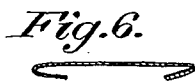


Fig. 6.

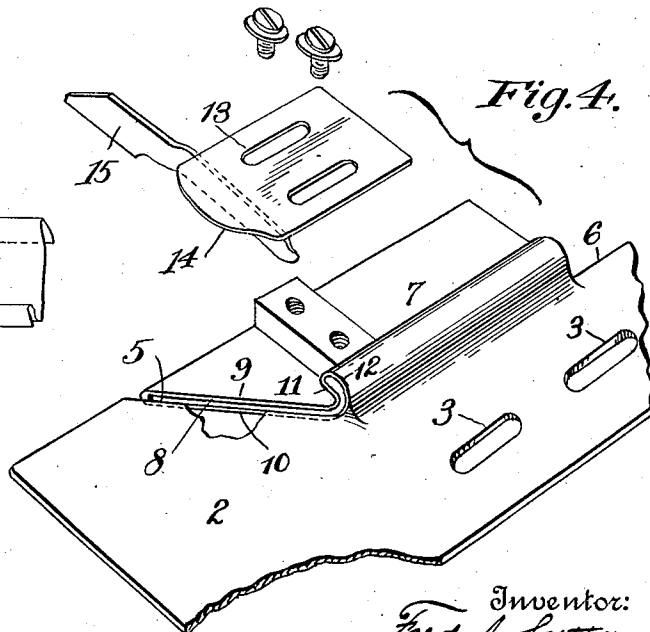


Fig. 4.

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UNITED STATES PATENT OFFICE.

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BINDING ATTACHMENT FOR SEWING-MACHINES.

1,011,877.

Specification of Letters Patent.

Patented Dec. 12, 1911.

Application filed February 4, 1911. Serial No. 606,467.

To all whom it may concern:

Be it known that I, FRED A. SUTTON, a citizen of the United States, residing at Utica, in the county of Oneida and State of New York, have invented certain new and useful Improvements in Binding Attachments for Sewing-Machines, of which the following is a specification.

This invention relates to binders or facing attachments for sewing machines, the object of the invention being to provide an improved attachment of this character simple in construction, readily attached to the machine and adjusted and by means of which the two sewing operations heretofore required for attaching a facing strip are obviated.

Heretofore, in applying facing strips to goods, such for instance as knit goods, it has been the usual practice to stitch the desired width of facing strip, the edges of which are inturned, to the goods by a two needle machine for instance, subsequent to which it has been necessary to bind the raw edge of the work or goods and the outer superimposed inturned edge of the facing strip together by means of an independent binding strip overlapping the inturned edge of the facing strip and the raw edge of the work, which of course had to be done by a separate stitching operation. In the present improvement, however, the outer edge of the facing strip itself is so folded over the raw edge of the work that this separate and independent binding strip is done away with, and consequently a separate stitching operation likewise dispensed with, while the facing strip thus not only forms the facing for the work, but also forms a binding therefor, it overlapping, as shown in Fig. 5, considerably more of the work at one side thereof than at the other.

The object of the present improvement, therefore, is to provide an improved attachment of the character described by means of which the facing strip will have one of its inturned edges folded around or over the raw edge of the goods or work so that when the facing strip is sewed along such edge the facing strip will not only be sewed to the goods, but will also bind the edge thereof by the same stitching operation, and to carry out this object the binder

is so constructed that it will reverse the facing strip and then fold one inturned edge thereof around the goods.

In the drawings accompanying and forming part of this specification, Figure 1 is a perspective view of a portion of the cloth plate of a sewing machine, which is illustrated as a double needle machine, one needle adapted to sew along each edge of the facing strip, and illustrating this improved attachment attached to the cloth plate; Fig. 2 illustrates the manner in which the facing strip is turned at its outer edge around the raw edge of the goods and also the manner in which both sides of the facing strip are stitched to the goods or work; Fig. 3 is an end view of the attachment looking from right to left; Fig. 4 is a detail, partly perspective, view of the attachment and the adjustable guide piece for folding the edge of the facing strip; Fig. 5 illustrates the work to which the facing strip is to be attached and also the facing strip showing one part thereof reversed and extending in an angular direction to another part thereof so that the same may be stitched to the work; and Fig. 6 is a sectional view illustrating a portion of a facing strip having its edges inturned.

Similar characters of reference indicate corresponding parts throughout the figures of the drawings.

In practice the facing strip, which is previously cut the desired width and provided with inturned lengthwise extending edges, is inserted into the attachment and drawn into position to be reversed and fed at an angle to its initial direction of movement in order to be stitched to the goods or work, which is fed in the usual manner across the cloth plate to the stitching mechanism, which comprises the usual needle and feeding mechanism, simultaneously drawing the work and the facing strip across the cloth plate in the usual manner. This improved attachment comprises, in the preferred form thereof herein shown and described, a supporting plate 2 adapted for attachment to the cloth plate of the machine, and for this purpose it is provided with a pair of elongated slots 3 for the reception of fastening screws 4 and by means of which the plate may be adjusted to the proper position on

the cloth plate. This supporting plate is cut away to form an edge 5 inclined to the direction of feed and terminating in a straight edge 6, and in this recessed portion of the supporting plate is located the binder proper 7, which may be formed as a part of the supporting plate or, as shown herein, formed from a blank separate therefrom and attached or soldered as at 20, Fig. 3, adjacent to the straight edge 6 of such supporting plate. This binder proper is likewise provided with an inclined edge 8 corresponding with the inclined edge 5 of the supporting plate but spaced therefrom to provide a sufficient space for the thickness of the binding strip. The binder proper is shown as comprising a pair of spaced apart walls or plates 9 and 10, one above the other, with the upper plate slightly above the plane of the supporting plate and having adjacent to the point of connection of the binder proper with the supporting plate upwardly bent or curved walls 11 and 12. The plates 9 and 10 are of a width corresponding with the desired width of the facing strip, while the upstanding curved walls 11 and 12, which extend lengthwise of such plates 9 and 10, are of a width corresponding in a general way with the width of the edge of the facing strip that is turned over upon the goods, and they are therefore of considerably less width than the width of the plates 9 and 10, since the latter must be, as stated, of a width to guide the relatively wide facing strip. The binder proper may be made from a blank by folding the blank upon itself to form the spaced apart walls hereinbefore described, the bent portion of the binder constituting means, together with the means hereinafter referred to, for maintaining the desired fold to one inturned edge of the facing strip, while the inclined spaced apart edges of the binder and supporting plate constitute the means for reversing the facing strip adjacent to the work. The binder thus forms a guiding device for the previously prepared facing strip to guide it into position adjacent to the work to be faced and also a means whereby the facing strip will be reversed and fed in a direction transverse to its initial feeding movement, in the manner shown in Fig. 5.

Carried by the binding device proper is an adjustable device, comprising a plate 13 having a forwardly projecting flange 14 of slightly curved formation, the plate being provided with elongated slots whereby it may be adjustably attached to the upper plate of the binder proper, and for which purpose the latter is provided with a block into which the screws for the attachment of the guide plate project, the flange 14 of the guide plate thus being spaced apart a sufficient distance above the upper plate

of the binder proper to permit the inturned edge of the facing strip to be properly folded over the raw edge of the goods to which the facing strip is to be attached. By adjusting this guide plate the folded over edge of the facing strip may be regulated so that such edge may be folded over more or less as occasion requires, while the flange hereinbefore referred to holds the top fold of the facing or binding strip down over the work and in the path of reciprocation of the needle, and by adjusting the guide plate toward or from the stitching mechanism the desired fold will be maintained at the edge of the facing strip. This guide plate is provided with a transversely extending lip or projection 15 extending beyond the inner edge of the supporting plate for the purpose of preventing the binding edge of the facing strip from moving away from the needle line, and thus establishes a uniform width of the work while the material is being fed through the machine.

The attachment being located on the cloth plate of the machine in advance of the feeding and stitching mechanism, it will be observed that the facing strip is guided between the parallel walls of the binder proper and the forward end thereof reversed to have the major portion thereof under the work to be faced, as shown in Fig. 5, at which time that inturned edge of the facing strip nearest to the flange is folded over on top of the raw edge of the work, whereupon both edges of the facing strip are sewed to the goods in a manner which will be readily understood. Thus it will be observed that the work is faced with a facing strip of considerable width at one side with one inturned edge of the facing strip at the underside of the work while the other inturned edge of the facing strip is folded over the opposite side of the work, thus obviating the necessity of using a separate binding strip as heretofore. In other words, as hereinbefore stated, the usual practice has been to stitch the facing strip with both inturned edges thereof at one side of the work only, which of course still leaves the work with a raw edge, a separate binding strip and binder being used for subsequently binding the raw edge of the material and one inturned edge of the facing strip. By the present improvement, therefore, it will be observed that the work is provided with a relatively wide facing strip which is simultaneously folded over the raw edge of the work without the necessity of a separate binding strip or of a subsequent binding operation, which also reduces the thickness of the edge of the completed work, since heretofore the inturned edge of the facing strip, together with the edge of the work and the separate binding strip, made five

thicknesses of material along the edge, while by the present improvement there are but four thicknesses of material along the edge.

In the present improvement the angle of inclination of the inclined edges of the spaced apart binder and supporting plate is shown as of forty-five degrees, but this angle may be varied in practice.

I claim as my invention:

1. A combined facing and binding attachment for sewing machines, comprising supporting means adapted for attachment to the cloth plate of a machine and comprising two guiding portions, one a permanently narrow guiding means for guiding a narrow portion of the strip and the other a permanently wide guiding means projecting laterally from and fixed to said narrow guiding means and corresponding in width, without adjustment, to the width of the facing strip for guiding such facing strip, the structure having means for reversing said strip to feed it in a direction at an angle to its initial direction of feed with the narrow portion folded over the work.

2. A combined facing and binding attachment for sewing machines, comprising a supporting means adapted for attachment to the cloth plate of a machine and having wide guiding means for guiding the facing portion of the strip and narrow guiding means rigid with said wide guiding means and extending along one edge of said wide guiding means for guiding a narrow portion of said facing strip, the structure having means for reversing said strip to feed it in a direction at an angle to its initial direction of feed with the narrow edge folded over the work, and means independent of the strip guiding means for maintaining such folded over edge upon the work.

3. A combined facing and binding attachment for sewing machines, comprising a supporting means adapted for attachment to the cloth plate of a machine and having wide guiding means for guiding the facing portion of the strip and narrow guiding means rigid with said wide guiding means and extending along one edge of said wide guiding means for guiding a narrow portion of said facing strip, the structure having means for reversing said strip to feed it in a direction at an angle to its initial direction of feed with the narrow edge folded over the work, and adjustable means independent of the strip guiding means for maintaining such folded over edge upon the work.

4. A sewing machine attachment of the character described, comprising a supporting plate adapted for attachment to the cloth plate of the machine, means carried by said plate for guiding and reversing a facing strip to feed it in a direction at an angle to its initial direction of feed and comprising a pair of spaced apart plates

corresponding substantially to the width of the facing strip and terminating in a portion inclined to the direction of feed and having an upstanding curved portion, and means for maintaining one edge of the facing strip folded upon the work.

5. A sewing machine attachment of the character described, comprising a supporting plate adapted for attachment to the cloth plate of the machine and having an edge inclined to the direction of feed, means carried by said plate and cooperating therewith for guiding and reversing a facing strip to feed it in a direction at an angle to its initial direction of feed and comprising a pair of spaced apart plates terminating in a portion inclined to the direction of feed and spaced apart from the inclined edge of the supporting plate and having an upstanding curved portion, and means for maintaining one edge of the facing strip folded upon the work and comprising a flanged member spaced apart and above said spaced apart plates.

6. A sewing machine attachment of the character described, comprising a supporting plate adapted for attachment to the cloth plate of the machine and having an edge inclined to the direction of feed, means carried by said plate and cooperating therewith for guiding and reversing a facing strip to feed it in a direction at an angle to its initial direction of feed and comprising a pair of spaced apart plates terminating in a portion inclined to the direction of feed and spaced apart from the inclined edge of the supporting plate and having an upstanding curved portion, and means for maintaining one edge of the facing strip folded upon the work and comprising a flanged member spaced apart and above said spaced apart plates and adjustable toward and from said inclined portion.

7. A sewing machine attachment of the character described, comprising a supporting plate adapted for attachment to the cloth plate of the machine and having means for guiding a facing strip, means for reversing said strip to feed it in a direction at an angle to its initial direction of feed, and means for maintaining one edge of the facing strip folded upon the work and also having a transversely extending projection for preventing the binding from moving away from the needle line.

8. A sewing machine attachment of the character described, comprising a supporting plate adapted for attachment to the cloth plate of the machine and having means for guiding a facing strip, means for reversing said strip to feed it in a direction at an angle to its initial direction of feed, and adjustable means for maintaining one edge of the facing strip folded upon the work and also having a transversely extend-

ing projection for preventing the binding from moving away from the needle line.

9. A sewing machine attachment of the character described, comprising a supporting plate adapted for adjustable attachment to the cloth plate of the machine, means carried thereby and cooperating therewith for guiding and reversing a facing strip and comprising a pair of spaced apart parallel plates having an upstanding curved portion and terminating in a portion inclined to the direction of feed and spaced apart from a similarly formed edge of the supporting plate, and means for maintaining an inturned edge of the facing strip folded upon the work and comprising an adjustable plate having a projecting flange spaced above said parallel plates and also having a transversely extending projection for preventing the binding from moving away from the needle line.

10. A sewing machine attachment of the character described, comprising a supporting plate adapted for attachment to the cloth plate of the machine, means carried thereby and cooperating therewith for guiding a facing strip having inturned edges and for reversing said strip to feed it in a direction at an angle to its initial direction of feed and comprising a member bent upon itself to form a pair of spaced apart parallel plates having an upstanding curved portion and terminating in a portion inclined to the direction of feed and spaced apart from a similarly formed edge of the supporting plate, and means cooperating with said member for maintaining one of the inturned edges of the facing strip folded upon the work.

11. A sewing machine attachment of the character described, comprising a supporting plate adapted for attachment to the cloth plate of the machine and having means for guiding a facing strip and maintaining both lengthwise edges thereof inturned and for reversing said strip to feed it in a direction at an angle to its initial direction of feed with one edge thereof folded over upon the work, said means comprising a part substantially corresponding with the width of the facing portion of the strip and a part substantially corresponding with the folded over edge portion of the strip, the part thereof substantially corresponding with the width of the facing portion being several times wider than the part substantially corresponding with the width of the folded over edge portion whereby the width of the facing strip will be at all times several times wider than the width of the folded over edge.

12. A sewing machine attachment of the character described, comprising a supporting plate adapted for attachment to the cloth plate of the machine, means carried

thereby and cooperating therewith for guiding a facing strip having inturned edges and for reversing said strip to feed it in a direction at an angle to its initial direction of feed and comprising a member bent upon itself to form a pair of spaced apart parallel plates having an upstanding curved portion and terminating in a portion inclined to the direction of feed and spaced apart from a similarly formed edge of the supporting plate, and means cooperating with said member for maintaining one of the inturned edges of the facing strip folded upon the work and comprising a projecting flange spaced above said member and adjustable toward and from the needle line, said means having a transversely extending projection for preventing the binding from moving away from the needle line.

13. A sewing machine attachment of the character described, comprising a supporting plate adapted for attachment to the cloth plate of the machine and having a recessed portion terminating in an edge inclined to the direction of feed, means carried in the recess of said supporting plate and cooperating therewith for guiding and reversing a facing strip and comprising a member bent upon itself to form a pair of parallel plates spaced apart terminating in an upstanding curved portion and having an inclined portion spaced apart from the inclined edge of the supporting plate, an adjustable member secured to said attachment and having a projecting flange in position to maintain one inturned edge of the facing strip folded upon the work, and means carried by said adjustable member for preventing the binding from moving away from the needle line.

14. A sewing machine attachment of the character described, comprising a supporting plate adapted for attachment to the cloth plate of the machine, means carried by said supporting plate and cooperating therewith for guiding and reversing a facing strip and comprising a plate having each side edge thereof bent upon itself to form channel portions along the edges of said plate, one of said channel portions forming an upstanding curved portion, said plate terminating in an edge inclined to the direction of feed, and means for maintaining an inturned edge of the facing strip folded upon the work.

15. A sewing machine attachment of the character described, comprising a supporting plate adapted for attachment to the cloth plate of the machine, means carried by said supporting plate and cooperating therewith for guiding and reversing a facing strip and comprising a plate having each side edge thereof bent upon itself to form channel portions along the edges of said plate, one of said channel portions forming

an upstanding curved portion, said plate terminating in an edge inclined to the direction of feed and spaced apart from a similarly formed edge of the supporting plate, and means for maintaining an inturned edge of the facing strip folded upon the work, said plate also having a transversely extending projection for preventing the binding from moving away from the needle line.

16. A sewing machine attachment of the character described, comprising a supporting plate adapted for attachment to the cloth plate of the machine and having means for guiding a facing strip and maintaining both lengthwise edges thereof inturned with one inturned edge above the plane of the other and for reversing said strip to feed it in a direction at an angle to its initial direction of feed with one inturned edge thereof folded over the work at one side and with the other portion of the strip at the opposite side of greater width than the width of the inturned folded over edge, and adjustable means carried on top of said

means for maintaining said inturned edge of the facing strip folded over the work.

17. A sewing machine attachment of the character described, comprising a supporting plate adapted for attachment to the cloth plate of the machine, means carried thereby and cooperating therewith for guiding and reversing a facing strip and comprising a pair of spaced apart parallel plates having a width substantially corresponding with the facing portion of the facing strip and terminating in an inclined portion inclined to the direction of feed, said plates having spaced apart upstanding curved portions extending along one side thereof above the plane of the upper parallel plate.

Signed at Utica, N. Y., this 30th day of January, 1911.

FRED A. SUTTON.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."