SEAM BINDING ATTACHMENT FOR SEWING MACHINES

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The present invention relates to guiding means applicable to a sewing machine, and particularly to a strip or binding guide or attachment for a sewing machine.

The main object of my invention is to provide a sewing machine with means for guiding material such as strips and bindings into proper position for sewing the same on fabrics in rapid and efficient as well as accurate manner.

Another object of the invention is to mount such a machine with a guiding attachment for a binding strip that is so located as to guide the strip from the forward portion of the sewing machine toward the rear, while supplying the binding strip from a reel or spool located at the rear.

A further object is to have such a guiding and feeding attachment upon the intermediate portion of the sewing machine with a special curved guiding member extending to a point forward of the sewing zone of the machine and from that point guiding the binding strip rearwardly beneath the needle.

An important object of the invention is to have a strip guiding and feeding attachment that is a permanent fixture thereon, but is shiftable from an operative position to an unobstructive idle or inoperative position, wherein the sewing machine may readily be used for ordinary sewing without any limitation whatsoever.

It is, of course, a practical object to provide a sewing machine with such a strip guiding attachment which is simple to make and simple to use, and also reasonably in cost in order to encourage wide distribution on the market.

Other objects and advantages of my invention will appear in greater detail as the specification proceeds.

In order to facilitate ready comprehension of this invention for a proper appreciation of the salient features thereof, the invention is illustrated on the accompanying drawing forming part hereof, and in which:

Figure 1 is a perspective view of a seam binding attachment made according to the invention and embodying the same in a practical form, the attachment being shown as mounted on a sewing machine partly illustrated to demonstrate operation;

Figure 2 is a perspective view of the same attachment when disengaged from the sewing machine and partly folded or collapsed;

Figure 3 is a fragmentary perspective view showing the attachment plate by which the device is attached to the machine;

Figure 4 is a transverse section as taken on line 4—4 in Figure 2;

Figure 5 is a fragmentary perspective view of the tape or strip guiding and turning end of the strip guiding member, the view being shown on an enlarged scale; and

Figure 6 is a longitudinal section of part of the device as taken on line 6—6 in Figure 1.

Throughout the views, the same reference numerals indicate the same or like parts.

Sewing machines are so universally used, that their construction and operation are well known, and several attachments are available for various purposes to facilitate certain manipulations on such machines. However, thus far, there appears to be no convenient attachment available for feeding and guiding a seam binding tape or strip when sewing the same upon a fabric, which attachment may also be swung back out of the way when normal use of the machine is desired. Upon considering this problem, I have succeeded in producing a special seam binding attachment as already outlined, which I shall now proceed to describe in detail in the following.

Hence, in the practice of my invention, and referring also again to the drawing, a sewing machine base plate 7 has an upwardly extending hollow post 8 from which extends horizontally, the arm 9 terminating in the sewing head 10 provided with the needle rod or bar 11 with a needle 12 thereon, and a presser foot 13. The vicinity of the needle 12 on base plate 7 may be considered the sewing zone upon the machine, and the latter as a whole being conventional.

Upon the base plate 7 is secured an attachment plate 14 by screws 15, 16 rearwardly of post 8, to which in turn is secured a bracket 18 having a pair of similar upright lugs 17, 17a spaced a small distance apart, the screws 18 merely extending down into plate 14 to fix the bracket in place but allow removal thereof from the plate when required. Between lugs 17 is pivotally mounted one end of a flat metal bar 19 by a pivot pin 20. To the other end of this bar 18 is pivotally connected an elongated bracket generally indicated at 21, by means of a second pivot pin 22. This allows the bracket to hinge upon the end of bar 18 and the latter similarly to hinge on the first mentioned bracket 18.

The structure 21 may well be termed a tape or strip guiding bracket, and primarily consists of a metal strip 23 having one end bent aside at an angle to form a support for a tape reel 24 with a center stud 25 upon which this reel is mounted. A screw 26 is mounted in the free end of this support or arm 29 with the end thereof formed with a pair of friction points or edges 27 adapted to engage frictionally with the underside of a disk 20 resting rotatably on arm 29 beneath tape or strip reel 24 to prevent a too free rotation of the
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Having now fully described my invention, I claim:

1. A seam binding attachment for a sewing machine having a laterally extending rigid arm terminating in a sewing head with a needle movable beneath the latter, said attachment including a stationary bracket upon the machine having a substantially horizontal pivot pin, an elongated bar pivotally mounted at one end upon said pin, a guide plate portion upon the other end of said bar having a pair of outwardly open slots spaced a predetermined distance apart, a tape reel supporting arm supported upon said bar rearwardly of said rigid arm and having an upright center stud for the reel, said guide plate portion continuing in an arcuate forwardly twisted guide portion terminating in a forwardly and downwardly bent extremity for directing tape from the reel rearwardly past the sewing zone of the machine beneath the needle thereof.

2. An attachment according to claim 1, wherein the elongated bar at its other end has a second pivot pin with the guide plate pivotally mounted on said second pivot pin, and wherein a metal strip substantially parallel to the guide plate and secured at one end thereto carries the reel supporting arm on the other end.

3. An attachment according to claim 2, wherein the metal strip has a space block at the end secured to the guide plate for spacing it from the said guide plate and rigid therewith to allow for the thickness of the elongated bar to extend therewith.

4. An attachment according to claim 3, wherein, a branch arm is secured at one end to the guide plate and has a pull pin slidably mounted therein, the elongated bar and the metal strip have holes registering when the guide plate and strip are aligned with said elongated bar and said pull pin enter said holes to retain said bar, strip and plate rigid in operative position of the attachment, said pull pin having a spring biasing the same into engaged position with said holes.

5. An attachment according to claim 4, wherein the arcuate guide portion of the guide plate has a pair of guide fingers for retaining the tape upon its path on the guide plate and a further guide means upon the extremity of said guide plate also retains the tape upon its path thereon and directs it toward the sewing zone.

6. An attachment according to claim 5, wherein the arm having the center stud for the tape reel has a reel supporting disk rotatably mounted on said stud and a retarding screw mounted on the same arm having friction points upon the end thereof frictionally engaging with said disk to regulate rotation thereof during operation and preventing irregular slacking of the tape toward said guide plate.

7. An attachment according to claim 6, wherein the branch arm is secured upon the side of said guide plate opposite to the reel supporting arm, and the end of the guide plate is curved to the same side upon which said branch arm is located.

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