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M. POSTLEWAIT

1,653,309

BRAIDER

Filed May 7, 1925

FIG. 1.

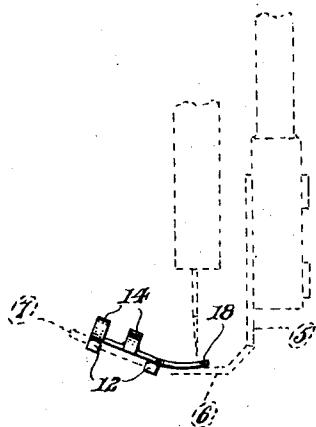


FIG. 3.

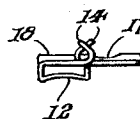


FIG. 4.

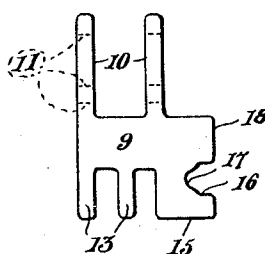


FIG. 2.

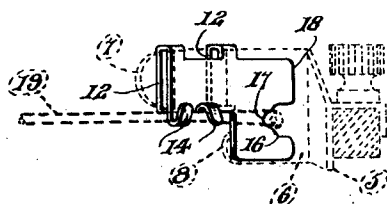
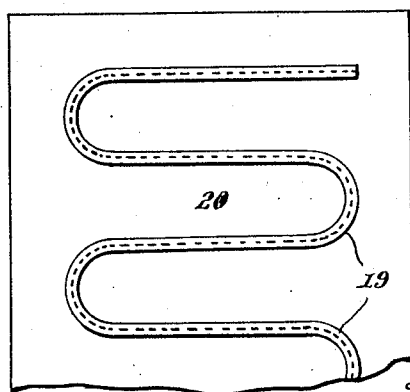


FIG. 5.



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BRAIDER.

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This invention relates to improvements in braiders.

The primary object of this invention is the provision of a braider adapted for use on sewing machines to permit braid or embroidery silk to be sewn to fabric which has been previously stamped with a pattern.

A further object of the invention is to provide a braider of the above mentioned type which may be attached to any sized sewing machine and will permit the operator of the machine to employ both hands for guiding the fabric; the braid or embroidery silk being handled entirely by the braider.

A still further object of the invention is to provide a braider which is especially constructed to permit the stamped pattern to be viewed at all times, thereby permitting the lines of the pattern to be accurately followed.

Other objects and advantages of the invention will be apparent during the course of the following description.

In the accompanying drawing forming a part of this specification and in which like numerals are employed to designate like parts throughout the same,

Figure 1 is a side elevational view of the braider embodying this invention, shown in full lines, arranged upon the presser foot of a sewing machine, shown in dotted lines,

Figure 2 is a top plan view of the structure shown in Fig. 1 with the braid shown in dotted lines properly arranged in respect to the braider,

Figure 3 is an end elevational view of the braider embodying this invention,

Figure 4 is a plan view of the blank from which the braider is formed, and

Figure 5 is a plan view of a piece of fabric to which braid has been sewn by means of the braider embodying this invention.

In the drawing, wherein for the purpose of illustration is shown a preferred embodiment of this invention, the numeral 5 designates the presser foot of a sewing machine which is formed with the horizontally extending base portion 6 having projecting therefrom the inclined, relatively large toe 7 and the smaller and narrower toe 8 which is spaced laterally from the larger toe 7.

The blank from which the braider is to be formed is shown in Fig. 4 and includes a body portion 9 having extending laterally from one longitudinal edge a pair of

spaced fingers 10 which are intended to be bent upon the dotted lines 11 to form the substantially rectangularly-shaped straps 12, see Figs. 1 to 3 inclusive. It will be noted by inspecting Fig. 3 that the bottom of each strap 12 is bowed inwardly. The remaining longitudinal edge of the body portion 9 of this blank is provided at one end with a pair of relatively short fingers 13 which are intended to be bent upwardly in opposite directions to form the guiding hooks 14, see Figs. 1 to 3 inclusive. This longitudinal edge of the body portion 9 of the blank is further provided with a lateral extension 15 which has formed in its outer transverse edge a notch 16 having its inner edge formed with a smaller notch 17.

It will be noted by inspecting Figs. 1 and 3 that the forward end 18 of the body portion 9 of the blank is bent at an angle to the remaining portion of the same for permitting the body portion to fit or conform with the angularity of the base portion 6 and relatively large toe 7 of the presser foot 5.

In applying this braider to a presser foot, the relatively large toe 7 is inserted through the straps 12 of the braider, in the manner shown in Figs. 1 and 2. The inwardly bowing of the bottom portions of these straps will permit the braider to be applied to toes of different widths as the binding engagement is produced by the thickness of the toe and not the width. The braid 19, see Fig. 2, is placed between the toes 7 and 8 of the presser foot and the braider should then be applied to the larger toe 7. The braid should then be fed rearwardly between the guiding hooks 14 and will be entirely guided by these hooks. The notches 16 and 17, of different sizes, are employed for accommodating different materials such as all silk embroidery thread including sweater silk, rope silk, etc., and braid of relatively small sizes and also gold or silver cord. The larger braids or silks will, of course, be received within the larger notch 16 while the smaller braids or silks will be received within the smaller notch 17.

In Fig. 5 there is shown a piece of fabric 20 which has had sewn thereto the braid 19, the said braid being stitched to the fabric along the lines of a stamped pattern or design.

It will be seen by inspecting Fig. 1 that the angularity of the larger toe 7 of the presser foot and the carrying of the braid by

the guiding hooks 14 above the toe 7 will permit the lines of the pattern to be viewed at all times by the operator of the machine so that the said lines may be accurately followed.

As will be understood, the arrangement of the spaced clamping members 10 in the fore and aft direction, and the arrangement of the resilient portion 12 adapted to engage the under surface of the leading toe portion 7 of the presser foot with the members extending transverse of the toe, provides a structure which is capable for use with different types of presser foot structures, since the engagement is at points widely spaced apart in the direction of length of the toe, and hence can be readily positioned on toes of different configurations when looked at in side view, the two members providing efficient clamping action while permitting ready positioning of the attachment upon the toe.

Hooks 14, by reason of their particular structure and arrangement have a direct advantage in connection with the body structure and arrangement. As will be seen, the front portion of the body 9—and which spans the slit of the presser foot in front of the needle—is of comparatively short length in the fore and aft direction of the attachment, especially when considered on the line which passes through the notches 16 and 17, the width of the remainder of the body portion in rear of this spanning portion, being such as to only cover the leading toe of the presser foot, so that this rear portion of the body portion does not overlie the line of the presser-foot slot, the arrangement being such that while the slit-spanning portion overlies the other toe of the presser foot, the entrance to the slit itself can be seen from above when the attachment is in position. While the notches 16, 17, provide for a recess in the advance edge of the attachment, the rear edge of the spanning portion extends transverse to the direction of length of the slit, so that the attachment presents no material obstruction to sight of the work to be braided beyond that which would be hidden by the presser foot itself, with the exception of the slit of the presser foot. As a result, the pattern which is to be braided can be readily followed by the operator, the line of the pattern to be stitched being exposed practically to the entrance of the slit.

Under these conditions the characteristics of the hooks 14 are of material value. As will be seen, the pair of hooks are spaced apart in the fore and aft direction of the presser foot, with each hook having an open side, the rear hook having its open side facing the covering portion of the body, thus preventing the advancing braid from being shifted laterally in a direction to materially obscure the advancing pattern line, and at

the same time permitting ready introduction of the braid into the zone in which it needs to travel in a predetermined path. The open side of the forward hook opens in the opposite direction, so that it acts to prevent the braid shifting laterally toward the covering portion of the body and away from the line of advancement. The two hooks thus tend to produce the effect of an eye in preventing material lateral shift of the braid, and yet the spacing of the hooks permits ready positioning of the braid, and permits the "eye" to be located in proximity to the plane of the line of the leading presser foot toe, so that the braid held above the advancing work by the positions of the hooks, will not materially obscure the pattern line. The latter arrangement is possible since the open side of the forward hook is away from the body portion, so that the direction of lead of the braid can extend in practically a direct line from the rear hook to the stitching point, doing this without materially overlying the path of desired travel of the pattern line to the entrance to the presser foot slit.

It is to be understood that the form of this invention herewith shown and described is to be taken as a preferred example of the same, and that various changes in the shape, size, and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claims.

Having thus described the invention, I claim:—

1. In braiding attachments for sewing machines, wherein the attachment is detachably secured to the leading toe of the presser foot and is adapted to guide the braid material to the stitching zone of the needle, a main body having means for clamping the attachment to the presser foot toe, said body having a portion adapted to span the presser foot slit at the rear of the needle, said body also having a pair of spaced guiding hooks at the rear of said spanning portion and adapted to guide the braiding material toward the stitching line, the width of the body within such hook zone being sufficient only to cover the said toe of the presser foot, whereby said elements co-operate to permit proper feeding of the braid material while presenting a minimum obstruction to observation of the work being braided as the latter is led beneath the presser foot.

2. An attachment as in claim 1, characterized in that the pair of hooks are arranged in fore and aft direction relative to the direction of braid advance and are positioned to locate the braid material above the presser foot, with the axis of the hooks arranged to lead the braid forwardly in the direction of the needle.

3. An attachment as in claim 1, character-

ized in that the pair of hooks are arranged in fore and aft direction relative to the direction of braid advance and are positioned to locate the braid material above the presser foot, with the axis of the hooks arranged to lead the braid forwardly in the direction of the needle, each hook having an open side, with the open side of one hook facing opposite that of the other hook.

4. An attachment as in claim 1, characterized in that the pair of hooks are arranged in fore and aft direction relative to the direction of braid advance and are positioned to locate the braid material above the presser foot, with the axis of the hooks arranged to lead the braid forwardly in the direction of the needle, each hook having an open side, with the open side of one hook facing opposite that of the other hook, and with the open side of the rear hook facing the toe-covering portion of the body, whereby the rear hook will prevent the braid material from shifting in the direction to cover the work pattern as the latter approaches the entrance to the presser-foot slit, the forward hook preventing shift of the braid material laterally away from the line of advance of

the braid in the direction of the toe-covering portion of the body.

5. An attachment as in claim 1 characterized in that the clamping means is in the form of spaced resilient members extending substantially transversely beneath the main body, and adapted to clamp the attachment by engagement with the under face of the leading toe at spaced points in the fore and aft direction, whereby the attachment may be secured to varying types of presser foot structures.

6. An attachment as in claim 1 characterized in that the clamping means is in the form of spaced resilient members extending substantially transversely beneath the main body, and adapted to clamp the attachment by engagement with the under face of the leading toe at spaced points in the fore and aft direction of the presser foot toe, the spacing of said members being greater than that of the pair of guiding hooks in the fore and aft direction of the presser foot toe, whereby the attachment may be secured to varying types of presser foot structures.

In testimony whereof I affix my signature.

MARTHA POSTLEWAIT.