A. H. DE VOE.

BRAIDER OR CORDER.

APPLICATION FILED OCT. 17, 1917.

1,432,974. Patented Oct. 24, 1922.

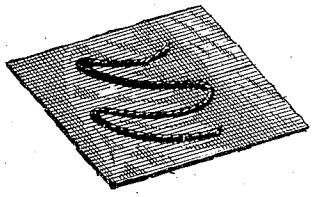


Fig. 8.

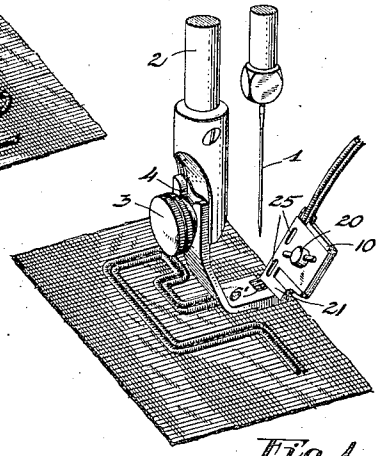



Fig. 1.

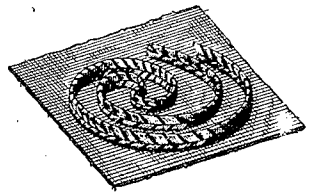


Fig. 9.

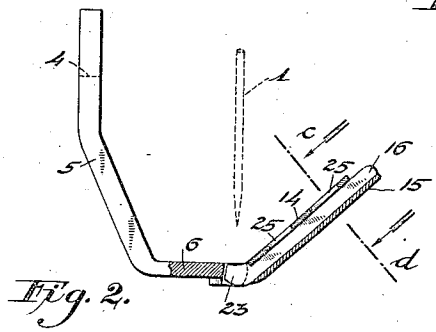



Fig. 2.

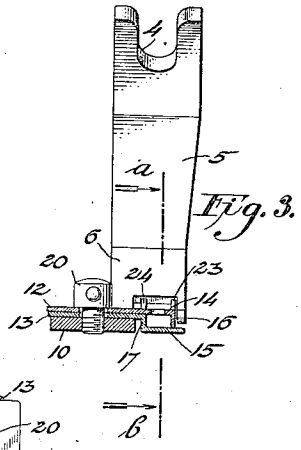



Fig. 3.

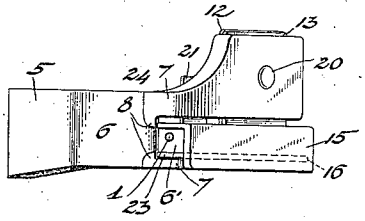
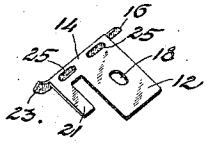



Fig. 4.

Fig. 5.



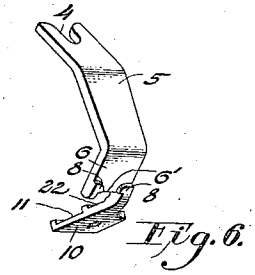




Fig. 6.

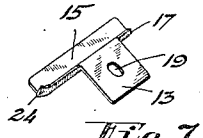



Fig. 7.

Witness:
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# UNITED STATES PATENT OFFICE.

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## BRAIDER OR CORDER.

Application filed October 17, 1917. Serial No. 197,014.

*To all whom it may concern:*

Be it known that I, ALBERT H. DE VOE, a citizen of the United States, residing at Westfield, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Braiders or Corders, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to sewing machine attachments and more particularly to that class of attachments much used for stitching braid or cord to a base material and commonly known as braiders or corders.

It is desirable in stitching braid sometimes to sew in the center of the braid and sometimes to sew along the edge. In the latter case the operative without adroit manipulation may make the braid stand on edge. In stitching cords, of which there are many varieties and sizes, the smart finish given thereby to hats and other articles of apparel is enhanced by laying the stitches close to one edge and not diametrically thereof, for the reason that the cord tends to roll or turn over after being stitched and thus present the appearance of a blind stitched cord. Heretofore these results have been accomplished in various ways but so far as known there is not a single presser-foot attachment extant by which both central or edge stitching of braids or cords may be done. Accordingly it is an object of my invention to extend the scope or range of usefulness of a braider or corder by making the guiding passage proper bodily adjustable relative to the needle and by making its side walls relatively adjustable to each other.

In the above mentioned classes of work it is highly desirable to be able to make sharp bends or turns in the braid or cord in order to duplicate leaf patterns or other designs having a highly ornamental appearance. The present invention aims to permit the operative laying the cord or braid in sharp bends without puckering the base material and to this end provides blocks of very short length on the under side of the presser-foot in rear of the needle opening therein so that the cord or braid may be laid with bights or bends as desired, at the same time insuring penetration of the braid or cord by controlling and directing it until it passes beyond the needle.

The invention in its preferred form is illustrated in the accompanying drawings, in which Fig. 1 is a perspective view of the attachment as mounted on the sewing machine, a sample of centrally stitched braid being shown. Fig. 2 is a longitudinal section on the line *a*—*b*, Fig. 3. Fig. 3 is a cross section on the line *c*—*d*, Fig. 2. Fig. 4 is a bottom plan view of the presser-foot. Figs. 5, 6 and 7 are details in perspective of the several parts of the attachment. Figs. 8 and 9 illustrate kinds of work that may be done with this attachment in addition to that shown in Fig. 1.

The attachment may be used on any suitable sewing machine having a needle 1 movable in a fixed path which obviously may be curved as well as straight. On the presser-bar 2 the attachment, in the form of a presser-foot, is secured by any suitable means, as for instance the thumb-screw 3 and slot 4 in a shank 5. The sole portion 6 of the presser-foot is provided at its front end with a needle-opening 6′ of substantially rectangular shape. Flanking the needle-opening on opposite sides are the guide portions or blocks 7, preferably being made integral with the presser-foot. The bottom faces of the blocks 7 cooperate with the feed-dog to advance the work when the braid or cord is thin and the surface 6, in rear of the blocks 7, cooperates with the feed-dog likewise when the braid or cord is thick. But whether the braid or cord is thick or thin the cutting away of the presser-foot to form the substantially flat surface 6 in rear of the guide-blocks 7 and as wide as the sole piece 6 permits of laying the braid or cord with sharp bends and with a minimum of frictional resistance due to the sliding of the body fabric on the lower surface of the blocks 7 or of the braid or cord on the surface 6. For convenience in description the lower surface of blocks 7 may be termed a work-engaging face and the surface 6 a braid- or cord-engaging face. Inwardly extending portions 8 are formed on the blocks 7 in rear of the needle-opening and define a guiding channel of very short length which terminates substantially immediately to the rear of the stitching point. These offset portions are preferably rounded off at their rear corners as indicated on the drawings so as not to bite into the cord or braid when a sharp angle is made.

An offset and inclined portion 10 at the front end of the presser-foot is provided with a groove 11 receiving the plate like supporting arms 12 and 13 of a pair of oppositely L-shaped members formed as shown in the drawings. The walls 14 and 15 of these members constitute the top and bottom of the cord- or braid-guiding passage proper, of which passage the walls 16 and 17 constitute the sides. Adjustment of the side walls to and from each other, for the two-fold purpose of accommodating different sized braids or cords and of locating the stitches laid by the needle centrally or eccentrically of the braid or cord, is afforded by the elongated slots 18—19 in each of the supporting arms through which slots passes the shouldered screw 20 threaded into the offset and inclined portion 10. To steady the upper of the L-shaped members a second arm 21 is formed integral therewith and is received within the groove shown at 22 in said inclined portion 10.

The front end portions of the side walls 16—17 are provided with lips 23—24 shaped and disposed at an angle to the main portion of the side walls as illustrated in the drawings. These lips 23—24 are located within the needle-opening on opposite sides of the needle. Together with the offset portions 8 of the blocks 7 the lips 23—24 constitute a channel open downwardly for directing a braid or cord at the critical time when it is being stitched. The adjustment afforded by the slots 18—19 is preferably made so as to favor the left-hand side of the braid or cord being penetrated by the needle but obviously the length of the slots and their location may be varied as desired so as to facilitate stitching the cord centrally or on either side.

Stiletto openings 25 may be provided in either of the members to facilitate the insertion of the braid or cord.

From the foregoing description it will be clear that the device is extremely simple in construction, that it is well adapted to handle braid or cord of various sizes and that it will enable the operative to stitch centrally or eccentrically (i. e., at the edge) of a braid or cord with a single attachment.

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

1. A presser-foot having a sole-portion formed with a needle-hole and with separated guide-portions on its bottom face on opposite sides of the needle-hole, said guide-portions defining a channel of less width than the sole-piece and adapted to guide a braid or cord as it passes the needle-hole, said sole-piece having a substantially flat braid or cord engaging face as wide as said sole-piece and disposed in rear of and at a higher level than the bottom faces of said separated guide-portions.

2. In a sewing machine, a presser-foot provided with a cord or braid guiding channel in its lower face and with a needle passageway opening into said channel, said channel terminating closely in rear of the needle passageway, said presser-foot having a cord engaging face a portion of which defines the upper wall of said channel and the rest of which is located in rear of the rear end of said channel, in combination with means for guiding and directing a cord or braid to said channel.

3. In a braider or corder for sewing machines having a needle, a presser-foot provided with an enlarged needle-opening, a braid- or cord-guide supported on the front of said presser-foot in advance of said needle-opening and having side walls directing the braid or cord under the needle, lips carried by said side walls extending into said needle-opening, blocks on the lower side of said presser-foot substantially in line with said lips and forming therewith a braid- or cord-guiding channel extending from a point in front to a point in rear of said needle, and a braid- or cord-engaging face on the presser-foot in rear of said blocks.

4. In a sewing machine having a needle operating in a fixed path, a presser-foot provided with an enlarged needle-opening at the front of its lowest portion, spaced blocks on said presser-foot defining a short channel leading from the rear of said needle-opening, in combination with means for leading a braid or cord to said channel, said means including braid- or edge-guiding elements located within said needle-opening on opposite sides of said needle, said elements being adjustable laterally relative to the needle whereby braid or cord may be directed centrally or eccentrically to the needle.

5. In a sewing machine having a needle, a braid- or cord-guiding member, a presser-foot provided with a needle-hole, and blocks on the lower face of said presser-foot spaced apart on opposite sides of said needle adjacent said needle-hole and defining a channel in line with the braid- or cord-guiding member, said blocks terminating short of the rear end of the lower face of the presser-foot.

6. In a sewing machine having a needle, a braid- or cord-guiding member adjustable transverse the line of seam-formation and controlling the braid or cord until it passes the needles, a presser-foot provided with a needle-opening into which said braid- or cord-guiding member extends, blocks on the lower face of said presser-foot on opposite sides of the line of seam-formation and defining a channel leading from the needle-opening, said channel being of short length relative to the sole-portion of the presser-foot.

7. In a sewing machine, a presser-foot provided with a needle-opening and a cord- or braid-guiding channel in its lower face, a cord-engaging face on the presser-foot a portion of which defines the upper wall of said channel and the rest of which is located in rear of said channel, in combination with, means for guiding and directing a cord or braid to said channel in the presser-foot, said means being adjustable laterally relative to the needle-opening.

8. In a sewing machine having a needle operating in a fixed path, a presser-foot provided with an enlarged needle-opening at the front of its work-engaging portion, spaced blocks on said presser-foot defining a short channel leading from the rear of said needle-opening, in combination with means for leading a braid or cord to said channel, said means including braid- or edge-guiding elements located within said needle-opening on opposite sides of said needle, at least one of said elements being adjustable laterally relative to the needle whereby various sized braids or cords may be stitched along one of their edges.

9. In a sewing machine, a presser-foot having a needle-opening, laterally adjustable cord or braid-guiding means in advance of said opening, and short laterally spaced guide-blocks in rear of said opening.

10. In a sewing machine, a presser-foot having a needle-opening, cord or braid-guiding means adjacent one side of said opening, means whereby said guiding means may be laterally adjusted, and a relatively short guide-channel disposed adjacent the opposite side of the needle-opening.

11. In a sewing machine, a presser-foot having a needle-opening, a cord or braid-guide adjacent one side of said opening, and spaced guide-blocks projecting from said presser-foot adjacent the opposite side of said opening, the opposed walls of said blocks being rounded at one end.

12. In a sewing machine, a presser-foot having a needle-opening, a pair of adjustable guides in advance of and projecting into said needle-opening, the sole of the presser-foot forming a cord or braid-engaging surface in rear of the needle-opening, and short spaced guides on said sole for laterally confining the cord or braid immediately adjacent the needle-opening.

13. In a sewing machine, a presser-foot having a needle-opening, a relatively extended adjustable cord or braid-guide in advance of the stitching point for guiding cord or braid centrally or eccentrically to said point, and a relatively short guide projecting from the presser-foot in rear of the stitching point, whereby the cord may be laid in bends without deformation at the stitching point.

In testimony whereof, I have signed my name to this specification.

ALBERT H. DE VOE.