F. A. McDONALD.

STITCHING GUIDE.

APPLICATION FILED JAN. 8, 1921.

1,396,447. **Patented Nov. 8, 1921.**

Fig. 1.

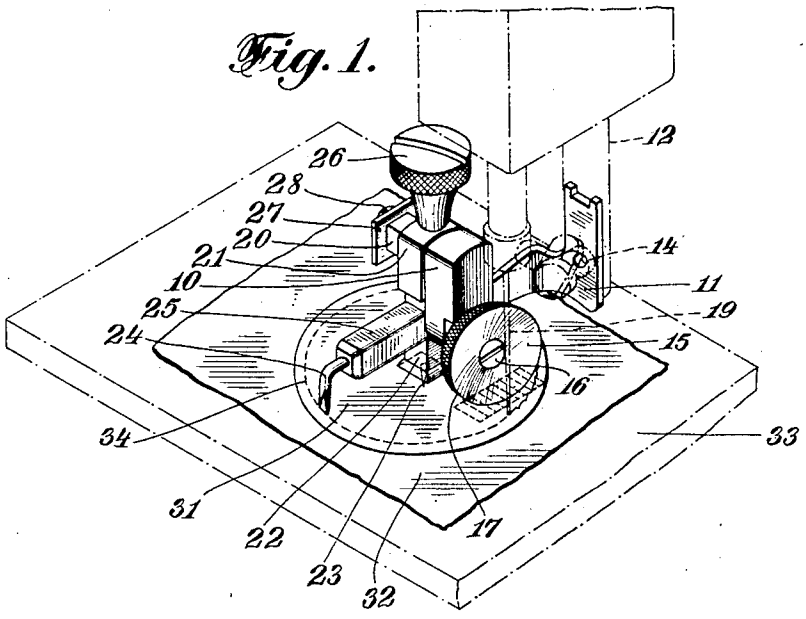


Fig. 2.

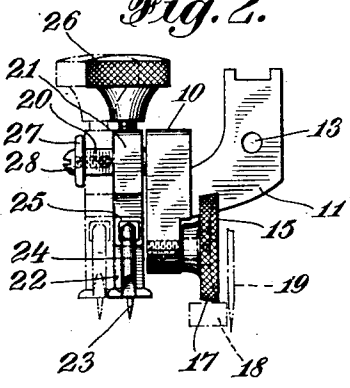


Fig. 3.

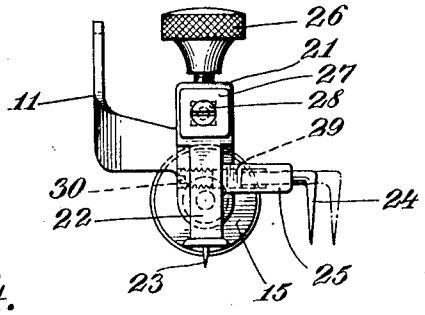
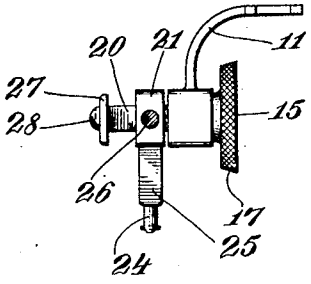


Fig. 4.



INVENTOR

Francis A. Mc Donald

BY Fraser Turk & Myers

ATTORNEY

UNITED STATES PATENT OFFICE.

FRANCIS A. McDONALD, OF COLLEGE POINT, NEW YORK.

STITCHING-GUIDE.

1,396,447. Specification of Letters Patent. Patented Nov. 8, 1921.

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To all whom it may concern:

Be it known that I, FRANCIS A. McDONALD, a citizen of the United States of America, residing at College Point, in the county of Queens and State of New York, have invented certain new and useful Improvements in Stitching-Guides, of which the following is a specification.

This invention relates to an improved sewing machine attachment and comprises a stitching guide adapted to facilitate the feeding of a work piece to be stitched along a curved line. It is particularly useful as a means for stitching circular pieces of leather known as "ankle patches" to the sides of athletic shoes.

It is usually customary when stitching circular patches of this character to guide the material by hand, an operation calling for considerable skill, in order to keep the stitching at a uniform distance from the edge.

It is one of the objects of the present invention to provide mechanism whereby the work piece may be accurately positioned on the work table of the sewing machine and automatically guided so that the patch may be neatly and uniformly stitched without calling for any close attention on the part of the operative.

In the drawings illustrating one embodiment of the invention,

Figure 1 is a perspective view of the stitching guide applied to an ordinary sewing machine, the usual machine head, table, needle bar and presser bar being indicated in broken lines.

Fig. 2 is a front view of the attachment, the work holder or centering device being illustrated in full lines as set for the stitching of a small patch, and in broken lines as set for the stitching of a larger patch.

Fig. 3 is an end view of the attachment, the gage being illustrated in broken lines as set for centering a small patch, and in broken lines as set for centering a larger patch.

Fig. 4 is a top view of the attachment, the set screw being omitted.

In the embodiment of the invention herein disclosed, 10 represents a body portion or support having an attaching lug 11 adapted to be secured to the presser bar 12 of a sewing machine. The lug 11 may be provided with an opening 13 to receive the usual thumb screw 14.

Attached to the body portion or support 10 is a presser element 15, preferably in the form of a wheel pivotally mounted upon the support by means of a screw or other appropriate fastening device 16. This presser element is preferably provided with a slightly conical circumferential surface 17, adapted to press the work piece against the usual four-motion feed bar illustrated conventionally in broken lines at 18, the relative position of the needle being indicated in broken lines at 19. This presser element takes the place of the usual presser foot but offers materially less resistance to the turning of the fabric during the stitching operation. However, should the circumstances require, the usual presser foot may be used.

Extending laterally from the body portion 10 and forming a part thereof is a supporting bar 20 upon which is mounted a slide 21 having a downwardly extending leg 22 terminating in a pointed work holder or centering element 23. This centering element may, if desired, comprise a needle to pass through the work sheet or, if preferred, may be sufficiently blunt to prevent penetration. It is merely essential that it shall prevent movement of the point of the work piece with which it is brought in contact, so that the work piece will be caused to rotate about this point during the stitching operation.

As a means for properly positioning the work piece, there is provided a gage 24 slidably mounted within an opening in an arm 25 extending laterally from the leg 22.

To provide means for stitching circular patches of different diameters, or along curves of different radii, the slide 21 may be shifted to different positions along the bar 20, and secured in adjusted position by means of the set screw 26. This movement of the slide may be limited by any appropriate means, as by the cap plate 27 and screw 28.

The gage 24 is likewise adjusted to different positions corresponding with those of the slide. To this end, the gage may be provided with a head 29 the movement of which is limited by the ends of the enlarged portion of the opening in the bar 25. This opening may be closed by any appropriate means, as by the screw plug 30.

The operation of the device is as follows:

With the presser bar and needle bar both raised, the work piece, comprising the circular patch 31 and the piece 32 to which it is

to be stitched, are placed upon the work table 33 in such position that the needle may be passed through one point of the work piece at the stitching line.

Assuming that the patch selected is of the smaller size for which the attachment is designed, the slide 21 and gage 24 are set in their positions indicated in full lines in Figs. 2 and 3. The work piece is then rotated about the point pierced by the needle until another point in the stitching line, represented in broken lines 34, is brought immediately under the point of the gage. The presser bar is then lowered to bring the periphery of the wheel 15 in contact with the work piece and press the same firmly against the feed bar 18. At the same time the work holder or centering device 23 will engage or pierce the work piece at the center of the patch. The point of the gage is at sufficient elevation above the work table to permit the work piece to move freely thereunder. With the work piece and mechanism adjusted, the sewing may be effected with little or no attention on the part of the operative, since the feed bar and presser element will cause the work to rotate about the workholder 23 while being stitched by the usual stitching mechanism.

Although the extreme positions of the slide and gage, as indicated in full and broken lines in Figs. 2 and 3, provide for the stitching of but two sizes of circular patches, it will be obvious that the range of such adjustment is unlimited and that by applying suitable scales and indicing means, these parts might be set at corresponding intermediate positions so as to provide for the stitching of circular patches of other sizes.

Although the invention has been illustrated in its preferred form, it is not intended to be limited thereto but may obviously be modified to suit the taste and skill of the designer within the scope of the appended claims.

What I claim is:—

1. An attachment for a sewing machine having the usual work table, and feed bar, comprising a support, a pointed work holder extending downwardly therefrom to form a centering means at one side of the feed bar about which a work piece may be caused to rotate, so as to be stitched along a curved line, a presser element carried by said support to hold a part of the work-piece in contact with the feed bar, and a gage, extending radially from said holder, by means of which the work-piece may be centered.

2. An attachment for a sewing machine having the usual work table and feed bar, comprising a support, a pointed work holder extending downwardly therefrom to form a centering means at one side of the feed bar, about which a work piece may be caused to rotate, so as to be stitched along a curved line, a presser element carried by said support to hold a part of the work-piece in contact with the feed bar, and a gage, extending radially from said holder, by means of which the work-piece may be centered, said presser element and said gage being each adjustable to and from said work-holder to provide for variations in the radius of curvature of the line of stitching.

3. An attachment for a sewing machine having the usual vertically settable presser bar, work table and feed bar, comprising a body portion having means whereby it may be secured to the presser bar, a pointed work holder extending downwardly from said body portion so as to be adapted to center a work piece on the work table at one side of the feed bar and about which the work piece may be caused to rotate so as to be stitched along a curved line, and a gage extending radially from said holder, by means of which the work piece may be centered.

4. An attachment for a sewing machine having the usual vertically settable presser bar, work table and feed bar, comprising a body portion having means whereby it may be secured to the presser bar, a pointed work holder extending downwardly from said body portion so as to be adapted to center a work piece on the work table at one side of the feed bar and about which the work piece may be caused to rotate so as to be stitched along a curved line, and a gage extending radially from said holder, by means of which the work piece may be centered, said work holder being adjustable to different positions along said body portion to vary its distance from the feed bar in accordance with the desired radius of curvature of the stitching to be effected, and said gage being adjustable to correspondingly vary its distance from said holder.

5. An attachment for a sewing machine, having the usual vertically settable presser bar, work table and feed bar, comprising a body portion having means whereby it may be secured to the presser bar, in place of the usual presser foot, a pointed work holder extending downwardly from said body portion so as to be adapted to center a work piece on the work table at one side of the feed bar, and about which the work piece may be caused to rotate so as to be stitched along a curved line, a presser wheel rotatably mounted on said body portion to hold the work piece in contact with the feed bar near the stitching point, and a gage extending radially from said holder, by means of which the work piece may be centered, said presser wheel and gage being each adjustable toward and from said work holder to provide for variations in the radius of curvature of the line of stitching to be effected.

6. An attachment for a sewing machine having a work table and feed bar, said attachment comprising a pointed work holder forming a centering means at one side of the feed bar about which a work piece may be caused to rotate so as to be stitched along a curved line, a gage positioned laterally with respect to the line joining said work holder and feed bar, as means for positioning said work piece, and means for attaching the holder and gage to the machine in the relation specified.

7. The sewing machine attachment of claim 6, said work holder being adjustable to vary its distance toward and away from said feed bar, and said gage being adjustable so as to correspondingly vary its position with respect to said holder.

In witness whereof, I have hereunto signed my name.

FRANCIS A. McDONALD.

Witnesses:

J. T. CROWLEY,

MAY A. REINHART.