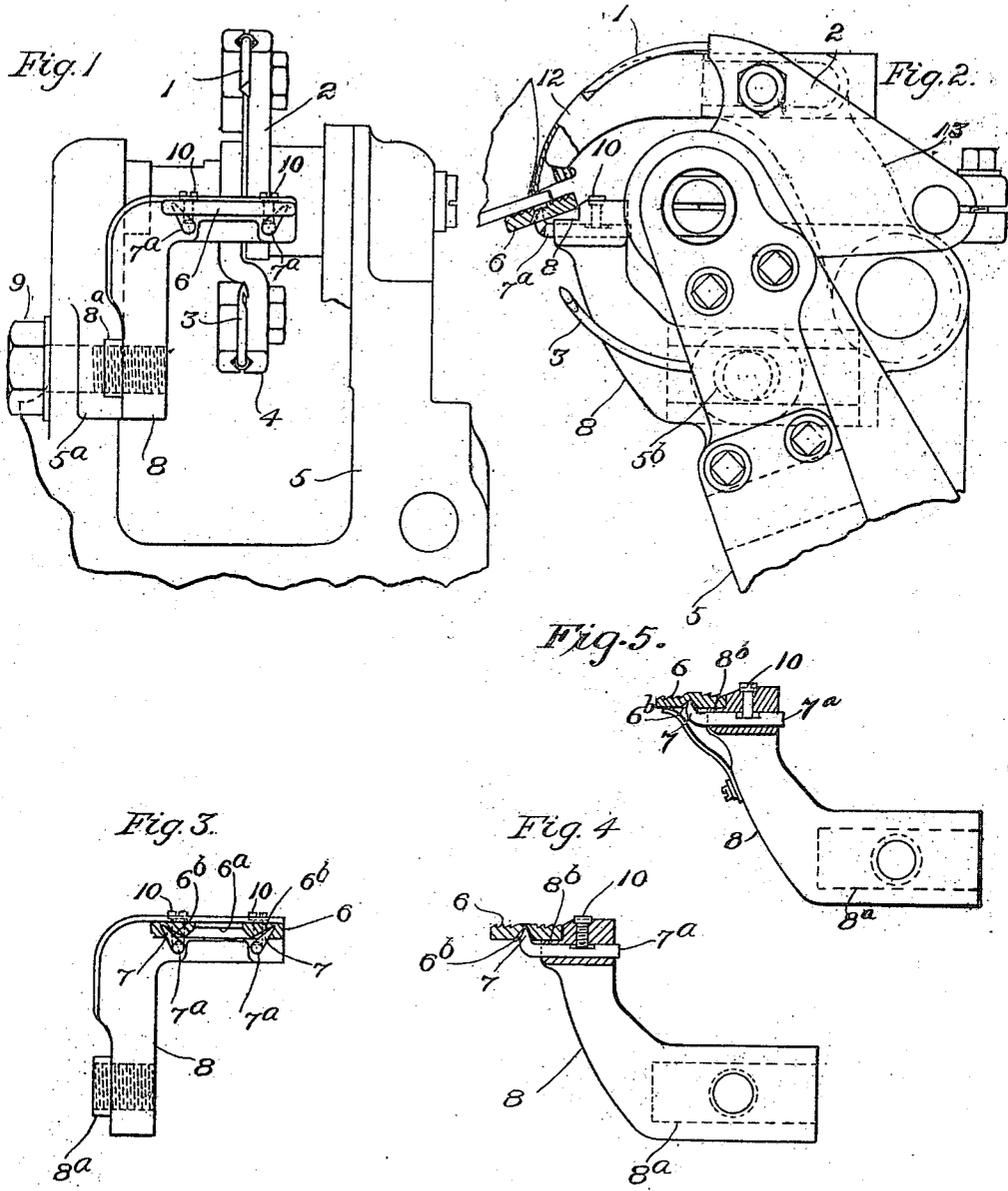


F. W. MERRICK.
 WORK SUPPORT FOR SEWING MACHINES.
 APPLICATION FILED NOV. 25, 1912.

1,155,318.

Patented Sept. 28, 1915.



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UNITED STATES PATENT OFFICE.

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WORK-SUPPORT FOR SEWING-MACHINES.

1,155,318.

Specification of Letters Patent. Patented Sept. 28, 1915.

Application filed November 25, 1912. Serial No. 733,298.

To all whom it may concern:

Be it known that I, FRANK W. MERRICK, a citizen of the United States, residing at Boston, in the county of Suffolk, State of Massachusetts, have invented a certain new and useful Improvement in Work-Supports for Sewing-Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention is an improvement in work-supports or work-rests of the character employed in sewing machines used for stitching the soles of boots and shoes, and for harness and saddlery work. It is applicable also to other machines.

The main object of the invention is to avoid distortion of the marginal portion of the sole of a shoe, or of other work, resulting from the bending or breaking down of such portion over the front edge of the work-support when the work is held in an inclined position while being operated upon, as frequently is necessary in practice.

A further object is to avoid the marking and creasing of the surface of the work which results from giving the work an inclined position over the front edge of a stationary and rigid support or rest while being operated upon. The marks and creases thereby occasioned require to be removed by buffing or other operations, and frequently considerable labor and time are expended in effecting the removal, with increase in the cost of manufacture.

The invention consists in a work-support or work-rest which rocks or tilts upon an axis parallel to the line of feed so as to accommodate itself to the angle or inclination of the surface of the work contacting therewith, as the work is tilted or inclined more or less.

An important feature of the invention in its preferred embodiment is the location of the pivotal axis of the work-support or work-rest in or substantially in the plane of the surface thereof with which the work comes into contact. Another is the location of such axis in line with the stitch-forming point in a sewing machine in which the invention is employed.

An embodiment of the invention is illustrated in the drawings, in which latter,—

Figure 1 shows in front elevation certain parts of a curved needle sewing machine having the said embodiment combined there-

with. Fig. 2 shows the parts of Fig. 1 in side elevation, and in addition shows a portion of a shoe, with the work-support or work-rest tilted or inclined. Fig. 3 is a detail view of the work-support or work-rest of Figs. 1 and 2, showing it detached and in section in a vertical plane passing through the pivots. Fig. 4 is a view of the said work-support or work-rest in vertical section in a plane at right angles to that of the section of Fig. 3. Fig. 5 shows the application of a spring in connection with the work-support or work-rest.

Having reference to the drawings:—The curved awl 1, swinging awl-carrier 2, curved needle 3, swinging needle-carrier 4, presser 12, swinging presser-carrier 13, and the portion 5 of the machine framework supporting said awl-carrier, needle-carrier, and presser-carrier, together with the mechanism for operating the parts for stitch-forming purposes, and for effecting the feeding of the work, are or may be of any approved character and construction. While I have shown a curved needle and a curved awl, and appropriate carriers therefor, it is to be understood that the invention is not limited to application to a curved-needle machine, but is equally applicable to a straight-needle machine, as well as to a variety of other machines besides sewing machines.

In carrying the invention into effect, the work-support or work-rest 6 is mounted upon pivots 7, 7, with capacity to rock or swivel upon an axis that is parallel with the line of feed from its normal position, which in Figs. 1, 3 and 4 is horizontal, into a position inclined to the horizontal as in Fig. 2, the degree of inclination varying according to the extent to which the shoe being stitched is caused to incline by the operator. The pivots 7, 7, are constituted by the conical points of the bent ends of stems 7^a, 7^a. The said stems occupy holes in a stand or carrier 8 which is mounted upon one upright of the portion 5 of the machine framework. The pivots 7^a, 7^a, are located at right and left, respectively, of the stitch-making point, and at opposite ends of the throat 6^a, Fig. 3, in the work-rest, said throat being of a length suitable to accommodate the maximum length of feed-movement of the awl, needle, or other feeding implement.

In order that the pivots 7, 7, may be located practically in the plane of the surface

of the work-rest with which the work makes contact, as in Fig. 2, conical cavities 6^b, 6^b, Figs. 3 and 4, are formed in the under side of the work-rest and extend through the thickness of the work-rest nearly to the said surface. Consequently, the work-rest rocks upon a pivotal axis practically in the plane of the work-contacting surface of the work-rest, so that the rocking movement of the work while in contact with the work-rest entails practically no displacement of the under surface of the work with reference to the said pivotal axis. Therefore the required line of stitching may be produced around the margin of the sole without deviation due to varying the inclination of the shoe.

To secure accuracy in the location of the stand 8 in applying the same to the machine-frame 5, the said stand is formed at one side thereof with a square rib 8^a, and the portion 5^a of the machine-frame to which the stand 8 is applied is formed with a groove into which the said rib fits as in Fig. 1. The stand is secured in place by means of a bolt 9, and in order to permit adjustment of the stand in the direction from front to rear the hole 5^b which is formed in the frame 8^a to receive the stem of the said bolt is made as a slot elongated in such direction. This slot provides for locating the stand in the proper position. To provide for a similar adjustment of the work-rest upon the stand, the stems 7^a, 7^a, are capable of adjustment lengthwise in the direction from front to rear within the holes which they occupy in the stand 8. The said stems are held in adjusted position by clamp-screws 10, 10, occupying threaded holes tapped in the stand, and binding by their inner ends against flattened portions of the stems. Such flattened

portions are of a length sufficient to permit the required extent of lengthwise adjustment of the stems relative to the stand in locating the work-rest properly in relation to the field of action of the awl and needle. The portion of the work-rest at the rear of the pivots is heavier than the front portion, so that the said rear portion gravitates normally to a seat or shelf 8^b upon the stand 8. A spring may be employed to aid gravity as at 14 in Fig. 5, or a spring alone may be utilized.

I claim as my invention:—

1. The combination with a support, of a work-rest pivotally mounted thereon, with its pivotal axis parallel with the direction of feed and passing through the stitching point, the said work-rest adapted to conform to the inclination of work in contact therewith by tilting about the said axis.

2. The combination with a support, of a work-rest pivotally mounted thereon with its pivotal axis parallel with the direction of feed and substantially in the work-contacting surface of the work-rest, the said work-rest adapted to conform to the inclination of work in contact therewith by tilting about the said axis.

3. The combination with a support, of a work-rest pivotally mounted thereon with its pivotal axis located substantially in the work-contacting surface thereof, extending parallel with the direction of feed and passing through the stitching point.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK W. MERRICK.

Witnesses:

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