(No Model.)

A. S. RICHARDSON.

WAX THREAD SEWING MACHINE.

No. 314,478. Patented Mar. 24, 1885.

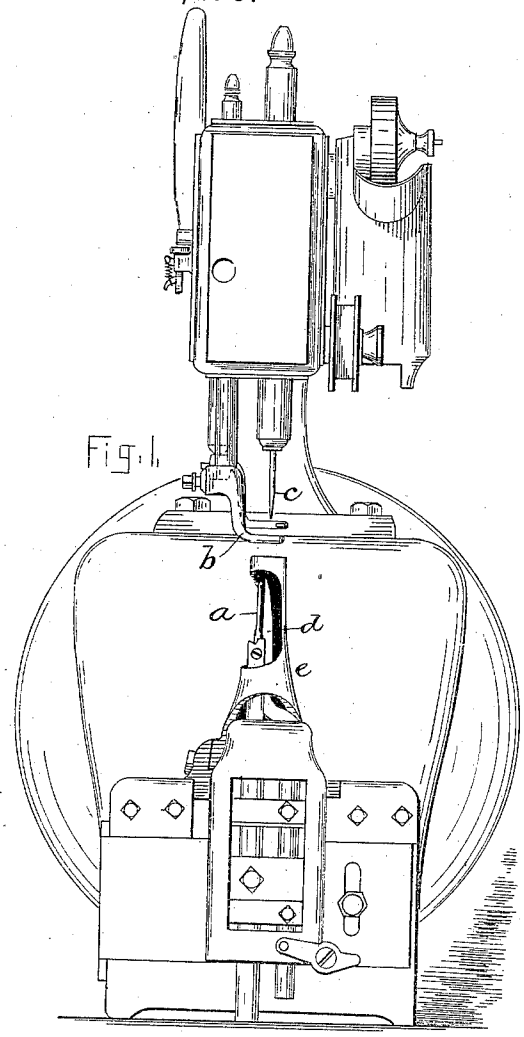

Fig. 1.

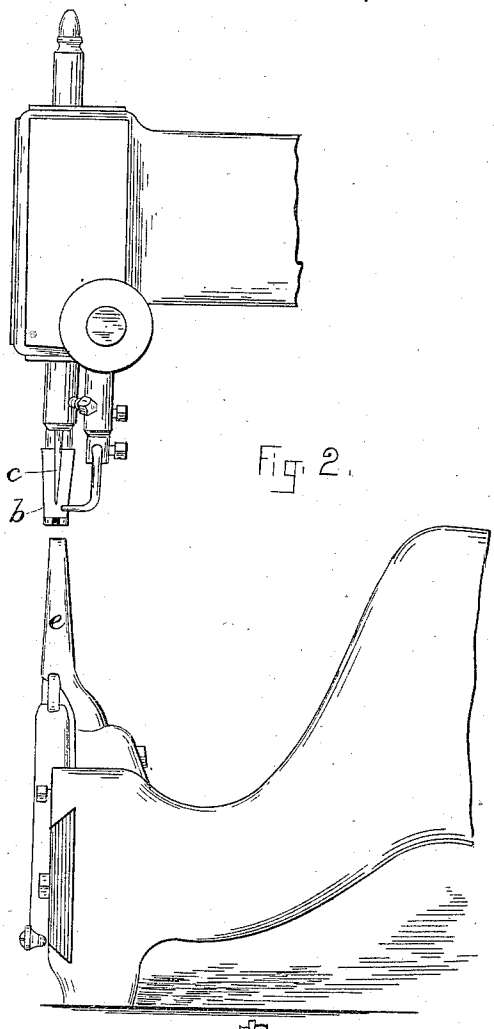

Fig. 2.

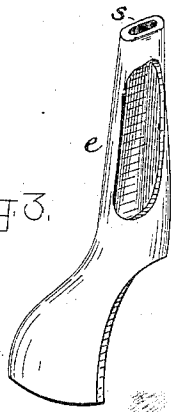

Fig. 3.

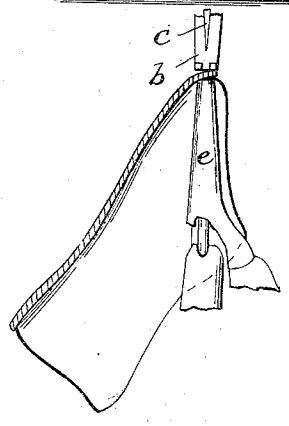

Fig. 4.

WITNESSES:
C. S. Gooding.
H. Brown

INVENTOR:
A. S. Richardson
by Wright Brown & Quinby Attys.

UNITED STATES PATENT OFFICE.

ARTHUR S. RICHARDSON, OF READING, MASSACHUSETTS.

WAX-THREAD SEWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 314,478, dated March 24, 1885.

Application filed March 17, 1884. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR S. RICHARDSON, of Reading, in the county of Middlesex and State of Massachusetts, have invented certain Improvements in Wax-Thread Sewing-Machines, of which the following is a specification.

This invention has for its object to enable a post wax-thread sewing-machine of the ordinary general construction to stitch outer soles to shoe-uppers which are not turned inside out; and to this end the invention consists in the provision on a machine of this class of an attenuated or slender post adapted to enter the inside of a shoe and permit the shoe to assume all the different positions or inclinations required while the machine is stitching the edge of the sole to the upper, said post having an elongated slot for the play of the awl, and being flattened to permit the needle to enter the slot adjacent to the edge of the sole, as I will now proceed to describe.

Of the accompanying drawings, forming a part of this specification, Figures 1 and 2 represent elevations of a wax-thread machine provided with my improved post. Fig. 3 represents a perspective view of the post. Fig. 4 represents a side view of the post, showing a longitudinal section of a shoe in the position it assumes when the toe is being stitched.

The same letters of reference indicate the same parts in all the figures.

In the drawings I have shown my improvement as applied to a needle-feed machine; but it will be understood that it is equally applicable to an awl-feed machine with the awl above or below the end of the post.

a represents the vertically and laterally moving needle, *b* the presser-foot, *c* the awl, and *d* the cast-off, of an ordinary side-motion wax-thread machine, these parts operating in the usual manner to form chain-stitches.

e represents my improved post, which is made of suitable height to support a shoe so that it can be inclined downwardly in any direction from the top of the post, and is flattened or reduced in its cross-section, so that it affords at its upper end only a narrow bearing-surface, in which is formed the elongated slot *s*, through which the awl or needle moves in feeding the work, as shown in Fig. 3, the top of the post constituting a slender flattened tube, the metal surrounding the slot *s* being of only sufficient thickness to afford the necessary strength and constitute a very narrow support for the work on all sides of the slot, whereby the needle, while it will enter the slot, is brought close to the edge of the sole, so that the seam is close to said edge. The body of the post below the top is made correspondingly slender, as shown.

The described form of the post enables a shoe-upper to be placed upon it and inclined in any desired direction, and to a sufficient extent to enable the post to reach any part of the inside of the shoe, including the toe, as shown in Fig. 4. I am thus enabled to stitch the sole to the upper on a line close to one edge of the sole without turning the shoe.

The class of work to which the improved machine is chiefly adapted is infants' and children's shoes.

Heretofore in stitching on the soles of this class of shoes, excepting when the Blake or McKay machine is used, the upper and sole have been turned inside out and stitched together by an ordinary sewing-machine.

My improvement obviates the labor of turning the shoe, and thus cheapens the cost of manufacture, besides obviating the wrinkling and loss of freshness caused by turning. It is obvious, however, that the improved machine may be used in the manufacture of heavier kinds of boots or shoes.

The upper and sole are lasted before the stitching operation, the outer sole being temporarily secured to the upper by the usual means, the preparation of the sole and upper being in this respect the same as when the sole is stitched by the Blake or McKay machine.

A shoe stitched by this improved machine differs from one stitched by the Blake or McKay machine, in that the stitches are formed on the inside of the sole instead of on the outside.

In an awl-feed machine, the post can be made more slender than in a needle-feed machine, because no space will be required for lateral movement of the needle.

I am aware that shoes have been sewed without being turned—as, for instance, by the well-known McKay or Blake sewing-machines; but in all these cases the stitches are laid on

the outer or upper surface of the sole or in a channel formed therein.

By using an ordinary wax-thread machine with my improvement attached I am enabled to sew the shoes or boots on lines close to the edges of the soles without turning, and to form the stitches on the under surface, rendering it unnecessary to channel the sole for the reception of the stitches, which is difficult to do in small thin soles, and avoid the objections to bulky and unsightly chains of stitches on the surface. Moreover, the post or standard in my improvement is stationary.

I am also aware that the posts of some sewing-machines have been made comparatively slender, but am not aware that such a post has ever been combined with a wax-thread machine for sewing shoes in such manner and so constructed that the line of stitches can be brought close to the edge of the sole, with the chain inside.

The advantages of sewing shoes with a wax-thread are well known and fully appreciated in the art, and by the use of my invention small shoes may be practically sewed with a wax-thread directly without turning the shoe—a result which has never been accomplished heretofore.

I claim—

The combination, with the needle and awl of a wax-thread sewing-machine, of a standard for supporting the shoe, and the lower stitching devices flattened to permit the needle to penetrate the sole adjacent to the edge, and with an elongated slot to permit the play of the awl or needle, substantially as described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 14th day of March, 1884.

ARTHUR S. RICHARDSON.

Witnesses:

C. C. RICHARDSON,

C. F. BROWN.