(No Model.)

# M. L. KEITH.

## CHANNEL GUIDE FOR SHOE SEWING MACHINES.

No. 534,159. Patented Feb. 12, 1895.

Fig. 1.

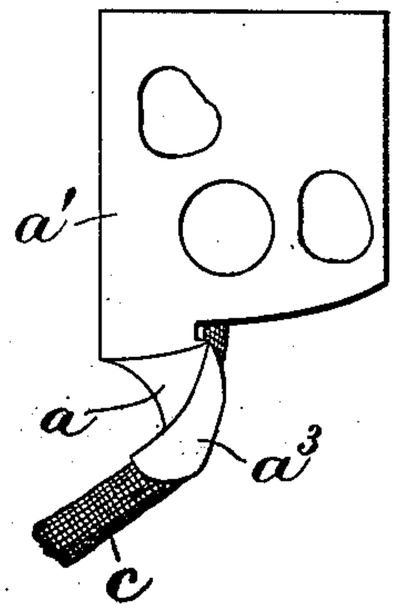



Fig. 2.

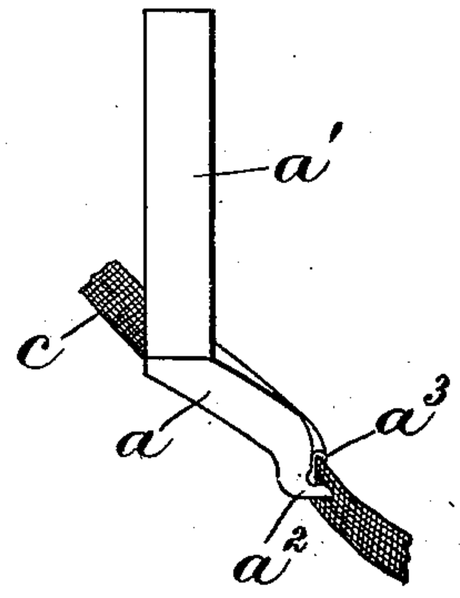



Fig. 3.

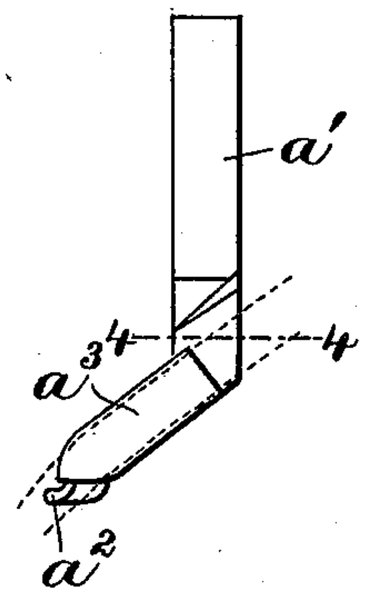



Fig. 4.

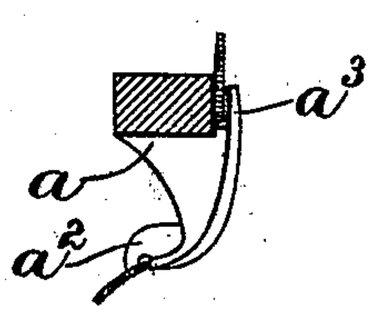



Fig. 5.

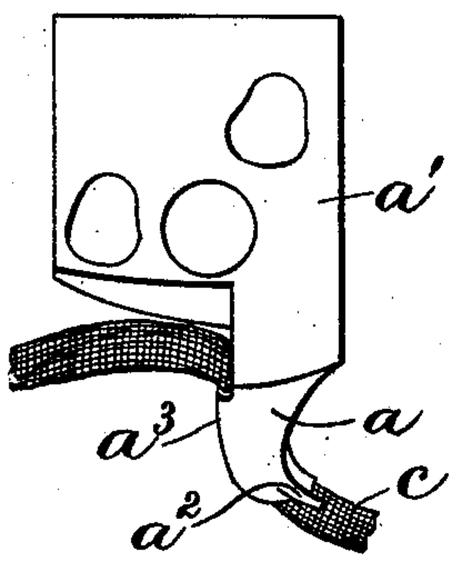
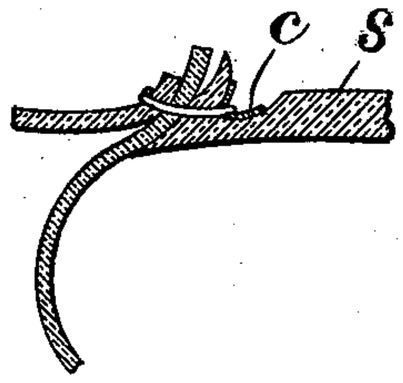



Fig. 6.

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# UNITED STATES PATENT OFFICE.

MYRON L. KEITH, OF BROCKTON, MASSACHUSETTS.

## CHANNEL-GUIDE FOR SHOE-SEWING MACHINES.

SPECIFICATION forming part of Letters Patent No. 534,159, dated February 12, 1895.

Application filed July 9, 1894. Serial No. 516,929. (No model.)

*To all whom it may concern:*

Be it known that I, MYRON L. KEITH, of Brockton, in the county of Plymouth and State of Massachusetts, have invented certain new and useful Improvements in Channel-Guides for Welt-Sewing Machines, of which the following is a specification.

This invention relates to machines organized to stitch together the welt, upper, and inner sole of a welted shoe, and it has for its object to enable a reinforcing strip to be laid in the bottom of the stitch-receiving channel in the inner sole, for the purpose of preventing the stitches which unite the inner sole, upper, and welt from sinking into the between-substance of the inner sole. A channel is cut in the outer surface of the inner sole of a welted boot or shoe, for the reception of the stitches that unite the inner sole, upper, and welt, said stitches passing through the material of the inner sole between the bottom of the channel and the edge of the sole, said material being known as the "between-substance." Owing to the fact that the surface at the bottom of the channel against which the stitches bear is formed by cutting the leather, said surface is more or less spongy and yielding, so that the stitches when formed under strong tension are liable to sink into the between-substance and thus diminish the tension and cause an imperfect connection between the upper, welt, and inner sole.

My invention consists in a channel-guide formed to enter the channel of an inner sole and to guide the work so that the stitches made by the stitch-forming mechanism will be properly located, and provided with a slot or passage arranged to present a cloth reinforcing-strip to the needle at such point that the needle in entering the between-substance will pass through said reinforcing strip and thus secure the said strip to the sole by the stitches, the strip preventing the sinking of the stitches into the between-substance.

Of the accompanying drawings, forming a part of this specification,—Figure 1 represents a side view of my improved channel-guide. Figs. 2 and 3 represent edge views of the same. Fig. 4 represents a section on line 4—4 of Fig. 3, looking downwardly. Fig. 5 represents a rear elevation. Fig. 6 represents a sectional view of a portion of a welted shoe, showing the location of the reinforcing-strip in the channel.

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

In the drawings—$a$ represents a channel-guide arm, which is formed on a plate or shank $a'$, the latter being adapted to be attached in the usual or any suitable way to a welt-sewing machine, so that the arm $a$ will stand in the proper position to enter the channel formed in the inner sole $s$ of a welted shoe and guide the channel, upper, and welt during the stitching operation, the arm $a$ having a thin-edged rib or fin $a^2$ which is formed and arranged to run in the angle or bottom of the channel and to guide the inner sole so that the path of the needle will be through the bottom of the channel. The arm $a$ is inclined relatively to the shank, as shown in Figs. 1, 2, 3, and 5.

In carrying out my invention, I provide the arm $a$ with an inclined slot or way formed to guide a reinforcing strip $c$, which is preferably of a suitable textile fabric, and is of sufficient width to be folded along the angle of the channel and thus form two narrow lips bearing on opposite sides of the channel, as shown in Fig. 6. The said slot or way is preferably formed by attaching a thin plate $a^3$ to the outer side of the arm $a$, said plate being formed so that a slot of sufficient width to properly guide the strip $c$ exists between it and the corresponding side of the arm. The slot is arranged to present the strip $c$ to the path of the needle so that the needle will pass through the center of the strip. The strip-guiding slot being inclined relatively to the shank $a'$ and arranged to present the strip to the path of the needle while the rib $a^2$ (which stands at a corresponding inclination, as best shown by dotted lines in Fig. 1 and by full lines in Fig. 5) guides the bottom of the crease in the sole, and therefore keeps the same in the path of the needle, it follows that the needle which enters the between-substance close to the point of said rib passes through the center of the strip. The strip may be fed to the channel-guide from a spool or coil located at any suitable point.

It will be seen that the strip $c$ presented as described to the channel is engaged and secured to the channel by the thread, and forms a continuous reinforcement along the entire

length of the channel, whereby the stitches are prevented from sinking into the between-substance.

I claim—

A channel-guide for welt-sewing machines, comprising in its construction an inclined arm having means for attachment to a sewing machine, a sole-guiding rib or fin projecting from the lower end of said arm and arranged to enter the bottom of the channel of an inner sole and hold the same in the path of the needle, and an inclined strip-guiding slot or way in said arm arranged to present a reinforcing-strip to the path of the needle so that the needle will pass through the center of the strip, the rib causing the needle to enter the bottom of the channel, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 30th day of June, A. D. 1894.

MYRON L. KEITH.

Witnesses:
HORACE BROWN,
A. D. HARRISON.