S. D. Tripp,

Laying Shoe Channels.

No. 109,077. Patented Nov. 8. 1870.

Fig: 1

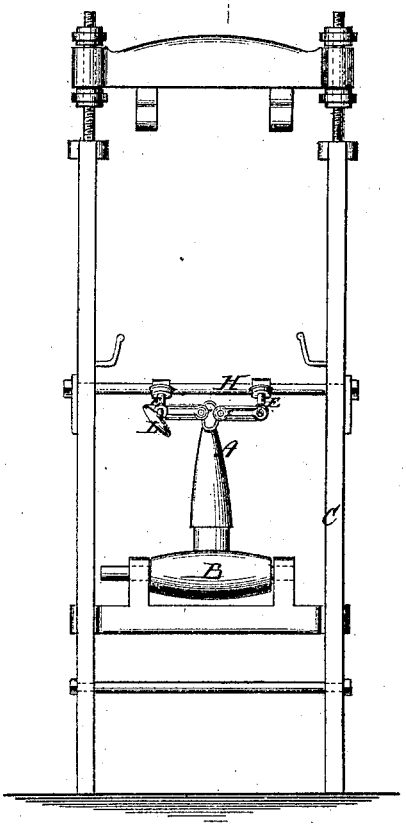


Fig: 4

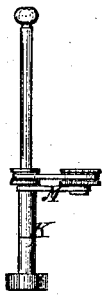


Fig: 2.

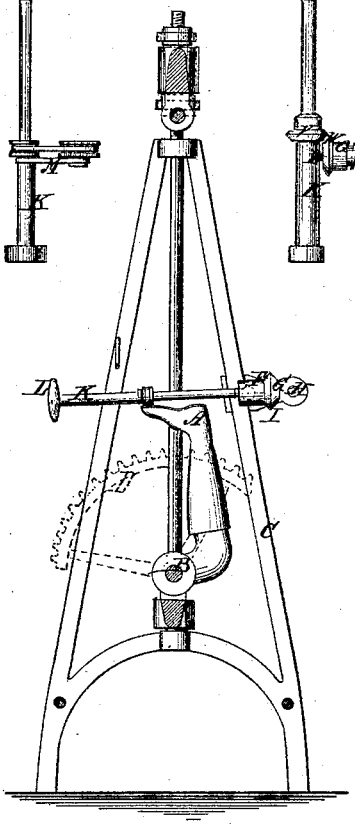


Fig: 5

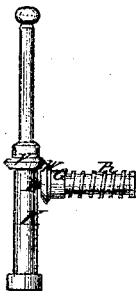
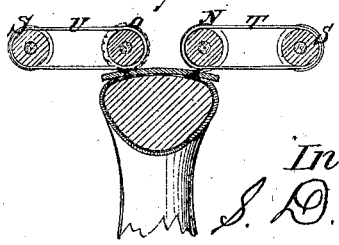


Fig: 3.



Witnesses:

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SETH D. TRIPP, OF LYNN, MASSACHUSETTS.

Letters Patent No. 109,077, dated November 8, 1870.

IMPROVEMENT IN MACHINES FOR LAYING CHANNELS IN BOOTS AND SHOES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, SETH D. TRIPP, of Lynn, in the county of Essex and State of Massachusetts, have invented a new and improved Channel-laying Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

This invention relates to improvements in machinery for the manufacture of boots and shoes, and consists in a combination with a last or former for holding the boot or shoe, of rubbing or smoothing-belts, rollers, or screens arranged to so act upon the soles of the boots or shoes as to lay the ridge of leather raised in forming the channel, in which the stitching or pegging for attaching the sole is done, back into the channel and smoothing it down.

Figure 1 is a front elevation of my improved machine;

Figure 2 is a sectional elevation of the same on the line *x x* of fig. 1;

Figure 3 is a section through the last and side view of some of the rubbing or laying devices which I propose to use;

Figure 4 is a plan view of one form of rubbing device and the mandrel used for manipulating it; and

Figure 5 is a plan view of a different form of rubbing device; also, the mandrel operating it.

Similar letters of reference indicate corresponding parts.

A is a last or form for holding a boot or shoe, preferably arranged in an inverted position, and attached by its shank to a shaft, B, mounted horizontally in a frame, C, so as to oscillate freely; and, in practice, it is to be provided with a segmental gear, D, by which it may be turned back and forth by suitable gearing.

E represents a pair of mandrels or arbors, supported at one end by ball-and-socket or universal joint-connections, with revolving tubes F, mounted on stud-pins G, radiating from the shaft H, arranged horizontally across the frame, parallel with the shaft B, and about as high or a little higher than the top of the last A, which shaft is capable of oscillation, to allow the arbors to swing in vertical planes to any required extent.

These tubes F are to be turned by bolts from suitable driving machinery, or they may have bevel-gear or friction-wheels I, connecting with suitable bevel-wheels arranged on the shaft H, to turn independently of it, and actuated by any suitable means.

The mandrels E range along the sides of the last at suitable distances therefrom, and extend beyond to the front side of the frame of the machine.

The front ends of the mandrels have tubes K fixed on them, which have handles L at the front ends, and extend along the said mandrels about half their length, terminating, in some cases, in arms M, which project toward the last and support belt-pulleys N or rubbing-pulleys O; or the said arms, taking the form of a stud-pin, P, may support a sleeve, Q, having a spiral rubbing or brushing-thread, R, upon the exterior.

When the belt or rubbing-pulleys N O are used, the mandrels are provided with driving-pulleys S, at the inner ends of the tubes K, for driving them by means of the belts T U.

The belt T, which hooks over the smooth pulleys N, is intended to rise so much out of the groove as to rub upon the leather and smooth down the ridge raised in forming the channel for the stitching or pegging; but when the laying or rubbing down is to be done by the rims of the roller O, which are serrated or roughened for the purpose, the belt will not bear on the leather, or at least so as not to prevent the roller from bearing upon it.

The rubbing-belts may be of India rubber, leather, or any substance which will have the necessary friction, or metal chains may be used.

In case the spirally-threaded laying or rubbing device, shown in fig. 5, is to be used, the mandrel will carry a beveled friction or toothed wheel, V, in the place of the pulley S gearing with a similar wheel on the sleeve Q.

The boot or shoe being placed on the last A, and having a vibratory motion imparted to it, the mandrels E or the handles L of the sleeves thereon, are taken in hand by the operator, and held so that the laying or rubbing devices, which are set in motion, will act on the sole as it vibrates back and forth, to brush or rub the ridge of leather down into the channel.

I propose in some cases to make the last stationary, and arrange the supporting shaft H for the mandrels to slide back and forth, for causing the proper movement of the rubbing or laying devices along the sole from end to end.

I may also, as is obvious from the foregoing description, arrange the rubbing or laying devices in stationary supports, and cause the last holding the shoe to traverse along the rubbing instruments while being held in contact with it.

Heretofore this operation has been done by hand at a considerable expense of time and labor, much of which is economized by this improved machine.

Moreover, the quality of the work performed by the said machine is much better than that done by hand.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

The belt-smoother T and smooth pulley N, the rough-rimmed roller O and belt U, and the vibrating former F, all combined, arranged, and operated as and for the purpose described.

The above specification of my invention signed by me this 13th day of July, 1870.

SETH D. TRIPP.

Witnesses:

GEO. W. MABEE,

T. B. MOSHER.