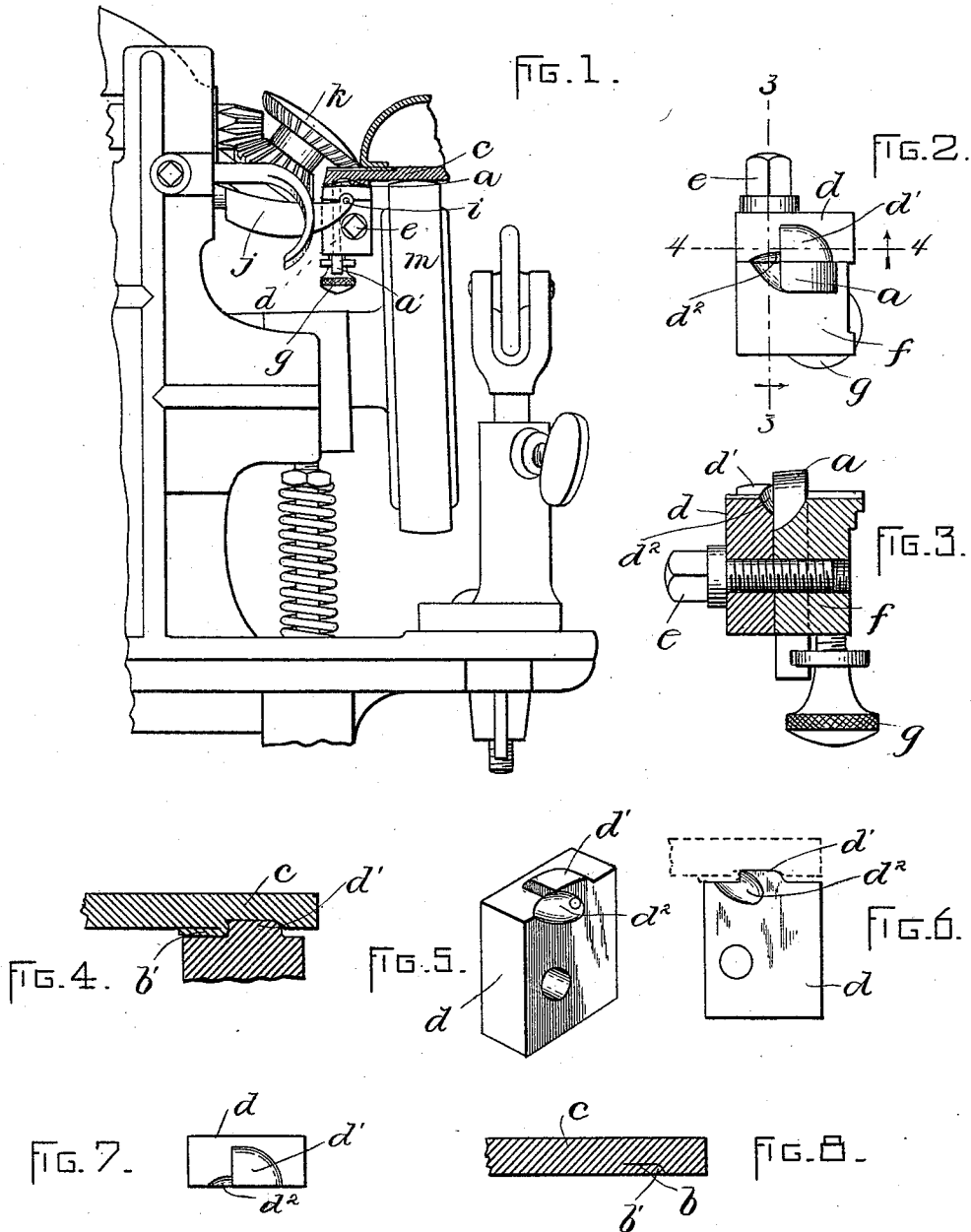


(No Model.)

J. H. POOLE.
SOLE CHANNELING MACHINE.

No. 536,737.

Patented Apr. 2, 1895.



WITNESSES:
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UNITED STATES PATENT OFFICE.

JOHN H. POOLE, OF RANDOLPH, ASSIGNOR TO THE EPPLER WELT MACHINE COMPANY, OF BOSTON, MASSACHUSETTS.

SOLE-CHANNELING MACHINE.

SPECIFICATION forming part of Letters Patent No. 536,737, dated April 2, 1895.

Application filed June 29, 1894. Serial No. 516,069. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. POOLE, of Randolph, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Sole-Channeling Machines, of which the following is a specification.

This invention relates to machines or appliances for cutting the channel in the outer sole of a welted boot or shoe while said sole is upon the last, the channel being intended to receive the stitches that connect the outer sole with the welt. The channel is formed by means of a curved knife, which cuts a slit extending inwardly from the outer face of the sole a short distance and then toward the center of the sole, substantially parallel with the outer face, a lip being thus formed which in the completed shoe covers the said stitches, the lip being turned back to expose the bottom of the channel before the stitching operation, and subsequently replaced to cover the stitches laid upon the bottom of the channel.

My invention relates particularly to the turning or folding back of the lip to expose the channel, and has for its object to enable said lip to be folded back or displaced and caused to retain its displaced position during the operation of cutting the channel, so that the necessity of a separate operation such as has been heretofore required to fold back the lip after cutting the same is avoided.

My invention therefore consists in a lip-turning attachment or plow arranged to follow the knife which cuts the said channel and to obstruct the lip in such manner as to prevent it from passing from the knife in the natural position in which it is left by the knife, the said plow or former folding the lip over against the adjacent portion of the face of the sole and thus exposing the channel, the folding operation being performed simultaneously with the channel cutting operation, all of which I will now proceed to more particularly describe.

Of the accompanying drawings forming a part of this specification,—Figure 1 represents a side elevation of a portion of a sole-channeling machine provided with my improved attachment. Fig. 2 represents a top view of

the knife-holder of said machine removed from its support and provided with my improved attachment. Fig. 3 represents a section on line 3—3 of Fig. 2, looking toward the right. Fig. 4 represents a section on line 4—4 of Fig. 2. Fig. 5 represents a perspective view of the lip-turning plow or attachment removed from the knife-holder. Fig. 6 represents a side view, and Fig. 7 a top view, of said plow. Fig. 8 represents a sectional view of a portion of an outer sole, showing the channel covered by the lip.

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

In the drawings—*a* represents a channeling knife, which is formed to cut a channel *b* in an outer sole *c*, the incision made by the knife in cutting said channel being preferably of the form shown in Fig. 8. The knife in cutting the channel *b* forms at the same time a lip *b'*, one side of which includes a part of the outer face of the sole, so that when said lip is in the position shown in Fig. 8 it covers the channel, and the continuity of the outer face of the sole is practically uninterrupted. Since the channel is to receive the stitches that connect the outer sole to the welt of the boot or shoe, and since said stitches are to be covered by the lip *b'*, it is necessary that said lip be displaced so as to expose the bottom of the channel before the stitching operation.

To effect the displacement of the lip, I provide a lip-turner which accompanies the knife and is formed to obstruct the lip directly behind the knife, thus preventing the lip from remaining in the channel, and is also formed to turn or fold the lip outwardly against the adjacent portion of the face of the outer sole. The lip turner is composed of a block *d* attached by a screw or bolt *e* to the block or holder *f* with which the knife *a* is connected. As here shown, the knife is provided with a shank *a'* which is fitted to slide in a slot in the block *f*, and is provided with an adjusting-screw *g* engaged as shown in Fig. 3 with a slot in the shank *a'*, so that by turning said screw the knife may be raised or lowered, as the case may be. The block *d* bears against the rear side of the block *f*, and co-operates with the latter in holding the knife, although this func-

tion of the block *d* is not an essential one, since the knife may be secured to the block *f* by other means.

d' represents a projection formed on the upper portion of the block *d* and arranged so that it bears against or is in close proximity to the back of the knife *a*, said projection extending across and obstructing the space under the knife through which the lip *b'* would naturally pass away from the knife, and thus preventing said lip from remaining in the channel. The front side of the projection *d'* and the adjacent portion of the corresponding side of the block *d* are cut away to form a curved recess *d²* which is formed to deflect the lip *b'* and cause the same to turn from the position shown in Fig. 8 to that shown in Fig. 4, the surface of said recess *d²* acting to change the position of the said lip, so that as the lip passes away from the knife it assumes the position shown in Fig. 4, it being folded back against the adjacent portion of the face of the outer sole. The flat face *d³* on the block at the rear of the recess *d²* acts to hold the outwardly bent lip against the face of the sole, as shown in Figs. 4 and 6. The block *f* holding the knife is provided with a recess *f'* (Fig. 3) which gives room under the knife for the turning of the lip.

The projection *d'* running in the channel as shown in Fig. 4 aids the operator in guiding the work during the channel-forming operation.

The knife-holder *f* and the lip-turning device may be employed in any suitably con-

structed sole-channeling machine provided with means for supporting the knife-holder and properly presenting it to the work. I have here shown the knife-holder as pivotally connected at *i* with arms *j* of a fork which is mounted upon a suitable supporting frame, said machine being provided with an inclined positively driven feed-wheel *k* which bears upon the welt and upon the side of the upper of the boot or shoe, and holds it down upon feed-roll *m*, the whole forming a part of an organized machine which is now in common use. I do not limit myself, however, to a machine having the parts above described, and may use my improved attachment with any other suitably constructed machine.

I claim—

A sole channeling device comprising a channel-cutting knife and a block or holder therefor having a projection at the rear of the knife formed to obstruct the passage under the knife and thus deflect the lip cut by the knife, a curved recess below said projection formed to guide the deflected lip outwardly, and a flat face at the rear of said recess formed to hold the lip in its outwardly turned position, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 16th day of June, A. D. 1894.

JOHN H. POOLE.

Witnesses:

CHARLES CURTIS,
C. F. BROWN.