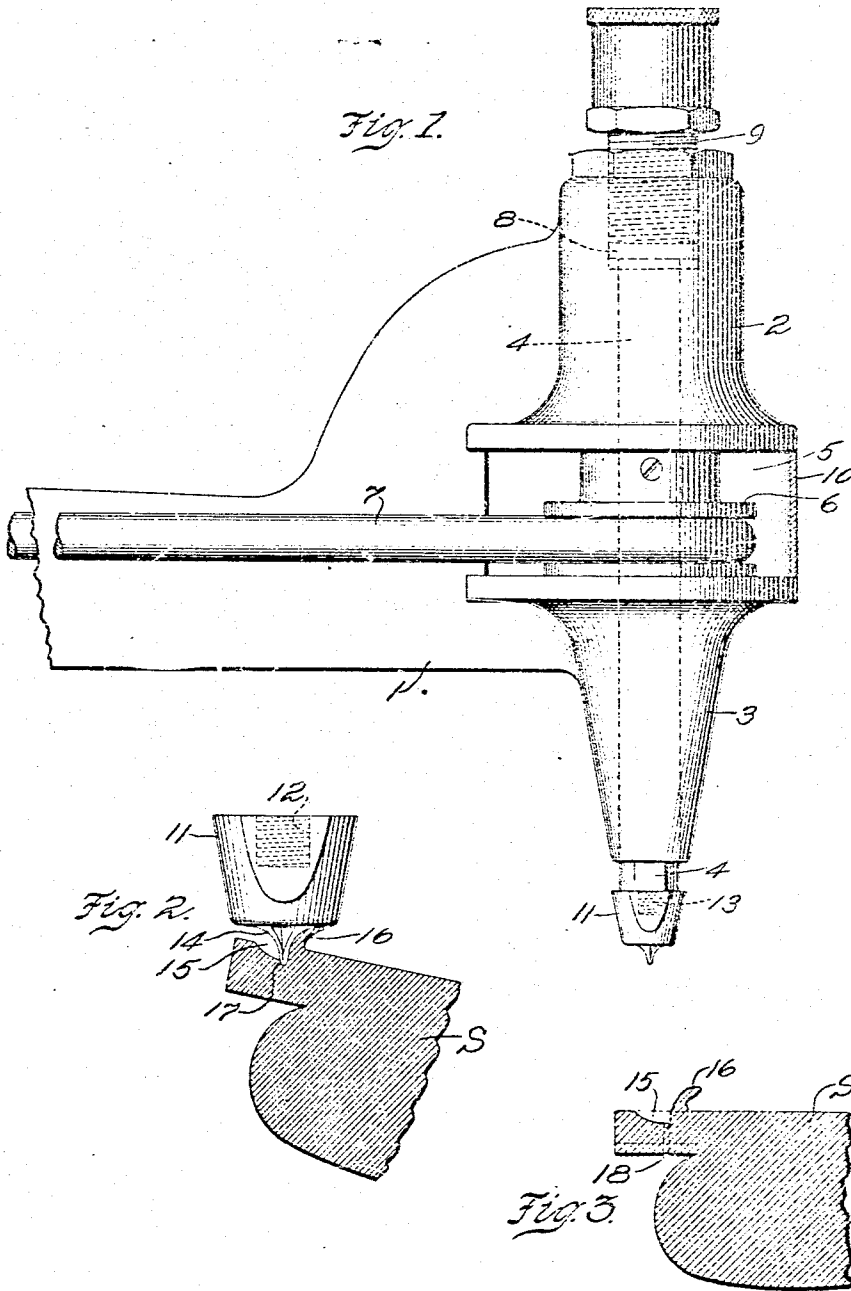


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CHANNEL LIP TURNING MACHINE.
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947,509.

Patented Jan. 25, 1910.



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM H. HOOVER, OF LYNN, MASSACHUSETTS, ASSIGNOR TO THOMAS G. PLANT, OF BOSTON, MASSACHUSETTS.

CHANNEL-LIP-TURNING MACHINE.

947,509.

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To all whom it may concern:

Be it known that I, WILLIAM H. HOOVER, a citizen of the United States, residing at Lynn, in the county of Essex and State of Massachusetts, have invented an Improvement in Channel-Lip-Turning Machines, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

The invention to be hereinafter described relates to machines for treating the soles of boots and shoes, and, more particularly, to such machines for producing a channel for the reception of the fastening means which secure the sole to the upper portion of the boot or shoe.

As well known to those skilled in the art, it is customary to provide the sole with a channel by cutting a flap diagonally into the surface of the sole which flap is turned or wiped over backward and pressed down to leave the channel open for the reception of the fastenings which unite the sole to the shoe, the flap being then turned back again to its first position to cover the fastenings.

The object of the present invention is to provide a simple and effective machine of this general character, the salient features or characteristics of which will best be understood from the following description in connection with the drawings which disclose one form or embodiment thereof, the invention itself being definitely pointed out in the claims.

In the drawings, Figure 1 is a side elevation, parts being broken away, showing the upper or head portion of the machine; Fig. 2 is a detached detail view showing the wiper or flap turner and its associated channel groover acting upon a shoe sole; and Fig. 3 is a diagrammatic sectional view to show the position of the upturned flap and the fastenings which secure the sole to the shoe, such fastenings being located in the groove formed in the channel.

The supporting head 1 for the upper portion of the machine may be of any usual character and is preferably formed as a casting having an upper bearing portion 2 and a lower bearing portion 3, in which bearing portions is sustained a shaft 4 for carrying the wiper or flap turner and groover. An opening 5 is preferably

formed between the upper and lower bearing portions 2 and 3 of the head, and secured to the shaft 4, between the upper and lower bearing portions, is a pulley 6 driven by a belt 7 which receives motion from any convenient source of power.

The upper portion of the shaft 4 may be preferably provided with the head on which rests a washer 8 preferably of some yielding material, such as fiber or the like, to provide a yielding resistance to the upward movement of the shaft 4. Screw threaded into the upper portion of the upper bearing 2 is an adjusting screw 9, the end of which bears against the fibrous or elastic washer 8. A shield 10, shown as broken away and in section, Fig. 1, may surround the pulley 6.

Connected to the lower end of the shaft 4 is the tool for acting upon the work, said tool, for identification, being herein designated as the wiper or flap turner and comprising a head portion 11 preferably provided with an interior screw thread 12 adapted to engage corresponding screw threads 13, dotted lines Fig. 1, on the end of the shaft 4.

Formed on the lower portion of the head 11 are the flap engaging and turning surfaces. These surfaces are preferably formed as downwardly and inwardly extending ribs or corrugations 14, the general characteristic of which is that when disposed in the channel 15 they will engage, and by their rotation, open and turn backwardly the channel flap 16, as indicated in Fig. 2.

As well known by those skilled in the art, after the line of fastenings has been placed in the usual channel of a shoe sole, and the channel flap returned to its former position, the shoe sole is treated to the finishing operations wherein the sole is subjected to pressure and such pressure sometimes causes the lines of stitches or other fastenings to impress themselves into the channel flap to such an extent as to mar the finished appearance thereof. The present invention, therefore, in addition to the general characteristics of the flap turners, as hereinbefore indicated, contemplates the provision of means for producing in the surface of the channel a groove or depression to receive the line of fastenings or stitches. To this end, as one form of the present invention, the ribs or corrugations 14 which act to open and turn the flap, as hereinbefore

indicated, converge and meet at their lower ends to form the groover 17 which is adapted to travel along the surface of the channel and impress itself into the stock as the latter is fed in the usual manner in opening and turning the channel flap.

From the construction hereinbefore described, it will be noted that the wiper or flap turner having its flap turning portions 14 and the groover 17 are rotated as the work is fed in the hands of the operator or otherwise in the direction of feed, and this turning action of the groover 17 facilitates the action thereof in forming the depression or groove in the surface of the channel for the reception of the line of stitches or fastenings, and such groover also acts to prevent the operator from accidentally moving the work transversely out of proper working position with respect to the said tools, all of which will be clearly understood by those skilled in the art. The channel flap 16 having been turned backward, as indicated in Fig. 2, and the groove or depression in the surface of the channel having been formed by the groover or point 17, the shoe S is presented to the fastener inserting means and a line of stitches or fastenings 18, as indicated in Fig. 3 serves to unite the sole to the shoe, after which the flap 16, Fig. 3, is turned down, the line of fastenings being sunk into the groove formed as described.

Changes in matter of form and relation of parts may obviously be made within the true field of the present invention which contemplates a backward turning of the

channel flap and the simultaneous formation in the surface of the channel of a groove or depression to receive the line of fastenings.

I claim—

1. In a machine for turning back the channel lip of a boot or shoe sole, the combination of a shaft and operating means therefor, and a wiper or flap turner detachably connected thereto and comprising a head having downwardly and inwardly concaved ribs extending continuously to the lower extremity of said wiper or lip turner and forming a channel groover, said head having a circular flange portion extending horizontally over the upper portions of the concaved ribs to engage and hold down the top of the channel flap as it is turned back by the concaved ribs.

2. In a machine for turning back the channel lip of a boot or shoe sole, the combination of a wiper or lip turner having lip engaging and turning portions, a channel groover carried by said wiper or lip turner to engage the surface of the channel and form a fastener receiving groove therein, a shaft to which said wiper or lip turner is detachably secured, means to permit said shaft to yield as the work is pressed against the wiper or lip turner, and means for adjusting the yielding action of said means.

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

WILLIAM H. HOOPER.

Witnesses:

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REDFIELD H. ALLEN