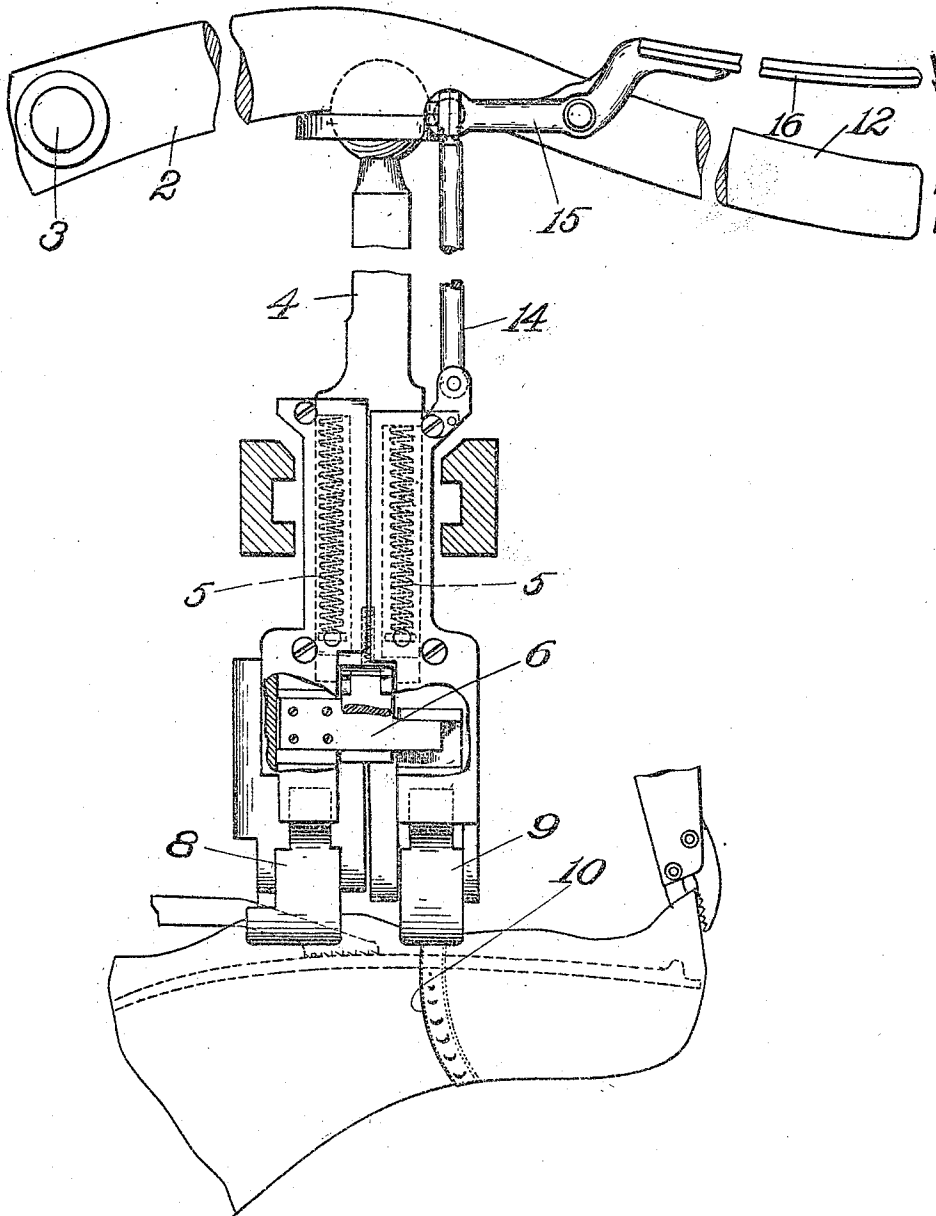


A. PERRI.
PULLING-OVER MACHINE.
APPLICATION FILED JULY 29, 1909.

991,168.

Patented May 2, 1911.



WITNESSES,
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ANGELO PERRI, OF HAVERHILL, MASSACHUSETTS, ASSIGNOR TO UNITED SHOE MACHINERY COMPANY, OF PATERSON, NEW JERSEY, A CORPORATION OF NEW JERSEY.

PULLING-OVER MACHINE.

991,168.

Specification of Letters Patent.

Patented May 2, 1911.

Application filed July 29, 1909. Serial No. 510,262.

To all whom it may concern:

Be it known that I, ANGELO PERRI, a citizen of the United States, residing at Haverhill, in the county of Essex and State of Massachusetts, have invented certain Improvements in Pulling-Over Machines, of which the following description, in connection with the accompanying drawings, is a specification, like reference characters on the drawings indicating like parts in the several figures.

This invention relates to pulling-over machines and particularly to the upper pulling mechanism thereof and is shown as an improvement upon the upper pulling mechanism disclosed in Letters Patent of Great Britain No. 16337/1908.

In machine pulling-over, that is initially pulling the upper at the critical points at the end and opposite sides of the forepart and adjusting it if necessary into general conformity with the lines of the last preparatory to lasting, the upper is usually seized at each side of the shoe by two grippers, one of which pulls the upper at and adjacent to the toe tip line or seam and the other of which pulls the upper in the rear of the seam. The belt of upper engaged at opposite ends by the two rear grippers stretches more than that engaged by the two front grippers for several reasons. It is usually longer because of the increased width of the last and it is usually more elastic because the front gripper seizes the inelastic tip stiffening material and frequently also the tip seam. Also on some styles of last the top face is low over the ball of the last so that the rear belt of upper requires to be pulled down into this low portion of the last. To meet these conditions, the two grippers operating on the same side of the last have been connected to their operating mechanism by means which permits them to move relatively for pulling the two bands of upper as required. In said prior patent provision is made for imparting a predetermined greater extent of movement to the rear grippers. Inasmuch, however, as conditions vary in different shoe uppers and in different styles of lasts, an operator sometimes finds need, for the purpose of making the desired initial stretching and positioning of the upper preparatory to lasting, to move the two side grippers relatively. This need is sometimes indicated by the presence

of fine wrinkles or fullness adjacent to the tip seam.

The object of this invention is to provide for this relative movement of the side grippers for adjusting the pulled upper.

With this explanation of the nature and the object of the invention, I will now proceed to describe the mechanism in which it is herein shown as embodied and will then particularly point out the features of the invention in the annexed claims.

The drawings show a side elevation of one of the side gripper mechanisms of a commercial pulling-over machine of well known construction, parts being shown in section to disclose the operating devices. The gripper mechanism includes or is suspended from lever 2 fulcrumed at 3, and connected at its rear end to the machine cam not shown. The operating bar 4 has a ball-connection with the lever and a lifting connection, including the springs 5, with the pairs of gripper jaws. This connection also, as herein shown, includes the lost motion arrangement at 6 which is described in said patent for giving to the rear pair of jaws or the gripper 8 a predetermined extent of uplifting movement greater than, and preferably prior to, that imparted to the front gripper 9 which engages the belt of upper which includes the tip seam 10. The lever 2 is extended forwardly from the operating bar 4 to form a hand piece 12 by which the operator can further uplift or can depress the grippers for adjusting or changing the tension on the pulled upper after the automatic pulling operation of the machine.

In accordance with this invention, one of the grippers, herein shown as the forward gripper 9, is connected by a link 14 with an auxiliary lever 15 pivoted upon the lever 2 and having a hand piece 16 arranged adjacent to the hand piece 12. In this position the operator can seize either or both of the hand pieces 12 or 16 with one hand. By lifting or depressing the hand piece 12 alone both grippers 8 and 9 are moved together. By engaging the hand piece 16 alone the front gripper can be further uplifted to apply additional tension to the belt of upper which includes the tip seam, and by seizing the two hand pieces the two grippers can be moved simultaneously in opposite directions. This invention thus makes it possible for the operator relatively to adjust the ten-

sion on the two belts of upper for better fitting it upon the last.

I claim as new and desire to secure by Letters Patent of the United States:—

5 1. A pulling-over machine, having, in combination, side grippers to engage two belts of upper extending transversely about the last, means for actuating the grippers to put the upper under tension, and means
10 for actuating the grippers for relatively adjusting the tension on the two belts while the grippers hold the upper.

2. A pulling-over machine, having, in combination, side grippers to engage two
15 belts of upper extending transversely about the last, means for actuating the grippers to put the upper under tension, and means for manually moving one side gripper relatively to the other on the same side while they hold
20 the upper.

3. A pulling-over machine, having, in combination, side grippers to engage two belts of upper extending transversely about the last, means for actuating the grippers to
25 put the upper under tension, and means for further uplifting the front gripper alone at the will of the operator.

4. A pulling-over machine, having, in combination, side grippers to engage two
30 belts of upper extending transversely about the last, means for actuating the grippers to put the upper under tension, and additional means for moving one of said side grippers independently.

35 5. A pulling-over machine, having, in combination, side grippers to engage two belts of upper extending transversely about the last, means for actuating the grippers to put the upper under tension, and crossed
40 hand pieces arranged to be seized by one hand of the operator for actuation to move the two grippers simultaneously in opposite directions.

45 6. A pulling-over machine, having, in combination, two side grippers, means for

automatically actuating said grippers constructed and arranged to move the rear gripper farther than the front one in pulling the upper, and means for manually moving the front gripper more while the upper is
50 held under tension by the two grippers.

7. A pulling-over machine, having, in combination, two grippers located on the same lateral side of the last, automatically
55 actuated means to uplift the grippers together, and manually actuated means to uplift them separately.

8. A pulling-over machine, having, in combination, two grippers located on the same lateral side of the last, automatically
60 actuated means to uplift the grippers together, and manually actuated means to lower one gripper and further uplift the other.

9. A pulling-over machine, having, in
65 combination, an operating lever, two relatively movable side grippers connected to the lever, a second lever fulcrumed upon the first lever and connected to one gripper to lift it, said parts being constructed and
70 arranged to transmit force applied to the second lever for uplifting one gripper to be transmitted also through the fulcrum connections to the other lever for lowering the
75 other gripper.

10. A pulling-over machine, having in combination, a gripper mechanism comprising two pairs of jaws for engaging adjacent portions of the upper, means for actuating
80 said mechanism to put the upper under tension, and a lever connected with one of said pairs of jaws for additionally tensioning the upper.

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

ANGELO PERRI.

Witnesses:

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MARY J. FLANAGAN.