J. C. SCHELTER.

RELASTING MACHINE.

APPLICATION FILED JULY 12, 1909.

981,800. Patented Jan. 17, 1911.

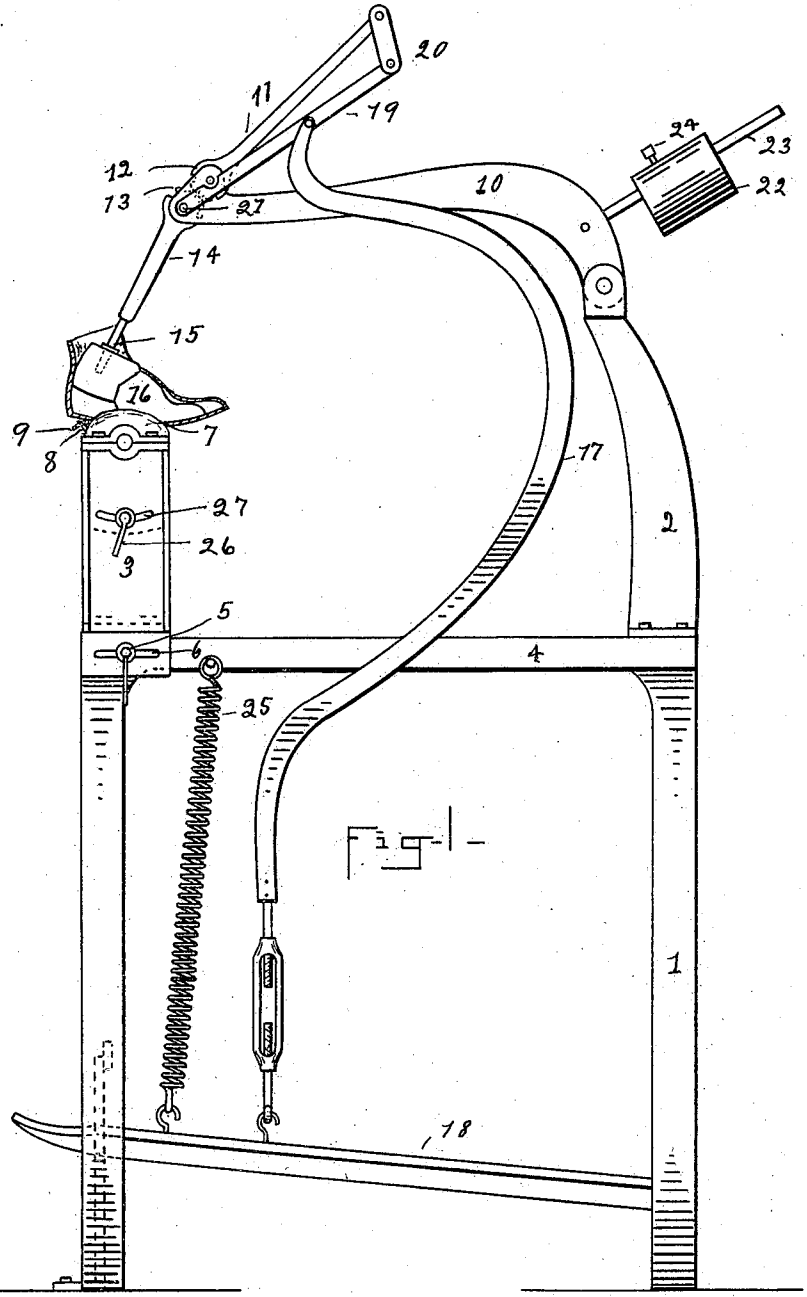
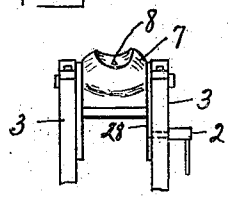


Fig-1-

Fig-2-



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RELASTING-MACHINE.

981,800. Specification of Letters Patent. **Patented Jan. 17, 1911.**

Application filed July 12, 1909. Serial No. 507,040.

To all whom it may concern:

Be it known that I, JOHN C. SCHELTER, a citizen of the United States, residing at Rochester, in the county of Monroe and State of New York, have invented new and useful Improvements in Relasting-Machines, of which the following is a specification.

This invention relates to improvements in relasting machines.

In the art of shoe making, certain kinds of shoes are partially made wrong side out and then turned and finished. It becomes necessary, therefore, in the manufacture of such shoes to insert a last in the shoe after it is partially constructed and it is important that it be a close fit which requires considerable effort to force the last into the shoe.

The object of the present invention is to provide a device which will support the shoe and force the last into the partially constructed shoe.

In the drawings herewith accompanying and making part of this application, Figure 1 is a side elevation of my improved relasting machine showing the method of operating the same including the shoe with a last partially inserted, the shoe being shown in section, and Fig. 2 is an end view of the shoe support.

Same letters of reference refer to like parts.

In said drawings 1 is the main frame, 2 a bracket extension of the main frame positioned at the rear end thereof. At the front end is a shoe supporting bracket 3 which may be slidably mounted upon a table 4 on the main frame. Said support may be secured in any given position by a set screw 5 passing through a slot 6 in the shoe supporting bracket and adapted to engage the table 4. Pivotally mounted in said bracket 3 is a shoe support 7 having in the top thereof a hook 8 adapted to take into a hole specially provided therefor in the heel 9 of the shoe sole as shown in Fig. 1, the heel part of the sole being left free to be turned downwardly slightly so as to admit the hook. Pivotally mounted on the extension 2 is a forwardly projecting arm 10. The arm 10 has pivotally secured thereto a lever 11 terminating at its lower end in a gear 12 adapted to engage a similar gear 13 on a plunger 14 also pivotally mounted in arm 10. The free end of plunger 14 terminates in a spindle 15 adapted to engage a last 16. The lever 11 is adapted to be moved by a link 17, one end attached to a treadle 18 and the other end attached to an arm 19, said arm 19 being pivotally connected one end to arm 11 by a link 20 and the other end to arm 10 as seen at 21. The arm 10 is provided with a counterbalancing weight 22 adapted to be detachably supported on a projecting rod 23 and secured in any given position by a set screw 24. A spring 25 secured to a treadle 18 and table 4 tends constantly to hold the treadle up. The shoe support is pivotally mounted between the side of bracket 3 and can be turned on its pivot so as to bring the shoe support at any desired angle and can, if desired, be permanently secured at a fixed angle by means of set screw 26 passing through a curved slot 27 in the side of the bracket and engaging the side 28 of the shoe support.

The operation of my improved relasting machine is as follows. The shoe with the last partially inserted as shown in Fig. 2 is placed on the shoe support, the pin 9 taking into the hole in the heel of the sole and holding the shoe. The foot is then placed on the treadle. Downward movement of the treadle draws down link 17 and also arm 11, the two operating simultaneously, arm 11 also turning on its pivot. The downward motion of arm 10 forces arm 14 down and the pivot movement of arm 11 imparts, through the gears, a forward motion to the end of the arm 14, thus thrusting the last down and forward with whatever force is necessary to drive the last down and forward into the shoe.

Having thus described my invention and its use I claim:—

1. In a relasting machine, a shoe support capable of manual longitudinal adjustment and provided with means for engaging the bottom of a shoe and supporting the shoe topside upward, a plunger adapted to engage a last also topside upward and move said last down into said shoe when on said support, and means for imparting a downward and forward movement to said plunger while in engagement with the last.

2. In a relasting machine, a main frame, a shoe support and means for securing a partially constructed shoe thereon, an arm pivotally secured to the main frame, a plunger pivotally secured to said arm and adapted to engage a last, means for imparting a

downward motion to said arm and plunger and means for imparting a simultaneous and independent turning movement to said plunger on its pivot.

3. In a relasting machine, a suitable frame, a shoe support mounted thereon, means for securing a partially constructed shoe upon said support, an arm pivotally secured to the frame, a plunger adapted to engage a last pivotally secured to the end of said arm and provided with a gear, a lever pivotally mounted in said arm and provided with a gear adapted to mesh with the gear on said plunger and means for simultaneously forcing said arm and plunger downward and said lever downward relative to said arm, whereby a downward and forward movement is imparted to said plunger.

4. In a relasting machine, a shoe support and means for holding a partially constructed shoe thereon, a plunger adapted to engage a last for aiding in forcing the last into the shoe, means for imparting a downward and forward movement to said plunger, and adjusting means for pivotally varying the angular position of the shoe support and the shoe thereon with relation to the normal direction of movement of said plunger.

5. In a relasting machine, a main frame, a shoe support mounted on said main frame and longitudinally adjustable thereon, and provided with means for engaging the bottom of a shoe and supporting said shoe topside upward, a plunger adapted to engage the top of a last and force said last downward into the open top of the shoe, and means for imparting downward and forward movement to said plunger, said longitudinal adjustment of the support constituting means which, in coöperation with said downwardly and forwardly moving plunger, varies the angle and direction of the thrust of the last with relation to the shoe when being forced into the shoe.

6. In a relasting machine, a main frame, a shoe support and means for securing a shoe thereon, a counterbalanced arm pivotally secured to the main frame, a plunger pivotally secured to said counterbalanced arm and means for imparting downward and forward movement to said plunger.

7. In a relasting machine, a main frame, a shoe support and means for securing a partially constructed shoe thereon, an arm pivotally secured to the main frame, a plunger adapted to engage a last pivotally secured to the end of said arm and provided with a gear concentric with its pivot point, a lever pivotally secured to said arm and provided with a gear concentric with its pivot point, a link secured to the end of said lever, a bar pivotally connected one end to said arm and the other to said link, a treadle and a link connecting said bar and said treadle, whereby downward pressure on said treadle, through intermediate mechanism, imparts a downward and forward movement to the end of the plunger.

8. In a relasting machine, a shoe support, in combination with a last-inserting device comprising two members pivotally united and overhanging at their said pivot the shoe support, one member being pivotally secured to a fixed support and the other member adapted to have an independent rotary movement on its said pivot which is located over the shoe support.

9. In a relasting machine, a shoe support, in combination with a last-inserting device comprising two members pivotally united at a point approximately over the shoe support, one member extending from said pivot at one end to a fixed pivot at its other end and being relatively long for moving the other shorter member in an approximately straight line when swung for a short distance, and said other member being relatively short and adapted to have an independent rotary movement on its pivot.

10. In a relasting machine, a shoe support, in combination with a last inserting device comprising two members pivotally united, one member relatively long and pivotally secured to a fixed support and lying normally in a substantially horizontal position and the other member relatively short and normally inclined to the former and adapted to have independent rotary movement on its pivot relative to the other member.

11. In a relasting machine, a shoe support in combination with a last inserting device comprising two members pivotally united, one member pivotally secured to a fixed support and the other member adapted to engage a last, means for imparting downward movement to said device as a whole and means for imparting independent rotary movement to said last engaging member.

12. In a relasting machine, a shoe support for frictionally engaging the bottom of a partially constructed shoe, and a relatively short swinging last-inserting device pivoted approximately vertically over said support, having a last-engaging free end adjacent said support, whereby the inserting movement of said device is in a direction approximately parallel to the opposing surface of the shoe support.

13. In a relasting machine, a shoe support for frictionally engaging the bottom of a partially constructed shoe, a relatively short swinging last-inserting device pivoted approximately vertically over said support, having a last-engaging free end adjacent said support, whereby the inserting movement of said device is in a direction approximately parallel to the opposing sur-

face of the shoe support, and means permitting said short arm to yield vertically to accommodate it to the movements of the last and to the requirements of different lasts and shoes.

14. In a relasting machine, a shoe support for frictionally engaging the bottom of a partially constructed shoe, a relatively short swinging last-inserting device pivoted approximately vertically over said support, having a last-engaging free end adjacent said support, whereby the inserting movement of said device is in a direction approximately parallel to the opposing surface of the shoe support, and means for imparting a positive swinging movement to said arm about said pivot.

15. In a relasting machine, a shoe support for frictionally engaging the bottom of a partially constructed shoe, a relatively short swinging last-inserting device pivoted approximately vertically over said support, having a last-engaging free end adjacent said support, whereby the inserting movement of said device is in a direction approximately parallel to the opposing surface of the shoe support, actuating gearing located at said pivot for swinging said arm, and an operating lever for operating said gearing.

16. In a relasting machine, a horizontal table, a supporting bracket mounted thereon, a shoe support at the upper end of said bracket provided with means for frictionally engaging the bottom of a partially constructed shoe, and a movable last-inserting device overhanging said support in position to insert a last into a shoe when the latter is in place on said support, said bracket and table being provided with means for adjusting the bracket lengthwise on the table to vary the position of said shoe support in a horizontal direction with reference to said inserting device.

17. In a relasting machine, a horizontal table, a supporting bracket mounted thereon, a shoe support at the upper end of said bracket provided with means for frictionally engaging the bottom of a partially constructed shoe, a movable last-inserting device overhanging said support in position to insert a last into a shoe when the latter is in place on said support, said bracket and table being provided with means for adjusting the bracket lengthwise on the table to vary the position of said shoe support in a horizontal direction with reference to said inserting device, and adjusting means for varying the angle of said shoe support with relation to said inserting device.

In testimony whereof I have signed this specification in presence of two subscribing witnesses this 6th day of July, 1909.

JOHN C. SCHELTER.

In presence of—
CHAS. F. PARTRIDGE,
SARAH W. NEWMAN.