No. 830,584. PATENTED SEPT. 11, 1906.

J. J. GILLESPIE.

SOLE PATTERN AND SOLE ROUNDING MACHINE.

APPLICATION FILED NOV. 17, 1904.

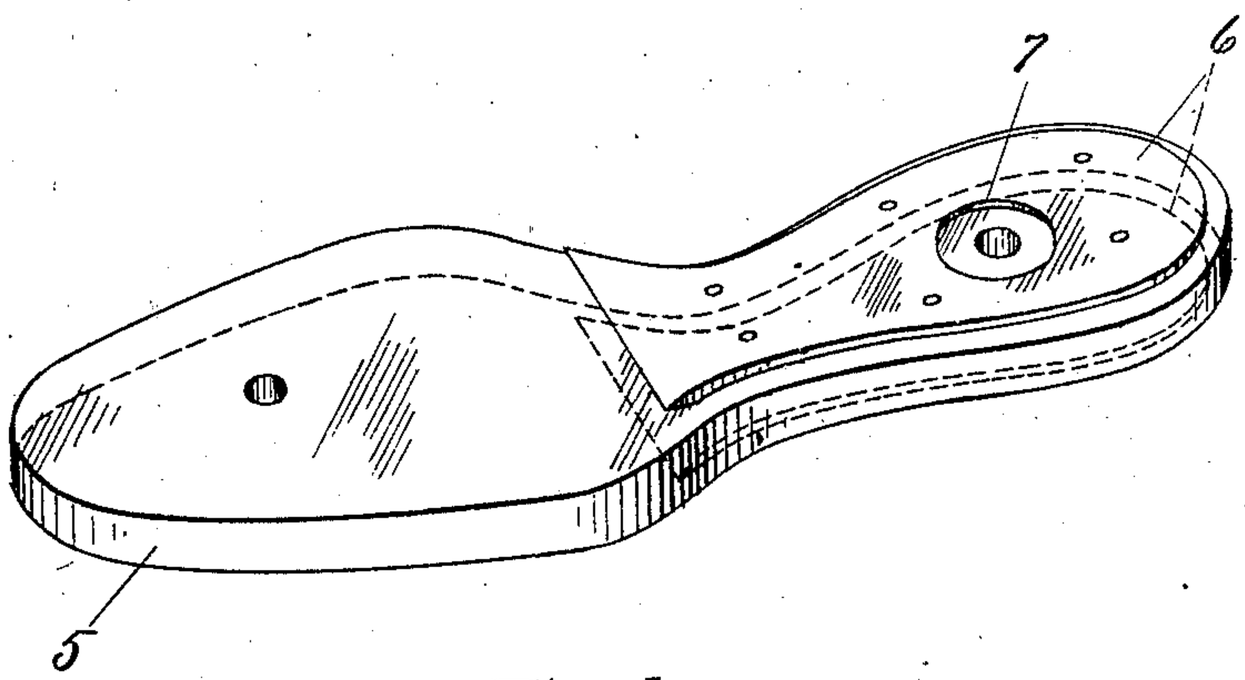
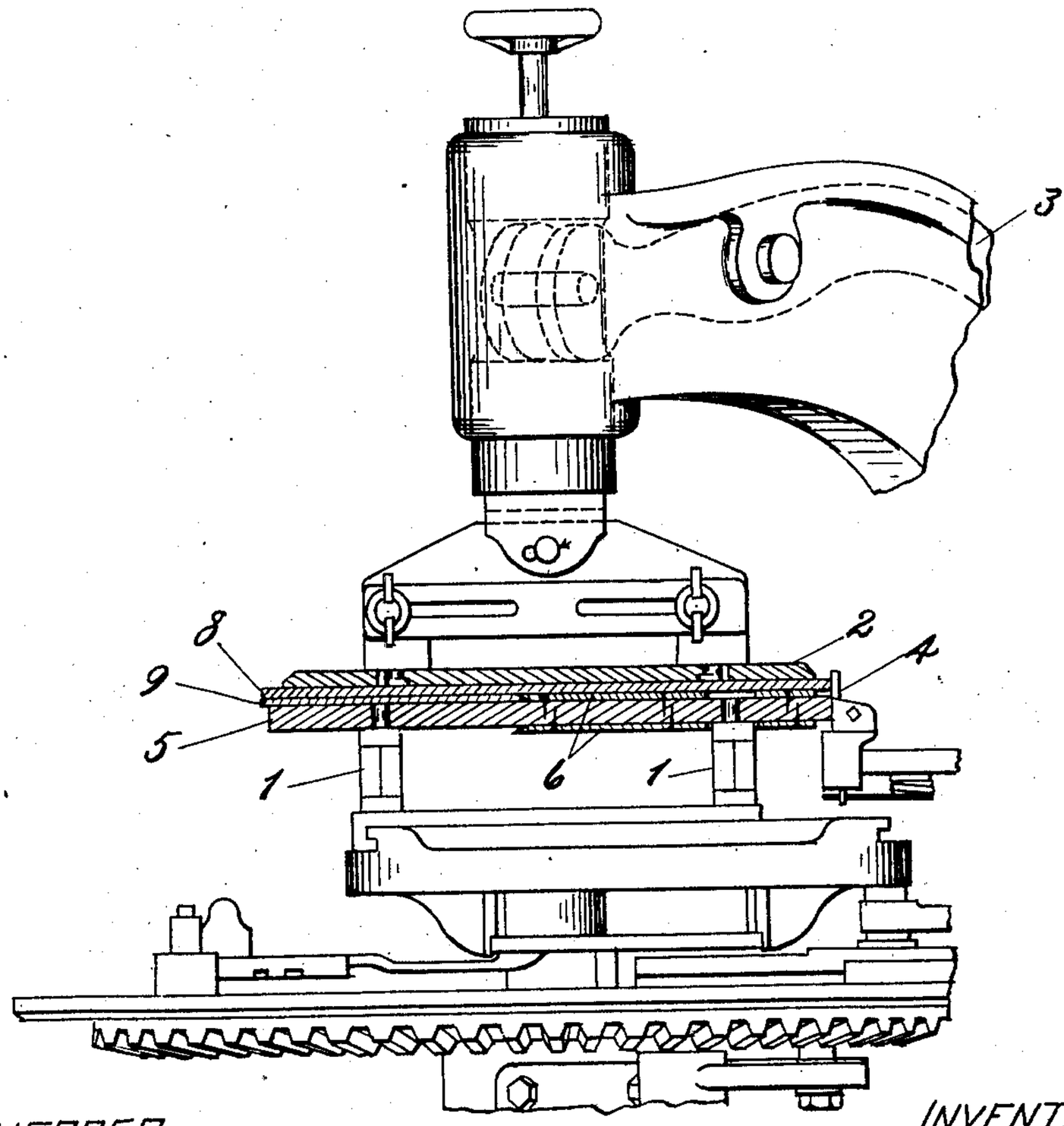


Fig. 1.



WITNESSES.
Charles E. Crush.
Bernard Barnes

Fig. 2.

INVENTOR.
John J. Gillespie

UNITED STATES PATENT OFFICE.

JOHN J. GILLESPIE, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO UNITED SHOE MACHINERY COMPANY, OF PATERSON, NEW JERSEY, A CORPORATION OF NEW JERSEY.

SOLE-PATTERN AND SOLE-ROUNDING MACHINE.

No. 830,584. Specification of Letters Patent. Patented Sept. 11, 1906.

Application filed November 17, 1904. Serial No. 233,164.

To all whom it may concern:

Be it known that I, JOHN J. GILLESPIE, a citizen of the United States, residing at Boston, in the county of Suffolk and Commonwealth of Massachusetts, have invented certain Improvements in Sole-Patterns and Sole-Rounding 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 both figures.

This invention relates to sole patterns and to sole-rounding or sole rounding and channeling machines of the class in which a pattern of the shape of the sole to be produced is employed to guide a knife in its movement relative to the pattern. In these machines the stock is commonly clamped with its face in contact with the pattern and a knife or knives moved about the pattern to act upon the stock in the manner desired; but, as will be obvious, my invention is applicable as well to a machine in which the pattern is movable rather than stationary.

It is at times desired to round and channel soles which are not of the form of the ordinary outer sole of the same thickness from end to end, but are of a variable thickness at different points on account of the attachment of layers of material extending over but a portion of the area of the sole. For instance, it may be desirable to round and channel at one operation an outer sole provided with a tap or half-sole. In machines heretofore in use of the class above referred to such soles cannot be satisfactorily channeled or rounded, for the reason that this variation in thickness prevents a proper relation from being preserved between the stock and the channeling-knife or the rounding-knife at all points in the paths of these knives relative to the stock. It will be understood that in such machines as commonly constructed the pattern is maintained in a horizontal position and the channeling and rounding knives move horizontally about its margin. Unless the margin of the sole to be channeled is flat and in a horizontal plane the channeling-knife will act unevenly to form a channel not of uniform depth from point to point along its length. Also to insure that the rounding-knife will trim the stock to the precise contour of the pattern it is essential that the stock be held rigidly at the margin of the pattern against the action of the knife.

It is the object of this invention to improve the construction of sole-patterns and machines of this class to permit soles of a variable thickness from point to point to be channeled or rounded accurately. To this end in the embodiment of the invention herein shown I have provided means for sustaining such soles arranged to maintain the marginal part of the face to be channeled flat and in a plane parallel to the plane of the path of the channeling-knife. The margin of the sole is rigidly held, so that the stock is firmly sustained against the action of the channeling-knife or the rounding-knife.

Preferably the pattern alone is modified to adapt the machines now in use for channeling or rounding soles provided with taps. To compensate for the presence of a tap-sole upon the sole to be acted upon, the heel part of the pattern is raised above the fore part, the raised part extending to the ball portion of the sole and terminating in an edge extending transversely from side to side of the pattern. The forward edge of the raised part constitutes a guide to aid in positioning the stock upon the pattern. As is well known, in the use of machines of this class the stock is placed by hand upon the pattern. Said forward edge is preferably beveled to fit the skived edge of the tap.

Other features of the invention, including details of construction and combinations of parts, will be herein described, and defined in the claims.

In the drawings, Figure 1 is a view in perspective of a pattern-plate constituting one embodiment of the invention. Fig. 2 is a view, partly in vertical section and partly in side elevation, of a portion of a sole-rounding machine, showing said pattern-plate in position in the machine.

In the rounding-machine to which my invention is shown as applied standards 1 are provided to support removably a pattern-plate in fixed position. A clamp 2, movable to and from the pattern-plate and actuated by a lever 3, is employed to bear on the upper face of the stock and hold it on the pattern-plate in position to be rounded by a

movable knife 4. So far as described these parts are well known in the art, and their specific mode of operation need not be stated.

The pattern-plate 5 is provided on the heel part of its acting flat face with a strip 6 of the thickness of the tap-sole. Where, as in the machine shown, the pattern-plate is reversible to permit both right and left soles to be operated on from the same plate, both flat faces of the pattern-plate are provided with compensating strips 6. The strips 6 are the same in form and area as the heel part of the clamp 2, and their edges may be slightly removed from the edge of the pattern-plate 5 where this is desirable to prevent said strips from interfering with the action of the knife mechanism. The strips may be removably attached to the pattern-plate in any suitable way, as by means of tacks, so that they may be replaced, if desired, by strips of different thickness to accommodate taps of a different thickness or by strips differing in other characteristics to suit different requirements. The forward edge of each strip 6, or that portion which engages the edge of the tap, is preferably beveled to correspond to the skived part of the tap. In the pattern-plate shown the bevel is formed on the under side of each strip. The strip may be formed, if desired, of resilient material, such as leather-board, to bear yieldingly upon the edge of the tap. The strips 6 may be cut away at 7 to receive the standards 1.

In operation a sole 8, provided with a tap-sole 9, is superposed on the pattern-plate, the rear edge of the tap-sole being inserted in the recess formed beneath the edge of the strip 6 and said edge resting against the edge of the strip 6. It will be evident that the stock in this position is evenly sustained from end to end, the heel part of the sole resting upon the strip 6. The clamp 2 being brought down on the stock, all portions of the stock are securely held in proper relation to the knife 4 and an accurate trimming operation thereby insured. The forward edge of the strip 6 at the ball portion of the pattern-plate serves as a guide or shoulder to enable the stock to be properly positioned on the pattern-plate, said forward edge determining the rear or inner line of the tap. The beveled edge of said strip acts as a retaining means to hold the stock in position and prevent it from sliping about on the pattern-plate. It will be understood that the tap-soles secured to the soles are skived or beveled to a thin edge at the rear, as usual, to permit the inner face of the sole to be held in close contact with the shoe at this point. By tapering the forward edge of the compensating strips provision is made for supporting the stock evenly at the skived part of the tap, so that the margins of both tap and sole at this point are held rigidly against the action of the knife and the upper face of the sole is flat.

Where a sole provided with a tap-sole is to be rounded and channeled at one operation, a pattern-plate such as that herein described supports evenly along its length the sole to be acted upon at its margin by the rounding and channeling knives. The face of the sole in which the channel is to be made is sustained in a horizontal plane and is maintained flat, so that the cut of the channeling-knife is of the same depth from point to point along the length of the channel. It will be understood that in machines which both round and channel the edge of the clamp is arranged within the boundaries of the pattern a distance sufficient to expose the margin to be channeled.

It will be obvious that features of my invention are applicable to the rounding of half-soles if it should be desired to turn them while unsecured to the outer sole, the compensating strips 6 permitting half-soles to be firmly held in position to be rounded.

Having described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. A sole-shaped pattern-plate, having the plane of its stock-supporting face at the heel part raised above the plane of the fore part, the forward edge of the raised portion being beveled to accommodate the skived edge of a tap.

2. A sole-shaped pattern-plate, having a heel-shaped raised portion at its rear end, the forward edge of the raised portion extending transversely from side to side of the pattern-plate.

3. A sole-shaped pattern-plate, having a portion projecting outwardly from its stock-supporting face to serve as a guide in positioning the stock on the plate, the forward edge of said portion extending transversely from side to side of the pattern-plate.

4. A sole-shaped pattern-plate, having a raised portion at the heel, the forward edge of the raised portion being recessed to receive an edge of the stock.

5. In a machine of the class described, a pattern-plate having a removable compensating strip at its heel part to raise the stock-supporting face at said heel part above the fore part.

6. In a machine of the class described, the combination with a pattern-plate having the contour of a sole and arranged to support the stock, of a clamp arranged to hold the stock upon said plate, the opposed faces of said clamp and plate being formed to bear evenly upon opposite faces of a sole provided with a tap.

7. In a machine of the class described, a pattern-plate and a clamp arranged to engage opposite sides of the work, the pattern-plate having the contour of a sole and the clamp having its edge within and spaced from the boundaries of the pattern-plate,

said clamp and plate being formed to bear evenly upon opposite faces of a sole provided with a tap.

8. A pattern having the contour of a sole and provided with a shoulder at the ball portion to determine the inner line of a tap.

9. A sole-shaped pattern, having a raised portion on each side, said raised portions being each cut away at the inner edge to provide a shoulder to determine the inner edge of a tap.

10. A sole-shaped pattern, having a raised portion on each side thereof extending from the ball portion to the heel, each raised portion being recessed at its inner edge, the base of the recess forming a shoulder to determine the inner edge of a tap.

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

JOHN J. GILLESPIE.

Witnesses:

CHARLES E. GRUSH,

BERNARD BARROWS.

Correction in Letters Patent No. 830,584.

It is hereby certified that in Letters Patent No. 830,584, granted September 11, 1906, upon the application of John J. Gillespie, of Boston, Massachusetts, for an improvement in "Sole-Patterns and Sole-Rounding Machines," an error occurs in the printed specification requiring correction, as follows: In line 84, page 2, the word "turn" should read *trim;* and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 16th day of October, A. D., 1906.

[SEAL.]

F. I. ALLEN,

Commissioner of Patents.