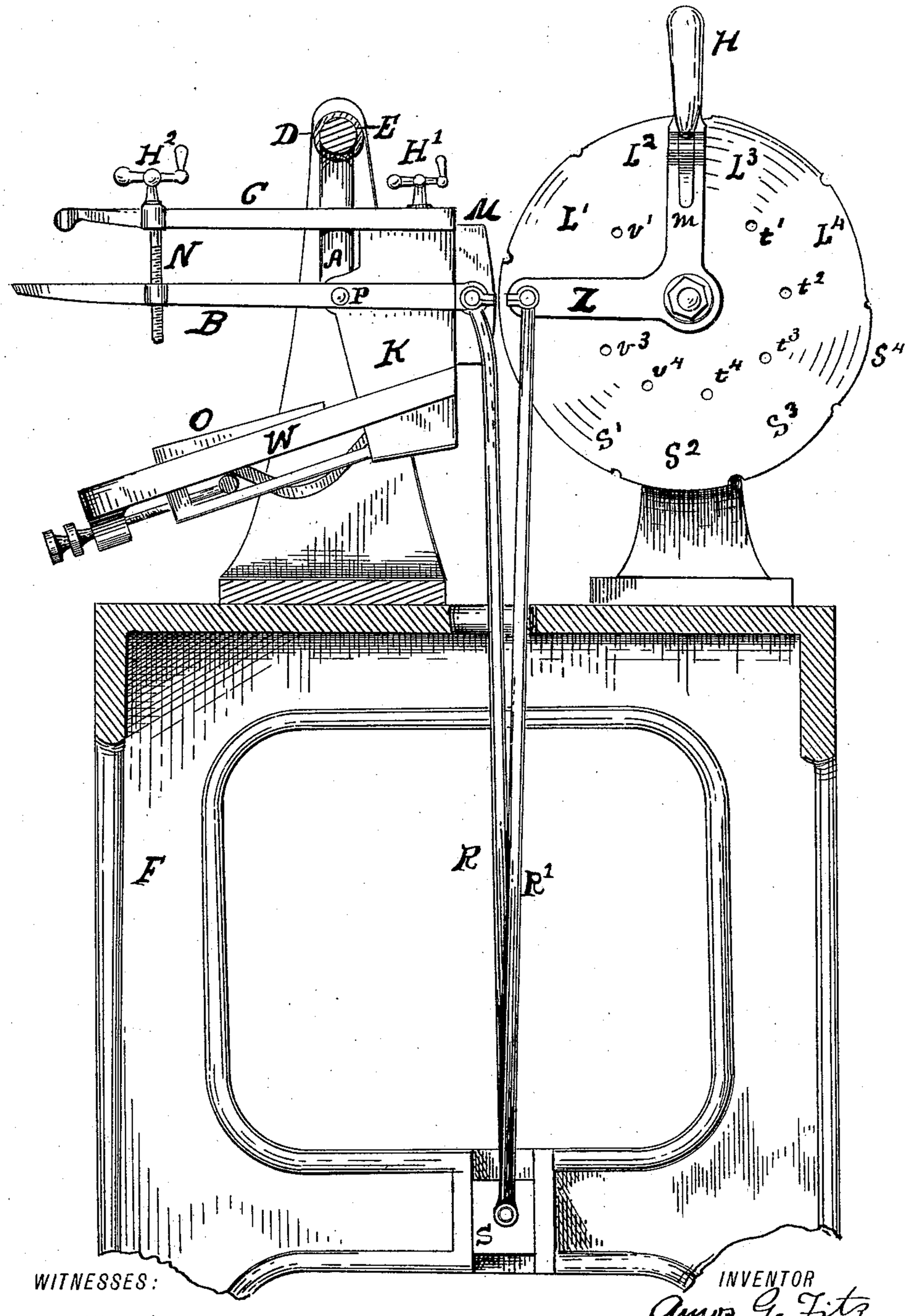
(No Model.)

A. G. FITZ.

MACHINE FOR SHAPING HEELS OF LASTS.

No. 588,971. Patented Aug. 31, 1897.



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AMOS G. FITZ, OF AUBURN, MAINE.

MACHINE FOR SHAPING HEELS OF LASTS.

SPECIFICATION forming part of Letters Patent No. 588,971, dated August 31, 1897.

Application filed March 11, 1897. Serial No. 626,981. (No model.)

To all whom it may concern:

Be it known that I, AMOS G. FITZ, a citizen of the United States, residing at Auburn, in the county of Androscoggin and State of Maine, have invented certain new and useful Improvements in Machines for Shaping the Heels of Lasts, of which the following is a specification.

My invention relates to machines which trim off the stub at the heel of a last to a surface whose outline is governed by a pattern attached to the machine. In United States Patent No. 541,158, issued June 18, 1895, and in United States Patent No. 574,604, issued January 5, 1897, I have described machines of this sort in which all lasts of a set are trimmed from the same pattern.

A principal object of this my present invention is to provide a machine in which the above-mentioned result is attained by simpler means.

My invention consists, primarily, in the combination, with a heel-pattern attached to a last-support and rocking therewith, of a series of convex bearing-surfaces corresponding to different sizes.

In the accompanying drawing I have only shown as much of the machine as is necessary to show the working of my invention. The machine is in other respects similar to Patent No. 574,604 above mentioned.

In the drawing, F is the frame of the machine.

W is a swinging support for the last pivoted to a pair of swinging arms, as A, which project from a sleeve D on a horizontal rod E. The pattern M is attached to the upwardly-projecting part K of the swinging support W. It should be so attached as to be readily adjustable, and I prefer to use the construction shown and claimed in my above-mentioned patents, and in that case the vertical position of M would be adjusted by turning the handle H′. Opposite M are a series of curved patterns formed on the outer edge of the same disk, which act, as hereinafter explained, to change the shape of the heel to correspond with different sizes. Of these patterns L' L^2 L^3 L^4 are for sizes larger than the pattern last of a set, and S' S^2 S^3 S^4 are for smaller sizes. These patterns may be made to change the shape of the different sizes of a set in any arbitrary manner desired, but I have shown them as arcs of circles, each of which at its middle point projects beyond or falls short of a circle drawn from the center of the disk of which it forms part for a distance equal to the greatest difference between the desired outline of the heel of that size and that which would be given it if copied direct from the pattern M.

t' t^2 t^3 t^4 are holes corresponding to L' L^2 L^3 L^4.

v' v^2 v^3 v^4 are holes corresponding to S' S^2 S^3 S^4. A pin m in the swinging arm Z enters these holes and holds the corresponding curve opposite M. The pin m is lifted out by pressing down the handle H, when any other curve desired may be brought into position in front of M. The swinging arm Z is connected by the rod R′ with the slide S. The rod R connects S with the piece B, which is attached to K by a pivot at P in the line of centers about which the support W swings. The piece C is rigidly attached to K and connected to B by the screw N, which is turned by the handle H^2.

O is a support for the heel of the last, which may be adjusted vertically in any convenient manner. I have shown a construction similar to that of my previous patent, No. 574,604.

When I wish to make use of my invention, I first adjust the last and the pattern M to the same angle in the manner set forth in my previous patents. I then place the heel of the last upon the outer end of B and turn the screw N until the last will just slip under the rounded end of C. The resulting motion of B is transmitted through the rods R R′, slide S, and rocking arm Z to the correcting-pattern, which has previously been brought into its working position in front of M, and raises or lowers it until its middle point is brought opposite the middle point of the last when replaced upon W, thus bringing the greatest amount of correction at the point where it is needed.

The circular arcs shown will in most cases give an approximation to a perfect form which comes well within the limits of ordinary workmanship, but whenever found necessary specially-designed curves can be used, which correct a particular style more closely.

Having now fully described my invention and the manner of using it, what I claim, and desire to secure by Letters Patent, is—

1. In a machine for shaping the heels of

lasts, the combination of a heel-pattern attached to the last-support and rocking therewith with a rocking correcting-pattern whose working edge is in contact with that of the heel-pattern, and has a curvature eccentric to the axis about which it rocks; all as set forth.

2. In a machine for shaping the heels of lasts, the combination with a rocking last-support of a heel-pattern adjustably attached thereto and a series of correcting-patterns which form part of the circumference of the same disk and are constrained to move in operative relation to the heel-pattern, all as set forth.

3. In a machine for shaping the heels of lasts, a rocking support for the last, a heel-pattern attached thereto, a series of correcting-patterns turning about the same center, a rocking arm, means of attaching the rocking arm to either of the patterns, a sliding piece, a rod connecting it with the rocking arm and a second rod transmitting to it the motion of the rocking support for the last, all combined with each other as set forth.

4. In a machine for shaping the heels of lasts, a rocking support for the last, a heel-pattern attached thereto, an arm rigidly attached to the rocking support above the line of centers about which it rocks, a second arm pivoted to the rocking support at the line of centers, means of adjusting the distance between the outer ends of these two arms to correspond to the heel depths of different lasts, a correcting-pattern and means of connection between the inner end of the lower arm and the correcting-pattern, all combined with each other as and for the purpose set forth.

5. In a machine for shaping the heels of lasts a rocking support for the last, a heel-pattern attached thereto, a vertically-adjustable support for the toe of the last, a correcting-pattern which is in operative relation to the heel-pattern, and means of connection between the last-support and the correcting-pattern; all as set forth.

In testimony whereof I have hereunto set my hand, in the presence of these witnesses, this 9th day of March, 1897.

AMOS G. FITZ.

Witnesses:
JOHN A. JONES,
N. M. EMERY.