

(No Model.)

B. E. MORRISON.
MACHINE FOR MOLDING SPRING HEELS.

No. 542,092.

Patented July 2, 1895.

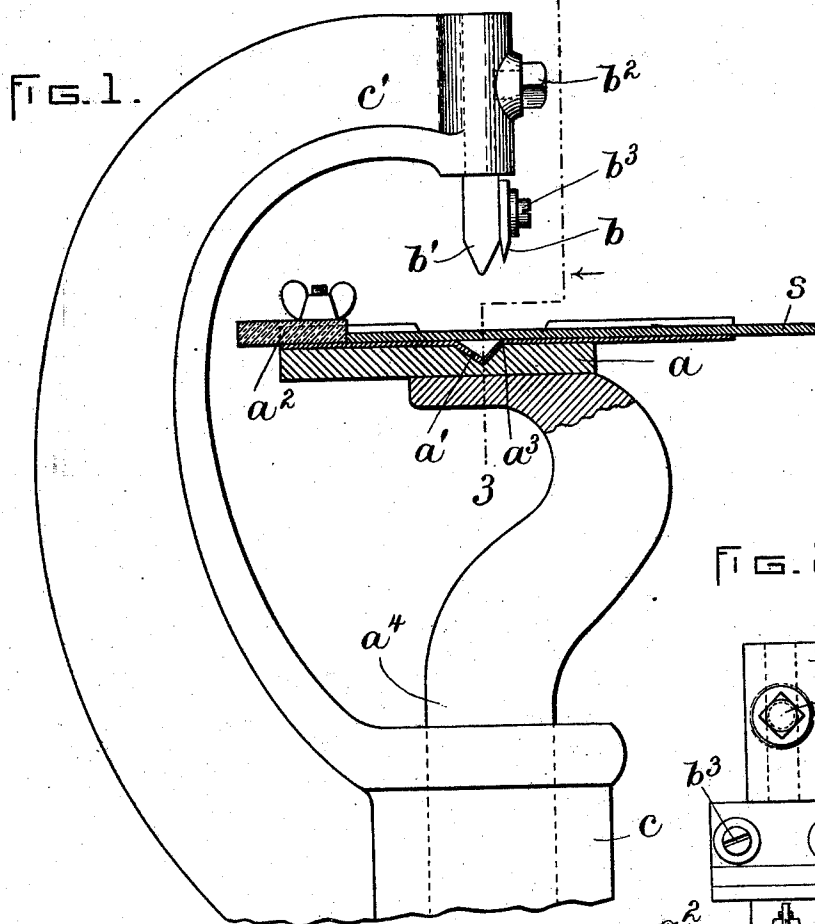


FIG. 3.

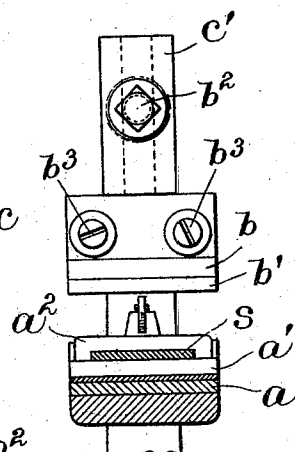


FIG. 2.

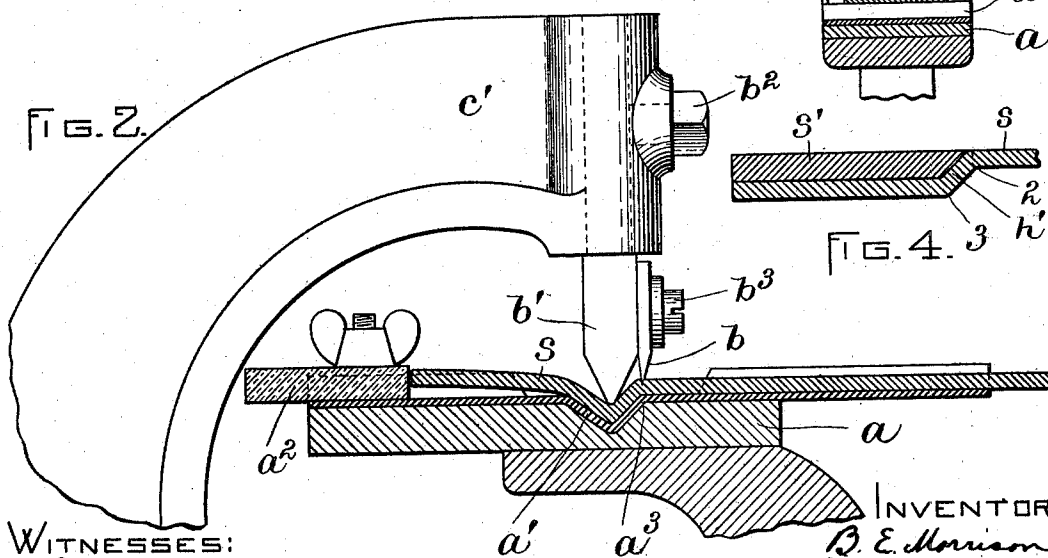
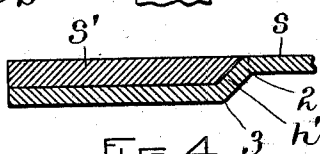


FIG. 4.



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UNITED STATES PATENT OFFICE.

BURTON E. MORRISON, OF HAVERHILL, ASSIGNOR TO WILLIAM GORDON,
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MACHINE FOR MOLDING SPRING-HEELS.

SPECIFICATION forming part of Letters Patent No. 542,092, dated July 2, 1895.

Application filed April 23, 1895. Serial No. 546,825. (No model.)

To all whom it may concern:

Be it known that I, BURTON E. MORRISON, of Haverhill, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Machines for Molding Spring-Heels, of which the following is a specification.

This invention relates to means for offsetting the heel portion of a sole that is formed to constitute the entire bottom of a shoe, thus depressing the heel portion below the adjacent part of the sole and forming an inclined heel-breast, so that when the heel is supplemented by a lift having a beveled front edge a so-called "spring-heel" will be formed.

The invention has for its object to provide a simple and effective machine for giving the sole the form above indicated.

The invention consists in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a partial side elevation and partial section of a machine embodying my improvements. Fig. 2 represents a view, on a larger scale, of the principal parts shown in Fig. 1, the machine being in its sole-pressing position. Fig. 3 represents a section on line 3 3 of Fig. 1. Fig. 4 represents a sectional view of the offset portion of the shoe bottom or sole, showing a lift applied thereto to complete the spring-heel.

The same letters and numerals of reference indicate the same parts in all the figures.

In carrying out my invention I provide a sole-molding machine composed of two general parts or members—namely, first, a sole-supporting bed *a*, having a flat upper surface, which is interrupted by a V-shaped recess *a'*, and an adjustable gage *a²*, secured to said bed at the inner portion thereof, said gage being adjacent to the inner edge of the recess *a'*, and, secondly, a two-part device comprising a scoring-blade *b*, arranged to enter the top surface of a sole, score or partly sever the same along a line coinciding with the outer edge *a³* of the recess *a'*, and a bending-die *b'*, which is affixed to the blade *b* and is arranged to enter the recess *a'* and force a portion of the sole *s* into said recess. One of said members

is movable toward and from the other, and suitable means are provided for forcing the movable member toward the fixed member with sufficient power to effect the molding operation hereinafter described. In the present case the bed *a* is the movable member, and is affixed to a standard *a⁴*, which is fitted to slide in a guide in a supporting-frame *c*, said frame having an overhanging arm *c'*, to which the shank of the bending-die *b'* is secured by a set-screw *b²*, the blade *b* being secured to the die *b'* by means of screws *b³*.

The operation is as follows: The bed *a* being depressed, as shown in Fig. 1, a sole *s* is placed thereon with its heel end against the gage *a²*, the latter being adjusted to the size of the sole. The bed *a* is then raised, thus bringing the sole first into contact with the bending-die *b'* and then into contact with the scoring-blade *b*, the arrangement being such that the scoring-blade enters the upper surface of the sole before the material of the sole is clamped between the apex of the bending-die and the bottom of the recess *a'*. The scoring-blade *b* by cutting into the upper surface of the sole enables the same to be bent by the conjoint action of the die *b'* and recess *a'* into exact conformity with the angle *a³*, which is directly under the scoring-blade, said angle *a³* forming the re-entrant angle 2 at the upper end of the inclined breast *h'* of the heel. Said blade confines the material of the sole interposed between it and the apex of the bending-die while the latter is compressing the material against the bottom of the recess, and thus forming the angle 3 at the bottom of the inclined breast *h'*.

I find that by the described simple machine a sole that is suitably dampened or "in temper" subjected to the described action of the members of the machine is given a well-defined and permanent shape, fitting it for the reception of the lift *s'*, which completes the spring-heel.

It is obvious that the scoring-blade and bending-die may be movable and the supporting-bed fixed, without departing from the spirit of my invention.

I claim—

1. A machine for molding spring heels, comprising two members, namely, first a sole-

supporting bed having a V-shaped recess, and secondly a scoring-blade arranged to enter the top surface of a sole on said bed along a line coinciding with one edge of said recess, 5 and a bending-die affixed to said blade and arranged to force a portion of the sole into said recess, one of said members being movable toward and from the other.

2. A machine for molding spring heels, comprising two members, namely, first a sole-supporting bed having a V-shaped recess, and an adjustable gage adjacent to the inner edge of said recess; and secondly a scoring-blade arranged to enter the top surface of a

sole on said bed along a line coinciding with the outer edge of said recess, and a bending-die affixed to said blade and arranged to force a portion of the sole into said recess, one of said members being movable toward and from the other. 15 20

In testimony whereof I have signed my name to this specification, in the presence of witnesses, this 18th day of April, A. D. 1895.

BURTON E. MORRISON.

Witnesses:

CHARLES J. DUNCAN,
WILLIAM GARDNER,
NATHL. C. BARTLETT.