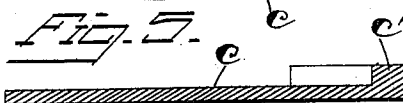
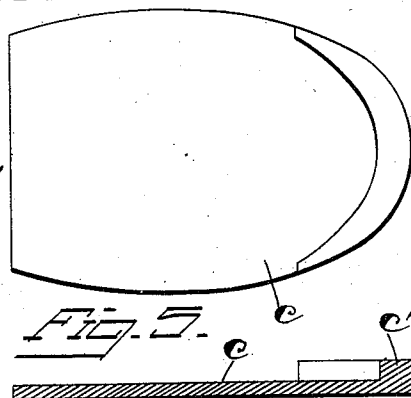
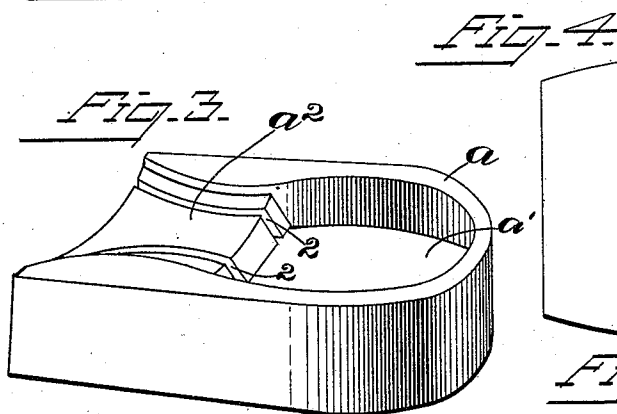
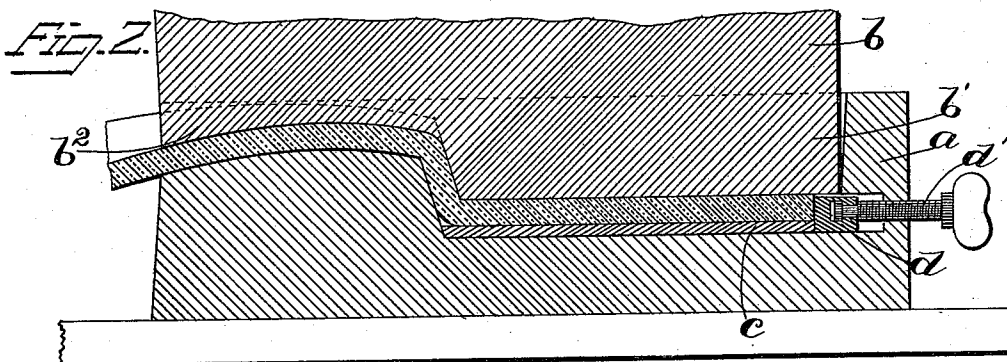
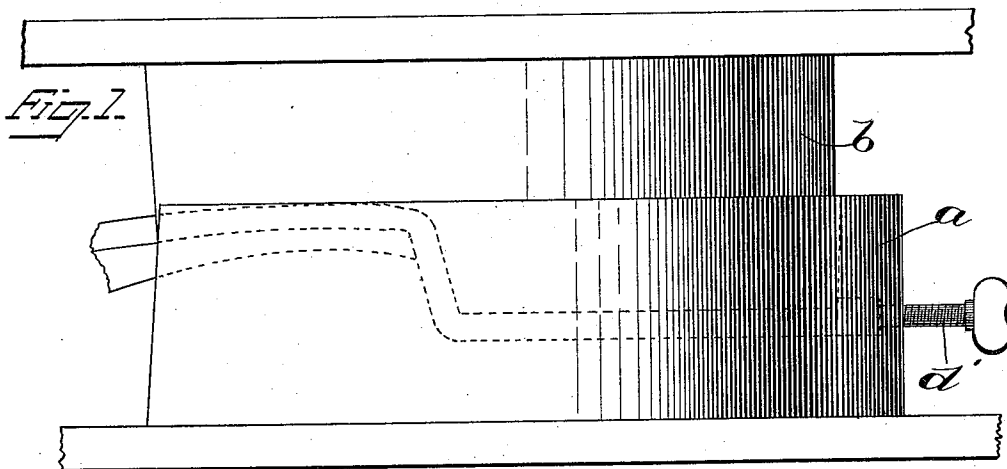


(No Model.)

G. W. RODIGRASS.
SOLE MOLDING APPARATUS.

No. 569,979.

Patented Oct. 20, 1896.



WITNESSES
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UNITED STATES PATENT OFFICE.

GEORGE W. RODIGRASS, OF HAVERHILL, MASSACHUSETTS.

SOLE-MOLDING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 569,979, dated October 20, 1896.

Application filed March 22, 1894. Serial No. 504,637. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. RODIGRASS, of Haverhill, county of Essex, State of Massachusetts, have invented an Improvement in Sole-Molding Apparatus, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

10 This invention has for its object to construct a die adapted to be used in conjunction with any ordinary sole-molding machine for the purpose of molding soles to be used in spring-heeled shoes.

15 The molded sole consists of a flat toe-and-ball portion, transversely-curved shank portion, a substantially vertical heel-breast, and a flat heel portion.

20 In a practical embodiment of my invention a female die is employed, comprising a heel-and-shank portion and also a coöperating male die.

In order that a single die may be employed for all sizes, adjusting devices are provided.

25 For the purpose of adjusting the height of the vertical heel-breast a series of false bottoms may be provided of different thicknesses, which when dropped into the female die raise the bottom thereof more or less.

30 For the purpose of adjusting the length of the spring-heel a block having a curved face may be seated in a recess formed at the rear end of the heel-recess of the female die, which block may be swiveled to or connected with an adjusting-screw projecting through and accessible from the exterior of said female die, so that by turning said screw the block may be moved back and forth or toward and from the breast, and if the false bottoms are made of different sizes, as well as of different thicknesses, which construction I deem preferable, then said block may be advanced so as to abut against the rear edge of said false bottom.

45 As the sole to be molded is frequently channeled from heel to toe prior to its being molded I have formed grooves in the shank and also in the heel-breast of one or it may be both dies to receive and prevent injury to the channel-flaps.

50 Figure 1 shows in side elevation a sole-molding apparatus embodying this invention;

Fig. 2, a longitudinal vertical section of the same, showing a false bottom dropped into the female die and the rear end block advanced to abut against it; Fig. 3, a perspective detail of the female die, and Figs. 4 and 5 a plan and sectional view of a modification to be referred to.

The female die *a* consists of a block recessed to present a heel portion *a'*, a shank portion *a''*, and the male die *b* consists of a block shaped to present a heel portion *b'* and a shank portion *b''*, said male die *b* coöperating with the female die *a* to mold the sole between them.

The shank and heel-breast portions of one or both dies are grooved at 2 to receive and prevent injury to the channel-flaps of the sole in instances where said sole is channeled prior to its being molded.

The shank portions of the die are formed to give to the shank of the molded sole a transverse curve, while the heel portions are formed to give to the molded sole a vertical heel-breast and a flat "spring-heel" portion.

To vary the height of the heel-breast of the molded sole, false bottoms *c* are dropped into the recess *a'*, formed in the female die, consisting of metallic plates of different thicknesses.

To vary the length of the spring-heel portion of the molded sole, a block *d*, having a curved inner face, is seated in a recess formed in the rear end wall of the recess *a'*, which is swiveled to or otherwise connected with a screw *d'*, passing through the rear end wall of the die and accessible exteriorly to be turned by hand or otherwise, for the purpose of adjusting the relative position of said block, thus moving it toward and from the heel-breast, and said block when adjusted serves as the rear abutting wall for the sole.

I prefer to make the false bottoms *c* of different sizes as well as of different thicknesses, and in such case the block *d* may be adjusted up to and against the rear end of said false bottom.

Referring to Figs. 4 and 5, the false bottoms are made of different sizes as well as of different thicknesses, and instead of providing an adjustable rear block *d* each false bottom is provided at its rear end with an upwardly-extended rib or projection *c'*, which serves

the same purpose as the block *d*. The two main parts of the die will be connected with or arranged in any ordinary sole-molding machine.

- 5 By providing a series of false bottoms with the adjustable block *d* or any equivalent therefor I am able to utilize a single die for all the different sizes; but so far as molding the sole to present a vertical heel-breast is
10 concerned the false bottoms and adjustable block *d* may be omitted; but in such case a different die will be required for each different size.

I claim—

- 15 1. A sole-molding apparatus for molding spring-heel shoes consisting of a female die having a heel-recess *a'* with a vertical heel-breast, and a transversely-curved shank portion *a''*, said vertical heel-breast and trans-
20 versely-curved shank portion being grooved as at 2 to receive and prevent injury to the channel-flaps, and the male die having a heel portion with a vertical heel-breast and a transversely-curved shank portion, said parts
25 being adapted to coöperate to mold the sole between them, which sole presents when molded a transversely-curved shank, a ver-

tical heel-breast, and a flat heel portion, substantially as described.

2. In a sole-molding apparatus, the combination of the female die having a heel-recess 30 with a vertical heel-breast, and a shank portion, and false bottoms substantially as described for said heel-recess, and the male die having a heel portion *b'* with a vertical heel- 35 breast, and a shank portion, substantially as described.

3. In a sole-molding apparatus, the combination of the female die having a heel-recess 40 with a vertical heel-breast, and a shank portion, and false bottoms substantially as described for said heel-recess, and an adjustable block *d* or equivalent, and the male die having the heel portion *b'* with a vertical heel- 45 breast, and a shank portion, substantially as described.

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

GEORGE W. RODIGRASS.

Witnesses:

CHAS. J. HALPEN,
B. W. HAYES.