

(No Model.)

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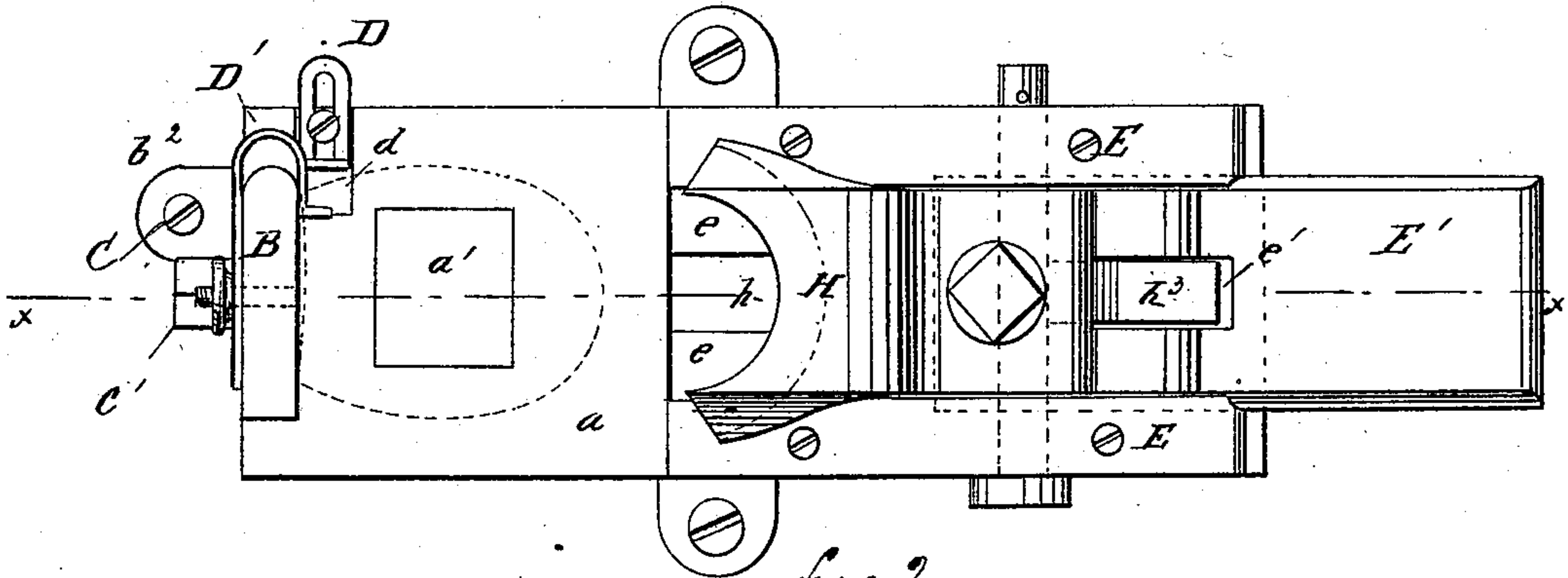
E. JONES.

MACHINE FOR FORMING BOOT OR SHOE HEELS.

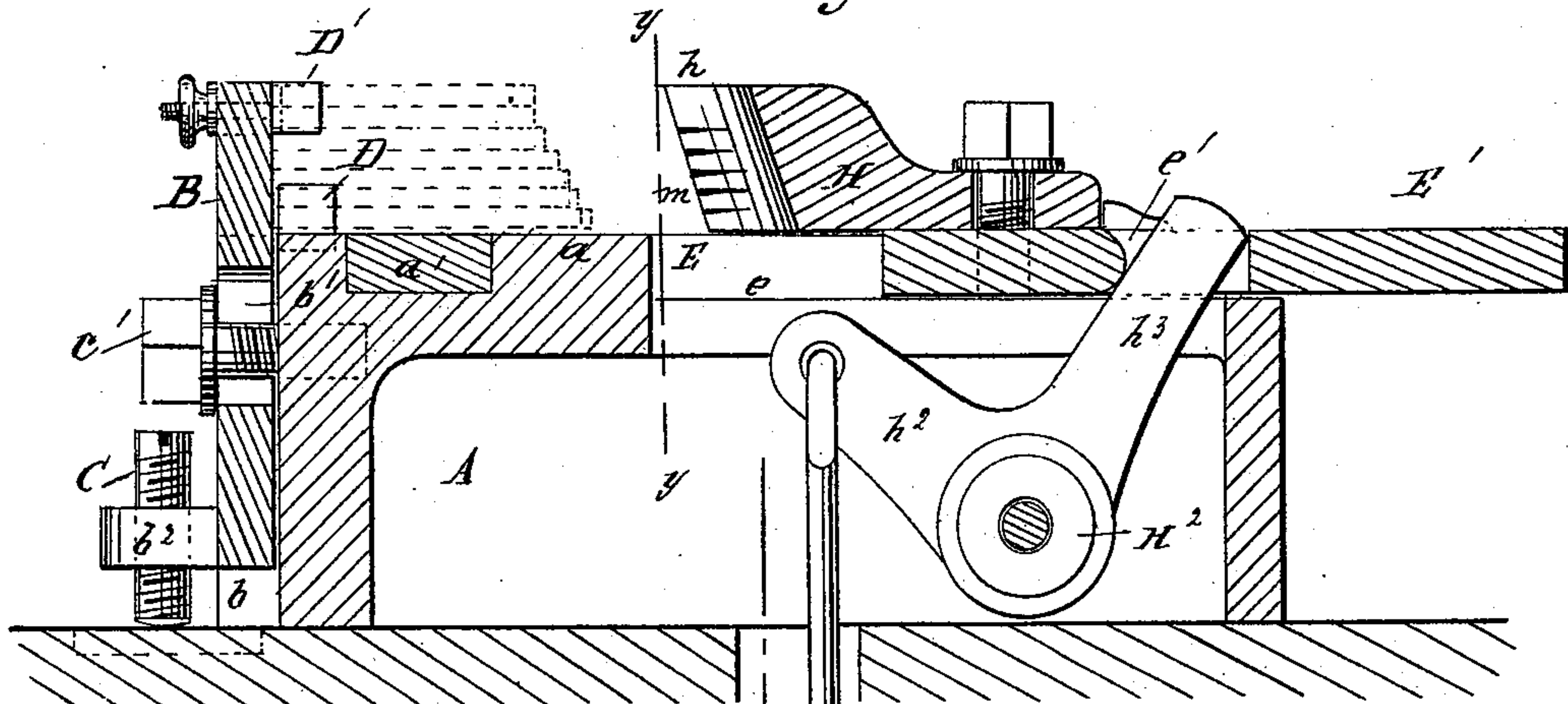
No. 374,536.

Patented Dec. 6, 1887.

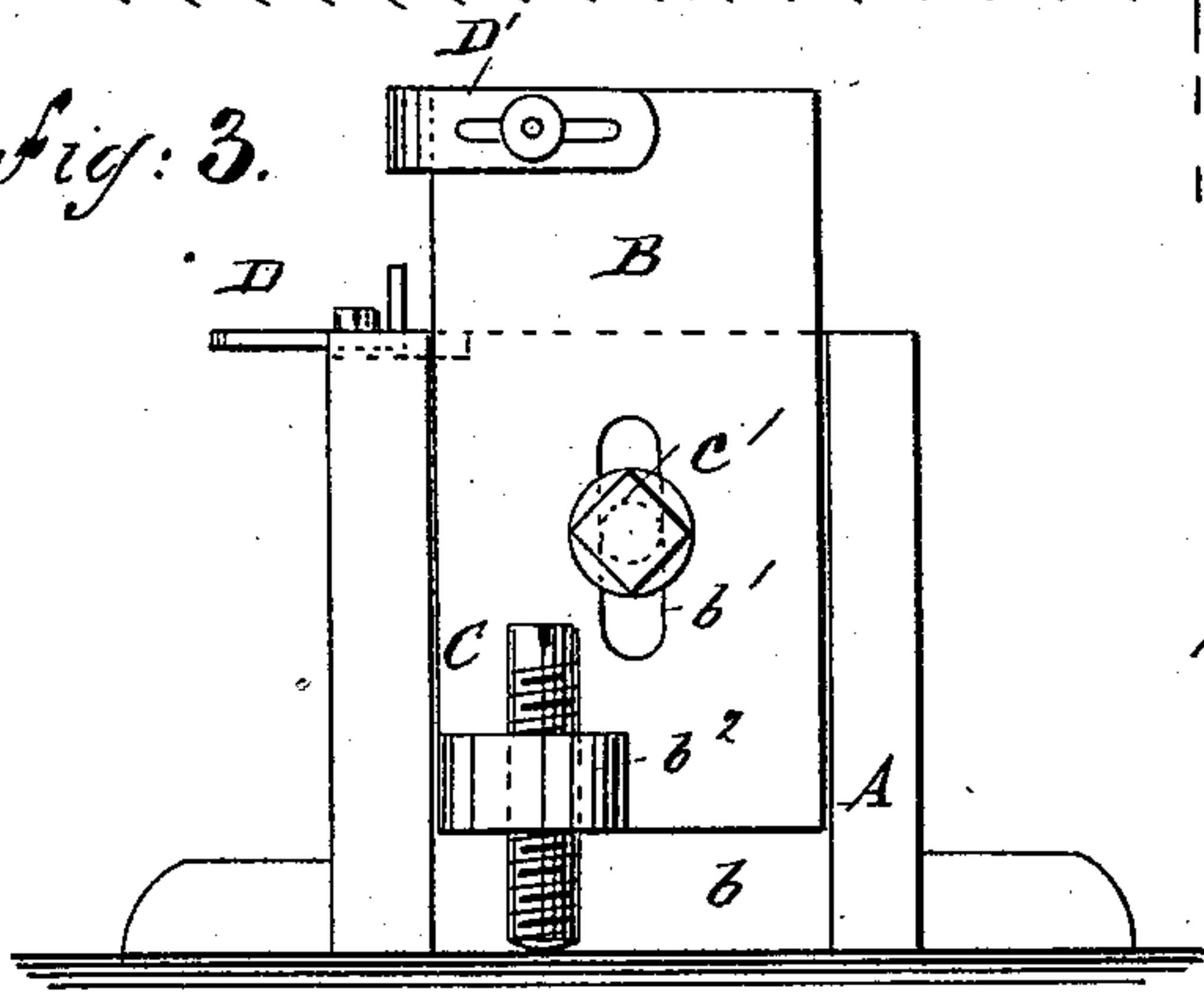
*Fig: 1.*



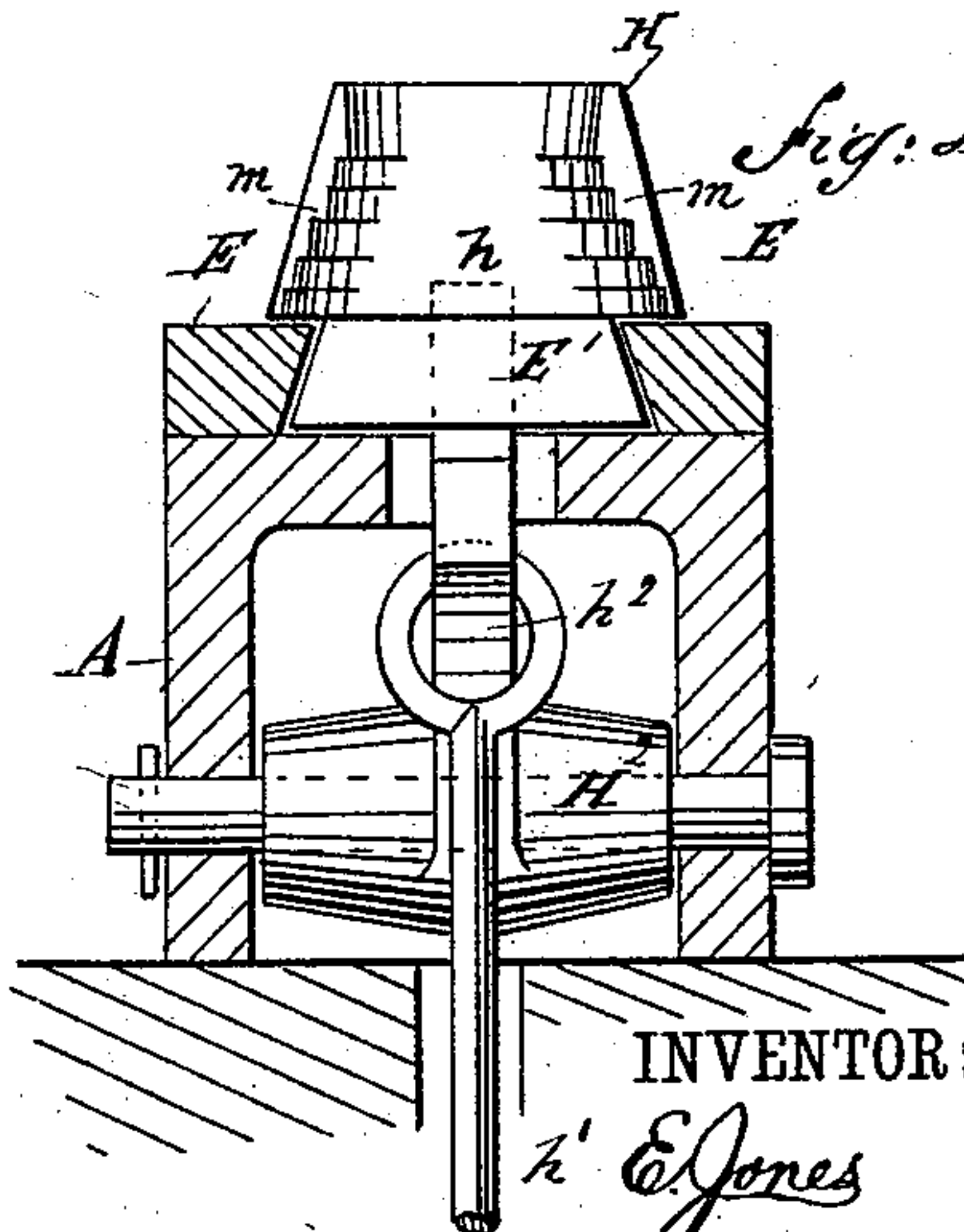
*Fig: 2.*



*Fig: 3.*



*Fig: 4.*



WITNESSES:

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INVENTOR:

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ATTORNEYS.

(No Model.)

2 Sheets—Sheet 2.

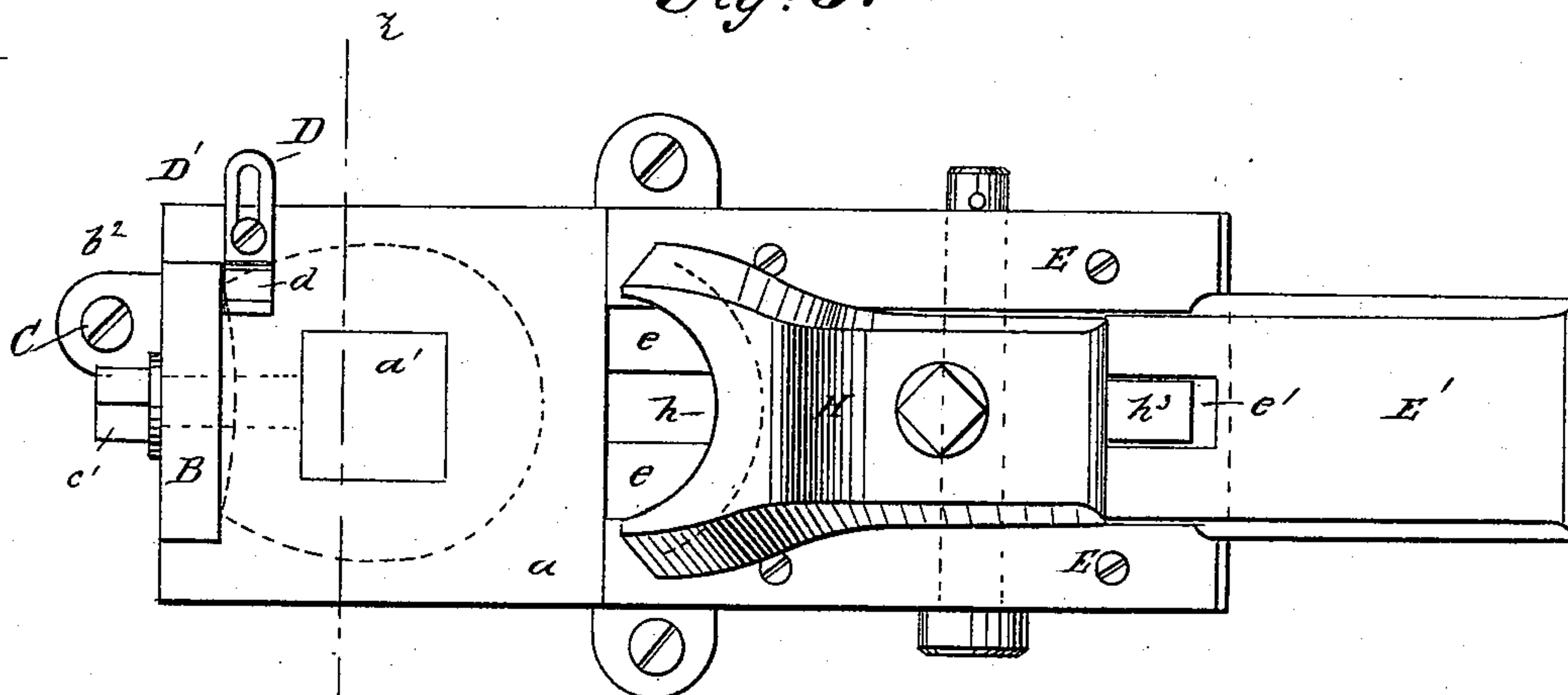
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# MACHINE FOR FORMING BOOT OR SHOE HEELS.

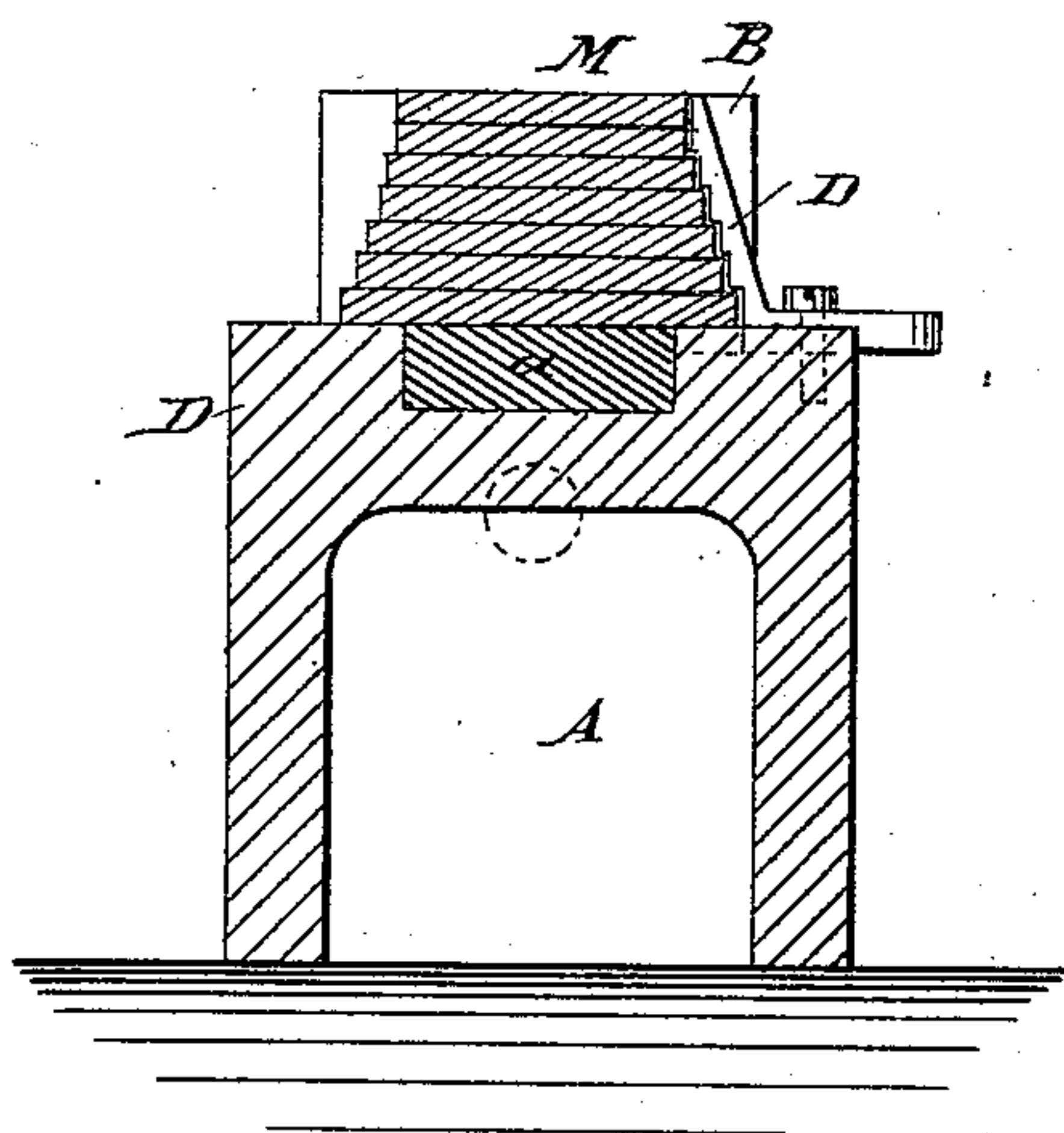
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*Fig: 5.*



*Fig: 6.*



*Fig: 7.*

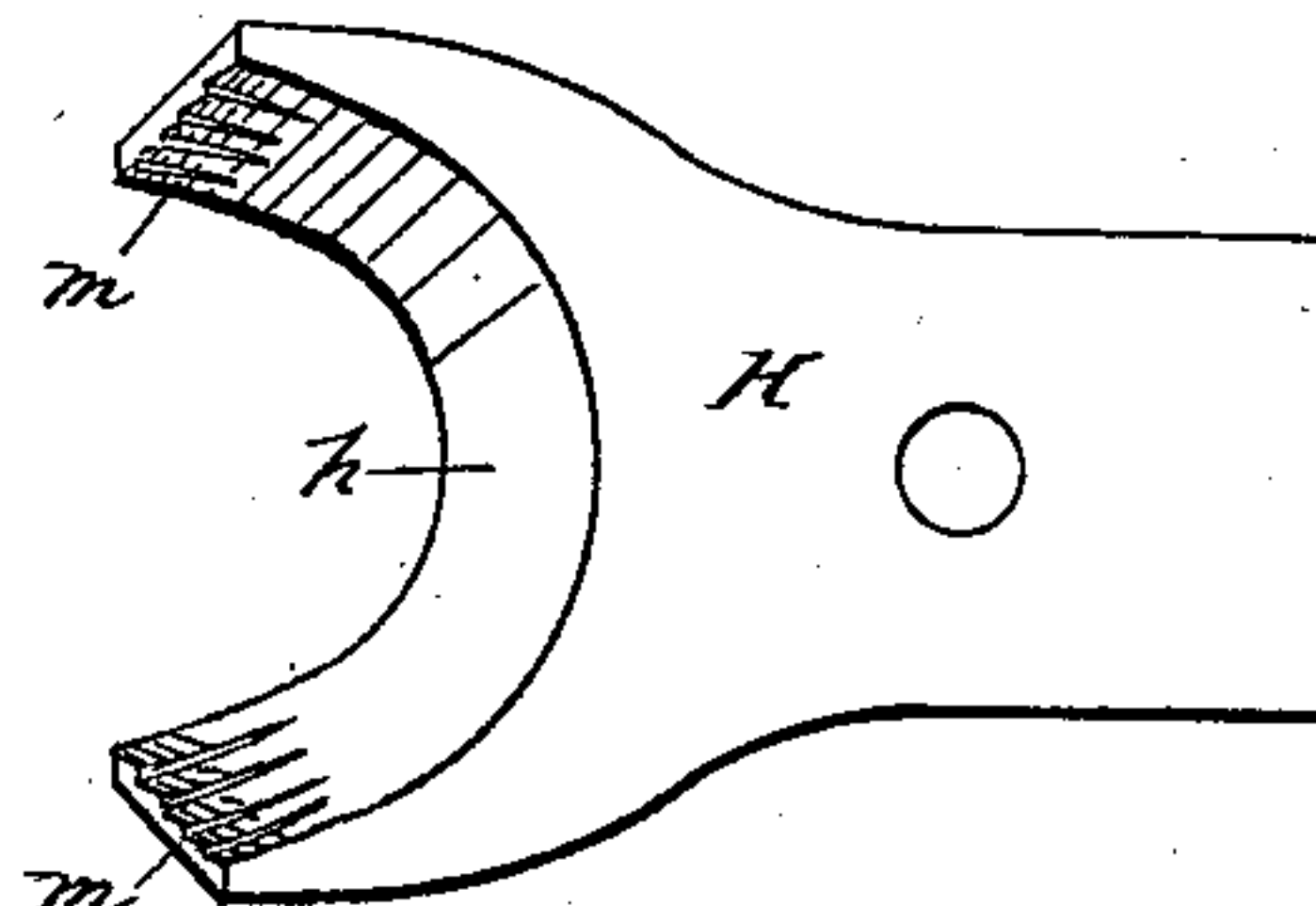
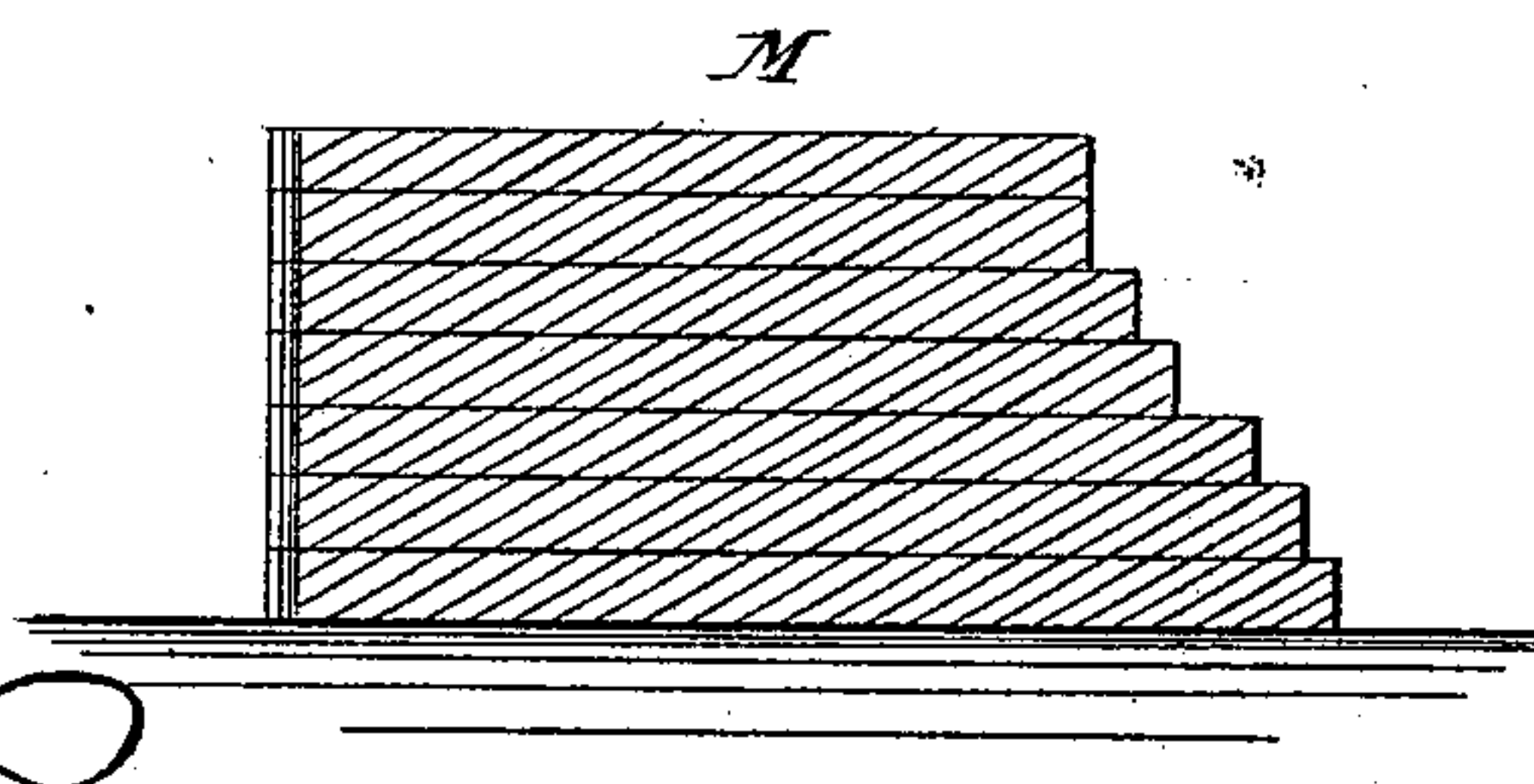


Fig: 8.



**WITNESSES:**

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# UNITED STATES PATENT OFFICE.

EDGAR JONES, OF ALBANY, NEW YORK.

## MACHINE FOR FORMING BOOT OR SHOE HEELS.

SPECIFICATION forming part of Letters Patent No. 374,536, dated December 6, 1887.

Application filed September 22, 1887. Serial No. 250,414. (No model.)

*To all whom it may concern:*

Be it known that I, EDGAR JONES, of Albany, in the county of Albany and State of New York, have invented a new and Improved Machine for Building Boot or Shoe Heels, of which the following is a full, clear, and exact description.

My invention relates to an improvement in machines for building boot or shoe heels, and has for its object to provide a machine of simple and cheap construction, whereby heels may be rapidly and effectively built by an inexperienced person, and wherein the heel may be built very near the desired shape, necessitating less trimming and economizing in material.

The invention consists in the construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the machine. Fig. 2 is a central vertical and longitudinal section on the line  $xx$  of Fig. 1; and Fig. 3 is an end view, and Fig. 4 is a transverse vertical section on the line  $yy$  of Fig. 2. Fig. 5 is a plan view of the device, illustrating the use of one guide. Fig. 6 is a transverse section on line  $zz$  of Fig. 5. Fig. 7 is a perspective view of the jack, and Fig. 8 is a section through the various lifts of the heel.

In carrying out the invention a rectangular base, A, is provided, having a top plate,  $a$ , extending from about the center to one end and from side to side, as shown in Fig. 1, in the center of which plate a block of hardened steel,  $a'$ , is inserted, the said block being adapted to receive the points of the nails used in making up the heel and prevent wear upon the top plate or table,  $a$ . The base A is attached to a stand or other vertical support by means of screws passing through lugs integral with its sides and ends, or in any other approved manner.

The end of the base covered by the table  $a$ , and also the end of said table, are grooved centrally and vertically, as shown at  $b$ , Figs. 2 and 3, and in said groove a perpendicular plate, B, is made to slide, adapted to project

above the table  $a$ , the said sliding plate B being provided with a central longitudinal slot,  $b'$ , and a lug,  $b^2$ , integral with its lower end, having a threaded aperture adapted to receive a set-screw, C. The lower end of the set-screw C has a bearing upon the base support, and by manipulating the said screw the plate B may be raised or lowered, as desired, to project a greater less distance above the table. The plate B is retained in the desired position by a locking-screw,  $c'$ , passing through the slot  $b'$  and into the end of the base, the head of the screw being made to engage the metal surrounding the slot, as shown in Fig. 3.

A gage, D, is adapted to slide in a groove,  $d$ , provided in the upper surface of the table near one outer end, purposed to constitute a guide in placing the lower lifts, and a second gage, D', is attached by a set-screw to the outer face of the end sliding plate, B, near the top, which gage is curved to extend slightly beyond the inner face of the plate, as shown in Fig. 1, and constitutes a guide for the upper lifts. Each gage is slotted and held by a set-screw, so as to be readily adjustable to different-sized lifts.

Upon the upper longitudinal edges of the base A metal strips E are secured, extending from the inner edge of the table out to the end of the base, having ways  $e$  produced in their inner contiguous edges, in which ways a horizontal plate, E', is adapted to slide, provided with a central longitudinal slot,  $e'$ . Upon the plate E' forward of the slot a die or former is adjustably secured, the front end of which is provided with a vertical concaved recess,  $h$ , tapered inward to substantially conform to the tapering portion of a heel, and a series of stepped recesses,  $m$ , upon the inner face at each outer end adapted to receive and hold in place the various lifts employed in making up a heel.

The die or former and plate E' are operated from any ordinary form of a spring-actuated treadle connected by a rod,  $h'$ , with one radial arm,  $h^2$ , of a hub, H<sup>2</sup>, pivoted in the base, another radial arm,  $h^3$ , of the hub being made to project up through the slot  $e'$  and engage the surface of the plate or rear end of the jack, as shown in Fig. 2.

In operation, the gages having been properly adjusted, and likewise the sliding end



plate, B, the lifts M are placed in position one upon another, as shown in dotted lines in Fig. 2 and positive lines, Figs. 6 and 8, with their front surfaces bearing against the smooth surface of plate B. When the heel has been built to a sufficient height, the die or former having, as aforesaid, the concaved and grooved or recessed front to conform to each side of the back center of the heel and to each lift independently is forced back in contact with the built heel, and the several lifts thereby held in a fixed position. The operation is completed by driving a sufficient number of nails through the combined lifts to virtually make them integral.

When the die or former is drawn up, it takes in just enough of the back of the heel to place the lifts in proper shape and leave a sufficient space upon each side of the heel to prevent the hammer from striking the die or former when the nails are driven.

If found desirable in practice, but a single side guide, D, may be employed, as illustrated in Fig. 6, the inner surface of the guide being grooved or recessed to engage each lift independently.

It will be understood that each style or shaped heel will require a separate die or former in building.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. In a heel-forming machine, essentially as herein described, the combination, with the base, a perpendicular adjustable plate at the end of said base, a table in front of said plate, and adjustable guides upon the plate and table, of a slotted horizontal plate adapted to slide upon the base, a follower or die or former detachably connected to said horizontal plate, provided with a concaved inwardly-tapering front surface, and means, substantially as described, for reciprocating the plate and die or former.

2. In a heel-forming machine, essentially as herein described, the combination, with a base, a perpendicular adjustable plate at the end of said base, a table in front of the plate, and an adjustable guide upon the table, of a horizontal plate sliding upon the base and a die or former provided with a grooved and tapering front face, and a series of recesses in said front face adapted to impinge against each lift or section of lifts independently, substantially as shown and described.

3. In a heel-forming machine, essentially as herein described, the combination, with a base, a perpendicular adjustable plate at the end of said base, a table in front of the plate, and adjustable guides upon said table and plate, of a horizontal plate sliding upon the base and a die or former provided with a grooved and tapering front face, and a series of recesses in said face adapted to impinge against each lift or section of lifts at each side of the rear center, substantially as shown and described, whereby when the die

or former is forced forward the several lifts comprising the heel are carried with their front faces against the perpendicular plate and made to conform themselves thereto automatically, as set forth.

4. In a heel-forming machine, a die or former having a concaved front grooved to conform to the back contour of a heel and to each lift independently, substantially as herein set forth.

5. In a heel-forming machine, a die or former having a concaved tapering front corresponding to the taper of a heel at the back and sides, and a series of grooves or recesses in the forward edges adapted to receive each lift or section of a lift independently, substantially as herein shown and described.

6. In a heel-forming machine, essentially as herein described, the combination, with a base, a perpendicular adjustable plate at one end of said base, a table in front of the plate, and an adjustable guide provided with a series of grooves corresponding to the various lifts of a heel, of a horizontal plate sliding upon the base and a die or former provided with a grooved and tapering front face, and a series of recesses in said face adapted to impinge against each lift or section of lifts, and corresponding to the grooves in the guide, substantially as shown and described.

7. In a heel-forming machine, essentially as herein described, the combination, with the base, a perpendicular adjustable plate at the end of said base, a table in front of the plate, provided with an embedded hardened steel block, and adjustable guides upon the plate and table, of a slotted horizontal plate adapted to slide upon the base, a die or former detachably connected to said horizontal plate, provided with a concaved inwardly-tapering front surface, and a hub pivoted within the base provided with radial arms, one adapted to extend up through the slot in the horizontal plate and the other adapted for attachment to a treadle, substantially as herein shown and described.

8. In a heel-forming machine, essentially as herein described, the combination, with the base, a perpendicular plate adapted to slide at the end of said base, provided with a central slot, a lug integral with its lower end, a locking-screw passing through said slot, and an adjusting-screw passing through said lug, a table in front of said plate, provided with an embedded steel block, and adjustable guides upon the plate and table, of a slotted horizontal plate adapted to slide upon the base, a die or former detachably connected to said horizontal plate, provided with a front face grooved to the tapering contour of a heel, and means, substantially as described, for actuating the plate and die or former, as herein set forth.

EDGAR JONES.

Witnesses:

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E. W. OBER.