L. H. FARNSWORTH.

Machinery for Crimping Boots and Shoes.

No. 158,788. Patented Jan. 19, 1875.

Fig. 1

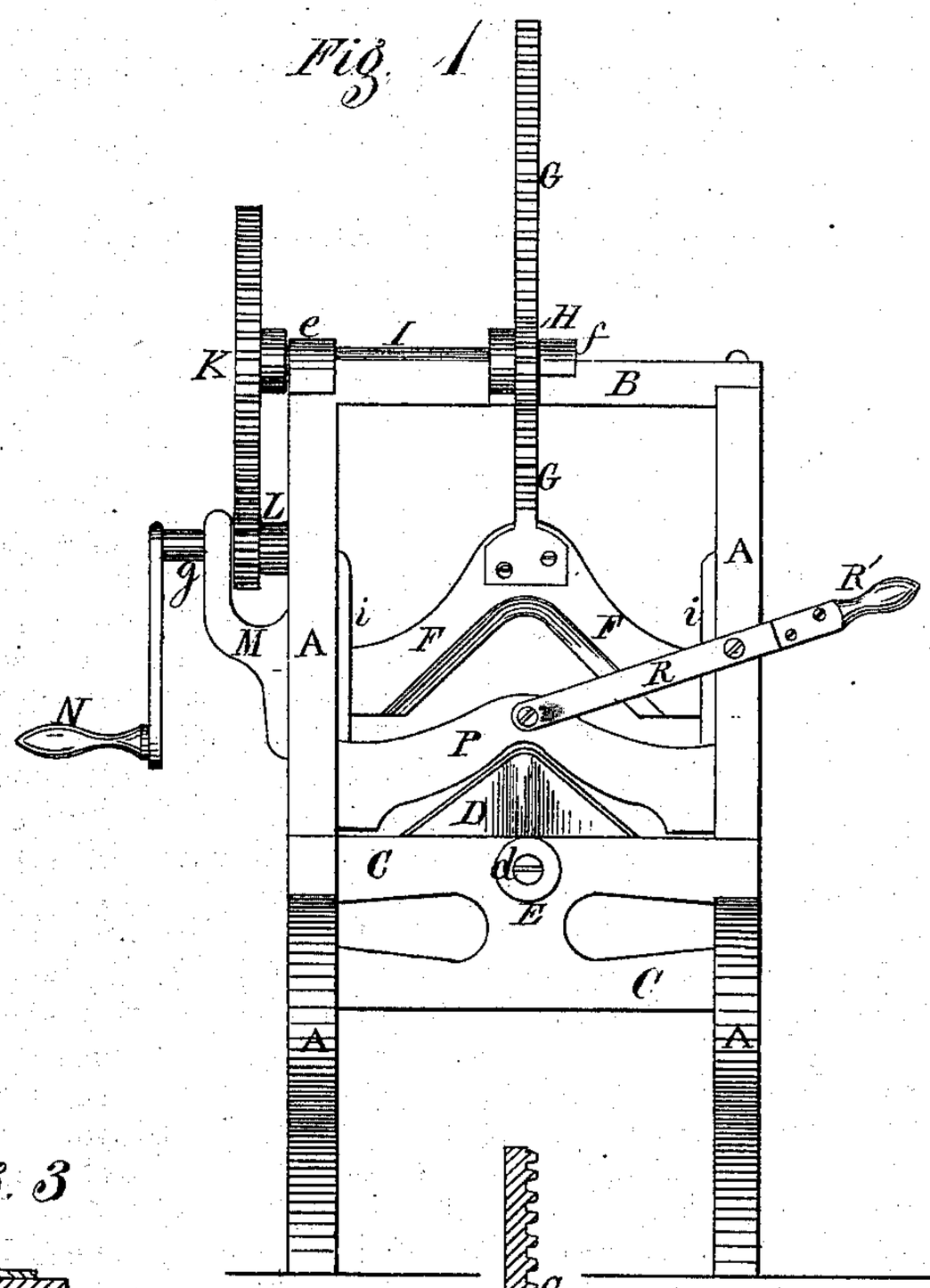


Fig. 3

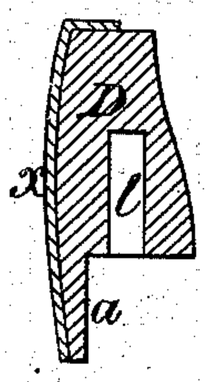


Fig. 4

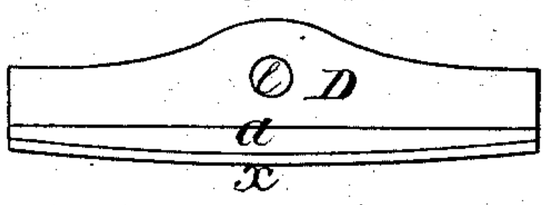
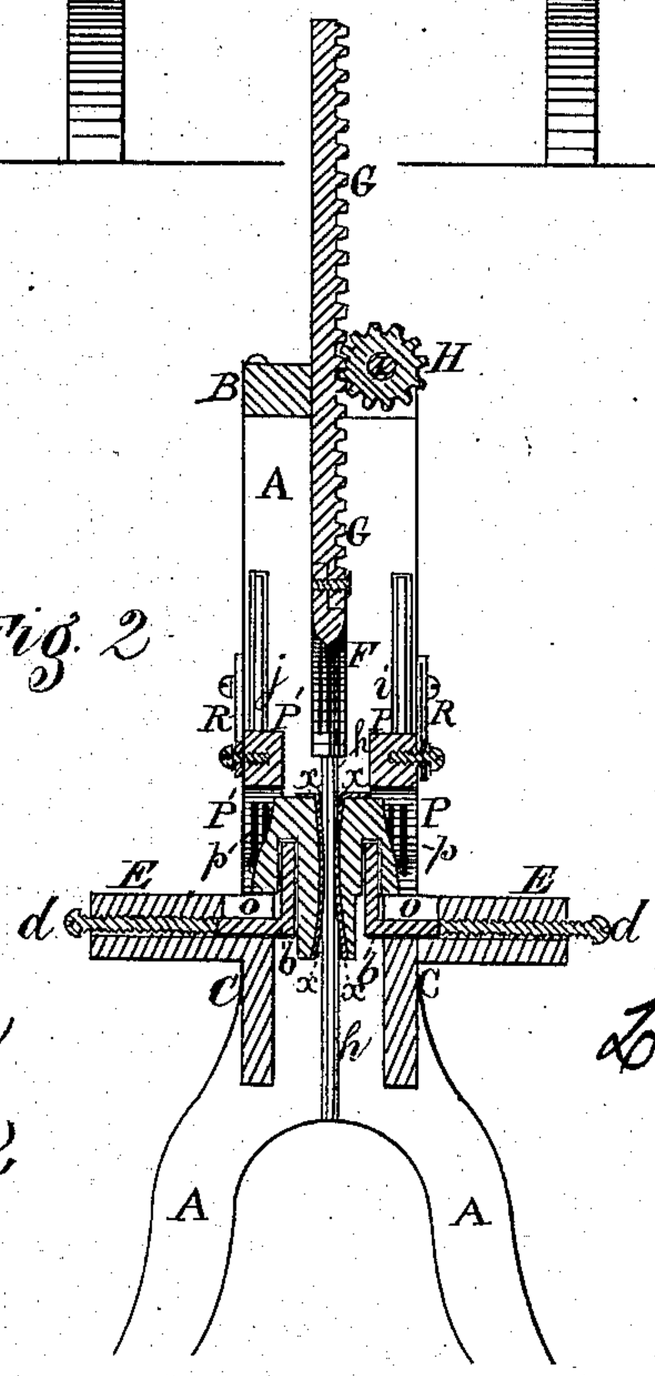


Fig. 2



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UNITED STATES PATENT OFFICE.

LUTHER H. FARNSWORTH, OF HUDSON, ASSIGNOR TO JOHN S. FOLSOM, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN MACHINERY FOR CRIMPING BOOTS AND SHOES.

Specification forming part of Letters Patent No. **158,788**, dated January 19, 1875; application filed February 12, 1874.

To all whom it may concern:

Be it known that I, LUTHER H. FARNSWORTH, of Hudson, in the county of Middlesex and State of Massachusetts, have invented certain Improvements in Boot and Shoe Crimping Machines, of which the following is a specification:

Figure 1 of the accompanying drawings is a front view, and Fig. 2 is a central vertical transverse section, of a crimping-machine with my improvements applied. Fig. 3 is a central vertical transverse section, and Fig. 4 is a bottom view, of a portion of my invention at an enlarged scale.

The object of the present invention is to provide a boot and shoe crimping machine with suitable means for pressing the leather in the desired shape, in an even and effective manner, without injury to the face of the leather, so as to allow pebble or other printed or stamped material to be crimped without injuring or destroying the pebbling or stamping, &c., which desideratum has not heretofore been accomplished by the ordinary boot and shoe crimping machines in use. To these ends my invention consists in the combination and arrangement of parts, which I will now proceed to describe and point out in the claims.

In the drawings, A represents vertical standards, bifurcated and curved outward at the bottom, or otherwise shaped to form supporting-legs, and connected at the top by a plate or beam, B, and having at the front and rear, at a convenient height from the floor, connecting-plates C, open or otherwise shaped, and of sufficient size and strength to form beds for jaws or clamps D, one of which is seated on the front and the other on the rear plate, C. Each of the jaws D is formed, as shown in Figs. 3 and 4, with a downward-extending inner lip, *a*, forming a rabbet that fits over the top and face of the plate; and has formed in its upper portion or body a vertical socket, *l*, that receives a vertical portion of a right-angled rod or stem, *b*, whose horizontal portion is received in a slot, *o*, formed in the inner portion of a standard or stem, E, that projects laterally from the exterior of the plates C; and has a screw, *d*, arranged to turn in its outer end to abut against and operate laterally the rod *b*, and, consequently, the jaw D, supported by it. The jaws D are, in the present example, convexly curved, both vertically and horizontally, on the inner face, although, if desired, they may be otherwise formed, and are covered on the inner face with rubber *x*, or other elastic or yielding material, substance, or compound, &c.; or the elastic facing may be formed with a convex surface, or otherwise, and applied to the jaws, which, in this case, may be formed with an even face; or the elastic facing may be applied over corrugated jaws, or otherwise formed and arranged as may be desired, to impinge evenly against the leather as it is brought between the jaws D by a presser, F, suitably curved and shaped in the desired form, and connected at the top with a vertical ratchet-bar, G, which is raised and lowered by a cog-wheel, H, connected with an arbor, I, turning in boxes *e f*, or otherwise arranged on the top B of the frame, which is cut out to receive the ratchet-bar G and wheel H, whose arbor I is operated by a large cog-wheel, K, located on the outside of the frame, and rotated by a pinion or small cog-wheel, L, connected with a crank-arbor, *g*, supported by a suitable bracket, M, and provided with a crank-handle, N. The presser F is grooved on its ends to travel on vertical ways *h*, projecting from the center of the standards A on the inside; or the frame may be otherwise arranged to allow the up-and-down travel of a presser. The standards A are provided on the inside of the front and rear with other vertical ways *i j*, or are otherwise arranged to admit the raising and lowering of a form or forms, P P′, curved or otherwise shaped on the top, and curved out on the bottom in a proper form to pass over and fit on the top of the jaws D, so that when brought down over the jaws they shall hold the leather thereon until it is drawn through the forms and jaws by the downward action of the presser F, which is suitably beveled on its under curved and inclined surface. The bottom of the forms may be either plain or corrugated, as at *p*, the latter arrangement giving the forms a better hold on the leather. Pivoted to each of the forms P P′ on the outside is the end of a lever, R, which is also pivoted to the side of one

of the vertical standards A, partly around the face of which the lever is bent and attached to a handle, R′, by which the levers R are operated to raise or lower the forms P, or form, to admit and hold the leather.

I do not confine myself to the use of jaws of the exact shape and arrangement of those shown. Neither do I confine the use of the jaws to a machine of the exact construction as that herein described, for, if preferred, the jaws may be differently shaped to suit machines of different construction and arrangement.

The operation of my invention is as follows: By pressing on the handle R′, the levers R, turning on the standard-pivots, elevate the forms P to admit the leather, which is placed on top of the jaws D. The forms P P′ are then lowered, to hold the leather on the jaws, by raising the handle R′, and the presser F is lowered by means of the ratchet-bar G, operated by the cog-wheel H and its connecting mechanism, or otherwise. As the presser F is lowered it draws the leather between the forms and jaws, and carries it down between the latter, which are adjusted to the proper distance apart, to admit the passage of the presser, by the screws *d*, the elastic surface of the jaws permitting the leather to receive the pressure required to crimp it without injuring its surface or effacing the pebbling or stamping, &c., thereon, thus obviating the objection to the use of ordinarily-constructed jaws, whose rigidity or other formation will not allow the crimping of pebbled, stamped, or other similar leather without defacement or destruction of the impression. The elastic facing is carried either wholly or partially over the top surface of the jaws to prevent defacement of the leather when drawn through the forms and jaws.

Having thus described my improvements, what I claim as my invention, and desire to have secured to me by Letters Patent, is—

1. The jaws D D, having convex elastic inner faces, in combination with the angular rods *b* and screws *d*, substantially as described, for the purpose specified.

2. In a crimping-machine, the vertically-sliding forms P P, located on each side of the presser F, provided with corrugated bottoms, and operated simultaneously by the bifurcated lever R R′, substantially as described, for the purpose specified.

3. In a crimping-machine, the combination of the laterally-adjustable jaws D, corrugated forms P P′, and presser F, all arranged and operating substantially as described.

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

LUTHER H. FARNSWORTH.

Witnesses:
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