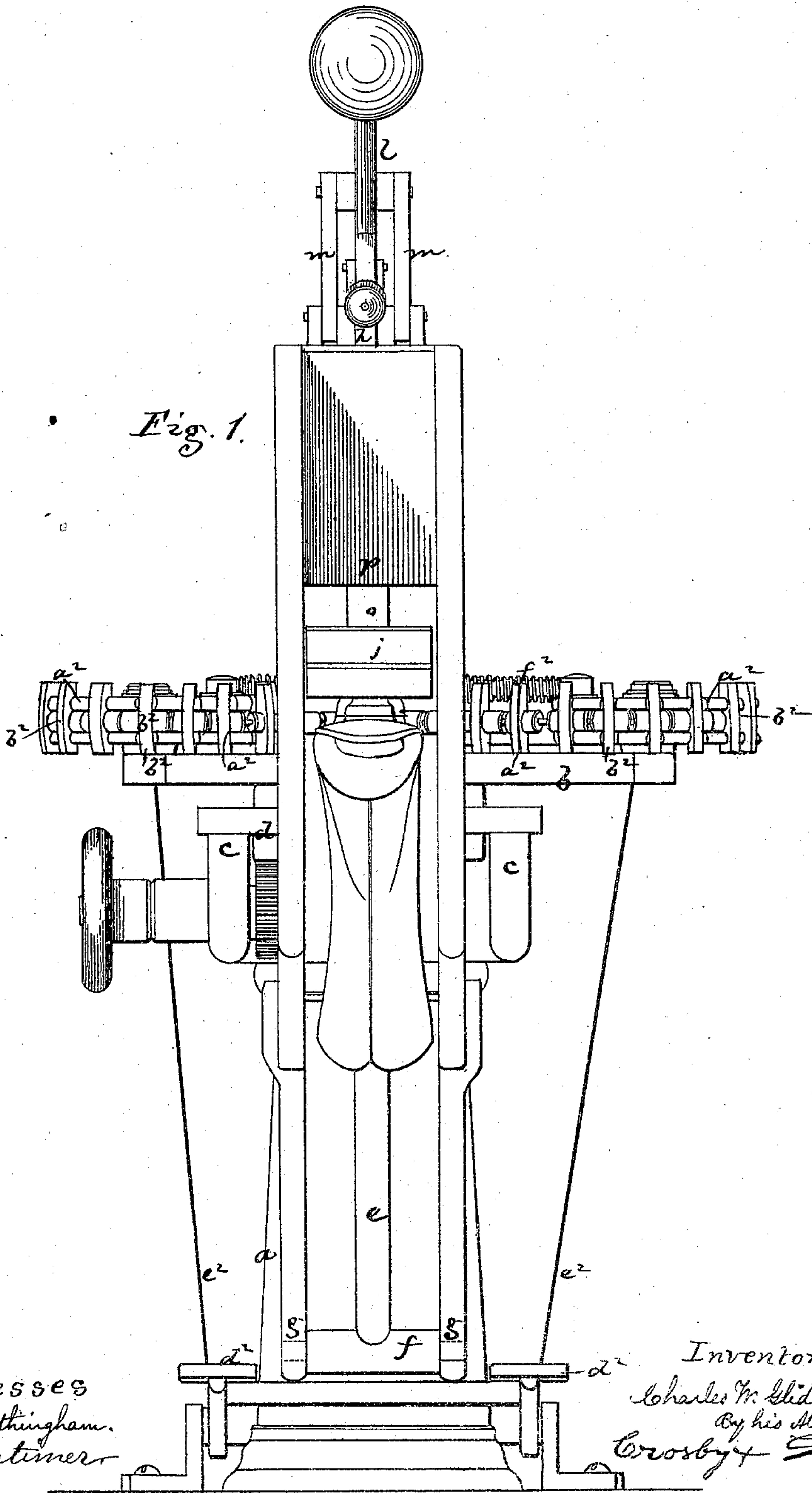


C. W. GLIDDEN.
Heel-Burnishing Machines.

No. 143,507.

Patented Oct. 7, 1873.

Fig. 1.



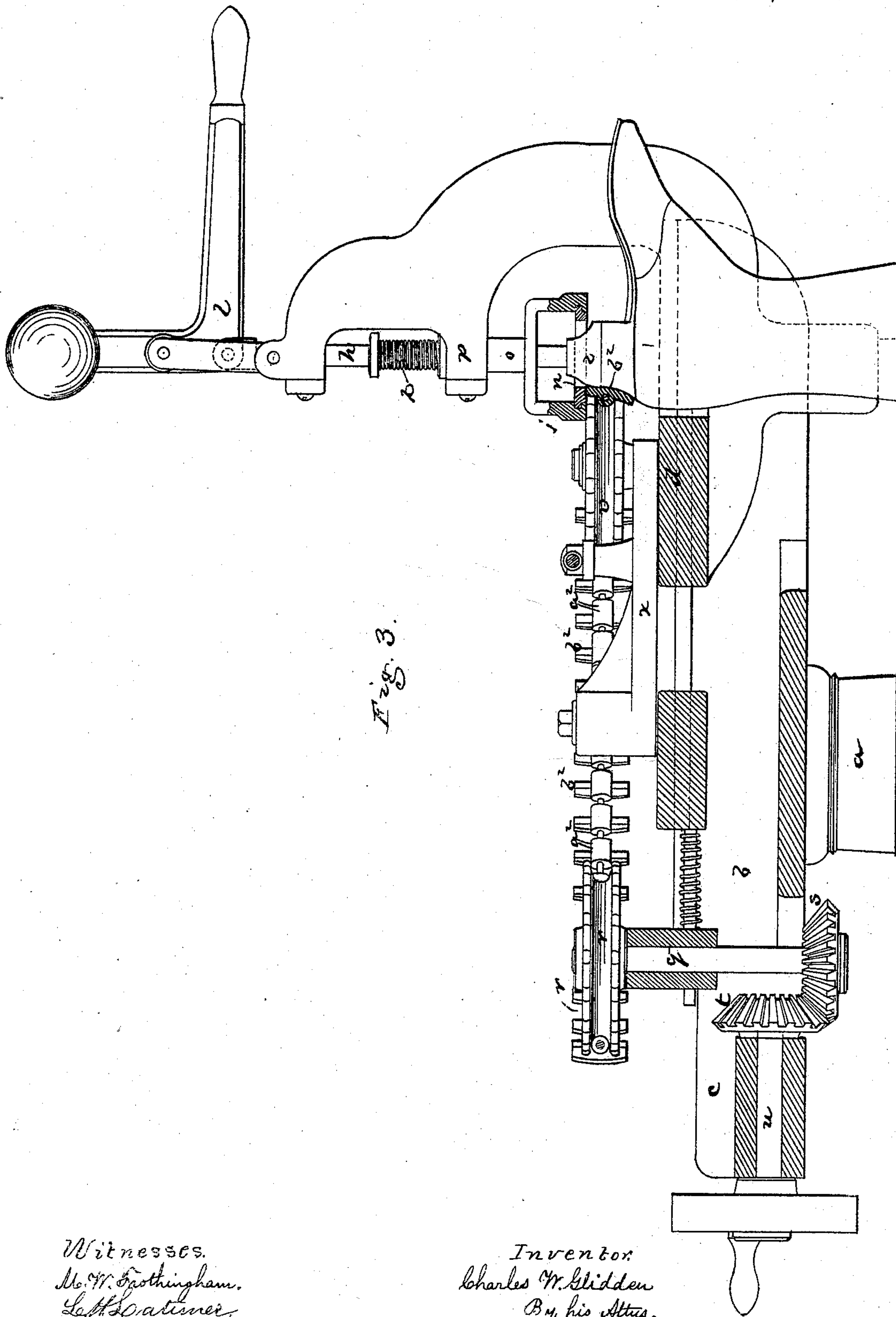
Witnesses
M. W. Frothingham.
L. H. Catmer

Inventor
Charles W. Glidden
By his Atty.
Crosby & Gould

3 Sheets--Sheet 2.

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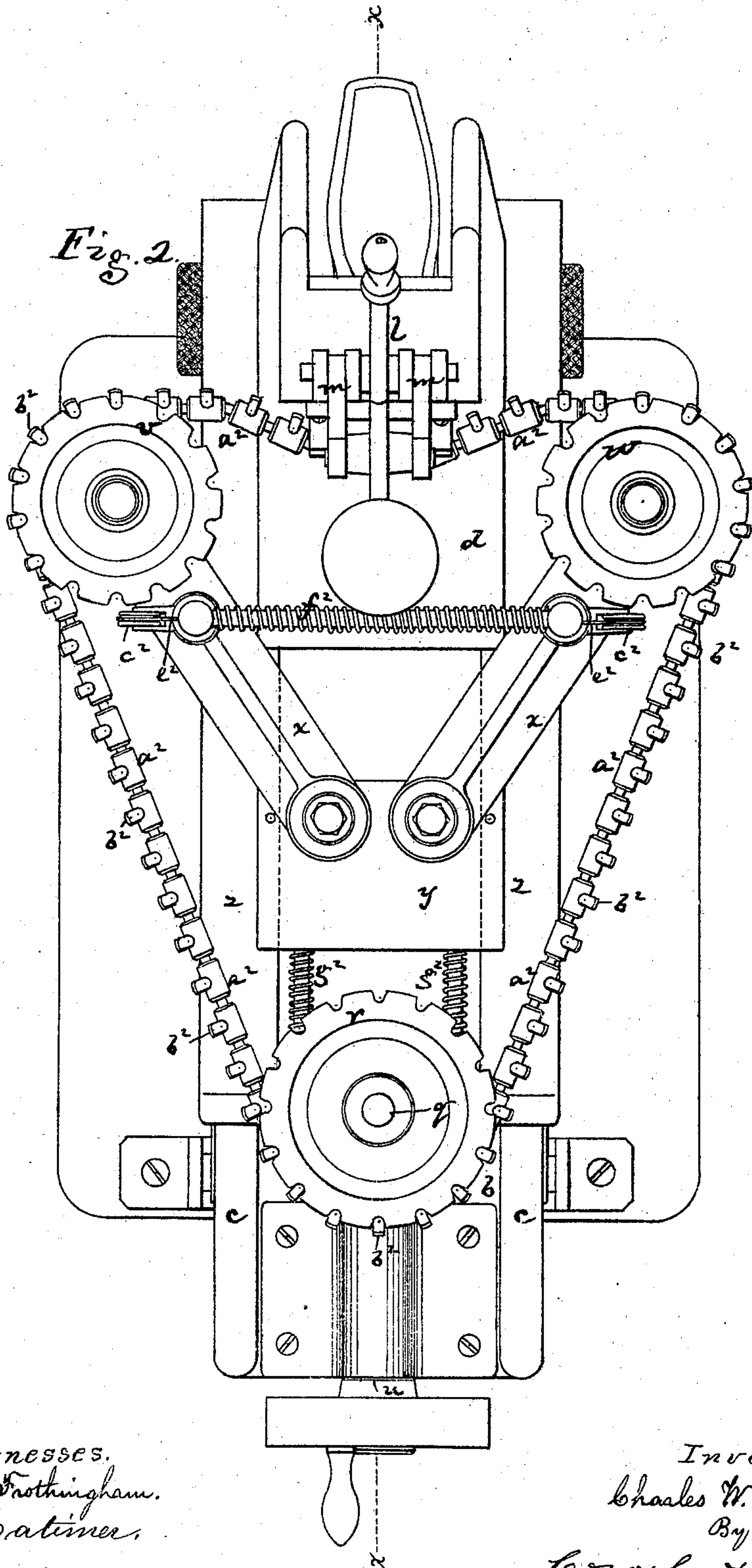
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UNITED STATES PATENT OFFICE

CHARLES W. GLIDDEN, OF LYNN, ASSIGNOR TO JAMES W. BROOKS,
TRUSTEE, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN HEEL-BURNISHING MACHINES.

Specification forming part of Letters Patent No. **143,507**, dated October 7, 1873; application filed
August 25, 1873.

To all whom it may concern:

Be it known that I, CHARLES W. GLIDDEN, of Lynn, in the county of Essex and State of Massachusetts, have invented an Improved Heel-Burnishing Machine; and I do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

The invention relates to a method of burnishing the heels of boots and shoes by the employment of a series of burnishing devices successively and continuously brought into action against the curved edge of the heels. For this purpose I use a chain the links of which are provided with burnishing-surfaces, and this chain I pass around a series of notched or sprocket pulleys, to which rotative movement is imparted to operate the chain by any suitable means, the pulleys being so located, or the shoe jacked in such position with relation thereto, that the burnishers are brought into contact with the heel-edge as they move, the pulleys being also so arranged that the burnishers are or may be brought into contact with the whole length of the curved heel-edge. My invention consists primarily in this method of burnishing heel-edges of boots and shoes.

The drawing represents a machine embodying the invention.

Figure 1 is a front elevation of the machine. Fig. 2 is a plan thereof. Fig. 3 is a sectional elevation.

a denotes a post, at the top of which is a frame, b , having guide-rods c , upon which is supported and slides a carriage, d , in which the boot or shoe to be heel-burnished is jacked or mounted. The boot is shown as mounted upon a vertical last-pin, e , extending from a shaft, f , journaled in bearings g , the pin, when loose, swinging down to permit a boot or shoe to be placed upon the pin or removed therefrom. In the upper part of the carriage are bearings for a vertical rod or shaft, h , at the foot of which is a tread or clamp plate, i , that is forced down upon the heel-tread and clamps the boot in position. The rod is forced up by a spring, k , and is jointed to a lever, l , by which it is moved down, the lever being preferably

fulcrumed upon links m , which, being brought into vertical position by the downward movement of the rod, lock the rod in position to hold the boot. The boot-heel is placed for reception of the tread-plate by means of a guide-block, j , having a heel-socket, n , this block having a stem, o , extending through the bearing p , and being held down by the stress of the spring k . The block is raised by hand when the boot is to be jacked in position or removed, and in jacking the boot the heel is brought under the socket, and then the block is let down, the heel being within the socket and in position to receive the tread-plate. Near the opposite end of the frame b is a vertical shaft, q , journaled in a suitable bearing, and carrying at top a sprocket-wheel, r , a bevel-wheel, s , being fixed on the foot of the shaft, and said wheel engaging with and being driven by a bevel-wheel, t , on a driving-shaft, u . The bearing of the shaft q is stationary; and v and w denote two other sprocket-wheels, turning on pins extending from movable arms x , pivoted to and diverging from a slide, y , that is mounted and slides on the rails z . Around the three pulleys passes a chain composed of a series of links, a^2 , of each of which a burnishing device, b^2 , forms a part. The outer faces of these devices are of the form (or approximating thereto) of the edge of the heel, and between the two wheels v w the burnishing-surfaces, as the chain moves, come into contact with the heel-edge. When the chain between the wheels is straight the burnishers will bear only at one point, and to extend the bearing contact the carriage d is pressed in and the wheels brought toward each other. The carriage may be pressed in by hand, and to move the wheels the arms x are provided with pulleys c^2 , over which, and down to pedal-levers d^2 , a cord, e^2 , passes, downward pressure of the pedals drawing the arms x and the wheels inward, and they being forced outward, when the pedals are released, by a suitable spring, f^2 . By pressing in the carriage and the wheels the chain may be made to embrace the whole curved surface of the heel-edge, the slide y yielding (for the movement of the wheels) against the stress of springs g^2 . The forms of the acting faces of the re-

spective burnishing devices may vary, so that by variously fitting to the heel-edge they will act conjointly in the burnishing operation to better effect than if all were alike.

I claim—

1. A boot and shoe heel burnishing machine having, in combination with a suitable mechanism for holding the boot or shoe in position, a chain or continuous series of burnishing devices, substantially as shown and described.

2. In combination with the burnisher-chain, the movable carriage *d*, substantially as described.

3. In combination with the burnishing-chain, the movable arms *x* and wheels *v w*.

4. The jack-carriage having the vertical swinging pin *e*, the tread-plate *i*, and the guide-

block *j*, arranged substantially as shown and described.

5. In combination with the movable arms *x*, the mechanism for drawing them inward and forcing them apart, substantially as shown and described.

6. The method of burnishing the edges of boot and shoe heels by subjecting the curved edge to the continuous action of a yielding series of burnishing devices, substantially as described.

Executed this 8th day of August, A.D. 1873.
C. W. GLIDDEN.

Witnesses:

FRANCIS GOULD,
M. W. FROTHINGHAM.