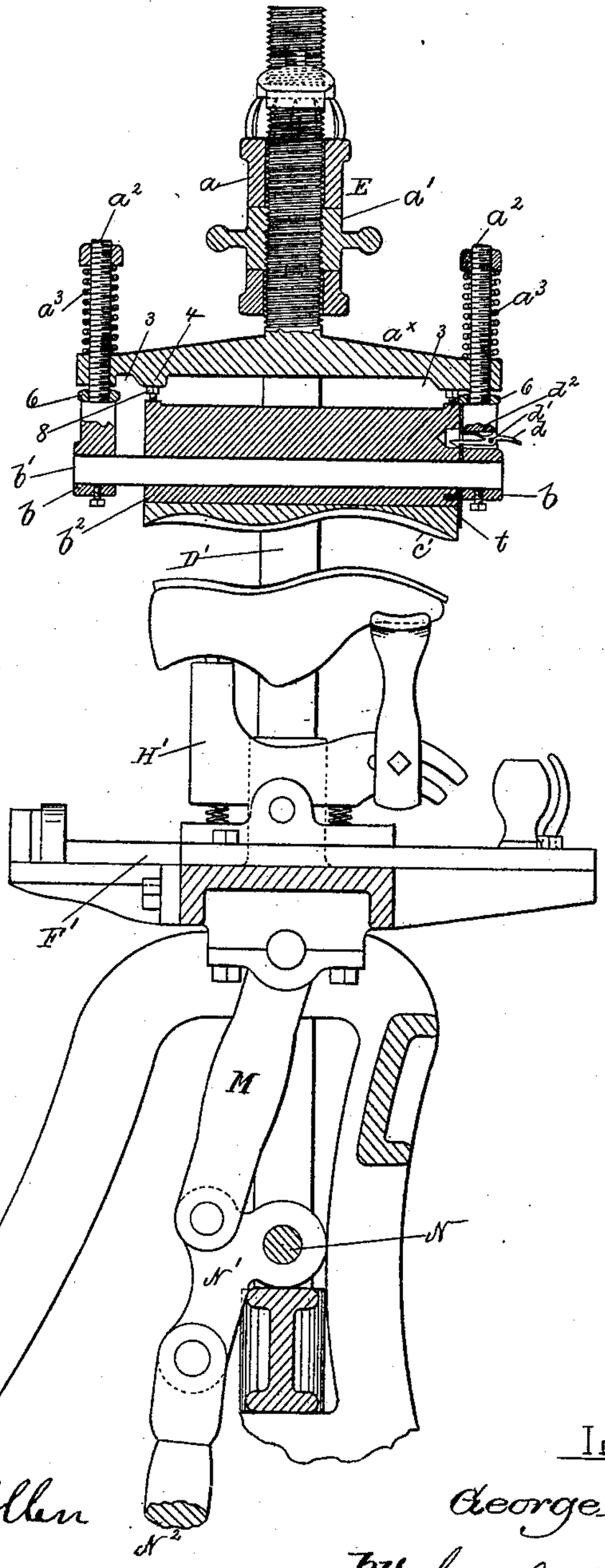
(No Model.) 2 Sheets—Sheet 1.

G. H. COGSWELL.

BEATING-OUT MACHINE.

No. 446,990. Patented Feb. 24, 1891.

Fig. 1.



Witnesses.

Edward F. Allen

Frederick L. Emmons

Inventor.

George H. Cogswell,

by Lemby & Gregory

Attys.

(No Model.)

2 Sheets—Sheet 2.

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BEATING-OUT MACHINE.

No. 446,990. Patented Feb. 24, 1891.

Fig 2.

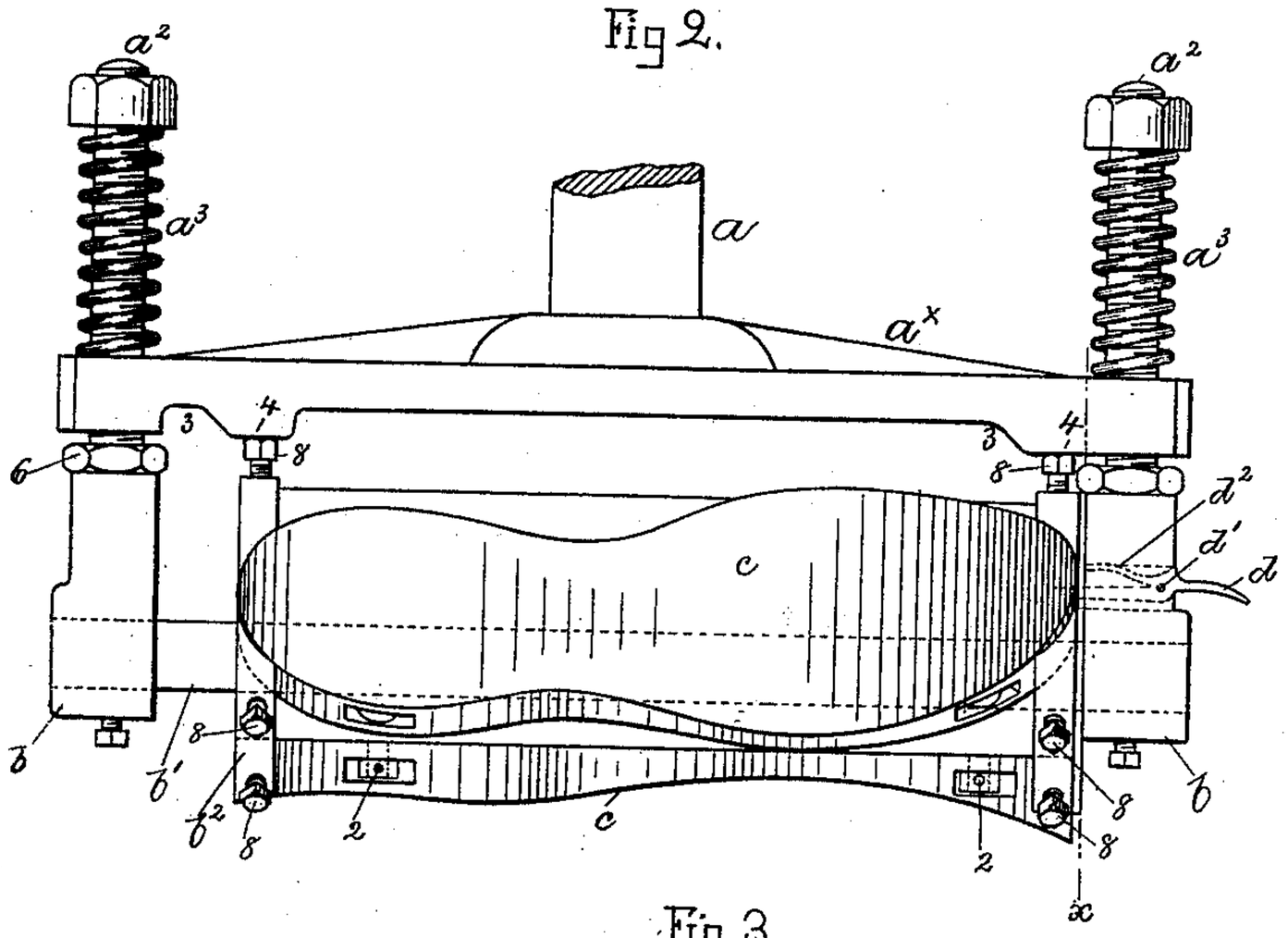


Fig. 4

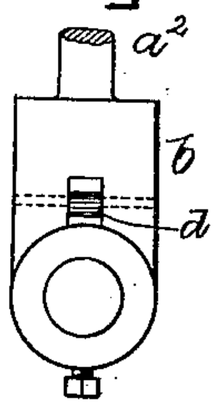
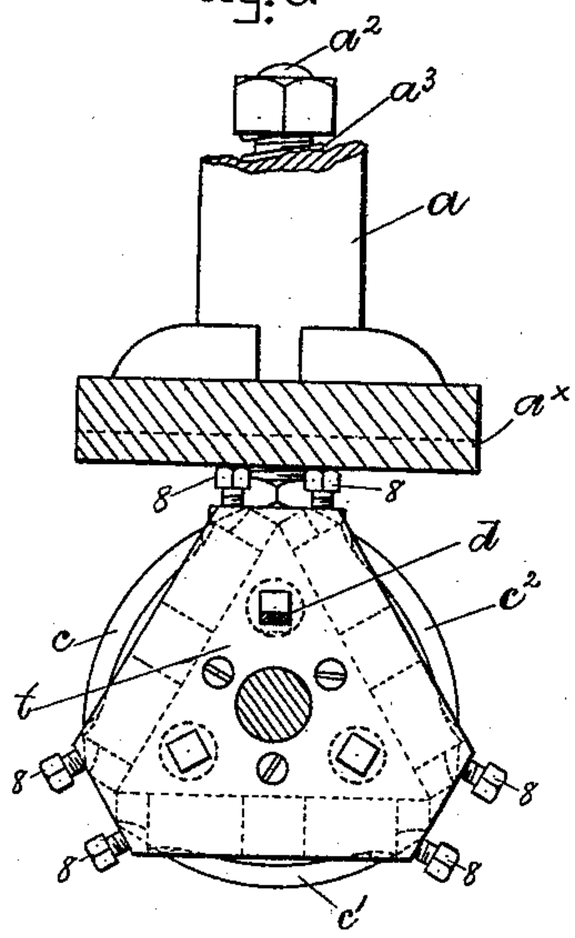


Fig. 3.



Witnesses.

Edward F. Allen.

Thomas L. Emery.

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UNITED STATES PATENT OFFICE.

GEORGE H. COGSWELL, OF BRADFORD, MASSACHUSETTS.

BEATING-OUT MACHINE.

SPECIFICATION forming part of Letters Patent No. 446,990, dated February 24, 1891.

Application filed December 1, 1890. Serial No. 373,174. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. COGSWELL, of Bradford, county of Essex, State of Massachusetts, have invented an Improvement in Beating-Out Machines, of which the following description, in connection with the accompanying drawings, is a specification, like letters and figures on the drawings representing like parts.

This invention has for its object to improve and simplify that class of beating-out or sole-leveling machines represented in United States Patent No. 384,893; but my improvements may be applied to other well-known forms of beating-out machines; but I have preferred, for sake of simplicity, to illustrate it in connection with the invention referred to in the said patent.

In beating-out machines as now commonly made the form has to be removed and another form substituted therefor whenever the size of the shoe or the shape of the sole to be pressed differs materially, and to save this operation of changing the forms by removing the same, which requires time of the operator and also time of the machine, I have devised a mold having a series of faces and mounted upon trunnions, so as to be revoluble, so that either of the mold-faces may be placed in operative position, according to the particular size of the boot or shoe, or the particular shape of the sole which is to be acted upon.

Figure 1 represents a part of a beating-out machine with my improvements added; Fig. 2, an enlarged detail of the particular parts added to the machine and of my invention; Fig. 3, a section thereof in the line x. Fig. 4 is a detail showing the lower end of the bearing-rod at the right in Fig. 2.

Referring to the drawings, E represents a cross-head; D′, one of two like parallel uprights supporting the said cross-head; H′, a jack to support the last containing the shoe having the sole which is to be beaten out or leveled; F′, a movable cross-head upon which the jack is mounted, and M N′ N^2 part of a toggle-joint by which to reciprocate or raise and lower the jack. These parts are and may be the same, and may be operated as in United States Patent No. 384,893, wherein like letters are employed to designate like parts.

In accordance with my invention the cross-head receives within it a threaded rod a, the threaded portion of which is surrounded by a nut a', which nut is also common to the said patent, the rotation of the nut enabling the rod to be raised and lowered, together with its attached parts.

The lower end of the rod a is provided with a plate $a^\times$, having at its ends suitable holes, through which are extended slides a^2, each provided at its lower end with a suitable bearing, as b, to receive the shaft b' of the form block or carrier b^2, provided with a series of forms c c' c^2, herein shown as three in number, the said form-plates being attached to the carrier in any usual or suitable manner, as by bolts or screws, as 2. The rods a^2 are surrounded by springs a^3, which permit of longitudinal movement of the rods under conditions to be hereinafter described.

The carrier b^2 has a series of adjustable stops 8 8, (shown as screws,) which may be turned in or out, to thereby regulate or control the amount of pressure to be exerted upon the sole between the form and the last on the jack.

The under side of the plate a is provided with notches or recesses 3, and the bearing b at the right in Fig. 2 has a locking device d pivoted thereto at d' and normally acted upon by a spring, as d^2, so that the locking device engages the plate t, attached to the carrier, and prevents it from moving longitudinally upon the shaft b', the said plate having a series of holes. (See Fig. 3.)

When it is desired to rotate the carrier to bring one or the other form connected to it in operative position, the operator will move the locking device to disengage it from the carrier and will move the carrier to the left in Fig. 2 until the pressure regulating or determining screws 8 come under the spaces 3, when the carrier and forms thereon may be rotated as one about the shaft b', and be again slid over to the right until the screws 8 come again under the points 4 of the plate $a^\times$, when the locking device will again engage the carrier and hold the form-block in working position. In case the regulating-screws 8, brought uppermost by rotating the carrier, should be longer or shorter than the ones just previously removed from under the projec-

tions 4 then the springs a^3 yield to accommodate for such difference in length of projection of the screws 2. It will be understood that these screws will be turned out or in, according to the particular class of work to be done, or the character of the leather and the pressure required to put upon it to beat it to shape.

The screw-threaded parts of the rods a^2 have each a nut, as 6, which is so placed upon the rod as to come nearly in contact with the lower side of the plate when the carrier is moved to the left, as stated in Fig. 2, to rotate it, the stop and regulating-screws 8 then entering the spaces 3. The springs a^3 would cause the form-carrier or some part of the form to come in contact with the projections 4 were it not for the nuts 6, which at that time contact with the under side of the plate $a^\times$ and leave the regulating-screws 8 free to move in space as the carrier is rotated.

This invention is not limited to the particular shape or construction of the carrier, and by the term "carrier" I mean to include only that part which receives the shaft b', constituting the center of rotation of the form-plates, and, if desired, the carrier and form-plates might be made and be operated in one piece or as one casting.

It will be noticed that the form rotates on an axis parallel to its length.

I claim—

1. In a beating-out machine, a jack, a plate $a^\times$, having bearings, and a rod b', mounted thereon, a rotatable carrier having two or more form-plates and mounted on said rod, and a locking device to retain the form-plate firmly in position with that arc of the plate which is to be used opposite the jack, combined with a jack, the carrier being and operating substantially as described.

2. In a beating-out machine-jack, the plate $a^\times$, having the projections 4 and recesses 3, the bearing-rods, and shaft b' therein, combined with a rotatable form-carrier having regulating-screw stops to operate substantially as described.

3. In a beating-out machine-jack, the plate $a^\times$, having the projections 4 and recesses 3, the bearing-rods, and shaft b' therein, combined with a rotatable form-carrier having regulating-screw stops, and with a locking device to engage and hold the said carrier, to operate substantially as described.

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

GEORGE H. COGSWELL.

Witnesses:
GEO. W. GREGORY,
A. S. WIEGAND.