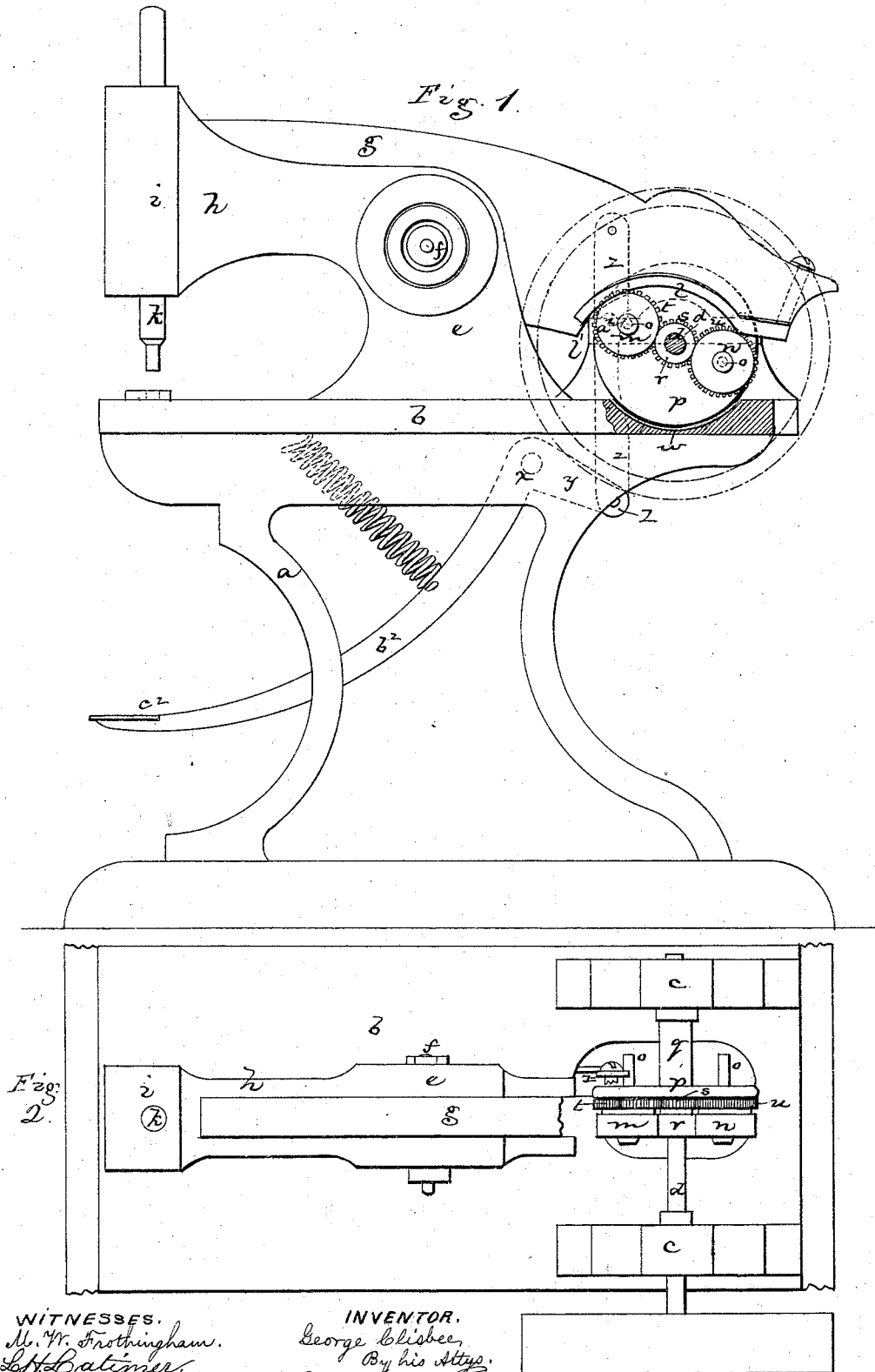


G. CLISBEE.
Embossing Presses.

No. 138,130.

Patented April 22, 1873.



UNITED STATES PATENT OFFICE

GEORGE CLISBEE, OF MARLBOROUGH, MASSACHUSETTS.

IMPROVEMENT IN EMBOSSING-PRESSES.

Specification forming part of Letters Patent No. **138,130**, dated April 22, 1873; application filed March 24, 1873.

To all whom it may concern:

Be it known that I, GEORGE CLISBEE, of Marlborough, in the county of Middlesex and State of Massachusetts, have invented an Improved Press for Embossing, &c.; and I do hereby declare that the following, taken in connection with the drawing which accompanies and forms 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 the organization of a lever-press for embossing leather and for similar purposes, the invention having particular reference to the arrangement of mechanism for working the lever. In my invention a stationary work-supporting plate is used, and over this plate is a head, in which moves vertically the embossing or other tool, said tool being attached or jointed to the front arm of a lever, whose rear arm extends back and over the driving-shaft. On the driving-shaft is a loose sleeve having a disk-wheel extending from it, and from this wheel extend two pins that support friction-rolls, the pins being on opposite sides of and in line with the shaft. Upon these pins are rolls, (turning loosely on the pins,) and between these rolls is a roll fast on the shaft, said roll being in contact with the rolls on opposite sides of it. The rolls may be friction-rolls, or the center one may have on one side of it gear-teeth meshing into gear-teeth on the corresponding sides of the outer rolls. Above the rolls is the rear arm of the lever, and in the bottom of this lever is an eccentric recess or track. Beneath the rolls is a concentric track, against which the outer rolls run as they rotate. When the rolls are in an approximate to a horizontal line the lever is free, and its rear end is drawn down by a suitable spring, thereby raising its front end for the introduction of the work; but as either roll in rising strikes into the lever-recess, and the opposite roll into the track below it, the three rolls are cramped between the track and the lever, causing the upper roll to bite upon the lever and to roll along the track thereof, throwing up the rear arm of the lever, and causing the front arm and its tool to descend against or into the work. It is in this organization that the invention primarily consists.

The drawing represents a machine or mechanism embodying my invention.

Figure 1 shows the mechanism in side and sectional elevation. Fig. 2 is a plan, the rear arm of the lever being partly broken away to show the mechanism beneath.

a denotes an upright which supports a table, *b*. Upon this table are boxes or bearings *c*, in which is journaled a shaft, *d*. The table also has extending up from it a bearing, *e*, in which is pivoted at *f* a lever, *g*, the front arm of the lever working in a long slot in an arm, *h*, extending from the bearing *e*, and said arm *h* having at its front end a head, *i*, in which moves vertically the bar or rod *k* that carries at its foot the tool to be operated. The front end of the lever is connected to the bar so as to actuate it, and the rear arm of the lever extends back over the shaft *d*. The under side of the lever, over the shaft, is made with a concave curve or track, *l*, eccentric to the shaft, and against this track rolls *m n* are intermittently brought to raise the rear arm of the lever, and thereby operate the tool connected to the front arm. The rolls *m n* turn loosely upon two pins, *o o*, extending from a disk-wheel, *p*, fixed upon the end of a sleeve, *q*, on the shaft *d*, the sleeve rotating loosely on the shaft. Upon the shaft, at one side of this disk-wheel, is fixed a roll, *r*, which roll is in frictional contact with the rolls *m n*. The rolls *m n* may be rotated on the pins by such contact alone, or the driving-roll *r* may have gear-teeth *s* at one side of it meshing into gear-teeth *t u* of the two rolls *m n*. The front end of the lever is thrown up by the stress of a suitable spring when the roll *m* or *n* passes out of contact with the rear arm of the lever. Beneath the rolls the table is made with a curved track-surface, *w*, concentric with the outer surfaces of the rolls *m n*, and as either roll passes into such track it rolls upon the surface thereof.

As the shaft is turned the disk *p* turns by friction, and the ascending roll passes under the lever-track *l* until it strikes it, when, being turned by the roll *r* or gear *s*, it rolls against such track, and thereby moves forward by reason of its frictional contact with the track, lifting the lever-arm as it moves on, and thereby operating the lever and the lever-actuated

tool, the stress of the roll being against the roll r , the stress of this roll against the roll below it, and the stress of the latter roll against the table-track w , the three rolls in line being cramped between the lever-track and the table-track. To vary the movement or pressure of the tool, the track or shoe l may be made adjustable with respect to the lever-arm to which it is fixed.

This is the simple operation of the mechanism; but to enable the action of the press to be fully controlled, without stopping the shaft, a regulating mechanism is applied as follows: On one side of the upright a is a foot-lever pivoted at x , and having a horizontal arm, y , connected to the foot of a link, z , which link has on one side a hook, a^2 . Each pin o extends through the disk, and the arm b^2 of the foot-lever c^2 being drawn up by a suitable spring, the link z is drawn down, bringing its hook into position for it to act as a stop to the pin o approaching it, the disk p and rolls $m n$ being thereby arrested. The operator, by then placing his foot upon the arm b^2 of the lever, raises the link z , and with it the rear arm of the lever, bringing the punch or other tool

down to the surface of the work, and at the same time releasing the pin o from the hook. The shaft d will then carry the disk p with it, and the roll m or n will pass under the track l and operate the lever to impart the working action to the tool. By these means the press is wholly within the control of the operator, who brings it into action at any time by simply depressing the lever-arm b^2 .

I claim—

1. The lever having the eccentric roll-track l and the disk p , rolls $m n$, shaft d and roll r and track w , arranged and operating substantially as described.

2. In combination with the rolls $m n$ and loose disk p , the gears $s t u$, substantially as shown and described.

3. In combination with the lever g , disk p , and rolls $m n$, the hook a^2 , link z , and foot-lever c^2 , arranged and operating substantially as shown and described.

GEO. CLISBEE.

Witnesses:

E. L. BIGELOW,
W. WALDO FAIRBANKS.