I. GREGG, Jr.

Machine for Re-pressing Brick.

No. 197,628. Patented Nov. 27, 1877.

Fig. 1.

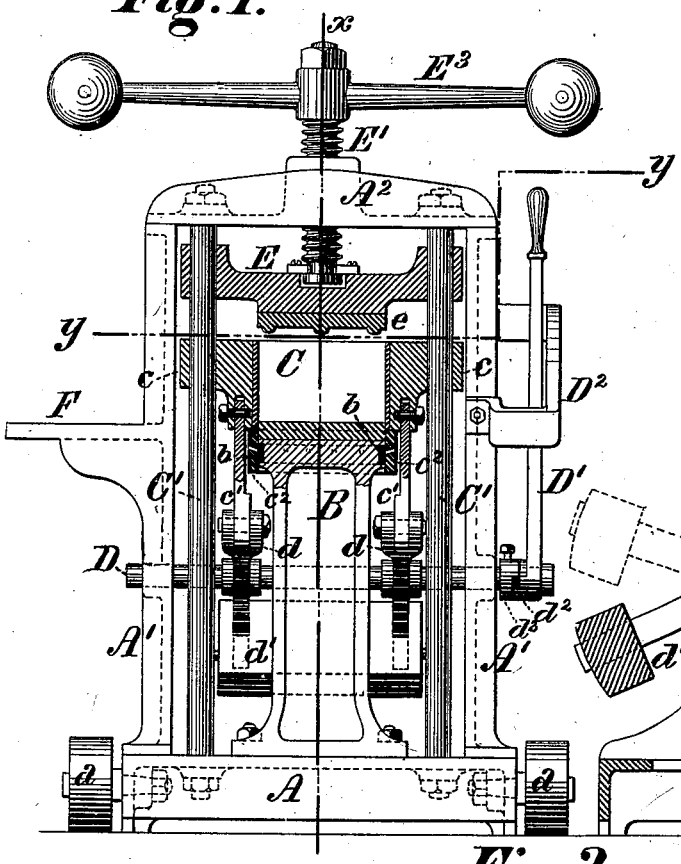


Fig. 2.

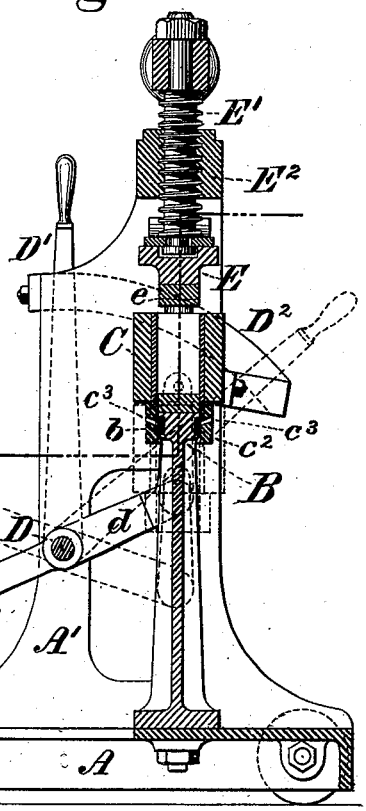
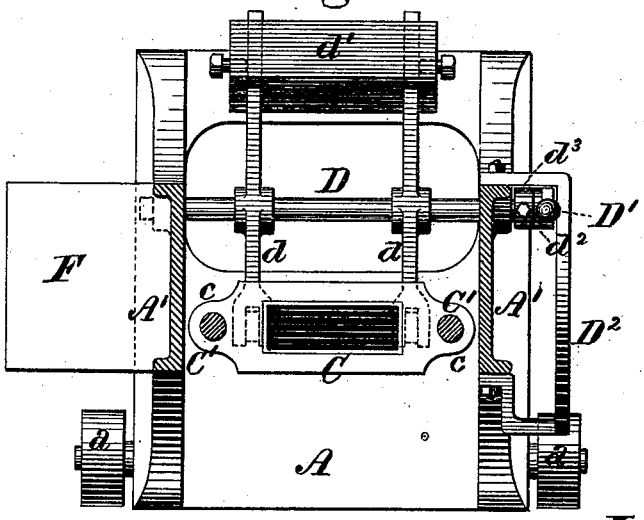


Fig. 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

ISAAC GREGG, JR., OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN MACHINES FOR RE-PRESSING BRICK.

Specification forming part of Letters Patent No. **197,628**, dated November 27, 1877; application filed September 24, 1877.

To all whom it may concern:

Be it known that I, ISAAC GREGG, JR., of the city and county of Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements in Machines for Re-Pressing Brick, of which the following is a specification:

The object of my invention is to provide a simple, convenient, and economical apparatus for re-pressing brick, tile, terra-cotta ware, and other articles made from clays, including fire-brick clay, by the application of manual power; to which end my improvements consist in the combination of an anvil, a mold-box placed edgewise thereon, and a pressure-plate, by which pressure is applied to the face of the brick or other article in the mold-box.

My improvements further consist in the combination of a stationary anvil, a mold-box, movable thereon by a rock-shaft, lever, and connecting-links, to admit of the insertion of the article to be re-pressed and the removal of the same when finished, and a screw and pressure-plate, for compressing the material within the mold-box.

My improvements further consist in the combination, with the anvil and mold-box, of an improved device for lubricating the latter, all as hereinafter more fully set forth.

In the accompanying drawings, Figure 1 is an end view, partly in section, of a re-pressing-machine embodying my improvements; Fig. 2, a vertical section of the same at the line *x x* of Fig. 1; and Fig. 3 a horizontal section of the same at the line *y y* of Fig. 1.

The frame of my improved machine consists of a substantial base or bed-plate, A, which may be mounted on rollers *a* to facilitate the movement of the machine from place to place, two vertical standards or housings, A^1, and a transverse cap-piece, A^2. A vertical anvil, B, is secured upon the bed-plate A midway between the housings A^1, its upper surface corresponding in length and width with the face of the brick when finished, and being truly plane, and preferably faced with steel. A mold-box, C, open, both at top and bottom, is fitted accurately to the anvil B, so as to be movable thereon without undue friction, and is provided with side lugs *c*, which slide upon two vertical guide-rods, C′, secured at bottom to the bed-plate, and at top to the cap-plate, on each side of the anvil, respectively. The mold-box is preferably lined with steel, and is set edgewise—that is, having its open ends corresponding in length with the face of the brick—so that pressure will be imparted thereto at right angles to its thickness. By this means I am enabled to insure a high degree of finish to the face of the brick, as well as a uniform thickness in the finished bricks. A transverse rock-shaft, D, is mounted on bearings in the housings A^1, and carries two arms, *d*, pivoted at their outer ends to links c^1, which are, in turn, pivoted to the mold-box C. The arms *d* are extended outward upon the opposite side of the rock-shaft D and secured to a counter-balance, d^1, the weight of which is to be substantially the same as the combined weights of the mold-box and links. The rock-shaft D is vibrated to raise and lower the mold-box by a hand-lever, D^1, upon one of its ends, moving along a segment, D^2, and in order to assist in the movement of the mold-box by imparting initial momentum to the hand-lever, I mount the lever loosely on the rock-shaft, and provide it with a shouldered hub, d^2, which engages a similar hub, d^3, secured upon the rock-shaft in the manner of a clutch-coupling, the projection of the hub d^2 being less in circumferential length than that of the fixed hub d^3, so as to admit of an initial movement of the hand-lever without movement of the rock-shaft and its connections. A foot-lever might be employed instead of the hand-lever, if desired, without changing the principle of operation. For the purpose of lubricating the interior surface of the mold-box at each movement thereof, I secure upon the outside of, and entirely around, the anvil B, below its top, a lubricating-pad, *b*, formed of sheep-skin or other material suitable for receiving and holding a lubricant, which lubricant is supplied to the mold-box at each passage of the latter over the pad *b*. In order to preserve the pad and lubricant from the injurious effects of dust, &c., I prefer to attach to the bottom of the mold-box a depending casing or flange, c^2, which incloses the pad on all sides when the mold-box is at the upper extremity of its traverse, and effectually prevents the access of foreign matters.

As the pad would in such case be inaccessible for the supply of lubricant without the removal of the mold-box or the casing c^2, I provide oil-channels c^3 in the casing c^2 or in the mold-box, through which lubricating material may be supplied, as required.

Pressure is applied to the brick or other material in the mold-box by a pressure-plate, E, which slides on the guide-rods C′, and is operated by a screw, E^1, engaging a nut, E^2, in the cap-plate. Weighted arms E^3 for rotating the screw by hand are secured upon its top, and at its lower end rotates freely in a recess in the pressure-plate, so as to raise and lower without rotating the latter. The pressure-plate is provided with a suitable facing-piece, *e*, fitting neatly within the mold box C, and having either a plain surface or being provided with dies for recessing or indenting, as may be desired.

In the operation of the machine, the brick or other article to be re-pressed is placed upon the anvil, and held there while the mold-box is raised by the hand-lever and its connections into the position shown in the drawings, and pressure is then applied by the screw and pressure-plate. The latter being then elevated, the mold-box is lowered and the finished brick or other material removed. A table, F, secured upon one of the housings, A^1, is provided for greater convenience in handling the articles operated on.

I claim as my invention and desire to secure by Letters Patent—

1. The combination, in a re-pressing-machine, of an anvil, a mold-box placed edgewise thereon, and a pressure-plate acting on the brick within the mold-box at right angles to its thickness, substantially as set forth.

2. The combination, in a re-pressing machine, of a stationary anvil, a mold-box moving thereon, and a pressure-plate and screw, substantially as set forth.

3. The combination, in a re-pressing machine, of a stationary anvil, a lubricating-pad secured thereto, and a mold-box moving on the anvil over the surface of the lubricating-pad, substantially as set forth.

4. The combination of the frame, the stationary anvil, the sliding mold-box, the guide-rods, the pressure-plate, and the screw, substantially as set forth.

5. The combination of the rock-shaft and its arms, pivoted links connecting said arms with a mold-box, and a lever mounted upon the rock-shaft, with a limited range of radial motion, substantially as set forth.

ISAAC GREGG, JR.

Witnesses:
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