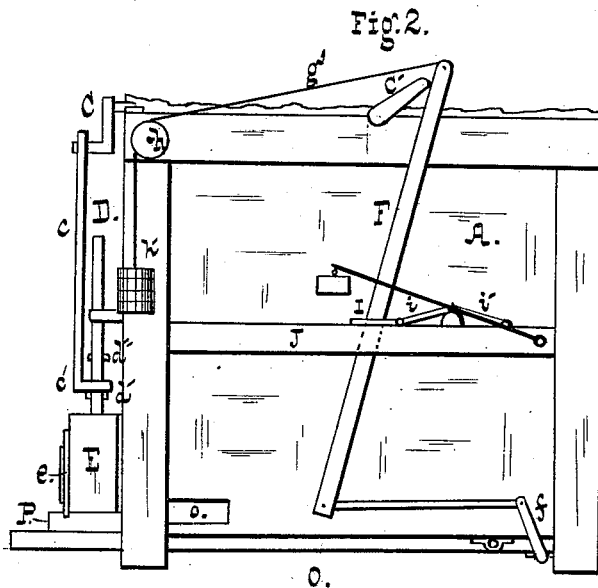
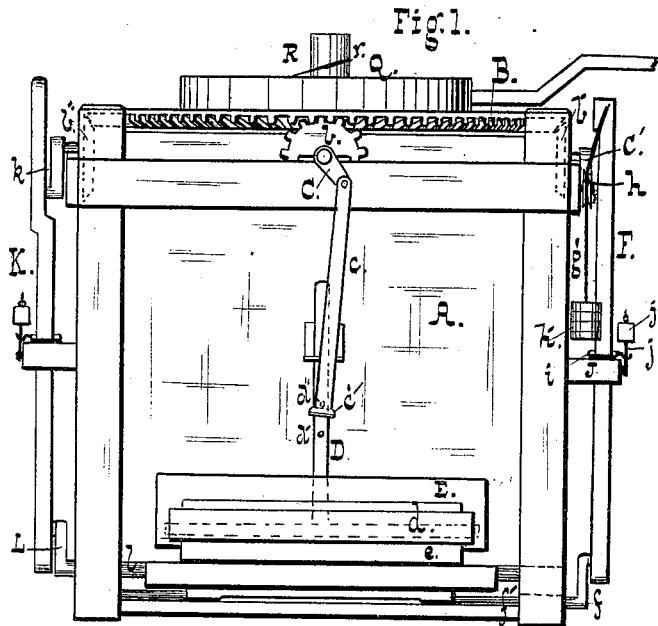


T. B. CRAYCROFT.
Brick-Machine.

No. 215,886.

Patented May 27, 1879.



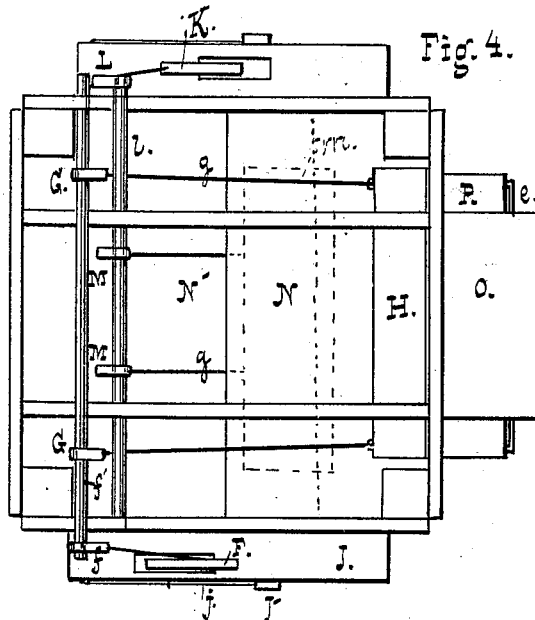
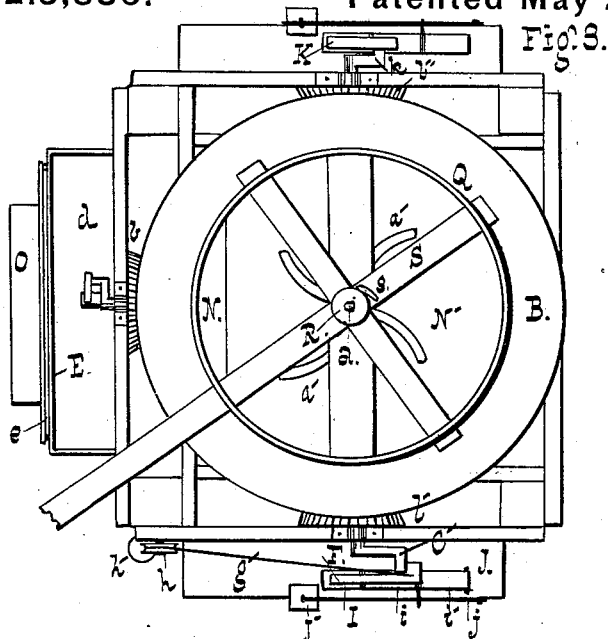
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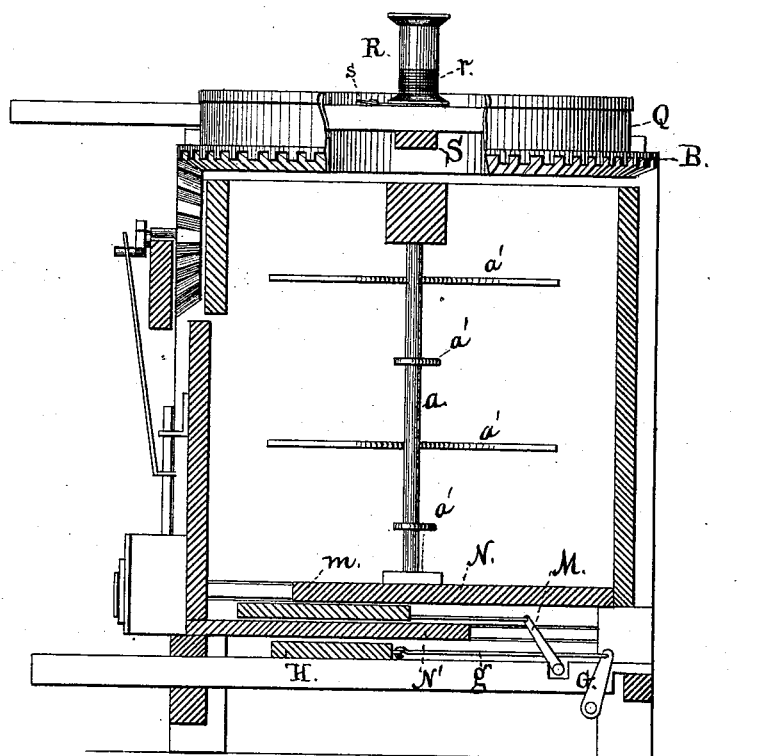
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Fig. 5.



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UNITED STATES PATENT OFFICE.

THOMAS B. CRAYCROFT, OF SALEM, ILLINOIS.

IMPROVEMENT IN BRICK-MACHINES.

Specification forming part of Letters Patent No. 215,886, dated May 27, 1879; application filed February 7, 1879.

To all whom it may concern:

Be it known that I, THOMAS B. CRAYCROFT, of Salem, Marion county, State of Illinois, have invented certain new and useful Improvements in Brick-Machines; and I hereby declare the same to be fully, clearly, and exactly described as follows, reference being had to the accompanying drawings, in which—

Figures 1 and 2 are front and side elevations of the device; Figs. 3 and 4, top and bottom plans of the same; and Fig. 5, a vertical sectional view.

This invention has reference to that class of brick-machines that form bricks of soft clay of a consistency but slightly greater than that of the clay used in making bricks by hand; and it consists in a machine constructed as hereinafter described, and possessing points of novelty indicated in the claims.

In the accompanying drawings, A is the clay-box, having a central vertical shaft, *a*, stepped on its bottom, and carrying above the box a main gear-wheel, B, which meshes with wheels *b b'* on the sides of the box. The wheel *b* carries upon its shaft a crank, C, which actuates the plunger *c* of the brick-press.

A collar, *c'*, on the end of the rod *c* embraces the rod D, which is attached to the press-plate *d*. The rod D is provided with studs *d' d''*, serving, respectively, as bearings for the collar *c'* in actuating the press. As these studs are farther apart than the thickness of the collar, a slight lost motion ensues, whereby the press-plate is allowed to remain on the mold, and not commence its return stroke until the mold is carried away, thereby preventing any possible withdrawal of clay by the plate.

On the front of the press-box E is secured a rubber, *e*, which is made to wipe over the face of the mold as it passes thereunder. The second wheel, *b'*, actuates the mechanism for carrying the brick-molds under the press. It also carries a crank, C', which engages with the upper end of the lever F, the lower end of the lever actuating a crank, *f*, on the shaft *f'*, which latter carries cranks G G under the machine. (See Fig. 3.) The cranks G G are attached by means of rods *g g* to a cross-bar, H, which propels the molds.

In order to effect a quick return stroke of the lever F, a cord, *g'*, is attached to its upper end, and is led over a pulley, *h*, a weight, *h'*, being secured to the end. The lever is pivoted to a link, I, that, in turn, is pivoted to a second link, *i*, and the latter to a third link, *i'*. To the frame J, which is slotted for the insertion of the lever, is attached a lever, *j*, carrying a weight, *j'*, which lever rests upon a bearing at the hinge between the links *i i'*. This bearing is slightly above the plane of the opposite ends of the links. The object of the described construction is as follows: While the knee-joint connection described suffices to hold the lever to its legitimate work, it yields without breakage to any undue strain, the joint simply buckling upward and returning as the obstacle is removed.

Upon the opposite side of the machine a construction almost identical is used, except that the lever K is slotted for the crank-pin *k*, carried by the wheel *b''*, so that the lever has positive motion in both directions. The crank L, driven by the lever K, is mounted on a shaft, *l*, that carries cranks M M, which drive the plunger *m* for filling the press. This latter reciprocates between the bottom N of the clay-box and a false bottom, N', the former being cut away, as shown in dotted lines, to allow the clay to fall on the latter and in front of the plunger.

The shaft *a* carries the usual inclined blades *a'* for mixing and driving the clay downward. O is a supporting-rack for the molds P, which fit snugly under the press-box, which latter is provided with a number of openings corresponding to the spaces of the mold.

From the foregoing description of the construction of the device its mode of operation will have been made evident. The wheel B being set in motion, the wheels *b b'* actuate, respectively, the pressing mechanism, the device for feeding the molds to the press, and the plunger for delivering clay to the press. The molds are successively fed in by hand through the aperture *o*, and are carried forward under the press-box by the bar H.

As adjuncts of the machine, a flange, Q, to prevent access of clay to the gearing, is mounted on the wheel B, and a drum, R, carrying a rope or chain, *r*, is pivoted on an axis

above the beam S. This device is used for drawing the clay-cars to the machine when such are used. A ratchet-and-pawl attachment, *s*, is used to admit of the drum being caused to rotate or not, at pleasure.

I am aware that it is not new to adapt a part of a machine to yield under undue strain, as mechanism designed to attain that end has heretofore been embodied in machines of various kinds; and I am also aware that in brick-machines the actuating-levers have been constructed in two parts, hinged together and held by a spring. Such I therefore do not claim.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a brick-press, the actuating-levers thereof, having their pivots rigidly held during the legitimate and normal working of the machine, but adapted to yield under undue strain, and automatically return as the obstacle is removed, as described.

2. In a brick-machine, the actuating parts thereof, pivoted to a knee-joint connection, adapted to yield under undue strain, as set forth.

3. In combination with the levers, the pivoted links *i i'* and weighted rods *j*, as set forth.

4. In combination with the clay-box A, having a double bottom, the reciprocating plunger and actuating-lever, adapted to yield as undue strain is brought upon it, all constructed as set forth.

5. In combination with the wheel B, the gears *b b' b''*, actuating, respectively, in the manner set forth, the pressing, mold-delivering, and clay-feeding mechanism, substantially as described.

6. In combination with the clay-box, the wheel B, having circumferential flange, and drum R, provided with ratchet and pawl, as set forth.

7. In combination with the levers, the pivoted links *i i'*, having their central pivot above the plane of the others, and the weighted rod *j*, as set forth.

THOMAS B. CRAYCROFT.

Witnesses:

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