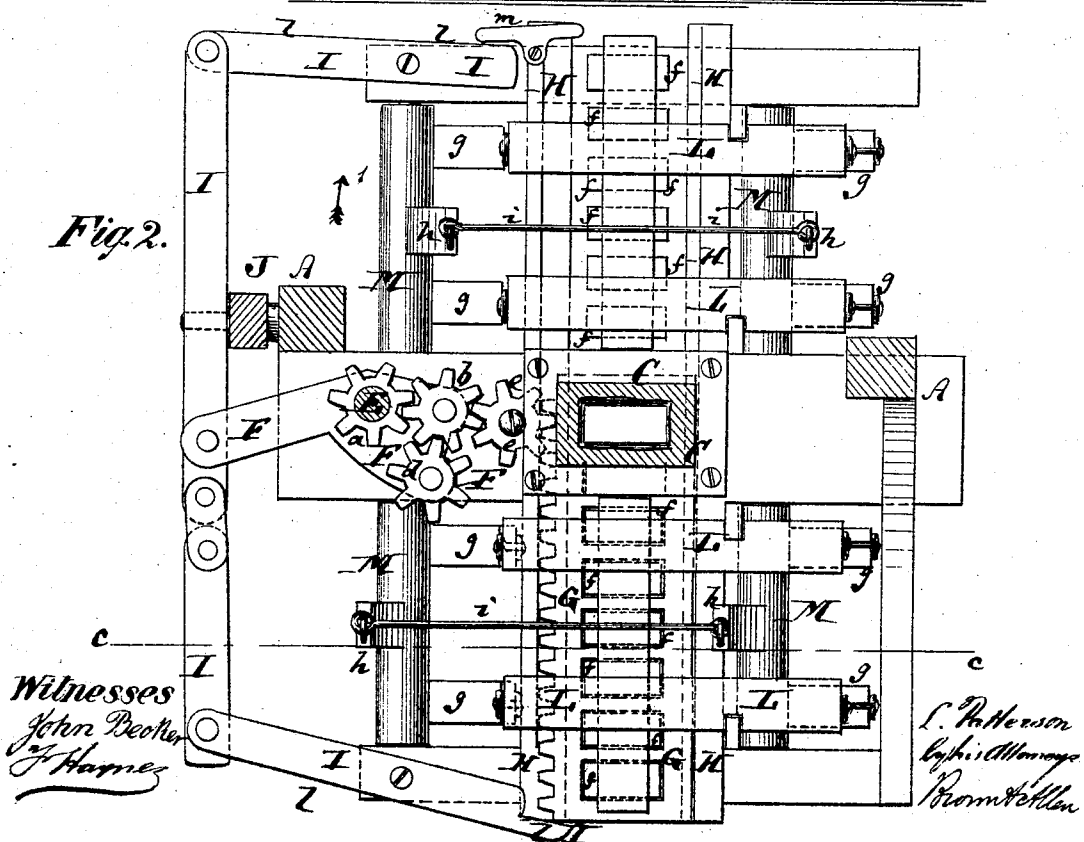
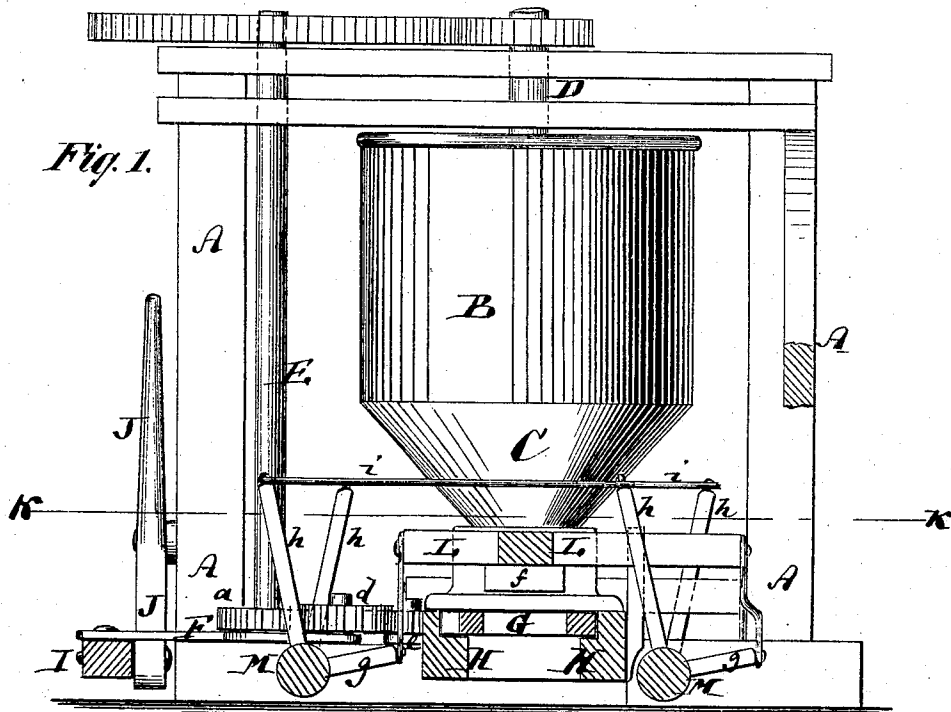


L. PATTERSON.
Brick-Machines.

No. 145,444.

Patented Dec. 9, 1873.



Witnesses
John Becker
J. Harner

L. Patterson
by his Attorneys
Bromwell

UNITED STATES PATENT OFFICE.

LEMUEL PATTERSON, OF PARKER CITY, PENNSYLVANIA, ASSIGNOR TO HIMSELF AND JAMES COOPER, OF SAME PLACE.

IMPROVEMENT IN BRICK-MACHINES.

Specification forming part of Letters Patent No. **145,444**, dated December 9, 1873; application filed November 12, 1873.

To all whom it may concern:

Be it known that I, LEMUEL PATTERSON, of Parker City, in Armstrong county and State of Pennsylvania, have invented an Improved Brick-Machine, of which the following is a specification:

Figure 1 is a vertical transverse section of my improved brick-machine, the line *c c*, Fig. 2, indicating the plane of section; and Fig. 2 is a horizontal section on the line *k k*, Fig. 1.

Similar letters of reference indicate corresponding parts in both figures.

This invention relates to a new arrangement of molds for a brick-machine, and a new mechanism for moving and employing the same, as will be hereinafter more fully described.

The letter A in the drawing represents the frame-work of my improved brick-machine. B is the clay-receptacle, terminating at its lower end in a sort of hopper, C, and containing within it, on a vertical shaft, D, a stirring device, by which the clay placed within the receptacle B is agitated and properly mixed, and whereby, also, such clay is gradually but forcibly discharged into the molds through the open lower end of the hopper C. The shaft D is in gear with another upright shaft, E, which has at its lower end a pinion, *a*, said pinion gearing into one of two pinions, *b* and *d*, that are hung upon a vibrating plate, F, said plate having the shaft E for its center. G is the mold-rack, being a metal or other frame, containing a series of openings of the size of the brick to be formed, the said openings being all in a straight row, as indicated at the lower part of Fig. 2. This mold-rack G is placed between two guide-rails, H H, of the frame A, and can move longitudinally between said rails, and its length is such that when it has completed its movement in one direction, and has arrived in the position shown in Fig. 2, its inner end will be clear of the mouth of the hopper C, and when it subsequently is moved in the opposite direction, so that all its openings pass under the hopper C, it will clear its other end also from beneath the hopper. One side of the mold-rack G is toothed, and in gear with a pinion, *e*. This pinion can, by vibrating the plate F, be brought in gear either with the pinion *b* or *d*, and when it is in gear with

the pinion *b* it will be turned in such direction as to move the mold in the direction of the arrow 1, (shown in Fig. 2,) while, when the plate F is swung to bring the pinion *d* into gear with *a* and *e*, the motion of the mold-rack will be reversed. One end of the plate F is, by a pivot, connected with a jointed frame, I, which is also connected with a hand-lever, J. By swinging this lever the frame I will be moved and the plate F swung to bring either the pinion *b* or *d* into gear, as may be desired. While the mold-rack G passes under the hopper C, clay is forced from such hopper into all the several molds of the rack successively, until they are all entirely filled, there being a bed-plate beneath the mold-rack under the hopper. When, therefore, the mold-rack arrives clear of the hopper at one end of the machine, it comes under one of the two vertically-moving frames, L L, which carry plungers *f*, that fit into the several molds, respectively, of the rack; and when, then, the frame L, which is over such mold-rack, is forced down, it causes this plunger to enter the molds and to discharge therefrom the clay in the form of completed bricks. Each frame L is suspended from or connected with the short arms *g* of a pair of rock-shafts, M M, the longer arms *h* of such rock-shafts being jointed together by rods *i*, as shown in the drawing. It is only necessary, in order to force the clay from the molds, to move one of the long arms *h*, and thereby vibrate both shafts M, and cause the requisite movement of the frame L. After the bricks have been discharged from the molds, the frame L is raised again to bring its plungers clear of the mold, and the lever J is then swung to reverse the movement of the rack, which is then refilled and brought under the other frame L and emptied again in the same manner already described. The end arms *l l* of the jointed frame L may be arranged so that one such arm strikes a link, *m*, by which the return movement from one terminal position of the rack G may be started, while the other such arm *l* would come opposite the other end of the mold-rack G, when the same is in its other terminal position, to also start it on its return movement, and also for the purpose of obtaining, by the motion of the rack G, such an effect

upon the position of the frame I that the plate F will be swung automatically by contact of the mold with the said arm *l*. Still, it will be preferable to move the plate F and reverse the motion of the mold by the action of the lever J, and not automatically.

I claim as my invention—

1. The reciprocating mold-rack G, gearing into the pinion *e*, and combined with the pinions *b* and *d*, which are hung upon the forward plate F, substantially as and for the purpose herein shown and described.

2. The vertically-movable frame L, carrying the plungers *f*, and connected with the short arms *g* of the jointed rock-shafts M M, substantially as herein specified.

3. The lever J, combined with the jointed frame I, vibrating plate F, and pinions *a*, *b*, *d*, and *e*, for operation on a brick-machine, substantially as herein shown and described.

LEMUEL PATTERSON.

Witnesses:

ROBERT BALPH,
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