T. E. Bonner,

Brick Machine.

No. 109,376. Patented Nov. 22. 1870.

Fig. 1.

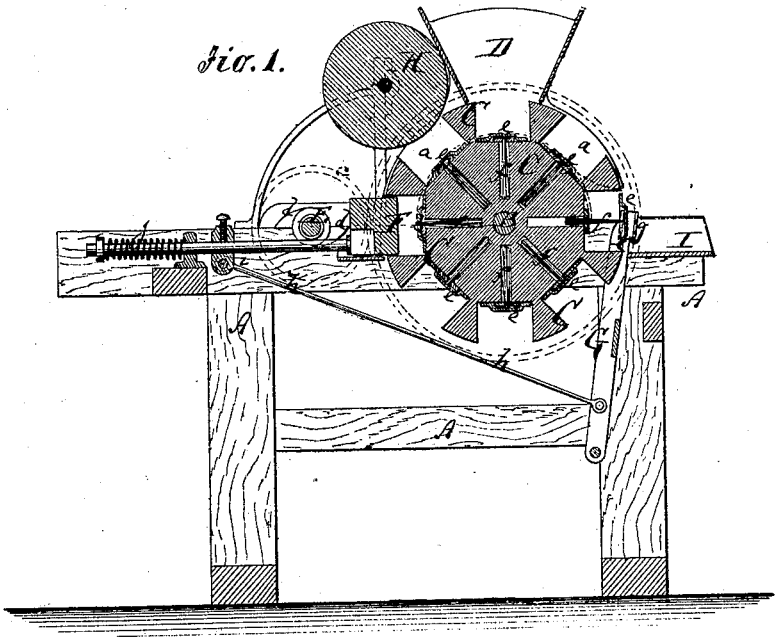


Fig. 3.

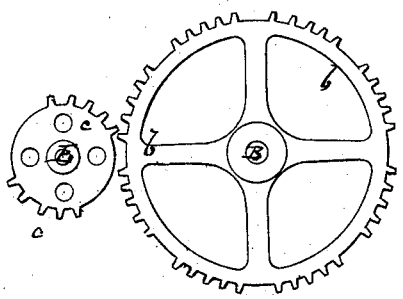
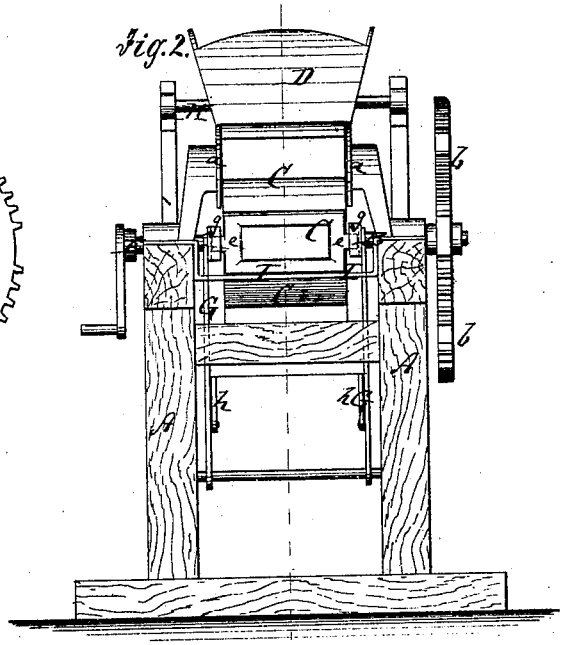


Fig. 2.



Witnesses.
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UNITED STATES PATENT OFFICE.

JOHN R. ARMSTRONG, OF ELKHART, INDIANA, ADMINISTRATOR OF THE ESTATE OF THOMAS E. BONNER, DECEASED.

IMPROVEMENT IN BRICK-MACHINES.

Specification forming part of Letters Patent No. **109,376**, dated November 22, 1870.

To all whom it may concern:

Be it known that THOMAS E. BONNER, deceased, of Elkhart, in the county of Elkhart and State of Indiana, did, during his life-time, invent a new and Improved Brick-Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 represents a vertical longitudinal section of my improved brick-machine. Fig. 2 is an end elevation of the same. Fig. 3 is a detail side view of the gearing for imparting intermittent rotary motion to the revolving-mold.

Similar letters of reference indicate corresponding parts.

The purpose of my invention is to improve upon that class of brick-machines which have rotary drums with molds at regular intervals on their peripheries.

I will first describe my invention in connection with all that is necessary to a full understanding thereof, and then clearly point it out in the claims.

A in the drawing represents the frame of my improved brick-machine. On the same are the bearings of a horizontal transverse shaft, B, which carries a drum, C, of wood or other suitable material. Along the periphery of this drum are formed the cavities or molds at regular intervals, the said molds having the shape of the bricks to be formed. The cavities extend from end to end of the drum, and are at their ends, at least those that are receiving and retaining the clay, closed by the downward-extending sides *a a* of a stationary hopper, D, which is supported above said drum. The shaft B carries at one end a wheel, *b*, which has a toothed edge, the succession of teeth being interrupted in line with each mold, as indicated in Fig. 3. The driving-shaft E, hung in the frame A, parallel with B, carries a wheel, *c*, which has two or more sections of teeth, with non-toothed spaces between, as in Fig. 3, the teeth of *c* meshing into those of the wheel *b*.

F is the reciprocating presser, large enough to fit one of the molds. It is drawn off the drum C by a spring, *j*, or weight, and receives motion toward the drum by cams *d d* on the shaft E. The bottom of each mold is formed by a metal plate, *e*, which is, with a spring-shank, *f*, fitted into the body of the drum. The ends of this plate project beyond the ends of the drum and enter, when the mold is to be emptied, two grooved jaws, *g g*, formed on a swinging frame, G, the said frame being, by arms *h h*, connected with the slide *i*, that is operated by the cams *d* and spring *j*.

The operation is as follows: The clay in the hopper is by suitable means forced into the molds as the same successively arrive under said hopper. The shaft E is continuously revolved by suitable means, and imparts motion to the drum, bent so that whenever a new mold arrives under the hopper, and one in line with the presser or plunger, the drum will remain stationary, as the non-toothed portions of the two wheels *b c* are then opposite each other. A roller, H, hung to the frame A, may be used for smoothing the clay in each mold, and for holding it therein previous to pressure. Whenever a filled mold arrives in line with the plunger, the latter is, by the cams *d*, moved forward against the clay in said mold, compressing the same, and is then immediately withdrawn by the spring *j* or its equivalent. The drum then turns again to bring another mold in line with the plunger, &c. The plate *e* of a mold containing the pressed clay enters with its ends the grooved jaws *g*, and is, while the drum remains stationary, and by the action of the cams of the plunger and slide *i*, forced outward to discharge the clay or brick upon a table, I. The spring *j* will then rapidly swing back the frame G and carry the plate *e* back to the bottom of its mold. Thus the brick are automatically and successively pressed in and discharged from the machine.

Having thus described the invention of T. E. BONNER, deceased, I claim as new and desire to secure by Letters Patent—

1. The movable bottom plate *e*, projecting beyond the ends of drum, combined with

grooved and swinging jaws *g g*, to expel the shaped and compressed brick, as described.

2. The reciprocating shaft *i*, rods *h h*, and frame G G, combined, as described, to simultaneously press and discharge a brick on opposite sides of the machine.

In testimony whereof I, the said J. R. ARMSTRONG, administrator of the estate of T. E. BONNER, deceased, have hereunto set my hand this 24th day of August, 1870.

JOHN R. ARMSTRONG.

Witnesses:

HOMER DWIGHT,

GEO. W. BEST.