2 Sheets—Sheet 1.

F. GRANT.

BRICK-MACHINE.

No. 183,662. Patented Oct. 24, 1876.

Fig. 1

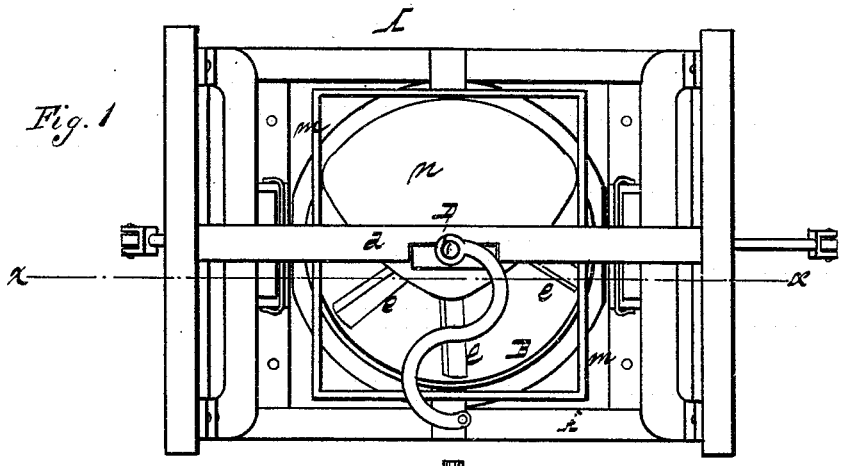
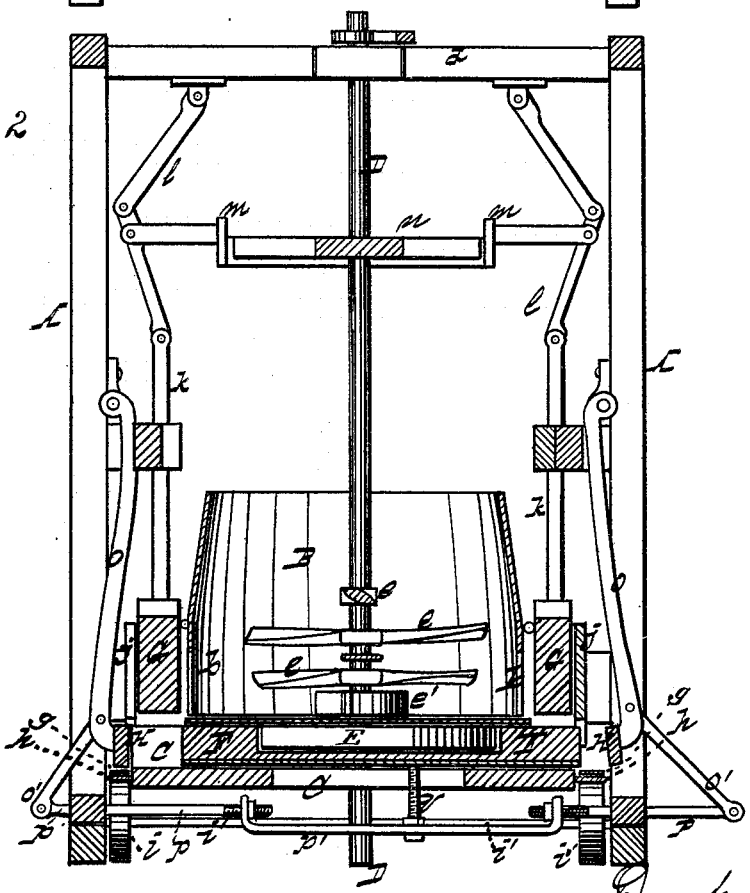


Fig. 2



WITNESSES

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2 Sheets—Sheet 2.

F. GRANT.

BRICK-MACHINE.

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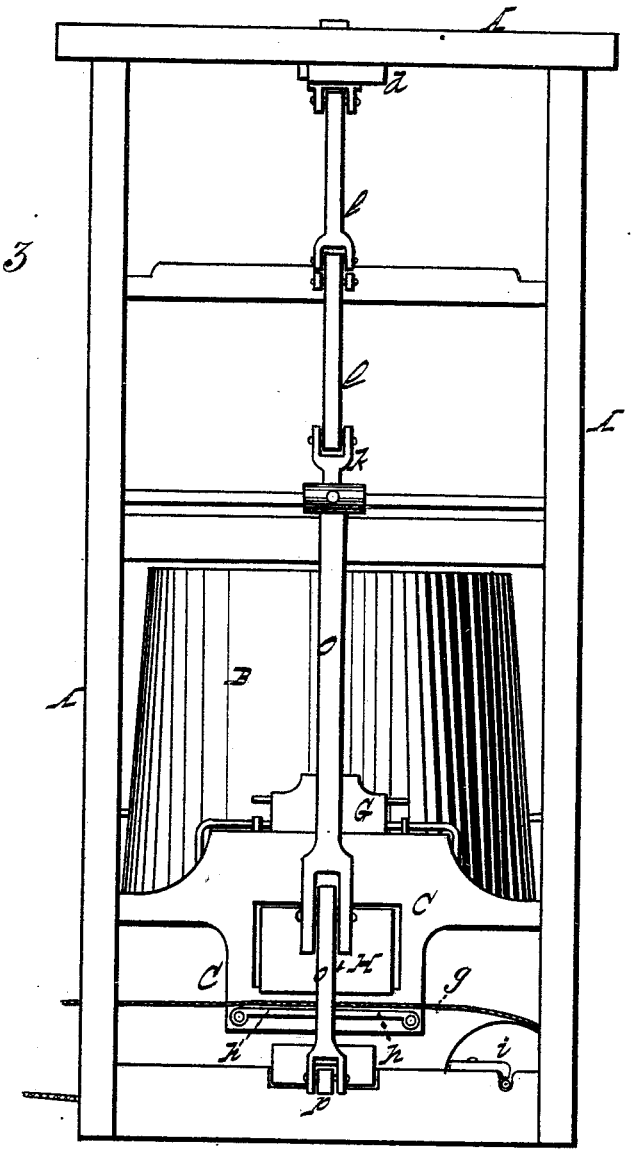
Fig. 3



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UNITED STATES PATENT OFFICE.

FRANK GRANT, OF MIDDLEPORT, OHIO.

IMPROVEMENT IN BRICK-MACHINES.

Specification forming part of Letters Patent No. **183,662**, dated October 24, 1876; application filed April 13, 1876.

To all whom it may concern:

Be it known that I, FRANK GRANT, of Middleport, in the county of Meigs and State of Ohio, have invented certain new and useful Improvements in Brick-Machines; 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 which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification, and in which—

Figure 1, Sheet 1, is a plan view of my improved brick-machine. Fig. 2 is a vertical section through the dotted line *x x* of Fig. 1; and Fig. 3, Sheet 2, a side elevation thereof.

Corresponding parts in the several figures are designated by like letters.

This invention relates to a certain improvement in that class of brick-machines in which the plastic clay issuing from the mill is subjected to vertical and horizontal pressure to receive the desired shape; and it consists of a single or double acting follower, having a vibratory movement and horizontally and vertically moving presser plates or blocks acting conjointly and with the follower in forming the clay into a brick shape, and of the combination therewith of their operating mechanism, substantially as hereinafter more fully set forth.

In the annexed drawing, A A refer to an upright frame, within and to which is suitably secured the cylinder or clay-mixing receptacle B. Passing vertically through the cylinder or receptacle B, and having its ends bearing in the bottom of a receptacle, C, below the cylinder B, and in a cross-bar, *d*, in the upper end of the frame A A, is a shaft, D, provided upon its portion within the cylinder with oblique knives *e e e*, for comminuting, stirring, and conducting the clay downwardly therein. Upon the shaft D is also a spiral or curved arm, *e'*, with its lower surface in contact with the bottom of the mill or cylinder B, for removing the clay therefrom, and pushing it alternately through the rectangular openings *b b* of the said cylinder into the receptacle C to be treated, as will be hereinafter described.

E is a cam upon the shaft D, and acting upon the follower F, to cause it to alternately throw the clay after formation out of the said receptacle C upon the off-bearing apron *g g*, passing over the plates *h h* and pulleys or rollers *i i* of the axis *i'*. The follower F gives shape to one (the inner) side of the brick.

G G are presser-blocks moving in guides *j j*, suitably disposed with reference to the openings *b b* of the cylinder or mill B, and fastened to the frame A A. To these presser-blocks are attached rods *k k*, guided in cross-bars of the frame A A, and connected to the upper end of the latter by knee-joints *l l*. These knee-joints are united together by a frame, *m*, vibrated by a cam, *n*, upon the shaft D, by which a corresponding motion is imparted to the presser-blocks G G, their depression and elevation alternating, allowing one mold to be filled while the clay in the other is being pressed or shaped upon its upper surface.

H H are also presser plates or blocks attached to rods or bars *o o*, fulcrumed to cross-bars or axes of the frame A A. To the rods or bars *o o* are linked, by the bars *o' o'*, rods *p p*, bearing in the frame A A, and having a vibratory movement transmitted to the presser plates or blocks H H, alternately pressing the clay in the mold in a horizontal plane, thus shaping the outer surface or side of the clay or brick.

To transmit motion from the follower F to the rods *p p*, a screw or bar, *q*, extends from a plate, *p'*, connecting the said rods together to the said follower.

To allow any surplus clay to escape from the molds, the vertical presser-blocks G G are made slightly narrower than the width of the molds.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination, with the receptacle C, of the follower F and presser blocks or plates G G H H, operating conjointly to form the clay into a brick shape, substantially as set forth.

2. The follower F and presser blocks or plates G G H H, in combination with the receptacle C, shaft D, having cams E *n*, knee-

jointed rods *k l*, frame *m*, jointed bars or rods *o o' p*, bar *q*, and plate *p'*, substantially as and for the purpose set forth.

3. The presser plates or blocks H H, in combination with the rods *o o*, bars *o' o'*, rods *p p*, and plate *p'*, having a bar or screw, *q*, connecting it to the follower F, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I hereunto affix my signature in presence of two witnesses.

FRANK GRANT.

Witnesses:
J. WM. MISTER,
E. C. WEAVER.