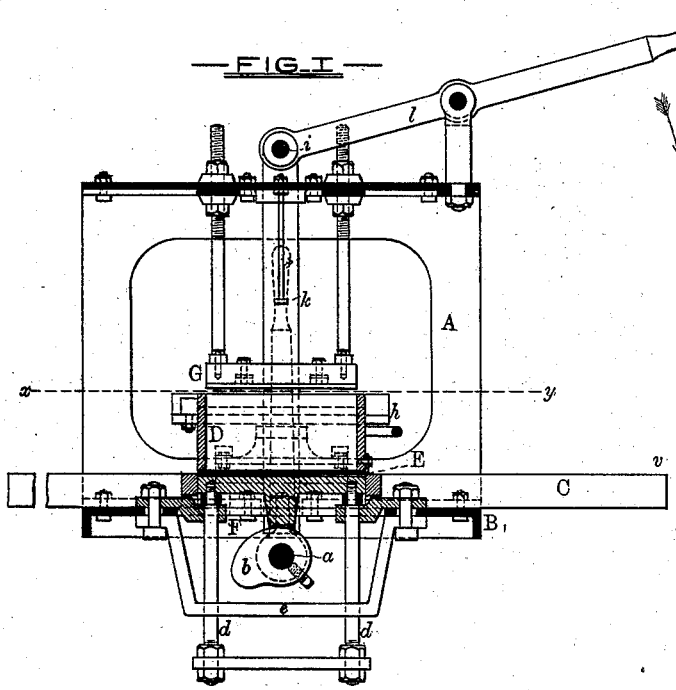
T. JAMES.

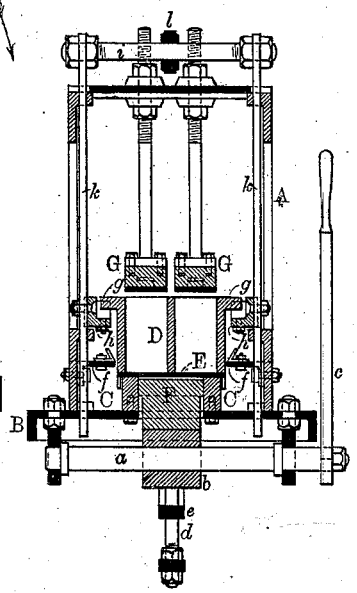
BRICK-MACHINE.

No. 192,763. Patented July 3, 1877

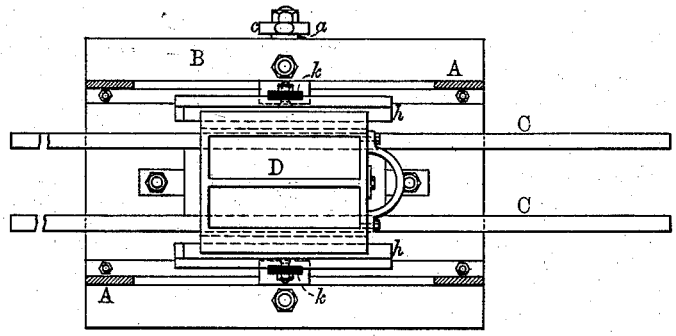
—FIG. I—



—FIG. II—



—FIG. III—



—WITNESSES.—

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UNITED STATES PATENT OFFICE.

THOMAS JAMES, OF BALTIMORE COUNTY, MARYLAND.

IMPROVEMENT IN BRICK-MACHINES.

Specification forming part of Letters Patent No. **192,763**, dated July 3, 1877; application filed April 30, 1877.

To all whom it may concern:

Be it known that I, THOMAS JAMES, of the county of Baltimore, and State of Maryland, have invented certain Improvements in Brick-Machines, of which the following is a specification; and I do hereby declare that in the same is contained a full, clear, and exact description of my said invention, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

This invention relates to certain improvements in that class of brick-machines in which the clay is compressed within a removable mold having one or more compartments or pockets, each one of which is of a size and shape corresponding practically to the size and shape of the bricks to be made, and in which the bricks, after the compressing operation to which they are subjected, are forced from the pockets by the entrance thereto of blocks similar in size to the bricks, as will hereinafter fully appear.

In the description of the said brick-machine which follows, reference is made to the accompanying drawing forming a part hereof, and in which—

Figure 1 is a sectional side elevation of the brick-machine. Fig. 2 is a transverse section of the machine. Fig. 3 is a sectional plan of the same on the line *x y*.

Similar letters of reference indicate similar parts of the invention in all the views.

A is the frame of the machine secured to the bed-plate B, and C C are rails forming a track running longitudinally of the same. D is the brick-mold, preferably formed in two compartments or pockets, each one of which is fitted to hold sufficient clay for one brick. E is a removable mold-plate supporting the mold D, and adapted for movement longitudinally of the track upon which it rests. A block, F, located in an opening in the bed-plate and between the rails C, has a vertically-reciprocating movement, which movement in an upward direction is obtained by means of a shaft, *a*, resting within bearings, and provided with a cam, *b*, and a hand-lever, *c*, secured to the outer end of the said shaft. The said block F is guided in its movements by means of bolts *d* extending from its under side, and a bar, *e*, having holes through which the bolts pass. The upward motion of the block F is, preferably, limited by the length of slot in the bed-plate, through which the hand-lever *c* passes; but the same effect is produced by the degree of eccentricity and the position of the cam *b* on the shaft *a*. The brick-mold D is guided to its proper lateral and longitudinal positions on the rails, respectively, by flanges *f* projecting from the inner sides of the frame A, and the strips *g* extending from the sides of the mold, the ends of which strips come into contact with pins on the upper faces of the elevatory bars *h*. The elevatory bars are suspended from a transverse rod, *i*, located above the frame by the side bars *k*, as shown.

The means for operating the transverse rod *i*, side bars *k*, elevatory bars *h*, and the brick-mold, to which they are connected, is a lever, *l*, pivoted to the top of the frame A, and attached at one end to the said transverse rod *i*. G G are stationary blocks, secured to the upper part of the frame A by means of bolts, and adapted, in the upward movement of the mold, to enter the compartments or pockets thereof, for purposes hereinafter described.

The operation of making bricks by means of this machine is as follows: A mold-plate corresponding to the one, E, is first laid upon the track at the end thereof, represented by *v*, and the mold placed thereon. The pockets in the mold are then filled with clay and the projecting clay struck off. The plate and mold are then placed directly over the vertically-moving blocks F and beneath the stationary blocks G. The hand-lever *c* is then moved in the direction of the arrow, which lever, through the medium of the mechanism connected therewith, elevates the mold and compresses the bricks, the stationary blocks G entering slightly into the pockets in the mold. The hand-lever *c* is then moved in a reverse direction, which allows the mold-plate to seat itself upon the track. The outer end of the second hand-lever is next depressed, which has the effect of elevating the mold, as before described. In this operation the bricks are forced out of the mold to the mold-plate, upon which plate they are removed to be dried. The mold is then withdrawn and used, as before de-

scribed, in connection with another mold-plate, the operation being continued as long as may be desired.

Having thus described my invention, what I claim as new, and wish to secure by Letters Patent of the United States, is—

1. In a brick-machine, the combination of the removable mold D, with mechanism for elevating the same, as described, the removable plate E, vertically-moving block F, and stationary blocks G, substantially as herein described.

2. As means for elevating the brick-mold D, the elevating-bars *h*, side bars *k*, transverse rod *i*, and hand-lever *l*, combined substantially as shown.

3. The combination of the vertically-moving block F, the shaft *a*, cam *b*, hand-lever *c*, track C, mold-plate E, removable mold D, and stationary blocks G, substantially as specified.

In testimony whereof I have hereunto subscribed my name this 25th day of April, in the year of our Lord, 1877.

THOMAS JAMES.

Witnesses:

PRUDENEIO DE MUVGUIENDO,

THOMAS MURDOCH.