

No. 846,277.

PATENTED MAR. 5, 1907.

H. ARMSTRONG.
BRICK MACHINE.

APPLICATION FILED DEC. 10, 1906.

4 SHEETS—SHEET 1.

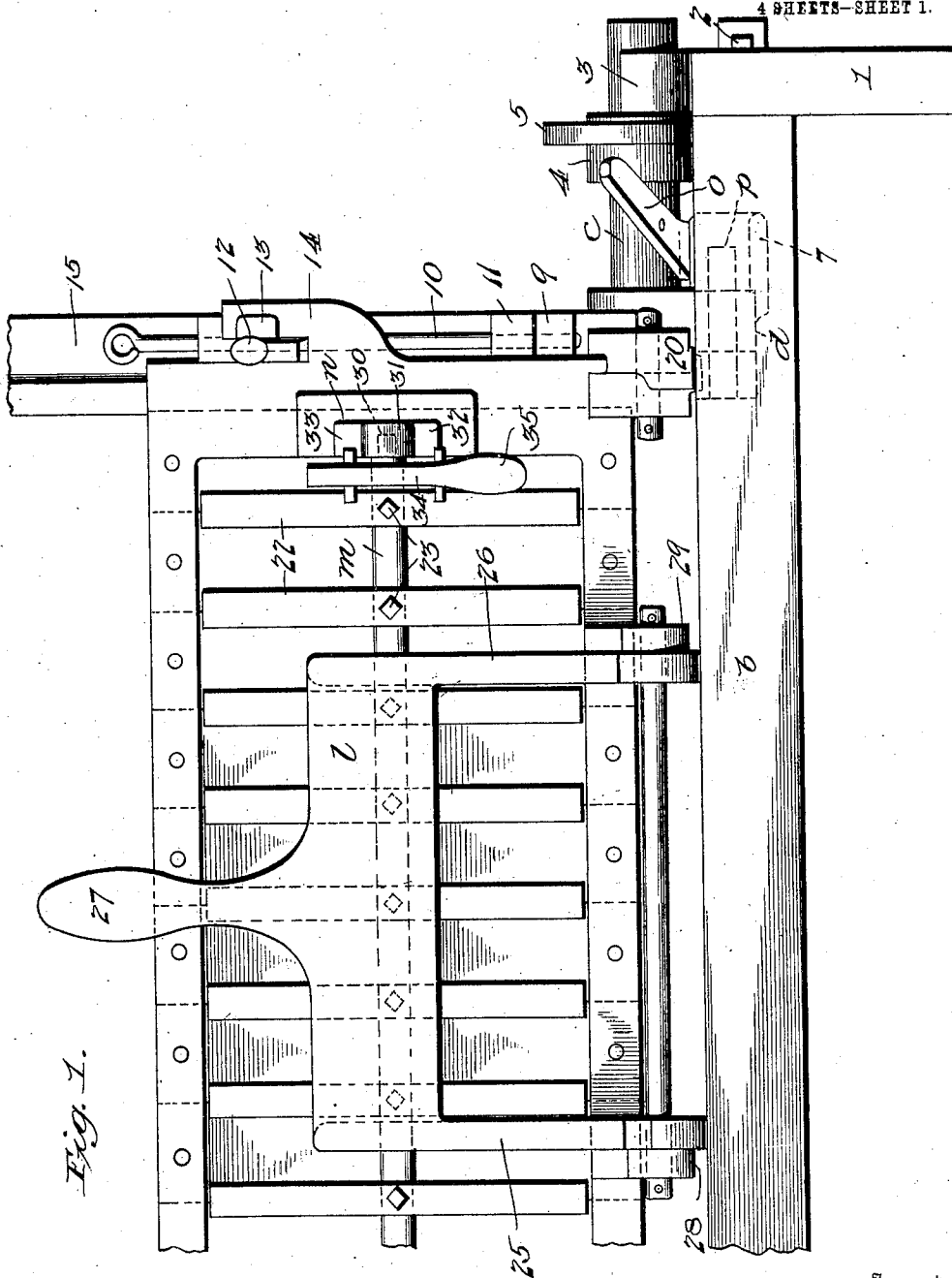


Fig. 1.

Witnesses

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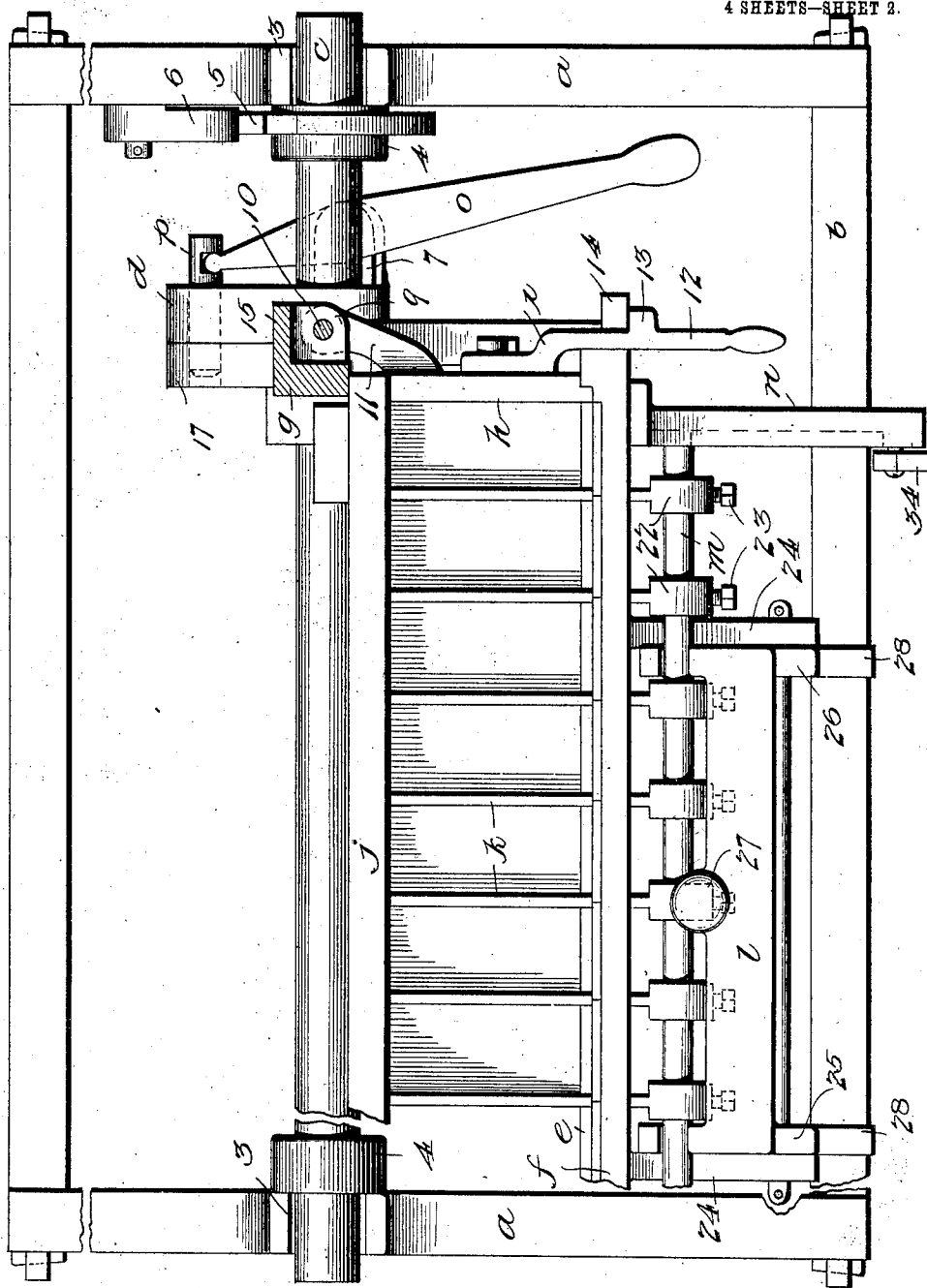
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Witnesses

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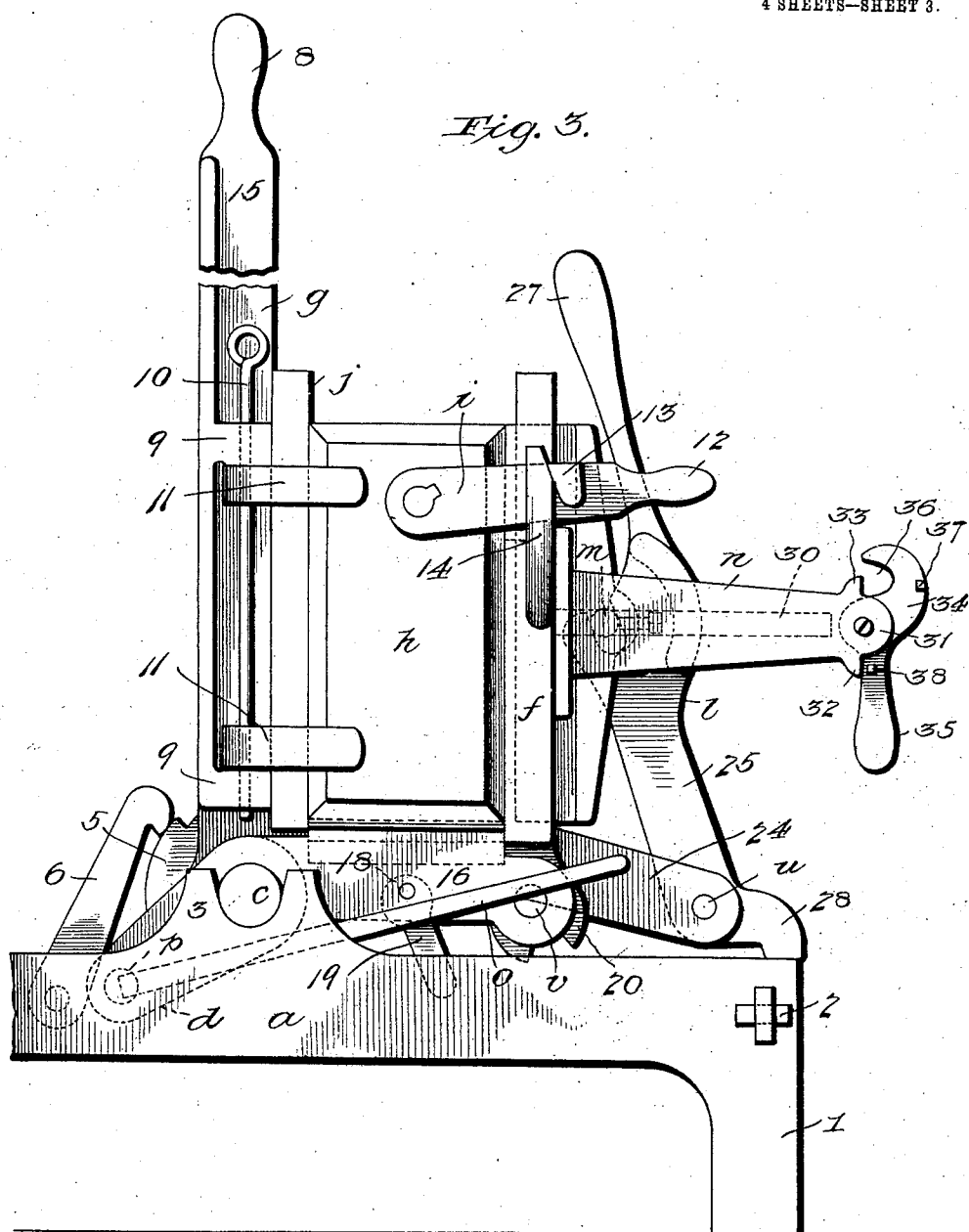
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4 SHEETS—SHEET 3.



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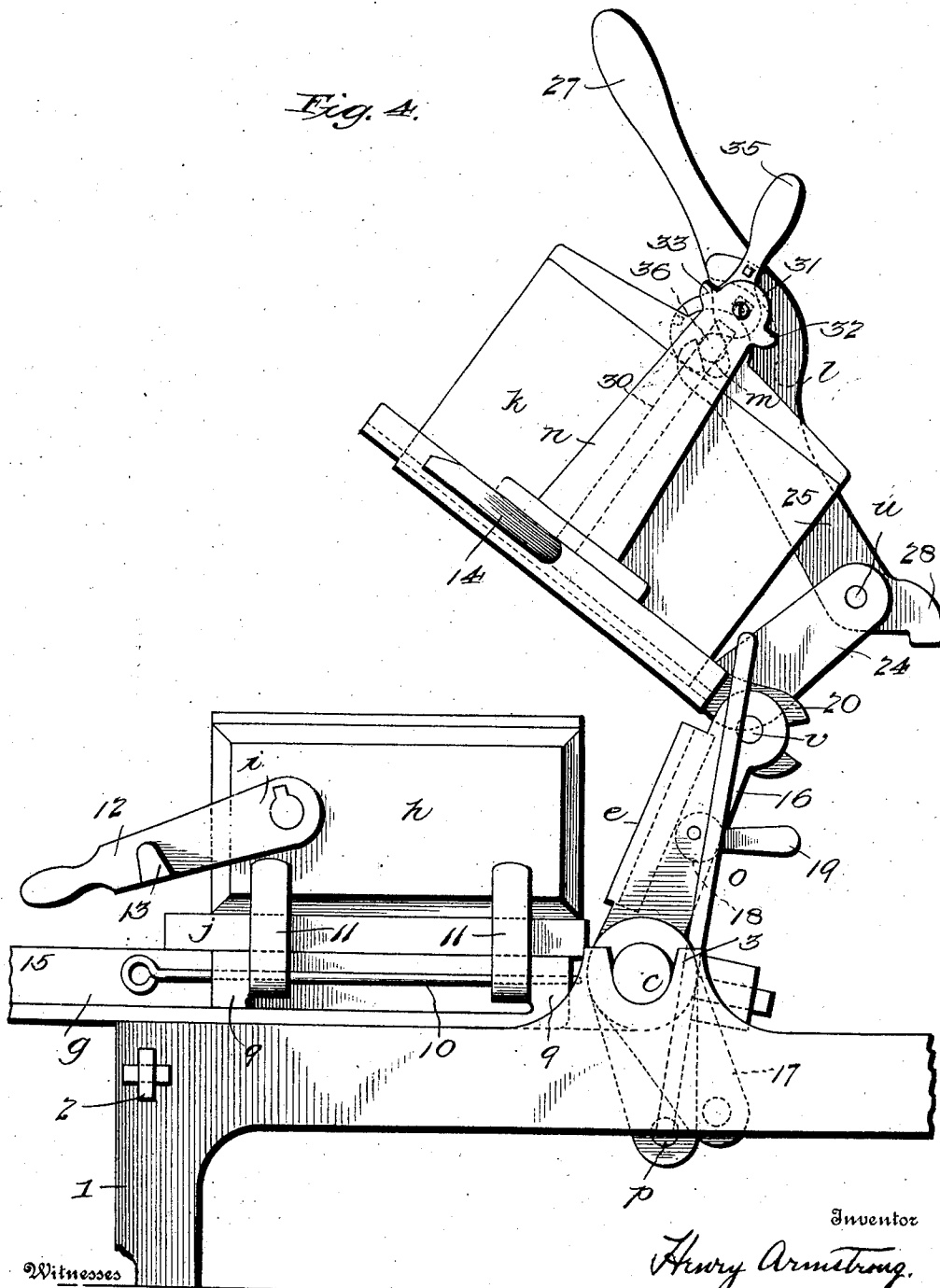
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4 SHEETS—SHEET 4.

Fig. 4.



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UNITED STATES PATENT OFFICE.

HENRY ARMSTRONG, OF ROCHESTER, NEW YORK.

BRICK-MACHINE.

No. 846,277.

Specification of Letters Patent.

Patented March 5, 1907.

Application filed December 10, 1906. Serial No. 347,117.

To all whom it may concern:

Be it known that I, HENRY ARMSTRONG, a citizen of the United States, residing at Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Brick-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in brick-machines; and the object of my invention is to provide a machine for making bricks, each having an ornamental side and end, of strong and simple construction and one that may be easily operated.

With this object in view my invention consists in the construction and combinations of parts, as hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of part of my invention. Fig. 2 is a plan view of the same, partly in section. Fig. 3 is an end view of the same, and Fig. 4 is an end view showing the parts of the machine separated after the bricks are made and preparatory to removing them from the machine.

a represents the end portions of the supporting-frame provided with legs 1. These end parts are connected by cross-beams *b* by means of mortise-and-tenon joints, the parts being secured together by pins or wedges 2. In bearings 3 on the end frames *a* is mounted the main shaft *c*, the whole machine being practically supported on this shaft, although the front of the machine is adapted to rest on the cross-beams *b*, as shown in Fig. 3.

The shaft *c* is provided with collars 4, fastened thereto to prevent longitudinal displacement of said shaft, and one of these collars is provided with the ordinary ratchet 5, with which a pawl 6 is adapted to engage, permitting motion of the shaft in one direction, but preventing motion in the other.

Splined or otherwise fastened to the shaft *c*, near each end thereof, are the projecting portions *d*, each carrying an extending bracket 7, on which is pivotally mounted a lever *o*, which engages the pin *p*, which pin slides through holes in the projecting portions *d* and the lever *g*, hereinafter described, locking the same together while the material is being tamped into the mold. When it is desired to remove the completed bricks from

the machine and before the parts assume the position shown in Fig. 4, the levers *o* are operated and the pins *p* pulled out of the levers *g*.

g represents the operating-levers for opening and closing the machine, each provided with a handle 8. Against these two levers *g* the pallet-plate *j*, which is preferably made of wood, is adapted to rest. This pallet-plate, with the completed bricks thereon, is adapted to be removed from the machine after a set of bricks has been made and similar ones substituted. Each of the levers *g* is provided with ears 9, through which runs a rod 10, on which are mounted the ears 11 of the end doors *h*, so that said doors may be swung outward from the position shown in Fig. 3 or downward from the position shown in Fig. 4 on the rod 10.

f represents the front door of the machine, and the doors *f* and *h*, which are each pivotally mounted, are adapted to be fastened together in the following manner: *i* represents a swinging lever pivoted to the door *h* and provided with a handle 12 and a projecting catch 13, which handle is adapted to swing down into a space left between the bracket 14 and the door *f*, to which said bracket is secured, the projection 13 serving to hold the parts together.

The lever *g* is a bell-crank lever and is mounted on the shaft *c*. It has a vertical portion 15, a horizontal portion 16, and a rearwardly and downwardly extending portion 17. On the parts 16 are supported the bottom plates *e*, which are provided with faces adapted to give an ornamental finish to one side of each brick. This plate or plates are removably secured in the part 16, so that they may be changed to produce bricks of different appearance. They are seated in a recess cut in the part 16, and an eccentric 18, provided with a handle 19, is located in the part 16 for convenience in leveling and removing these plates. The front door *f* is similarly provided with removable plates *e* of such a character as to give an ornamental finish to one end of each brick. The front door *f* is provided with downwardly-projecting perforated lugs 20, which are mounted on pins *v*, carried in the horizontal portion 16 of the lever *g*.

k represents the movable dividing-plates between which the bricks are formed. Each of these is provided with a rearwardly-extending perforated boss 22, by means of which it is secured to the shaft *m* by a screw

23. Obviously if the shaft *m* is drawn back the plates *k* will be drawn back with said shaft, and this backward movement is accomplished in the following manner: To the front door *f* are fastened two projecting brackets 24, through which passes a shaft *u*. On this shaft *u* are mounted the two downwardly-projecting arms 25 and 26 of the forked lever *l*, provided with a handle 27. Each of the arms 25 and 26 is provided with a cut-away portion, (shown in dotted lines in Figs. 3 and 4,) through which cut-away portions the shaft *m* passes. By turning the lever *l* on the shaft *u* it is obvious that the shaft *m* and the division-plates *k* will be drawn backward out from between the bricks. The arms 25 and 26 have extending downwardly from them lugs 28 and 29, which when the machine is used in making the bricks, as shown in Fig. 3, rest upon one of the beams *b*, thus supporting the machine.

n represents brackets extending rearwardly from the door *f* and which are provided with slots 30, in which the shaft *m* travels. Locking means are provided for holding the shaft *m* in position after the dividing-plates *k* have been pulled out, which means are best shown in Figs. 3 and 4. On the ends of each of the brackets *n* is a rounded portion 31, provided with two lugs 32 and 33. Mounted on this rounded portion is a catch 34, provided with a handle 35, a recess 36, and lugs 37 and 38, so arranged that when the handle 35 is thrown into the position shown in Fig. 4 the catch will engage the shaft *m*, holding it in position. The lugs 37 and 38 limit the movement of this pivoted catch in either direction.

The operation is as follows: The parts being in the position shown in Fig. 3, the material is rammed in between the dividing-plates *k* by hand or any suitable means, the plates *e* giving a plain or ornamental finish to one side and one end of each brick. After the molds have been filled with the material the levers or arms *g* are turned down to a horizontal position. The handle 27 is then moved from the position shown in Fig. 3 to that shown in Fig. 4, pulling the partition-plates *k* from between the bricks, and the shaft *m* is locked in the position shown in Fig. 4. The levers *i* are then lifted, unlocking the end doors *h* from the door *f*. The levers *o* are then moved inward toward the center of the machine until the pins *p* are drawn out of the parts *d* of the levers *g*, thereby unlocking them. The machine is then in the position shown in Fig. 4. The end doors *h* are then turned down on the rods 10, thus leaving the wooden pallet *j*, carrying the completed brick, free to be removed. New plates *e* and a similar pallet may then be inserted in the machine, after which the handle 35 is thrown back, releasing

the shaft *m*, and thus letting dividing-plates *k* drop into place. The levers *g* are then turned back to a vertical position and the end doors locked to the front door, thus completing the cycle of operations and restoring the machine to its initial position.

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

1. In a brick-machine, the combination of a supporting-frame, a shaft pivotally mounted in said frame, levers carrying a pallet serving as the back of a mold, and plates serving as the bottom of the mold, and also carrying a front door provided with movable division-plates, and end doors hinged to said levers, substantially as described.

2. In a brick-machine, the combination of a frame, a shaft supported therein, operating-levers mounted on said shaft, a pallet adapted to be carried by said operating-levers, end doors pivotally supported one on each of said operating-levers, a bottom provided with finishing-plates carried by said levers, a front door provided with finishing-plates and with movable division-plates pivotally mounted on said levers, and means for fastening the end and front doors together, substantially as described.

3. In a brick-machine, the combination of a front door forming a part of the mold, pivotal supports for said front door, said door being provided with recessed brackets and with apertures, division-plates mounted to slide in the apertures of said door, a shaft connected to all of said division-plates and adapted to slide in the recesses of said brackets, means for moving said shaft and with it the division-plates outwardly from the mold, and means for locking said shaft in its moved-out position, substantially as described.

4. In a brick-machine, the combination of an apertured front door, pivotal supports therefor, division-plates adapted to slide through the apertures in said front door, a shaft to which said division-plates are secured, recessed brackets secured to said front door and guiding said shaft, a pivoted forked lever, the arms of which engage said shaft, and means for locking said shaft after it has been moved to pull out the division-plates from the machine, substantially as described.

5. In a brick-machine, the combination of a mold comprising a pallet, bottom, end doors, and front door, means for securing said end doors to said front door, pivotal supports for said front door, division-plates adapted to slide in apertures in said front door, a shaft to which all of said division-plates are secured, recessed brackets for guiding said shaft, a pivoted forked lever, the arms of which engage said shaft, said arms being provided with downwardly-extending portions adapted to rest upon the

frame of the machine and normally support said front door in a vertical position, substantially as described.

5 6. In a brick-machine, the combination of a supporting-frame, a shaft mounted on said frame, operating-levers mounted on said shaft, each lever including a vertical portion, a downwardly and rearwardly extending portion, a horizontal portion, a pallet adapted
10 to rest against said vertical portions, end doors hinged to said vertical portions, a bottom carried by said horizontal portions, a front door pivotally supported at the ends of said horizontal portions, means for locking
15 said end doors to the front door, division-plates adapted to slide in apertures in the front door, a shaft to which said division-plates are all secured, and means for moving said shaft to draw the division-plates out of
20 the mold, and means to lock said shaft after

said plates have been drawn out, substantially as described.

7. In a brick-machine, the combination of a mold, operating-levers for separating the parts of said mold, each lever being provided
25 with an apertured downwardly and rearwardly projecting part, a supporting-frame, a shaft mounted on said frame on which said levers are mounted, apertured brackets on said shaft, and a lever and pin at each end of
30 the machine, said pin being adapted to be moved in and out of the aperture in the projecting part of said levers, substantially as described.

In testimony whereof I affix my signature 35
in presence of two witnesses.

HENRY ARMSTRONG.

Witnesses:

L. H. EHRMANN,
J. HILSDORF.