

No. 855,716.

PATENTED JUNE 4, 1907.

E. L. MARTIN.
BRICKMAKING MACHINE.
APPLICATION FILED JUNE 29, 1906.

4 SHEETS—SHEET 1.

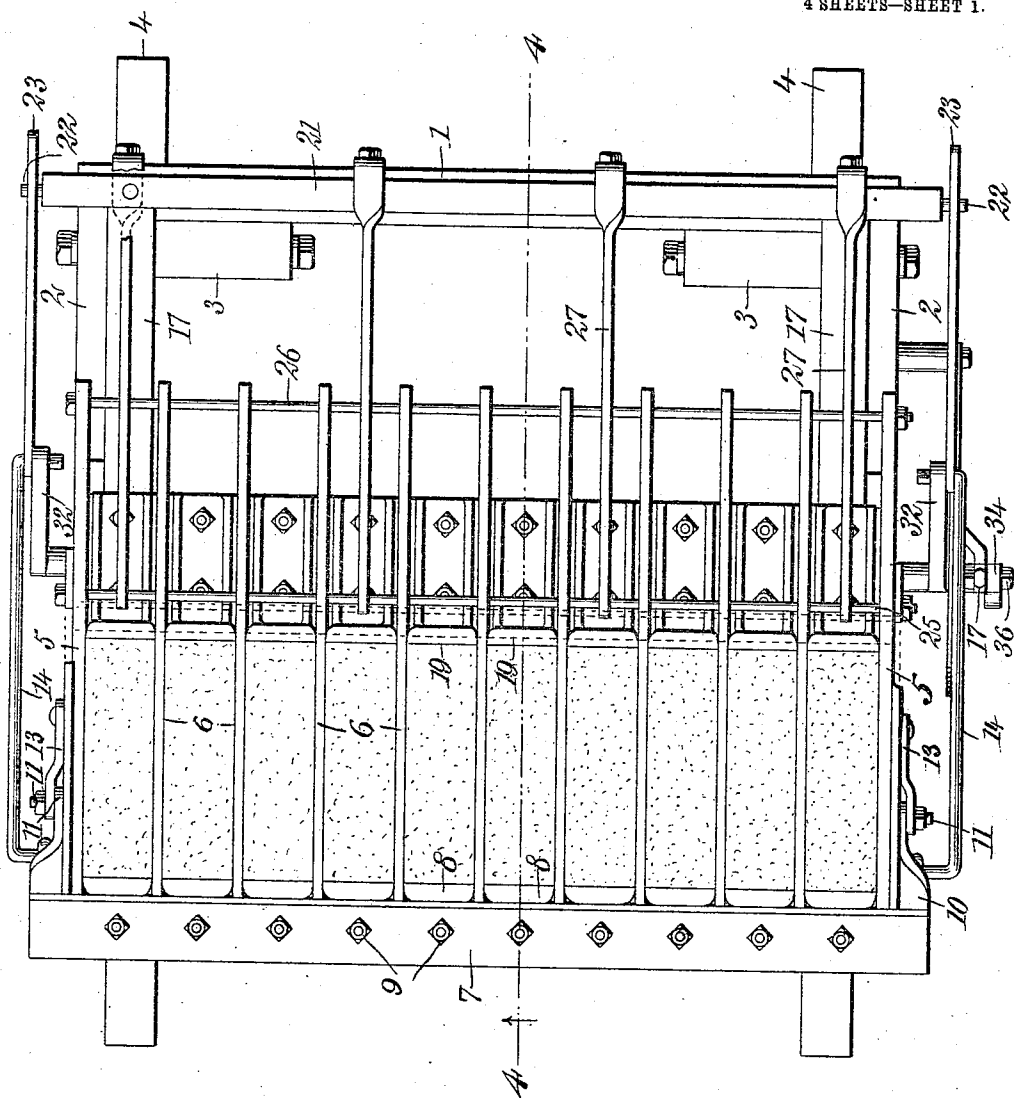


Fig. 1.

WITNESSES

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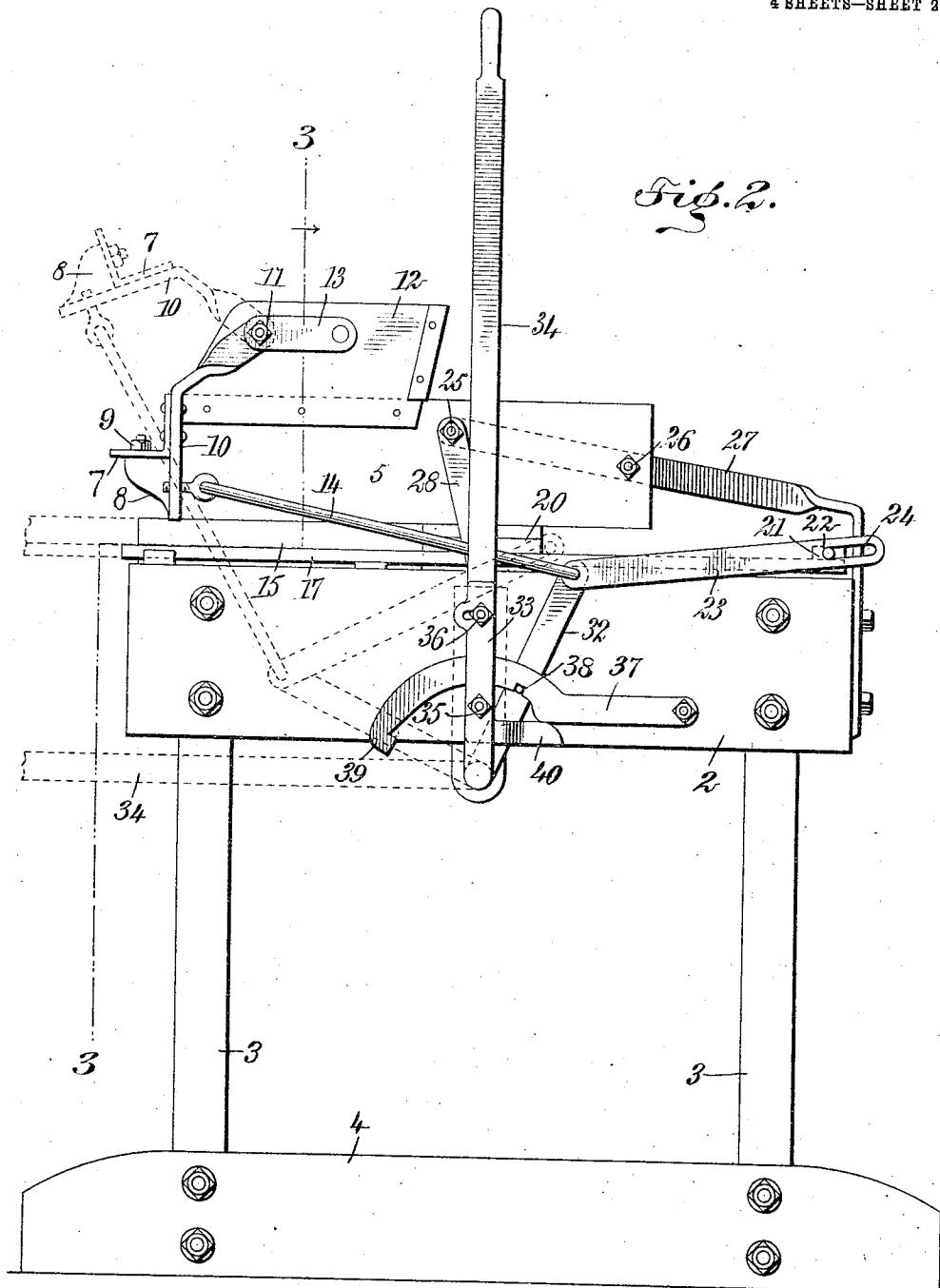
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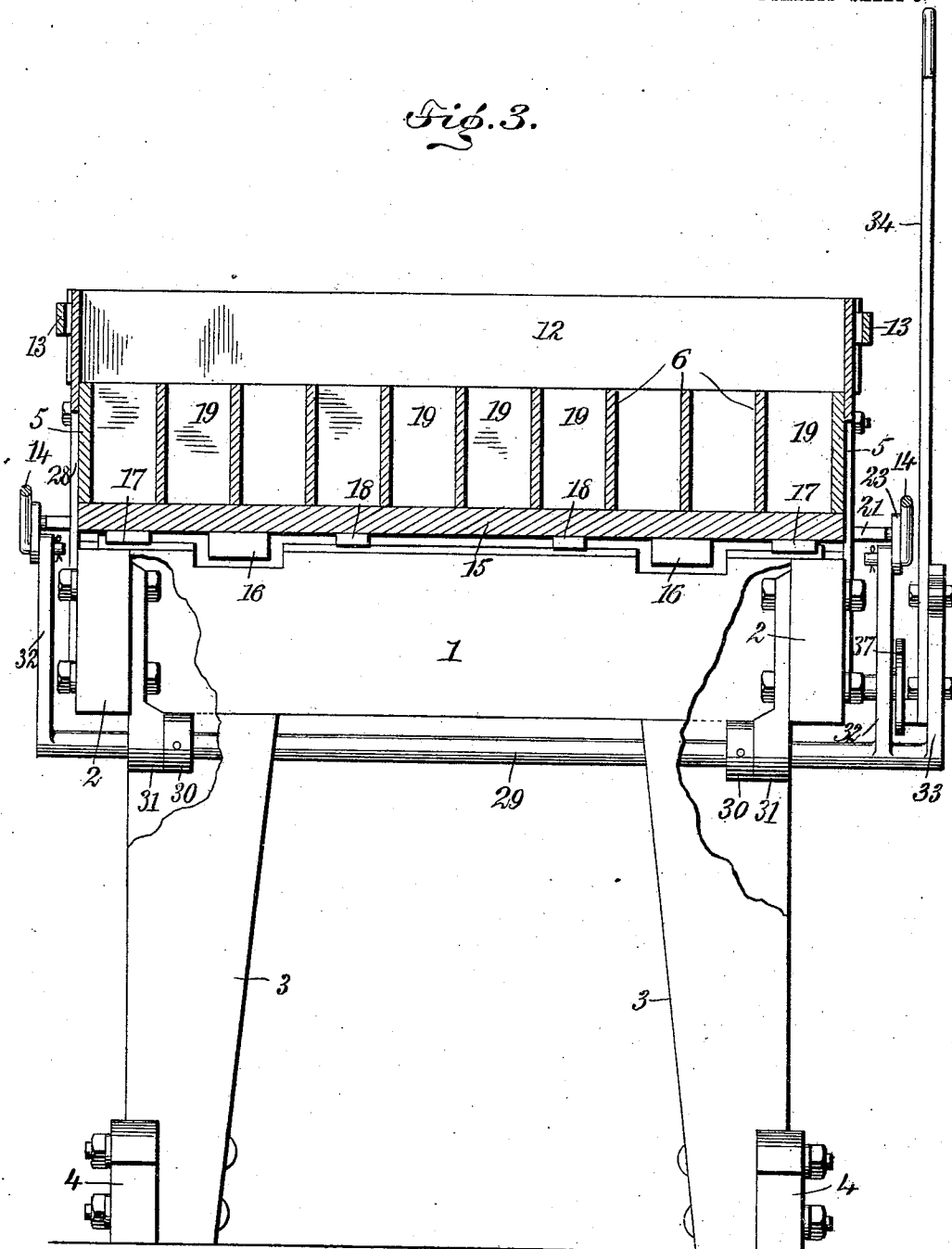
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4 SHEETS—SHEET 3.

Fig. 3.



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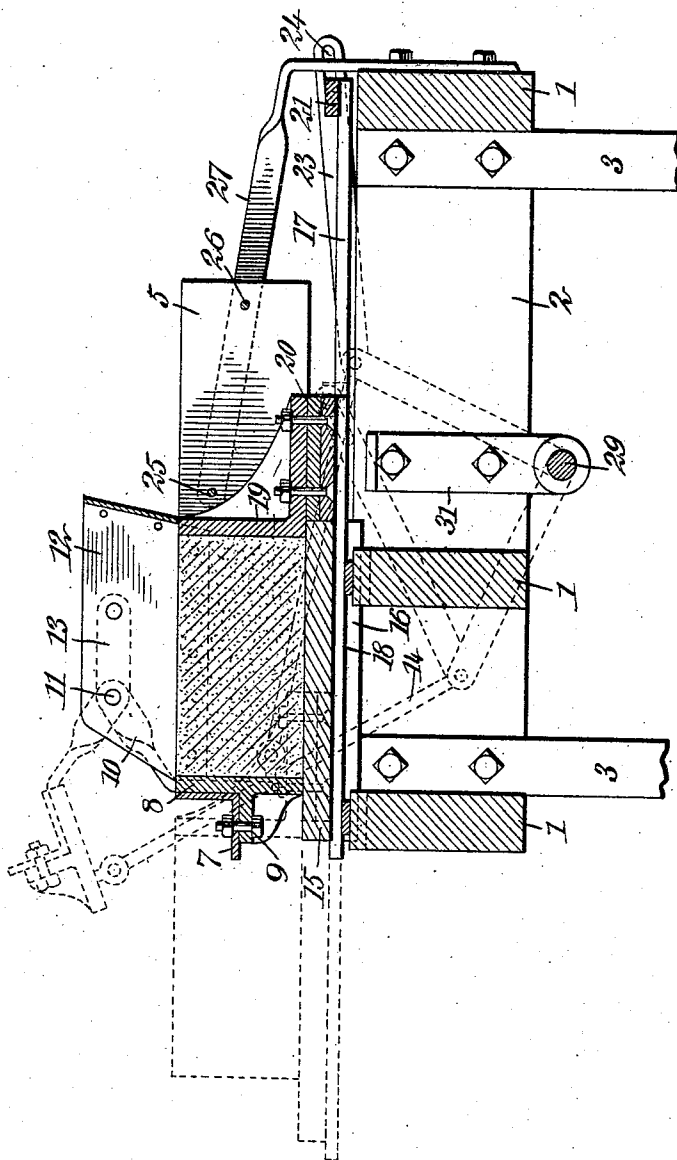
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4 SHEETS—SHEET 4.

Fig. 4.



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EARL L. MARTIN, OF WOODBURN, IOWA.

BRICKMAKING-MACHINE.

No. 855,716.

Specification of Letters Patent.

Patented June 4, 1907,

Application filed June 29, 1906. Serial No. 324,018.

To all whom it may concern:

Be it known that I, EARL L. MARTIN, a citizen of the United States, and a resident of Woodburn, in the county of Clarke and State of Iowa, have invented a new and Improved Brickmaking-Machine, of which the following is a full, clear, and exact description.

This invention relates to machines for making bricks, and is especially adapted to be operated by hand. The object of the invention is to so simplify and improve the machine that the molds may be unlocked, opened, and the finished bricks removed by a single operation of one lever.

The specification is a specific description of one form of my invention, while the claims define the actual scope thereof.

Reference is to be had to the accompanying drawings which form part of this specification, in which drawings like characters of reference indicate corresponding parts throughout the views, and in which

Figure 1 is a plan view of the machine having the hopper removed; Fig. 2 is a side elevation of the same; Fig. 3 is a vertical section on the line 3—3 of Fig. 2; and Fig. 4 is a vertical section on the line 4—4 of Fig. 1.

In the form of the invention here shown, it is illustrated as being supported upon a suitable frame or stand, comprising cross timbers 1, longitudinal timbers 2 and legs 3. These parts are rigidly bolted together, and if desired the lower ends of the legs may be further strengthened by means of a connecting strip 4. Upon this frame is secured the brick mold comprising stationary side walls 5, stationary partitions 6, hinged front walls and slidable bottom and back walls. The stationary sides and partitions are smoothly polished in order that the completed brick may be easily removed therefrom. Extending across one end of the side and end partitions is an angle iron 7 carrying a plurality of castings 8 fitting between each successive pair of the partitions. These castings have a polished inner surface and constitute the end wall of the mold. These castings are secured to the angle irons in any suitable manner, preferably by means of bolts 9 whereby any one of the castings may be removed without disturbing the others. Above the molds and opening into the same is a hopper 12 having arms 10 pivoted to the sides thereof by bolts 11. These arms carry the angle

irons and castings above referred to, and upon the bolts 11 acting as pivots the entire end of the mold may be swung up and away from the sides and the partitions, as shown in dotted lines in Figs. 2 and 4. As the walls of the hopper 12 are usually constructed of comparatively thin material, it may be found desirable to add re-inforcing strips 13, each having one end thereof bent outward to receive the outer ends of the pivot 11. Pivally connected to the two ends of the removable wall above described are two rods 14, by means of which the said removable wall is operated.

The bottom of the mold consists of a removable plate 15 which rests upon and is supported by cross pieces 16, 17 and 18. The supports 16 are rigidly connected to the main supporting frame of the machine, while the strips 17 and 18 are slidably connected thereto and operate in a manner to be described hereinafter.

The back wall of the molds is made up of a plurality of L-shaped castings 19, each of which has its vertical leg fitting between two of the partitions, and its other leg bolted to the connecting support 20. These L-shaped backs, the connecting support 20, and the strips 17 and 18 constitute the slidable back and bottom supporting member. To operate this portion of the machine the parts 17 are extended backwardly a considerable distance and connected by a cross piece 21 having pins 22 on the ends thereof. These pins extend through slots 24 in the connecting links 23, which latter are connected to and operated with the connecting rods 14 for the hinged front wall above described.

As the front and back walls and the bottom of the mold are each movable, it is necessary to provide means to hold the partitions and sides stationary. This is accomplished by extending the partitions and side walls a considerable distance back of the back wall of the mold and connecting them together by bolts 25 and 26. Secured by these bolts are a suitable number of strips 27 having their opposite end secured to the frame of the machine, as is clearly shown in Figs. 2 and 4.

For operating the machine, I have provided a shaft 29 journaled in suitable supports 31 and prevented from longitudinal movement by collars 30. This shaft has integral therewith or rigidly secured thereto arms 32 extending upwardly and having

their ends connected to the operating links 14 and 23. The shaft also carries an arm 33 having the operating handle 34 bolted thereto.

5 The machine constructed as above is operated as follows: Starting with the parts in the position shown by solid lines in Figs. 2 and 4, the material of which the bricks are to be constructed is placed in the molds and
10 tamped solid. The top is then smoothed off by a suitable tool and the bricks are ready for removal. Upon moving the handle toward the left of the machine, as illustrated in Fig. 2, the shaft 29 is rotated and by means
15 of the arms 32 and links 14 the hinged front end is moved from contact with the partitions and sides. When this end has swung a suitable distance the end of the slot 24 comes in contact with the pins 22 and the strips 17
20 carrying the slidable back and bottom then move in the same direction as the handle. The bricks are thus removed from the machine into the position shown in dotted lines in Fig. 4, and the removable bottom 15 is
25 then carried with the brick thereon to any point of depository desired, and a new bottom is inserted and the parts returned to the original position ready to have the molds refilled. The operation of the device is thus
30 seen to be very simple and consequently very rapid, a single movement of a single lever being sufficient to open up the mold and remove the bricks therefrom.

In connection with the machine above described, I have shown an improved catch which may, if desired, be used in connection therewith. As shown in Fig. 2 the handle 34
35 is secured to the arm 33 by means of two bolts 35 and 36, the latter of which passes through a short slot, while the former acts as a pivot. The lower end of the arm 34 is shown as provided with a lug 40 adapted to contact with a latch 37 and raise the same so
40 that it no longer engages with a pin 38 on the link 32. It will thus be seen that when the pin 38 engages the notch in the latch 37 the mold is closed and the parts locked in position, but upon movement of the lever 34 the lug 40
45 lifts the latch before the link 32 is caused to oscillate, such lost motion arising by the use of the short slot and bolt 36. The end of the latch 37 may be provided with a catch 39 which engages with the pin 38 when the mold is in open position, and thus acts as a stop to
50 limit further movement.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

60 1. A brick making machine comprising a mold having a hinged front wall, slidable bottom and rear walls, and stationary partitions and side walls.

65 2. A brick making machine, comprising a mold having a hinged front wall, rear and bottom walls laterally slidable toward said

hinged wall, and means for moving said walls simultaneously.

3. A brick mold having stationary side walls, a hinged front wall, a slidable rear wall, and means for moving them simultaneously
70 after the front wall has been moved clear of the side walls.

4. A mold having a plurality of partitions and a front wall, said wall comprising a plurality of vertical members adapted to fit between the adjacent pairs of partitions, a connecting member extending across the end of said mold and secured to each of the vertical members, arms secured to the connecting member and pivoted above the same, and
80 means for moving said front wall on said pivot.

5. A brick mold having a movable front wall a plurality of stationary partitions, a removable bottom slidable beneath said partitions, a frame carrying said bottom, a rear wall secured to said frame and comprising a plurality of sections each fitting between two adjacent partitions, and means for simultaneously moving said frame and front wall
90 whereby the bricks are forced from the mold by the rear wall and carried by the bottom wall and the front wall is moved out of the path of the brick.

6. A brick mold having side walls, a front wall pivoted at a point above the top thereof, a rear wall slidable between said side walls, an arm, means for oscillating it, means connecting said arm to the front wall, and means connecting the arm to the rear wall, said last mentioned means including a lost-motion device whereby when the arm is oscillated in one direction the front wall is swung away from the side walls before the rear wall slides between them.
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7. A brick making machine comprising a mold having a movable wall, an oscillating shaft, an arm secured to said shaft, means connecting said arm and said movable wall, a handle for oscillating the shaft, means for locking said arm in a given position, and means connected to said handle whereby movement of the handle unlocks the arm and further movement of the handle moves said arm and wall.
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8. A receptacle having a movable wall, an oscillating shaft, an arm secured to the shaft and connected to said wall, a second arm secured to said shaft, a handle pivoted to said second arm and having limited movement in relation thereto, a pivoted latch engaging said first mentioned arm for locking it in a predetermined position, and means connected to said handle adapted to contact with the latch and raise it as the handle moves in relation to the arm, whereby upon further movement of the handle it may move the arm.
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9. A brick making machine comprising a suitable frame, a mold supported on said frame, partitions in said mold, means for rig-
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idly connecting said partitions and the side walls of the mold to the frame, and means for moving the bottom, front and rear wall.

10 10. A brick mold having a removable bottom, a plurality of sliding supports carrying said bottom, and a rear wall secured to said supports and moving therewith, said rear wall comprising a plurality of L-shaped members.

15 11. A mold having a hopper supported above the same, arms pivoted to said hopper, a front wall for said mold carried by said arms, and means for swinging said front wall away from said mold whereby the contents may be removed.

20 12. A rectangular mold having two opposite walls movable in relation to the other two walls, and means for simultaneously raising one of said walls and ejecting the material from the mold by the action of the opposite movable wall.

13. A mold having a wall, means for advancing said wall to eject the material from the mold, a second wall opposite first mentioned wall, and means for moving said second wall out of the path of the molded material as it is ejected. 25

14. A mold having a wall, means for advancing said wall to eject the material from the mold, a second wall opposite said first mentioned wall adapted to be moved out of the path of the material as the latter is ejected, and means for simultaneously moving said walls. 30

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses. 35

EARL L. MARTIN.

Witnesses:

J. J. UNDERWOOD,
GEO. HOLDEN.