

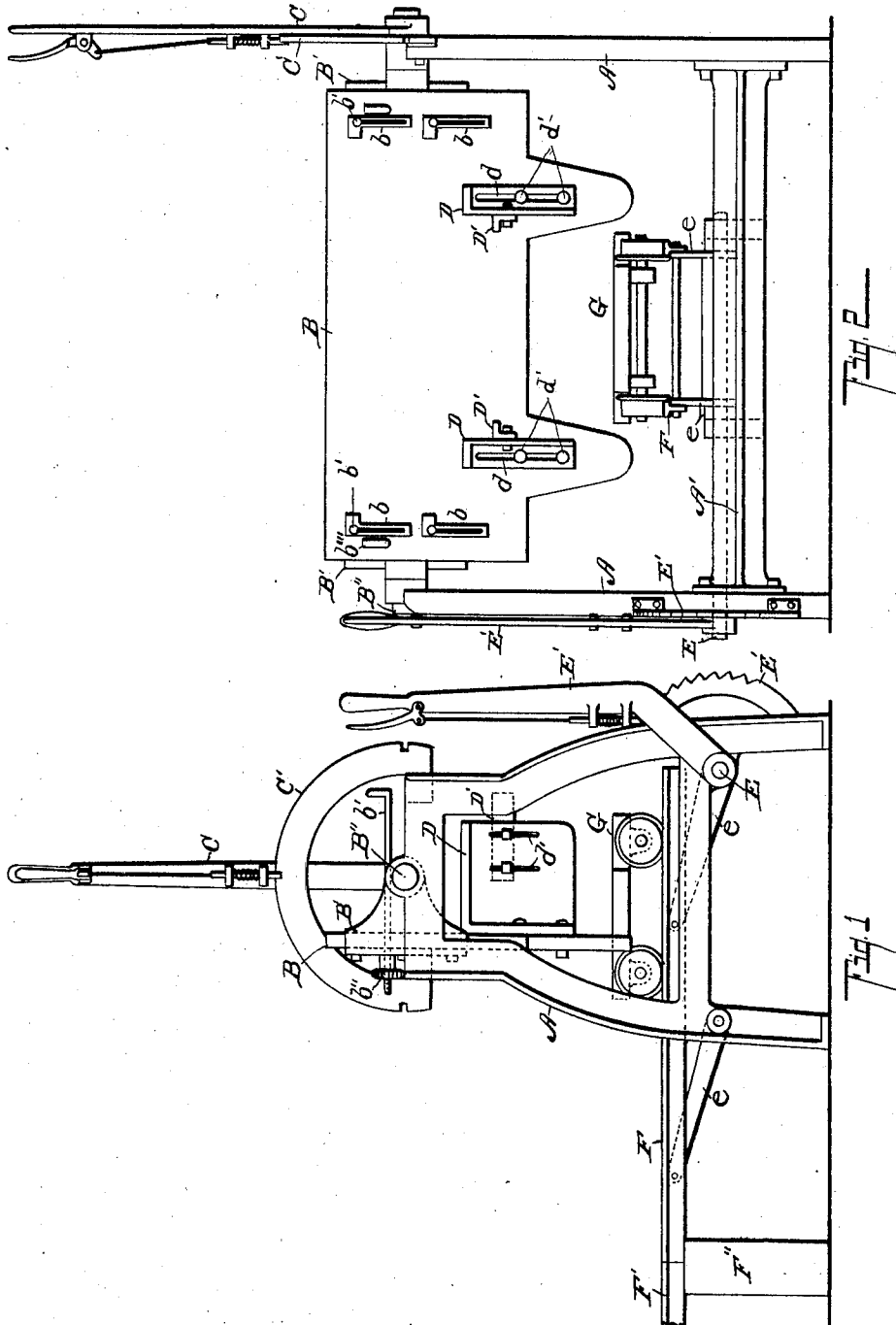
No. 830,540.

PATENTED SEPT. 11, 1906.

E. W. THOMPSON.
MOLDING MACHINE.

APPLICATION FILED JULY 28, 1905.

3 SHEETS—SHEET 1.



Witnesses:

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3 SHEETS—SHEET 2.

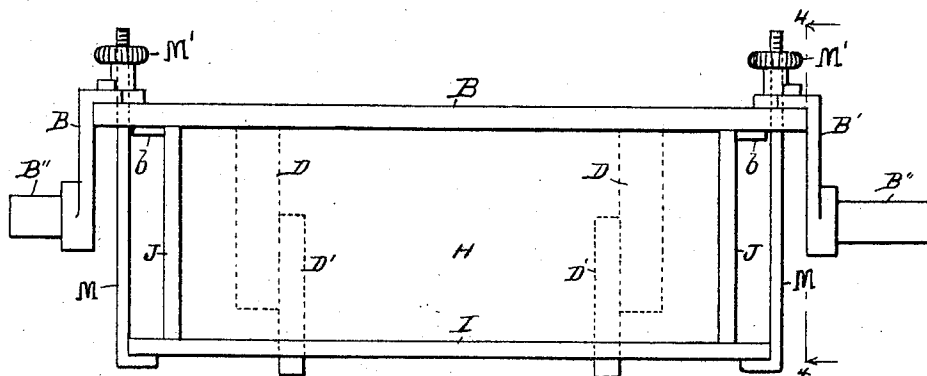


Fig. 3

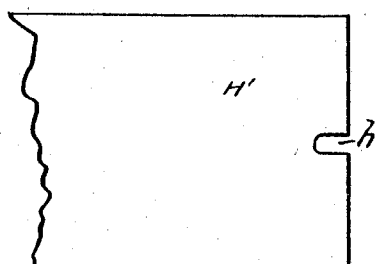


Fig. 5

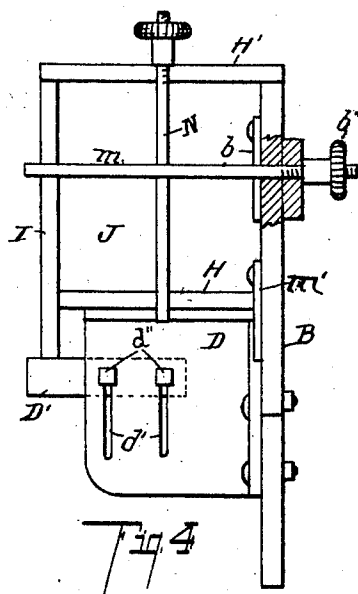


Fig. 4

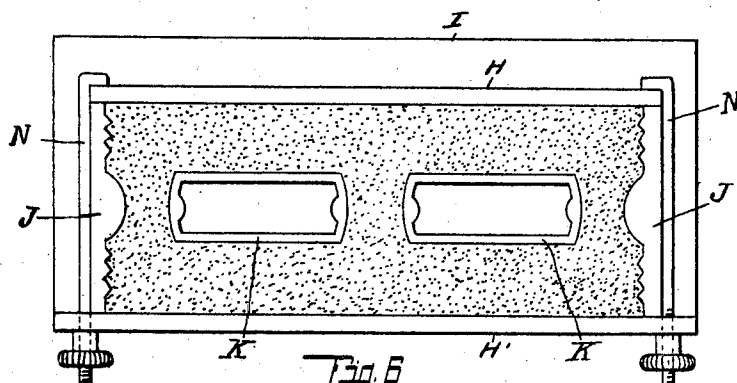


Fig. 6

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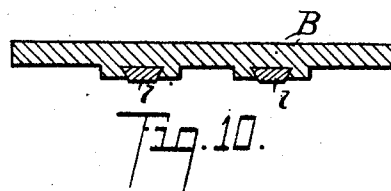
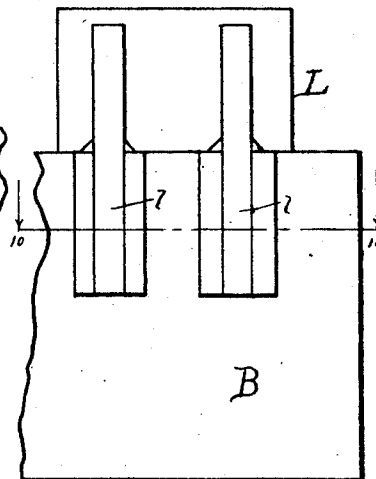
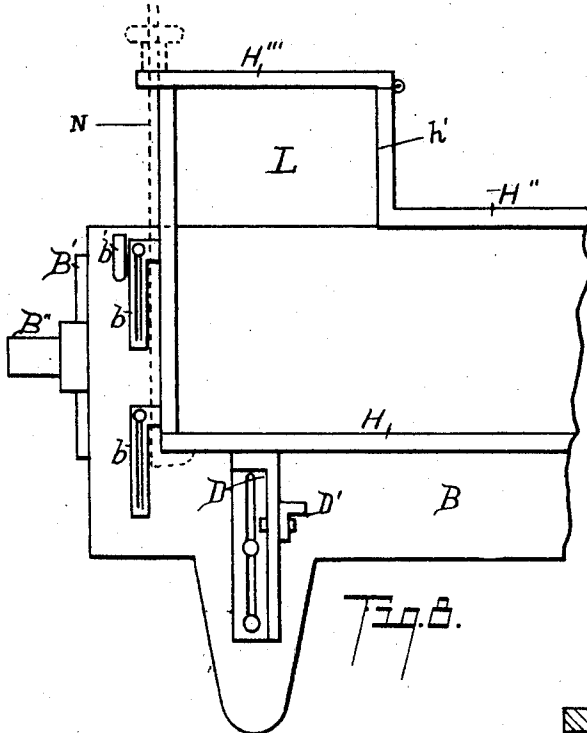
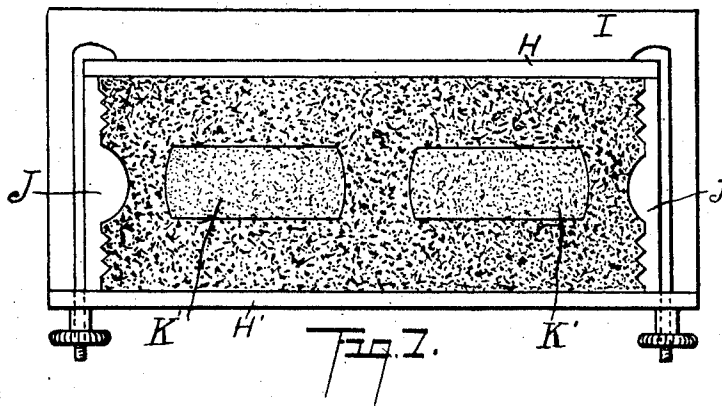
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APPLICATION FILED JULY 28, 1905.

3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

EVERT W. THOMPSON, OF NILES, MICHIGAN.

MOLDING-MACHINE.

No. 830,540.

Specification of Letters Patent.

Patented Sept. 11, 1906.

Application filed July 28, 1905. Serial No. 271,680.

To all whom it may concern:

Be it known that I, EVERT W. THOMPSON, a citizen of the United States, residing at the city of Niles, county of Berrien, State of Michigan, have invented certain new and useful Improvements in Molding-Machines, of which the following is a specification.

This invention relates to improvements in molding-machines.

It relates particularly to improvements in molding-machines for use in the manufacture of concrete or artificial-stone building-blocks, although certain features thereof are desirable for use in other relations, as will be readily apparent.

The objects of this invention are, first, to provide an improved molding-machine by which concrete material may be successfully handled while in a condition adapted to secure the best results; second, to provide an improved molding-machine which is capable of very easy and rapid manipulation in use; third, to provide an improved molding-machine which may be quickly adjusted to any size of block desired within the scope of the machine; fourth, to provide an improved molding-machine which is very simple and economical in structure and very durable in use.

Further objects and objects relating to structural details will definitely appear from the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification.

The invention is clearly defined and pointed out in the claims.

A structure embodying the features of my invention is clearly illustrated in the accompanying drawings, forming a part of this specification, in which—

Figure 1 is an end elevation view of my improved molding-machine. Fig. 2 is a front elevation view thereof. Fig. 3 is a plan view of the mold proper, showing the arrangement of parts. Fig. 4 is a sectional view taken on a line corresponding to line 4 4 of Fig. 3. Fig. 5 is a detail plan view of the top plate H'. Fig. 6 is a plan view of the mold removed from the supporting-plate with a block therein and with cores in position in the block. Fig. 7 is a similar view showing the cores removed and the core-openings filled with sand. Fig. 8 is a detail front elevation view of the structure modified to form L-shaped or corner-blocks.

Fig. 9 is a rear elevation view showing the manner of securing the plate extension L in position. Fig. 10 is a detail sectional view taken on a line corresponding to line 10 10 of Fig. 9.

In the drawings similar letters of reference refer to similar parts throughout the several views, and the sectional views are taken looking in the direction of the little arrows at the ends of the section-lines.

Referring to the drawings, I provide a frame preferably consisting of end pieces or standards A, secured together by cross-pieces A'. A table-like plate B is supported by the arms B', which are provided with journals B'', arranged in suitable bearings on the upper ends of the standards A. A lever C is secured to one of the journals B'' for adjusting the plate. A suitably-notched segment C' is provided for the lever, so that the plate may be locked in its adjusted positions.

A pair of brackets D are secured to the plate. These brackets are slotted at d to receive the securing-bolts d' therefor, so that they may be adjusted on the plate. In use these brackets serve to support the walls of the mold, the face-plate or wall H resting thereon. The brackets D' are adjustably secured upon the brackets D to serve as a support for the mold-wall I, which is arranged on edge thereon. The end walls J are placed upon the wall H and between the wall I and the plate B. The end walls are held in position by the adjustable L-shaped blocks b. These blocks are slotted longitudinally and are clamped to the plate B by suitable bolts, as b'. The walls are secured together and to the plate B by the clamps M, which are arranged through suitable holes b'' in the plate and engage the wall I. The clamps preferably consist of rods having hooks formed on one end to engage over the wall I, as clearly appears in Fig. 3, being threaded to receive the knurled nuts M'. With the mold in this position the concrete material is placed therein, the cores K being arranged transversely in the mold as the same is filled up with the concrete material. These cores are hollow and open-ended and may be of any suitable size or shape. They are of such length as to extend from the plate B to the wall I of the mold.

After properly tamping or compressing the concrete material the top plate H' is put in position, as appears in Fig. 4, and is secured by clamps N, preferably similar in construction to clamps M described. The top plate or

wall H' is preferably notched at *h* to receive the clamps, and the hook portion of the clamp is engaged over the wall or face-plate H. After the top plate H' is clamped in position the table B, with the mold secured thereon, is given a quarter-turn, which brings the table-plate B to the top, the wall I being then at the bottom. The clamps M are then removed to release the mold from the plate B.

For convenience in removing the molded block I provide a car G, adapted to receive the mold as it is released from the plate B. A track-section F is carried by the links *e e'*, which are adapted to be swung up to bring the car in contact with the mold. The links *e e'* are arranged in pairs and are pivoted on the molding-machine frame, the links *e* being rigidly secured to the rock-shaft E. A lever E' is provided for rocking the shaft, so that it can be locked in any position. A ratchet-segment is provided for the lever.

The track-section F when in its lower position is adapted to form a continuation of the track F', which runs to any desired point. The outer end of the track-section F when in its lower or normal position rests upon the block F''. After the mold is removed from the plate B the cores K are drawn and the walls H H' and J J are released, leaving the block upon the wall I to set, the wall I being preferably a plank or board of proper dimensions. Before drawing the cores K they are filled with sand K', (see Fig. 7,) and as the cores are drawn the sand serves to support the body of the block, which is still in a soft or plastic condition. By following this course the cores can be drawn immediately after forming the block, and as the same are in a moist or plastic condition the cores can be readily withdrawn, the necessity for providing collapsible cores being thus obviated. By leaving the block upon the wall I the remaining walls can be removed at once, so that they can be utilized repeatedly. As the walls are entirely independent when released by the clamps, they can be removed without any danger of crumbling the block. By following this course the concrete material can be molded while in a moist and very plastic condition, which is of great advantage in the manufacture of artificial-stone or concrete blocks.

It has been the general practice heretofore in order that the blocks might be removed from the molds and the cores from the blocks in a comparatively short time after forming to mix the cement and other materials with as little water as practicable. The result is that a very poor quality of building-block is produced. By the aid of my improved mold I am enabled to produce blocks which can be satisfactorily molded with the material in a satisfactory condition to secure the most desirable results.

When it is desired to form L-shaped or

corner blocks, I provide a modified form of top board H''. (See Fig. 8.) This top board is provided with a vertical portion *h*. The end wall of one end of the mold is made of sufficient length for the long end of the block, that being the only modification required therein. An extension L is provided for the plate B, as is illustrated in Figs. 8 and 9. This extension is secured to the plate by downwardly-projecting arms *l*, which are adapted to be inserted into suitable dovetailed slots formed in the back of the plate. The top plate H'' is provided with a hinged section H'''. In forming an L-shaped or corner block the main body of the mold is first filled, the top plate H'' is then put in position, and the remainder of the mold filled. The mold is then manipulated in the same manner as has been described for the regular block.

My improved molding-machine is very compact and simple in structure and can be operated very rapidly and with a minimum amount of labor. It is economical to produce and is durable and not likely to get out of repair.

I have illustrated and described the same in detail in the form preferred by me on account of the structural simplicity and convenience, although I am aware that it is capable of considerable variation in structural details without departing from my invention.

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

1. In a molding-machine, the combination of a frame; a plate journaled on said frame; a lever for adjusting and holding said plate in its adjusted positions; brackets having slots therein adjustably secured to said plate by bolts arranged in said slots; a mold face-plate arranged on said brackets; brackets having slots therein adjustably secured to said first-named brackets by bolts arranged in said slots; a mold-wall arranged on edge thereon; end walls arranged between said plate and wall resting on said face-plate; L-shaped supports for said end walls having longitudinal slots therein, adjustably secured to said plate by bolts arranged in said slots; clamps arranged through suitable perforations in said plate engaging the wall opposite thereto, for clamping said mold-walls to said plate; a top plate; clamps arranged to engage the same and said face-plate; a car; a track therefor; supporting-links therefor arranged on said frame in pairs; a lever for adjusting said links; and means for locking said lever in its adjusted positions, for the purpose specified.

2. In a molding-machine, the combination of a frame; a plate journaled on said frame; a lever for adjusting and holding said plate in its adjusted positions; brackets having slots therein adjustably secured to said plate by bolts arranged in said slots; a mold face-plate

arranged on said brackets; brackets having slots therein adjustably secured to said first-named brackets by bolts arranged in said slots; a mold-wall arranged on edge thereon; end walls arranged between said plate and wall resting on said face-plate; L-shaped supports for said end walls having longitudinal slots therein, adjustably secured to said plate by bolts arranged in said slots; clamps arranged through suitable perforations in said plate engaging the wall opposite thereto, for clamping said mold-walls to said plate; a top plate; and clamps arranged to engage the same and said face-plate, for the purpose specified.

3. In a molding-machine, the combination of a frame; a lever for adjusting and holding said plate in its adjusted positions; brackets having slots therein adjustably secured to said plate by bolts arranged in said slots; a mold face-plate arranged on said brackets; brackets having slots therein adjustably secured to said first-named brackets by bolts arranged in said slots; a mold-wall arranged on edge thereon; end walls arranged between said plate and wall resting on said face-plates; L-shaped supports for said end walls having longitudinal slots therein, adjustably secured to said plate by bolts arranged in said slots; clamps for clamping said mold-walls to said plate; a top plate; clamps arranged to engage the same and said face-plate; a car; a track therefor; supporting-links therefor arranged on said frame in pairs; a lever for adjusting said links; and means for locking said lever in its adjusted positions, for the purpose specified.

4. In a molding-machine, the combination of a frame; a plate journaled on said frame; a lever for adjusting and holding said plate in its adjusted positions; brackets having slots therein adjustably secured to said plate by bolts arranged in said slots; a mold face-plate arranged on said brackets; brackets having slots therein adjustably secured to said first-named brackets by bolts arranged in said slots; a mold-wall arranged on edge thereon; end walls arranged between said plate and wall resting on said face-plate; L-shaped supports for said end walls having longitudinal slots therein, adjustably secured to said plate by bolts arranged in said slots; clamps for clamping said mold-walls to said plate; a top plate; and clamps arranged to engage the same and said face-plate, for the purpose specified.

5. In a molding-machine, the combination of a frame; a plate journaled on said frame; a lever for adjusting and holding said plate in its adjusted positions; brackets having slots therein adjustably secured to said plate by bolts arranged in said slots; a mold face-plate arranged on said brackets; brackets having slots therein adjustably secured to said first-named brackets by bolts arranged in said

slots; a mold-wall arranged on edge thereon; end walls arranged between said plate and wall resting on said face-plate; L-shaped supports for said end walls having longitudinal slots therein, adjustably secured to said plate by bolts arranged in said slots; clamps arranged through suitable perforations in said plate engaging the wall opposite thereto, for clamping said mold-walls to said plate; a car; a track therefor; supporting-links therefor arranged on said frame in pairs; a lever for adjusting said links; and means for locking said lever in its adjusted positions, for the purpose specified.

6. In a molding-machine, the combination of a frame; a plate journaled on said frame; a lever for adjusting and holding said plate in its adjusted positions; brackets having slots therein adjustably secured to said plate by bolts arranged in said slots; a mold face-plate arranged on said brackets; brackets having slots therein adjustably secured to said first-named brackets by bolts arranged in said slots; a mold-wall arranged on edge thereon; end walls arranged between said plate and wall resting on said face-plate; L-shaped supports for said end walls having longitudinal slots therein, adjustably secured to said plate by bolts arranged in said slots; and clamps arranged through suitable perforations in said plate engaging the wall opposite thereto, for clamping said mold-walls to said plate; for the purpose specified.

7. In a molding-machine, the combination of a frame; a plate journaled on said frame; a lever for adjusting and holding said plate in its adjusted positions; brackets having slots therein adjustably secured to said plate by bolts arranged in said slots; a mold face-plate arranged on said brackets; brackets having slots therein adjustably secured to said first-named brackets by bolts arranged in said slots; a mold-wall arranged on edge thereon; end walls arranged between said plate and wall resting on said face-plate; L-shaped supports for said end walls having longitudinal slots therein, adjustably secured to said plate by bolts arranged in said slots; clamps for clamping said mold-walls to said plate; a car; a track therefor; supporting-links therefor arranged on said frame in pairs; a lever for adjusting said links; and means for locking said lever in its adjusted positions, for the purpose specified.

8. In a molding-machine, the combination of a frame; a plate journaled on said frame; a lever for adjusting and holding said plate in its adjusted positions; brackets having slots therein adjustably secured to said plate by bolts arranged in said slots; a mold face-plate arranged on said brackets; brackets having slots therein adjustably secured to said first-named brackets by bolts arranged in said slots; a mold-wall arranged on edge thereon; end walls arranged between said plate and

5 wall resting on said face-plate; L-shaped supports for said end walls having longitudinal slots therein, adjustably secured to said plate by bolts arranged in said slots; and clamps for clamping said mold-walls to said plate; for the purpose specified.

9. In a molding-machine, the combination of a frame; a plate journaled on said frame; a lever for adjusting and holding said plate in its adjusted positions; brackets adjustably secured to said plate; a mold-wall arranged on said brackets; brackets adjustably secured to said first-named brackets; a mold-wall arranged on edge thereon; end walls arranged between said plate and wall; supports for said end walls adjustably secured to said plate; clamps arranged through suitable perforations in said plate engaging the wall opposite thereto, for clamping said mold-walls to said plate; a top plate; clamps arranged to engage the same and said wall; a car; a track therefor; supporting-links therefor arranged on said frame in pairs; a lever for adjusting said links; and means for locking said lever in its adjusted positions, for the purpose specified.

10. In a molding-machine, the combination of a frame; a plate journaled on said frame; a lever for adjusting and holding said plate in its adjusted positions; brackets adjustably secured to said plate; a mold-wall arranged on said brackets; brackets adjustably secured to said first-named brackets; a mold-wall arranged on edge thereon; end walls arranged between said plate and wall; supports for said end walls adjustably secured to said plate; clamps arranged through suitable perforations in said plate engaging the wall opposite thereto, for clamping said mold-wall to said plate; a top plate; and clamps arranged to engage the same and said wall, for the purpose specified.

11. In a molding-machine, the combination of a frame; a plate journaled on said frame; a lever for adjusting and holding said plate in its adjusted positions; brackets adjustably secured to said plate; a mold-wall arranged on said brackets; brackets adjustably secured to said first-named brackets; a mold-wall arranged on edge thereon; end walls arranged between said plate and wall; supports for said end walls adjustably secured to said plate; clamps for clamping said mold-walls to said plate; a top plate; clamps arranged to engage the same and said wall; a car; a track therefor; supporting-links therefor arranged on said frame in pairs; a lever for adjusting said links; and means for locking said lever in its adjusted positions, for the purpose specified.

12. In a molding-machine, the combination of a frame; a plate journaled on said frame; a lever for adjusting and holding said plate in its adjusted positions; brackets adjustably secured to said plate; a mold-wall

arranged on said brackets; brackets adjustably secured to said first-named brackets; a mold-wall arranged on edge thereon; end walls arranged between said plate and wall; supports for said end walls adjustably secured to said plate; clamps for clamping said mold-walls to said plate; a top plate; and clamps arranged to engage the same and said wall; for the purpose specified.

13. In a molding-machine, the combination of a frame; a plate journaled on said frame; a lever for adjusting and holding said plate in its adjusted positions; brackets adjustably secured to said plate; a mold-wall arranged on said brackets; brackets adjustably secured to said first-named brackets; a mold-wall arranged on edge thereon; end walls arranged between said plate and wall; supports for said end walls adjustably secured to said plate; clamps arranged through suitable perforations in said plate engaging the wall opposite thereto, for clamping said mold-walls to said plate; a car; a track therefor; supporting-links therefor arranged on said frame in pairs; a lever for adjusting said links; and means for locking said lever in its adjusted positions, for the purpose specified.

14. In a molding-machine, the combination of a frame; a plate journaled on said frame; a lever for adjusting and holding said plate in its adjusted positions; brackets adjustably secured to said plate; a mold-wall arranged on said brackets; brackets adjustably secured to said first-named brackets; a mold-wall arranged on edge thereon; end walls arranged between said plate and wall; supports for said end walls; adjustably secured to said plate; clamps for clamping said mold-walls to said plate; a car; a track therefor; supporting-links therefor arranged on said frame in pairs; a lever for adjusting said links; and means for locking said lever in its adjusted positions, for the purpose specified.

15. In a molding-machine, the combination of a frame; a plate journaled on said frame; a lever for adjusting and holding said plate in its adjusted positions; brackets adjustably secured to said plate; a mold-face arranged on said brackets; brackets adjustably secured to said first-named brackets; a mold-wall arranged on edge thereon; end walls arranged between said plate and wall; supports for said end walls adjustably secured to said plate; and clamps arranged through suitable perforations in said plate engaging the wall opposite thereto, for clamping said mold-walls to said plate, for the purpose specified.

16. In a molding-machine, the combination of a frame; a plate journaled on said frame; a lever for adjusting and holding said plate in its adjusted positions; brackets adjustably secured to said plate; a mold-wall arranged on said brackets; brackets adjustably secured to said first-named brackets; a

mold-wall arranged on edge thereon; end walls arranged between said plate and wall; supports for said end walls adjustably secured to said plate; and clamps for clamping said mold-walls to said plate, for the purpose specified.

17. In a molding-machine, the combination of a frame; a plate journaled on said frame; means for adjusting said plate on its journals; brackets on said plate; a mold face-plate arranged on said brackets; a wall arranged on edge; end walls arranged between said plate and wall resting on said face-plate; clamps arranged through suitable perforations in said plate engaging the opposite wall for clamping said mold-walls thereto; a top plate; clamps arranged to engage the same and said face-plate for securing said walls together when released from said plate; a car; a track therefor; supporting-links therefor arranged on said frame in pairs; a lever for adjusting said links; and means for locking said lever in its adjusted positions, for the purpose specified.

18. In a molding-machine, the combination of a frame; a plate journaled on said frame; means for adjusting said plate on its journals; brackets on said plate; a mold face-plate arranged on said brackets; a wall arranged on edge; end walls arranged between said plate and wall resting on said face-plate; clamps arranged through suitable perforations in said plate engaging the opposite wall, for clamping said mold-walls thereto; a top plate; clamps arranged to engage the same and said face-plate for securing said walls together when released from said plate; a car; a track therefor; and means for raising and lowering said track, for the purpose specified.

19. In a molding-machine, the combination of a frame; a plate journaled on said frame; means for adjusting said plate on its journals; brackets on said plate; a mold face-plate arranged on said brackets; a wall arranged on edge; end walls arranged between said plate and wall resting on said face-plate; clamps arranged through suitable perforations in said plate engaging the opposite wall, for clamping said mold-walls thereto; a top plate; and clamps arranged to engage the same and said face-plate for securing said walls together when released from said plate, for the purpose specified.

20. In a molding-machine, the combination of a frame; a plate journaled on said frame; means for adjusting said plate on its journals; brackets on said plate; a mold face-plate arranged on said brackets; a wall arranged on edge; end walls arranged between said plate and wall resting on said face-plate; clamps arranged through suitable perforations in said plate engaging the wall opposite, for clamping said mold-walls thereto; a car; a track therefor; supporting-links therefor arranged on said frame in pairs; a lever for

adjusting said links; and means for locking said lever in its adjusted positions, for the purpose specified.

21. In a molding-machine, the combination of a frame; a plate journaled on said frame; means for adjusting said plate on its journals; brackets on said plate; a mold face-plate arranged on said brackets; a wall arranged on edge; end walls arranged between said plate and wall resting on said face-plate; clamps arranged through suitable perforations in said plate engaging the opposite wall, for clamping said mold-walls thereto; a car; a track therefor; and means for raising and lowering said track, for the purpose specified.

22. In a molding-machine, the combination of a frame; a plate journaled on said frame; means for adjusting said plate on its journals; brackets on said plate; a mold face-plate arranged on said brackets; a wall arranged on edge; end walls arranged between said plate and wall resting on said face-plate; and clamps arranged through suitable perforations in said plate engaging the opposite wall, for clamping said mold-walls thereto; for the purpose specified.

23. In a molding-machine, the combination of a frame; a plate journaled on said frame; means for adjusting said plate on its journals; brackets on said plate; a plate or mold-wall arranged on said brackets; a wall arranged on edge; end walls arranged between said plate and walls; means for detachably securing said walls to said plate; a top plate; clamps for securing said walls together when released from said plate; a car; a track therefor; supporting-links therefor arranged on said frame in pairs; a lever for adjusting said links; and means for locking said lever in its adjusted positions, for the purpose specified.

24. In a molding-machine, the combination of a frame; a plate journaled on said frame; means for adjusting said plate on its journals; brackets on said plate; a plate or mold-wall arranged on said brackets; a wall arranged on edge; end walls arranged between said plate and walls; means for detachably securing said walls to said plate; a top plate; clamps for securing said walls together when released from said plate; a car; a track therefor; and means for raising and lowering said track, for the purpose specified.

25. In a molding-machine, the combination of a frame; a plate journaled on said frame; means for adjusting said plate on its journals; brackets on said plate; a plate or mold-wall arranged on said brackets; a wall arranged on edge; end walls arranged between said plate and walls; means for detachably securing said walls to said plate; a top plate; clamps for securing said walls together when released from said plate; for the purpose specified.

26. In a molding-machine, the combina-

tion of a frame; a plate journaled on said frame; means for adjusting said plate on its journals; brackets on said plate; a plate or mold-wall arranged on said brackets; a wall
5 arranged on edge; end walls arranged between said plate and walls; means for detachably securing said walls to said plate; a car; a track therefor; supporting-links therefor arranged on said frame in pairs; a lever
10 for adjusting said links; and means for locking said lever in its adjusted positions, for the purpose specified.

27. In a molding-machine, the combination of a frame; a plate journaled on said
15 frame; means for adjusting said plate on its journals; brackets on said plate; a plate or mold-wall arranged on said brackets; a wall arranged on edge; end walls arranged between said plate and walls; means for detachably securing said walls to said plate; a
20 car; a track therefor; and means for raising and lowering said track, for the purpose specified.

28. In a molding-machine, the combination of a frame; a plate journaled on said
25 frame; means for adjusting said plate on its journals; brackets on said plate; a plate or mold-wall arranged on said brackets; a wall arranged on edge; end walls arranged between said plate and walls; and means for detachably securing said walls to said plate;
30 for the purpose specified.

29. In a molding-machine, the combination of a frame; a plate journaled on said
35 frame; means for adjusting said plate on its journals; plate-like mold-walls; means for detachably securing said walls to said plate to form a mold; a top plate; means for securing said walls together when released from
40 said plate; a car; a track therefor; supporting-links therefor arranged on said frame in pairs; a lever for adjusting said links; and means for locking said lever in its adjusted positions, for the purpose specified.

30. In a molding-machine, the combination of a frame; a plate journaled on said
45 frame; means for adjusting said plate on its journals; plate-like mold-walls; means for detachably securing said walls to said plate to form a mold; a top plate; means for securing said walls together when released from said
50 plate; a car; a track therefor; and means for raising and lowering said track, for the purpose specified.

31. In a molding-machine, the combination of a frame; a plate journaled on said
55 frame; means for adjusting said plate on its journals; plate-like mold-walls; means for detachably securing said walls to said plate to form a mold; a top plate; means for securing said top plate and walls together when released from said plate; for the purpose
60 specified.

32. In a molding-machine, the combina-

tion of a frame; a plate journaled on said
65 frame; means for adjusting said plate on its journals; plate-like mold-walls; means for detachably securing said walls to said plate to form a mold; a car; a track therefor; supporting-links therefor arranged on said frame
70 in pairs; a lever for adjusting said links; and means for locking said lever in its adjusted positions, for the purpose specified.

33. In a molding-machine, the combination of a frame; a plate journaled on said
75 frame; means for adjusting said plate on its journals; plate-like mold-walls; means for detachably securing said walls to said plate to form a mold; a car; a track therefor; and means for raising and lowering said tracks,
80 for the purpose specified.

34. In a molding-machine, the combination of a frame; a plate journaled on said
frame; means for adjusting said plate on its journals; plate-like mold-walls; means for detachably securing said walls to said plate to
85 form a mold, and means for securing said mold-walls together when released from said plate, for the purpose specified.

35. In a molding-machine, the combination of a frame; a plate journaled on said
90 frame; means for adjusting said plate on its journals; a mold; means for detachably securing said mold to said plate; a car; a track therefor; and means for raising and lowering
95 said track, for the purpose specified.

36. In a molding-machine, the combination of a frame; a plate journaled on said
frame; means for adjusting said plate on its journals; a mold; means for detachably securing said mold to said plate, for the purpose
100 specified.

37. In a molding-machine, the combination of a frame; a plate journaled on said
105 frame; means for adjusting said plate on its journals; brackets on said plate; a mold face-plate arranged on said brackets; a wall arranged on edge; end walls arranged between said plate and wall resting on said face-plate; clamps arranged through suitable perforations in said plate engaging the wall opposite
110 thereto, for clamping said mold-walls thereto; a top mold-wall; clamps arranged to engage the same and said face-plate for securing said walls together when released from said plate; and an open-ended shell-like core of a length
115 to extend from wall to wall when arranged in the mold, for the purpose specified.

38. In a molding-machine, the combination of a frame; a plate journaled on said
120 frame; means for adjusting said plate on its journals; brackets on said plate; a mold face-plate arranged on said brackets; a wall arranged on edge; end walls arranged between said plate and wall resting on said face-plate; and clamps arranged through suitable perforations in said plate engaging the wall opposite thereto, for clamping said mold-walls
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thereto; and an open-ended shell-like core of a length to extend from wall to wall when arranged in the mold, for the purpose specified.

39. In a molding-machine, the combination of a frame; a plate journaled on said frame; means for adjusting said plate on its journals; plate-like mold-walls; means for detachably securing said walls to said plate to form a mold; a top plate; means for securing said walls and top plate together when released from said plate; and an open-ended shell-like core of a length to extend from wall to wall when arranged in said mold, for the purpose specified.

40. In a molding-machine, the combination of a frame; a plate journaled on said frame; means for adjusting said plate on its journals; plate-like mold-walls; means for detachably securing said walls to said plate

to form a mold; and an open-ended shell-like core of a length to extend from wall to wall when arranged in said mold so that the ends of the core are sealed by the walls when in position, for the purpose specified.

41. In a mold, the combination of plate-like mold-walls; means for detachably securing said walls together form a mold; and an open-ended shell-like core of a length to extend from wall to wall when arranged in said mold so that the ends of the core are sealed by the walls when in position, for the purpose specified.

In witness whereof I have hereunto set my hand and seal in the presence of two witnesses.

EVERT W. THOMPSON. [L. s.]

Witnesses:

DAVID KAY,
GOTTLIEB E. HELLE.