





# UNITED STATES PATENT OFFICE.

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## BRICK-MACHINE.

No. 832,404.

Specification of Letters Patent.

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*To all whom it may concern:*

Be it known that I, DAVID F. McDONALD, a citizen of the United States, and a resident of Lake Butler, in the county of Bradford and State of Florida, have made certain new and useful Improvements in Brick-Machines, of which the following is a specification.

My invention is an improvement in molds or machines for use in making brick or building-blocks out of cement compositions, such as sand and cement; and the invention consists in certain novel constructions and combinations of parts, as will be hereinafter described and claimed.

In the drawings, Figure 1 is a perspective view of my machine with the mold closed ready to receive the cement composition. Fig. 2 is a top plan view of the machine with the mold open in full lines and closed, in dotted lines. Fig. 3 is a detail view of the latch for holding the mold closed, and Fig. 4 is a detail perspective view illustrating one of the mold-sections.

As shown, my machine comprises the main frame A, mold-sections B, and levers C, carrying the mold-sections B.

The main frame A comprises the side sills A', the front cross-bar A<sup>2</sup>, the rear cross-bar A<sup>3</sup>, and the mold-supporting cross-bars A<sup>4</sup>, provided with a batten A<sup>5</sup>, extending between the bars A<sup>4</sup> and forming a stop against which the bottom plate D of the mold rests when the said bottom plate is supported upon the bars A<sup>4</sup>, as shown in Figs. 1 and 2.

The mold is divided into sections opening from corner to corner, and each section B of the mold having a side plate B' and an end plate B<sup>2</sup>, together with a connecting-plate B<sup>3</sup>, the latter connecting the inner end of the side plate B' with the respective levers C and having a flange B<sup>4</sup> to facilitate such connection and the section B being also provided at the juncture of its side plate B' and end plate B<sup>2</sup>, with a flange extension B<sup>5</sup>, bolted to the lever C, as shown in the drawings.

The levers C are pivoted at C' to the rear cross-bar A<sup>3</sup> and are held movably at their other ends in keepers a<sup>2</sup>, mounted upon the front cross-bar A<sup>2</sup>, the said bar being provided at its middle with a block a<sup>3</sup>, which operates to limit the movement of the levers C toward each other. The levers, it will be noticed, may be moved on their pivots C' between the positions shown in Figs. 1 and 2, and when closed to the position shown in Fig. 1 they may be secured by any suitable

form of latch. In Fig. 3 I show in detail one form of latch which may be utilized for holding the levers in the position shown in Fig. 1 when the mold is closed. This comprises a shaft E, journaled at E' upon the front cross-bar A<sup>2</sup> and provided at its ends with crank projections E<sup>2</sup>, which project down along the outer sides of the levers C when the said levers are closed and the latch is adjusted to the position shown in full lines in Fig. 1 and indicated in dotted lines in Fig. 2. Manifestly any suitable form of latch may be employed for this purpose, that shown and provided with the intermediate handle portion e may be found convenient for the purpose.

As best shown in Fig. 4, it may be preferred to make the mold-sections of a double thickness of metal bent to form the connecting portion B<sup>3</sup> and the side plate B' and having the end plates B<sup>2</sup> returned, whereby said end plates are formed of a double thickness of metal and then extended to provide the uniting-flange B<sup>5</sup>. By this construction the end plates B<sup>2</sup> are of sufficient strength to retain their position against the tamping action, being for such purpose doubled, as before described, the side plates B' being arranged to abut at one end the inner sides of the levers C and being braced at their other ends by the connecting-plates B<sup>3</sup>, as will be understood from the drawings.

In operation the sand and cement of which it is designed to make the bricks may be dampened until it can be tamped into a solid mass. The bottom or pallet D being placed in position and the handles operated to adjust the levers to the position shown in Fig. 1, the sand and cement may be placed in the mold and tamped until the mold is full. Then the levers may be spread to open the mold, leaving the brick on the pallet, which can be removed with the brick and the latter left to dry and harden. If desired, this may be on the pallet on which the brick has been tamped, pallets being provided for the separate bricks, the said pallets being removable from the machine and easily reapplied, as will be understood from the foregoing description.

It will be noticed the machine is quite simple, can be made at a small expense, can be easily supported on any suitable form of stand, and will be found quite useful in isolated places where it is not convenient or practicable to have large costly machines.

Manifestly cores of any suitable shape may be inserted when it is desired to make hollow



building - blocks, as is well known to those skilled in the art.

The opening of the mold from corner to corner is an important feature of my invention, as well as the construction of mold-sections, whereby they are secured to the levers in such manner as to permit the opening of the mold from corner to corner, the levers being so pivoted as to facilitate the spreading or opening of the mold when formed in the manner as shown and before described.

Manifestly it may be desirable in practice to make the mold-sections of castings, in which event the side plate, end plate, and connecting-plate of each section may be cast integral.

I claim—

1. The mold herein described for building-blocks comprising a main frame having side sills, a rear cross-bar, a front cross-bar having keepers for the mold-levers and a central block forming a stop to limit the inward movement of said levers, the bars upon the side sills between the cross-bars and forming a support for the mold bottom or pallet, the levers pivoted to the rear cross-bar and projecting through the keepers of the front cross-bar, the mold opening from corner to corner and comprising the sections consisting of plates of metal bent forming the side plates, the end plates returned and extended to form a flange for connection with the respective lever, and a connecting-plate between the other end of the side plate and the lever, substantially as set forth.

2. In a machine for molding building-blocks, a mold opening from corner to corner

and consisting of sections each having a side plate an end plate and a connecting portion projecting outwardly from the side plate at the end thereof opposite the end plate and movable support to which said sections are secured, substantially as set forth.

3. The combination of a main frame, the levers pivoted at one end and the mold arranged to open from corner to corner and consisting of the two sections secured to their respective levers, each section comprising a side plate, an end plate at one end of the side plate and a connecting-plate at the other end of the side plate and extending between the same and the lever substantially as set forth.

4. A mold for building-blocks arranged to open from corner to corner and consisting of two separable sections each having a side plate, an end plate at one end of the side plate and returned and extended to form a flange for connection with the supporting device and a connecting-plate at the opposite end of the end plate, substantially as set forth.

5. A machine for molding building-blocks comprising a pair of levers and mold-sections secured to their respective levers and comprising each a side plate, an end plate at one end of the side plate, the other end of the side plate being spaced away from its lever, and devices extending between and connecting such ends of the side plates and their levers, substantially as set forth.

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Witnesses:

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