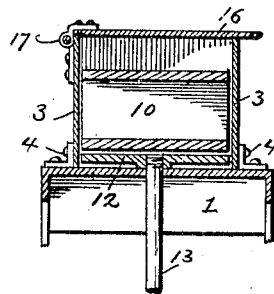
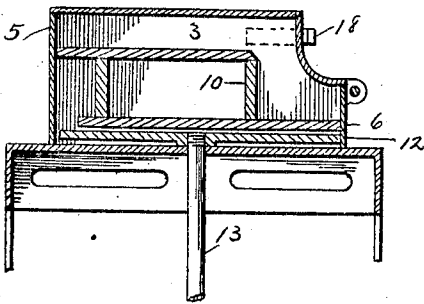
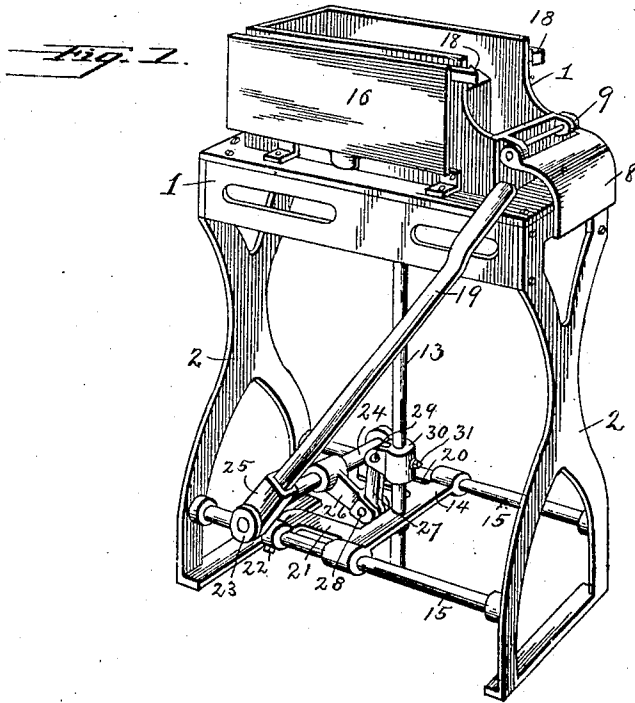


No. 849,704.

PATENTED APR. 9, 1907.

A. O. THOMAS.
CONCRETE BLOCK MACHINE.
APPLICATION FILED MAY 19, 1906.



Witnesses

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AUGUSTUS O. THOMAS, OF KEARNEY, NEBRASKA.

CONCRETE-BLOCK MACHINE.

No. 849,704.

Specification of Letters Patent.

Patented April 9, 1907.

Application filed May 19, 1906. Serial No. 317,844.

To all whom it may concern:

Be it known that I, AUGUSTUS O. THOMAS, a citizen of the United States, residing at Kearney, in the county of Buffalo and State of Nebraska, have invented certain new and useful Improvements in Concrete-Block Machines, of which the following is a specification.

This invention relates to new and useful improvements in concrete-block machines; and it particularly contemplates a machine for molding a block of unique construction and means for ejecting the block from the mold.

The invention specifically comprises a mold formed with movable walls, which at the completion of the molding operation are disassembled to allow the removal of the block from the mold through the agency of the ejector.

The detailed construction will appear on the course of the following description, reference being had to the accompanying drawings, forming a part of this specification, like numerals designating like parts throughout the several views, wherein—

Figure 1 is a perspective view illustrating a machine constructed in accordance with my invention. Fig. 2 is a longitudinal section taken through the mold and showing the arrangement of the constituent parts thereof, together with the block-ejecting device; and Fig. 3 is a transverse section of the same.

In the practical embodiment of my invention I employ a suitable mold-support comprising a table 1, supported upon vertical legs 2. The mold proper is mounted upon table 1 and comprises stationary vertical sides 3, arranged in spaced parallel relation and supported from said table by connection with angular securing-slips 4. The mold further comprises a rear end wall 5, coextensive in height with the side walls 3, and a front end wall 6, of less height than the walls 3.

The mold, as shown, is especially designed for the formation of blocks comprising parallel extended members united by a diagonal or transverse web, and to this end in the formation of a block of such contour the side walls 3 are curved along a portion of their front edges, as at 7, and the space between said curved portion 7 is closed by a curved front wall 8, suitably hinged, as at 9, to the wall 6. The bottom of the mold is constituted of a movable pallet 10, which for the sake of lightness is preferably made hollow

and has its upper face shaped to conform to the contour of one of the faces of the block to be produced. The pallet 10 fits snugly within the mold and has its edges in contacting relation with the adjacent mold sides, so as to prevent the escape or dislodgment of the plastic material. The pallet rests loosely upon a follower 12, movable within the mold-body, and carried upon the end of a movable rod 13, extending through the table 1. The rod 13 is guided in its vertical movement by its passage through a transverse brace 14, secured to the cross-arms 15, which unite legs 2. The mold further comprises a top 16 hinged, as at 17, to one of the side walls 3. The front wall 8 is secured in its closed position by resilient or other suitable catches 18, carried upon the respective side walls 3 and positively engaging the wall 8.

The means for moving the rod 13 comprises suitable connecting elements operated by a hand-lever 19. The transverse brace 14 is provided with rearward extensions 20, which are formed with integral collars 21, surrounding the cross-arms 15 and adjustably held thereon by a set-screw 22 engaging said cross-arms. The collars 21 are formed with apertured brackets 23, arranged adjacent each cross-arm 15 in aligned relation serving as bearings for a transversely-journaled rock-shaft 24, which carries at one of its ends an upstanding socket 25 for the reception of the lever 19. The rod 13 is directly actuated through the medium of toggle-links 26 and 27, having pivotal connection with one another, as at 28. The link 26 is rigidly carried by the shaft 24, and the link 27 has pivotal connection at its end, as at 29, with a collar 30, sleeved upon the rod 13 and adjustably positioned thereon by a set-screw 31.

In practical use the parts of the mold are relatively disposed, as shown in Fig. 1, wherein the front wall 8 and the top 16 are open. The pallet 10 is introduced into the mold and rests upon the plate 12, and the front wall 8 is moved to close upon the mold. Plastic material is introduced into the mold until the latter is filled, and the material is then tamped. The top 16 is then closed upon the material, and the latter is allowed to set. The block produced will possess the dimensions and configuration of the space between the pallet 10 and the walls of the mold.

When the material has become set, the top 16 is opened and the front wall 8 moved to

the position of Fig. 1, so that an unobstructed passage is left through the top of the mold for the removal of the block therefrom. This operation is effected by moving the lever 19 in the proper direction, rocking the shaft 24 and through the medium of the connecting toggle-links 26 and 27 raising the rod 13 vertically, which lifts the plate 12 and the pallet 10 to a point above the mold, whereby the block produced may be removed from said pallet in any desired manner.

The disclosure of some of the elements of the invention is purely arbitrary and is to be regarded in the light of example rather than of enumeration. For instance, the form of the pallet, the general contour of the mold, and the mode of operation of the block-ejecting device may be varied or altered to suit the exigencies of existing circumstances and uses.

In the preferred embodiment of the invention the various component parts are made of iron for the purpose of adding strength and durability to the structure.

Having fully described my invention, I claim—

1. A block-molding machine comprising a mold-box and a vertically-movable pallet therein, said pallet comprising two horizontal sections arranged in different vertical planes and joined by a connecting member, the said horizontal sections extending in opposite directions from said planes, and said mold-box having a movable portion adapted to overlie the lower pallet-section and be rigidly held in such position when the said box is arranged for the reception of material to

be molded and to be moved away from said position when the molded material is to be removed from said box.

2. A block-molding machine comprising a mold-box and a movable pallet therein, said mold-box having a curved movable portion arranged at one end thereof and adapted to overlie said pallet and be rigidly held in such position when the said box is arranged for the reception of material to be molded and to give shape to a portion of the top of the block molded in said machine.

3. A block-molding machine comprising a stationary rectangular mold-box formed with four rigid lateral walls, a curved inwardly-extending wall-section pivoted to one of said walls and when in its closed position engaging portions of the adjacent side walls to produce a mold having a portion thereof covered over at the top to give shape to a portion of the top of the block to be molded in said box, said pivoted wall-section being adapted to be thrown out of engagement with said side walls, and means movable within said stationary walls for vertically ejecting a block from the mold when the pivoted wall-section is out of engagement with the said walls, substantially as described.

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

AUGUSTUS O. THOMAS.

Witnesses:

MILDRED S. JOHNSON,
VIRGINIA MERCER.