

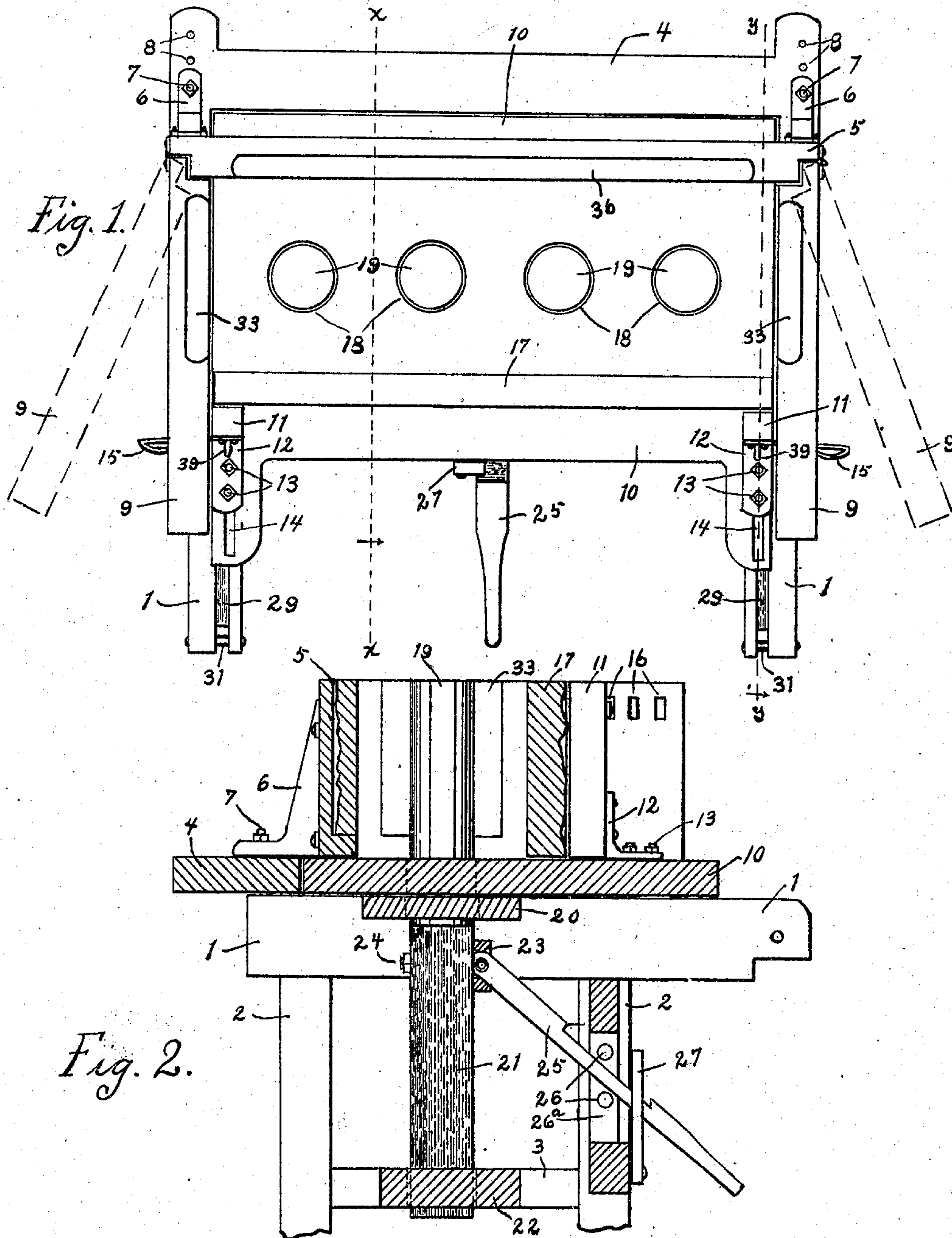
No. 848,091.

PATENTED MAR. 26, 1907.

G. W. DUNMORE.
CONCRETE BUILDING BLOCK MACHINE.

APPLICATION FILED MAR. 2, 1906.

2 SHEETS—SHEET 1.



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GEORGE W. DUNMORE, OF STERLING, ILLINOIS.

CONCRETE-BUILDING-BLOCK MACHINE.

No. 848,091.

Specification of Letters Patent.

Patented March 26, 1907.

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To all whom it may concern:

Be it known that I, GEORGE W. DUNMORE, a citizen of the United States, residing at Sterling, in the county of Whiteside and State of Illinois, have invented certain new and useful Improvements in Concrete-Building-Block Machines; and I do 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention has reference to concrete-building-block machines, and is specially designed for the manufacture of blocks of that description which are formed with one or more central hollow spaces.

As the product of a machine of this class is generally heavy and somewhat difficult to handle, it is therefore desirable that the construction and operation of the machine be such as to permit the perfected blocks to be easily handled and removed from the machine. In my device this can be accomplished with the greatest ease and convenience. It is also possible in my invention to vary the width of the mold so as to increase or diminish the thickness of the block and at the same time maintain the position of the hollow spaces centrally of the block.

Other novel and desirable features will be more fully set forth in the following specifications, reference being had to the drawings accompanying the same.

In the drawings, Figure 1 is a plan view of my device. Fig. 2 is a vertical cross-section in the line *x x* of Fig. 1. Fig. 3 is a similar view in the line *y y* of Fig. 1. Fig. 4 is an enlarged detail showing a portion of one of the ends 9. Fig. 5 is a vertical transverse section of the mold.

Similar numbers refer to similar parts throughout the several figures.

1 represent the side pieces of the frame, supported on legs 2, each pair of legs being united by a cross-bar 3. Supported on the rear ends of the side pieces 1 is a cross-plate 4, and fixed to said cross-plate is the back 5 of the mold by means of a pair of braces 6, attached to the back 5 and secured to the plate 4 by means of bolts 7, passing through one of series of holes 8 in said plate. Hinged to the ends of the back 5 so as to swing outwardly, as shown in broken lines in

Fig. 1, is a pair of end pieces 9. 10 is a movable bottom for the mold, supported on the side pieces 1, as hereinafter shown, and extending rearwardly beneath the back 5. Fixed on the bottom 10 is a pair of posts 11 by means of supports 12, attached to the front faces of the posts 11 and secured to the bottom plate 10 by bolts 13, held in slots 14 in such plate. Each of the posts 11 is provided near its top with a spring-catch 15, adapted to engage one of a series of openings 16 in the end 9 adjacent thereto and hold such end normally in a closed position. A front piece or plate 17 is loosely supported on the bottom 10 against the posts 11.

Centrally of the bottom 10 is a series of openings 18, permitting the upward movement of a series of cores 19. Below the bottom 10 a cross-plate 20 is supported by the side pieces 1 and provided with openings similar to and corresponding with the holes 18, permitting the passage of the cores 19 below the plate 10. Such cores are provided at their lower ends with guides 21, extending downwardly through perforations in a cross-plate 22, supported at its ends by the cross-pieces 3. The guides 21 are united by a cross-bar 23, through which bar and each of the guides pass bolts 24. (Only one shown.) A hand-lever 25 is pivotally secured to the bar 23 midway the ends thereof and supported between a pair of rollers 26 in a cross-plate 26^a, supported between the front pair of legs of the machine. The forward end of the lever 25 can be locked from upward movement when at its lowest position by means of a catch 27.

The bottom plate 10 has fixed to its lower face a pair of guides 28, Fig. 3, having longitudinal movement in channels 29 in the side pieces 1. Each of the guides 28 is provided with a slot 30, adapted to engage pins 31 in the forward ends of the channels 29 on the forward movement of such guides. To facilitate the movement of such guides and the parts thereto attached, the bottoms of the channels 29 can each be provided with a series of small rollers 32, if desired.

Each of the end pieces 9 is provided with a reversible plate 33, held in a recess 34 of corresponding shape, one side of such plate being plain and the other side being provided with a pattern 35, which may be in imitation of rock-face blocks or other design. The back 5 is similarly provided with a plate 36, having a pattern 37 on one of its faces,

and the front piece 17 can have one of its faces similarly carved, as shown at 38. In the formation of the block all of the plain faces may be used, if desired, or as many of the pattern-faces as may be necessary to produce the desired result.

Each of the posts 11 can be provided with a handle 39 to add to the convenience of operation of the machine.

The operation of the machine is as follows: The ends of the mold are closed against the post 11, and the front piece 17 placed in position to complete the mold. The lever 25 is then operated to elevate the cores 19 and locked with such cores held at the highest point, as shown in Fig. 2. The mold is then filled with the plastic material in the usual manner. Upon the formation of the block the lever 25 is released and the cores 19 moved downwardly until they are clear of the bottom 10. The end pieces 9 are next released and swung outwardly, and the bottom 10, with the perfected block thereon, is then drawn forwardly until it upsets, ending in the position shown in broken lines in Fig. 3. In this position the block is supported on the front piece 17 of the mold, such piece being further employed in lifting the block from the machine and transporting it to a point where, after it has sufficiently set, it can be removed from its support. In the formation of successive blocks of stone it will be necessary to use a number of the front pieces 17.

If it is desired to increase the thickness of the block which is to be manufactured, this can be accomplished by moving the back rearwardly and securing the bolts 7 in another pair of holes 8. The posts 11 are moved forwardly a corresponding distance and secured in their new position, whereby the positions of the cores 19 centrally of the mold is maintained. The new adjustment of the posts 11 is such that the catches 15 will engage another pair of the openings 16.

If desired, one or more of the cores 19 can be used by disengaging the remainder thereof from the cross-plate 23.

It will be seen that after the formation of the stone block it can be quickly and easily removed from the machine, the weight of the stone itself assisting in the upsetting of those parts by which it is supported.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

1. In a machine of the class described, the combination with a frame, of a mold comprising a back and ends secured to the frame,

a bottom plate slidable in said frame and carrying the mold-front, and means whereby said bottom plate may be slid from the mold and turned to assume a vertical position.

2. In a machine of the character described, a frame, a mold comprising a back and ends mounted on said frame, a bottom plate slidable in the frame and carrying the mold-front, and provided with a slot, said bottom plate being adapted to be slid from beneath the mold to bring the end of the slot into engagement with a portion of the frame upon which the bottom plate may be turned to a vertical position.

3. In a machine of the character described, a frame, a mold comprising a back and end plates thereon, a mold-bottom carrying the mold-front, a pivot member on the frame, and means whereby the mold-bottom may be slid from beneath the mold into engagement with the pivot member and turned to a vertical position thereon.

4. In a machine of the character described, a frame, a mold comprising a back and end plates thereon, a mold-bottom carrying the mold-front, a pivot member on the frame, and means whereby the mold-bottom may be slid from beneath the mold into engagement with the pivot member and turned to a vertical position thereon and supported solely thereby.

5. In a machine of the character described, a mold comprising a back and side walls secured together, and a bottom and front secured together, said bottom and front being adapted to be slid entirely from under said mold, and means limiting the outward movement thereof and means permitting the said bottom to be tilted to a vertical position upon said first means.

6. In a machine of the character described, comprising a mold, a sliding bottom therefor, the mold-front being secured to said bottom, a bed upon which said bottom slides, a bar beyond the front edge of said bed, and means permitting said bottom to be slid entirely from beneath the mold and into engagement with said bar, and means permitting said bottom to be tilted to a vertical position on said bar and into engagement with said front edge of said bed.

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

GEORGE W. DUNMORE.

Witnesses:

I. L. WEAVER,
F. A. GOULD.