

No. 878,542.

PATENTED FEB. 11, 1908.

S. M. KIMBLE.
CEMENT BLOCK AND BRICK MACHINE.
APPLICATION FILED MAR. 5, 1906.

2 SHEETS—SHEET 1.

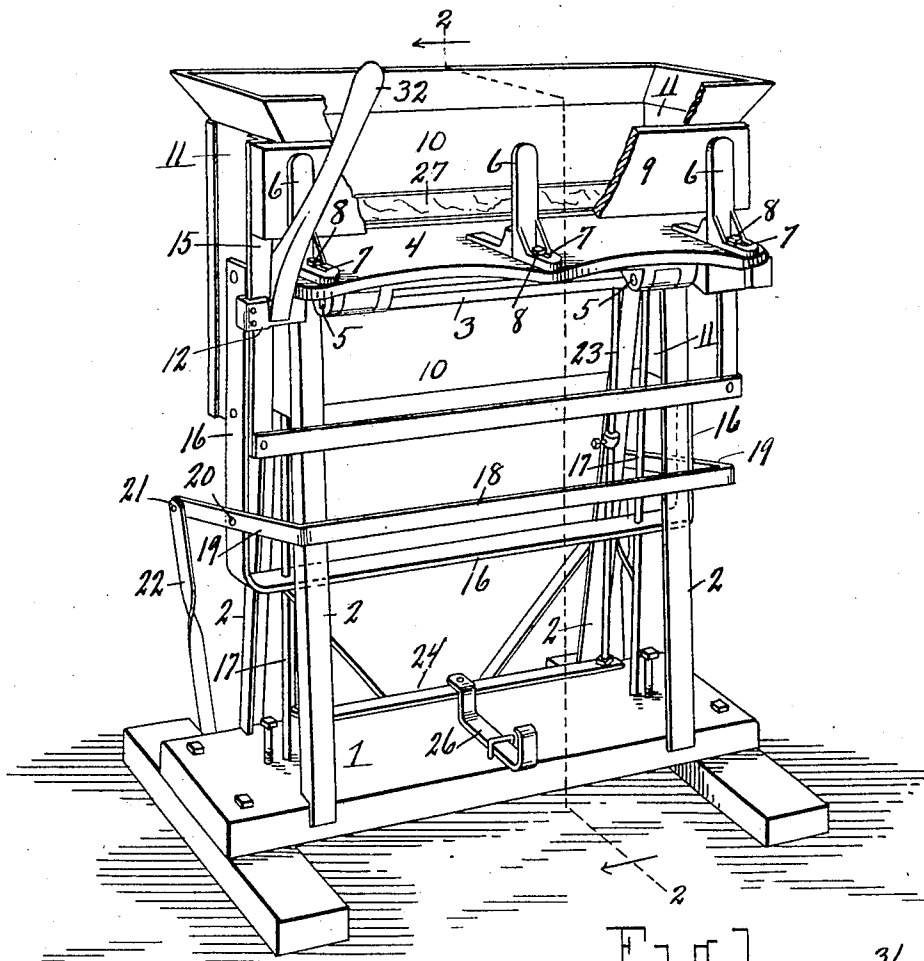


Fig. 1.

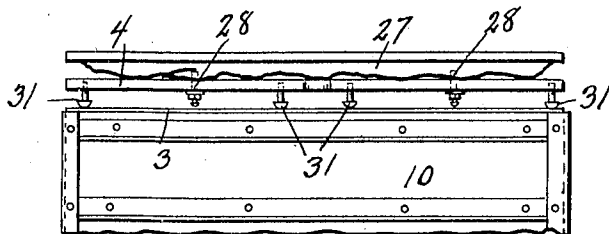


Fig. 5.

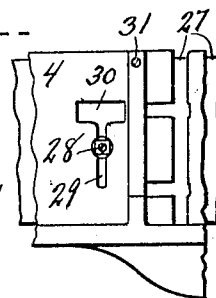


Fig. 6.

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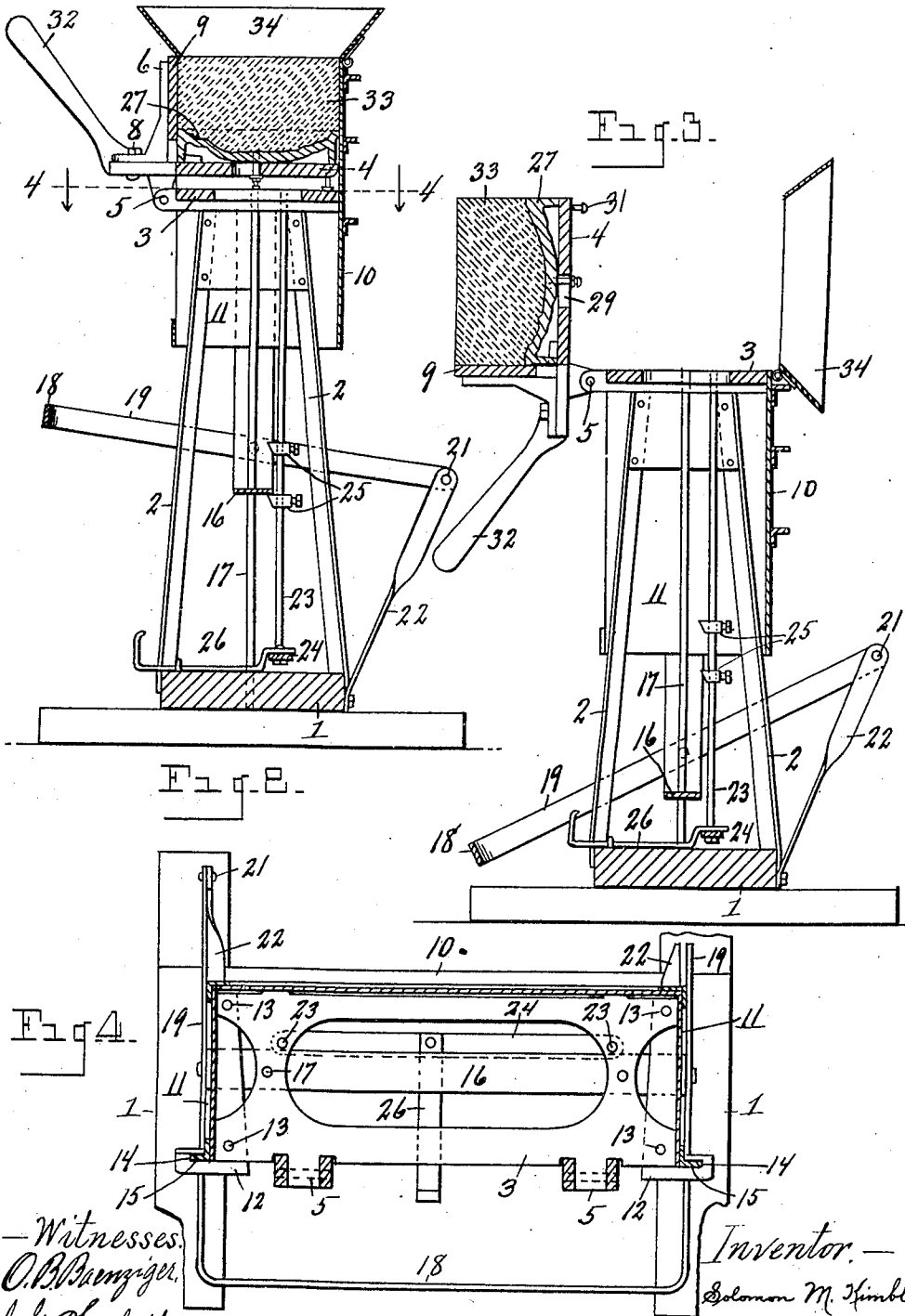
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

SOLOMON M. KIMBLE, OF JACKSON, MICHIGAN, ASSIGNOR OF TWO-THIRDS TO SIMPLEX MANUFACTURING CO., OF JACKSON, MICHIGAN.

CEMENT BLOCK AND BRICK MACHINE.

No. 878,542.

Specification of Letters Patent.

Patented Feb. 11, 1908.

Application filed March 5, 1906. Serial No. 304,232.

To all whom it may concern:

Be it known that I, SOLOMON M. KIMBLE, a citizen of the United States, residing at Jackson, in the county of Jackson, State of Michigan, have invented certain new and useful Improvements in Cement Block and Brick 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 figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in molds for manufacturing cementitious bricks, stones and building-blocks, and consists in the construction and arrangement of parts hereinafter fully set forth and pointed out particularly in the claims.

The object of the invention is to provide a machine of the character described of comparatively simple and inexpensive construction, and wherein the arrangement is such as to enable bricks, blocks or stones of various sizes to be readily and perfectly formed and quickly and easily removed from the mold.

The above object is attained by the structure illustrated in the accompanying drawing, in which:—

Figure 1 is a perspective view of a machine embodying my invention. Fig. 2 is a vertical transverse section as on line 2—2 of Fig. 1, showing a molded block within the mold of the machine. Fig. 3 is a transverse section similar to Fig. 2, showing the shell of the mold dropped and the molded block turned outwardly onto the pallet board upon which the block may be carried away for drying. Fig. 4 is a horizontal section as on line 4—4 of Fig. 2. Fig. 5 is a fragmentary view in elevation, showing the adjusting screws for leveling the bottom of the mold. Fig. 6 is a fragmentary view of the under side of the bottom of the mold, showing the slotted opening therein, through the medium of which the face-plate is adjustably bolted to the bottom.

Referring to the characters of reference, 1 designates a base upon which are mounted the angle iron uprights 2, forming the main portion of the frame of the machine and supporting at their upper ends the bed-plate 3. The bottom 4 of the mold is hinged at 5 to

the front edge of the bed-plate to tilt outwardly, as shown in Fig. 3, the front edge of said bottom projecting outwardly some distance beyond said hinge. Mounted upon the projecting edge of the hinged bottom of the mold are the brackets 6 made adjustable by means of the slots 7 through the feet thereof, through which pass the securing bolts 8. These brackets support in a vertical position the pallet board 9 which forms the front of the mold. The back 10 and the ends 11 of the mold form a trilateral, vertically movable shell which embraces the bed-plate and mold bottom upon three sides, and which in conjunction with the bottom and pallet board forms the mold in which the bricks or blocks are made.

The shell of the mold is maintained in place and guided in its vertical movement by means of the brackets 12 which are bolted at 13 to the under side of the bed-plate and which are provided with outwardly extending end portions in which are formed ways 14 that receive the projecting flanges 15 at the front corners of said shell, which extend vertically thereof. By means of the vertically movable shell, a block of any desired thickness may be formed.

To provide for moving the shell of the mold vertically, there is secured to the ends thereof a depending bail 16 through the horizontal portion of which freely pass the guide rods 17, the upper ends of said rods being secured in the bed-plate and the lower ends thereof being secured in the base 1. Crossing the front of the machine is an actuating-bar 18 having the right angle end portions 19 which are fulcrumed at 20 to the vertical portions of the bail, and which at their rear ends are pivoted at 21 to the upper ends of the supporting standards 22. It will now be understood that by raising and lowering the cross bar 18, the shell of the mold will be caused to slide up and down in its support upon the frame.

In order to enable the forming of cementitious blocks of any desired thickness, it is necessary to provide for supporting the shell of the mold so as to maintain the top of the shell at various heights above the mold bottom. To accomplish this result I employ the vertically depending spring rods 23 which are secured at their upper ends in the bed-plate, and which at their lower ends are connected to the cross bar 24. These rods depend con-

tiguous to the horizontal portion of the bail 16, and mounted on said rods to adjust vertically are the stop lugs 25 which project into the path of said bail. The spring of said rods 5 permits the bail to pass said lugs when the shell is raised, said lugs being beveled on their under face for this purpose. After the bail shall have passed the lugs in its upward movement, the rods spring back so as to 10 cause said lugs to engage and support the bail, as shown in Fig. 2. By securing the lugs at any desired point upon the rods, the shell may be supported so as to present the top thereof at any predetermined point 15 above the bottom of the mold. For the purpose of disengaging the stop lugs from the bail to permit the shell to slide downwardly, there is employed the trip bar 26, the inner end of which is attached to the cross bar 24, 20 while its outer end projects within reach of the foot of the operator. By shoving inwardly on said bar the rods 23 may be sprung rearwardly so as to carry the lug from contact with the bail, thereby permitting the 25 shell to descend.

For the purpose of facing the bricks or blocks, a face-plate 27 is employed which may be ornamented or fashioned in any desired manner to give an ornamental configuration to the face of the block. This face-plate is mounted upon the bottom of the mold and is detachably secured thereto by 30 means of a bolt 28 which passes through a slotted opening 29 in said bottom having an enlarged terminal portion 30 to permit of the passage of the nut and washer upon said fastening bolt. In practice, two of the bolts 28 are employed and because of the slotted openings 29 through which they pass, the 40 face-plate may be adjusted upon the mold bottom so as to enable it to be squared with the shell.

For the purpose of leveling the bottom of the mold, adjusting screws 31 are employed 45 which screw into the under side of the bottom near its rear edge and bear upon the bed-plate 3, thereby supporting the rear edge of the bottom and enabling it to be raised or lowered as conditions may require.

50 In the operation of this machine, the shell is set at such a height as to form the desired thickness of block, and a pallet board of the required width is placed against the brackets 6 with its end portions bearing 55 against the ends of the shell or mold. Cement is then placed in the mold and tamped solid, after which it is struck off

level with the top. The shell, constituting the back and ends of the mold, is then 60 dropped and the bottom with the formed block thereon, is tilted outwardly by means of the attached handle 32, to the position shown in Fig. 3, in which position the formed block 33 will rest upon the pallet board upon which it is supported while being carried 65 away for drying; the bottom is then tilted back into position, a new pallet board placed in the mold, and the operation repeated.

To the back of the shell of the mold is 70 hinged a hopper 34 to facilitate the placing of the cement in the mold.

If desired the mold space may be divided by transverse partitions so as to form a number of blocks or bricks at a time.

Having thus fully set forth my invention, 75 what I claim as new and desire to secure by Letters Patent, is:—

1. A mold of the character described, comprising a suitable frame, a bottom, a mold-section mounted to slide vertically with respect to said bottom, an actuating lever 80 pivotally connected with the mold-section, an adjustable stop for supporting the mold-section, and a trip for disengaging said stop.

2. A mold of the character described, comprising a suitable frame, a bottom, a mold-section vertically adjustable with respect 85 to said bottom, said mold-section having a depending bail, guide-rods passing through said bail, a pivoted lever engaging the bail for moving the mold-section vertically, depending spring-rods carrying stop-lugs adapted to engage the bail to support the mold-section, and means for moving said spring-rods to disengage said lugs. 95

3. A cement brick and block machine, comprising a suitable frame, a mold mounted thereon consisting of a trilateral section forming three sides of the mold, a bottom, 100 the fourth side of the mold carried on said bottom, said bottom and fourth side movable away from the remaining sides, the trilateral mold section being vertically movable with respect to the bottom, an actuating lever pivotally connected with the vertically 105 movable mold section, an adjustable stop for supporting said mold section, and a trip for disengaging said stop.

In testimony whereof I sign this specification in the presence of two witnesses.

SOLOMON M. KIMBLE.

Witnesses:

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E. C. VAN LEUVEN.