

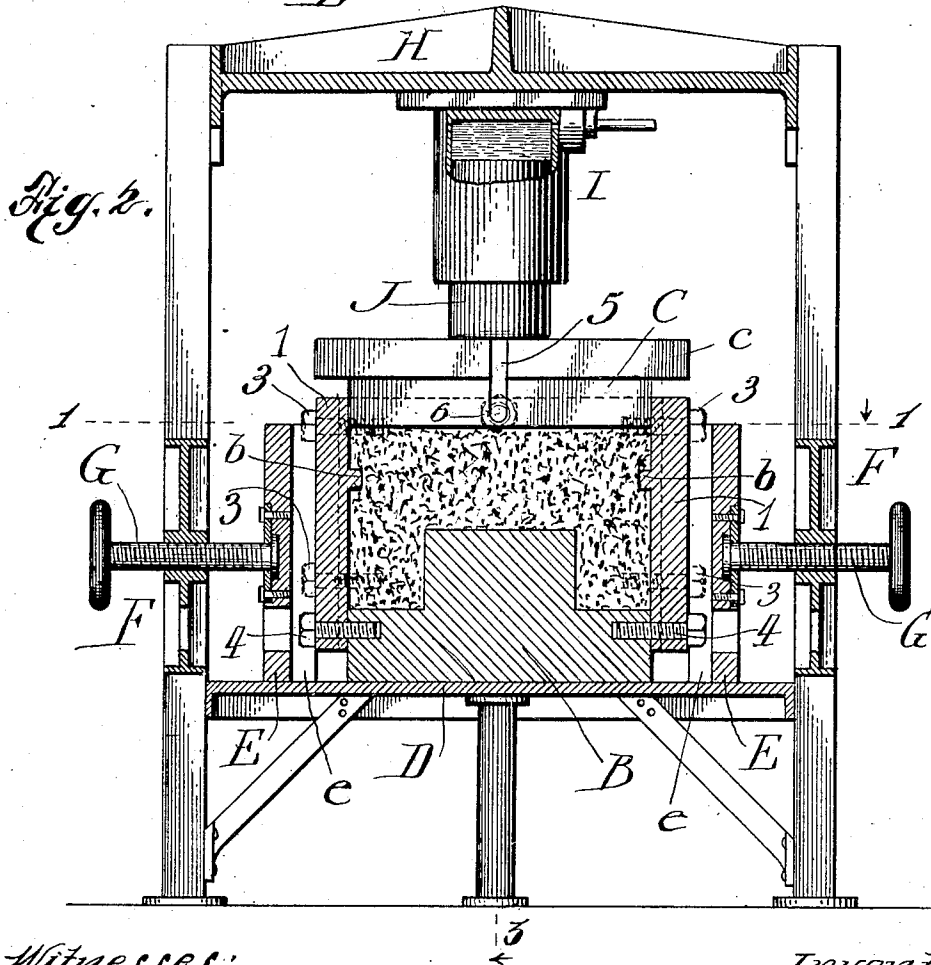
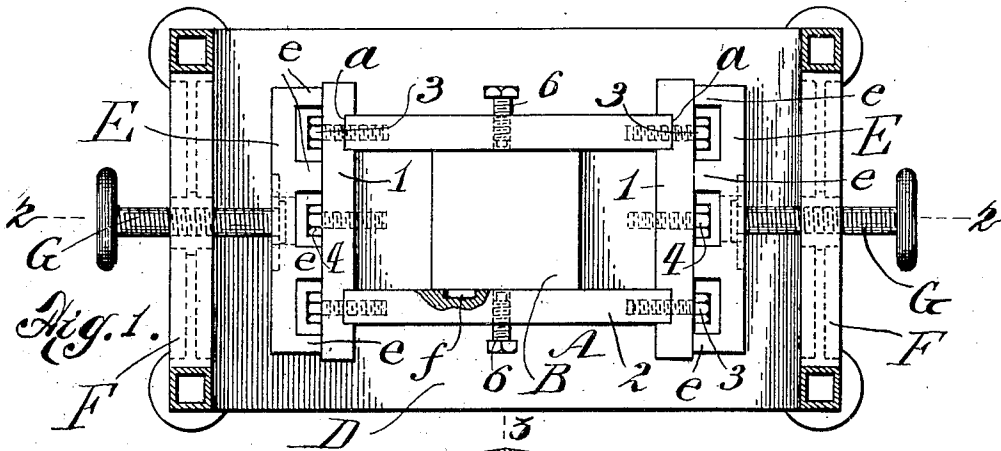
No. 876,322.

PATENTED JAN. 14, 1908.

L. H. K. BRODIE.
MOLDING MACHINE.

APPLICATION FILED DEC. 22, 1906.

2 SHEETS—SHEET 1.



Witnesses:
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G. G. How,

Inventor:
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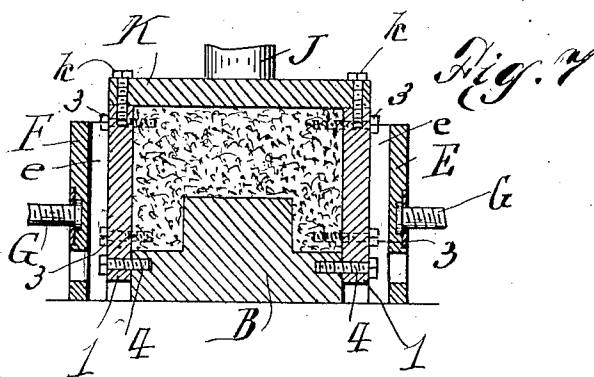
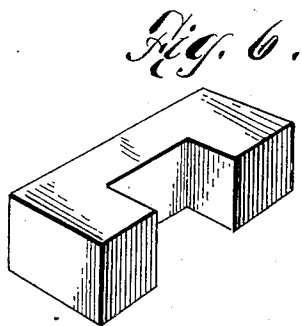
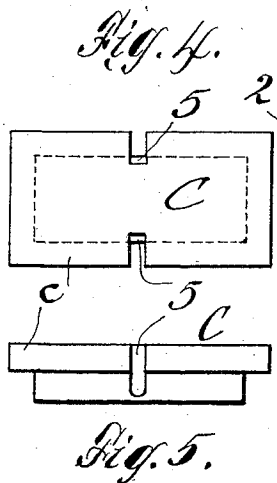
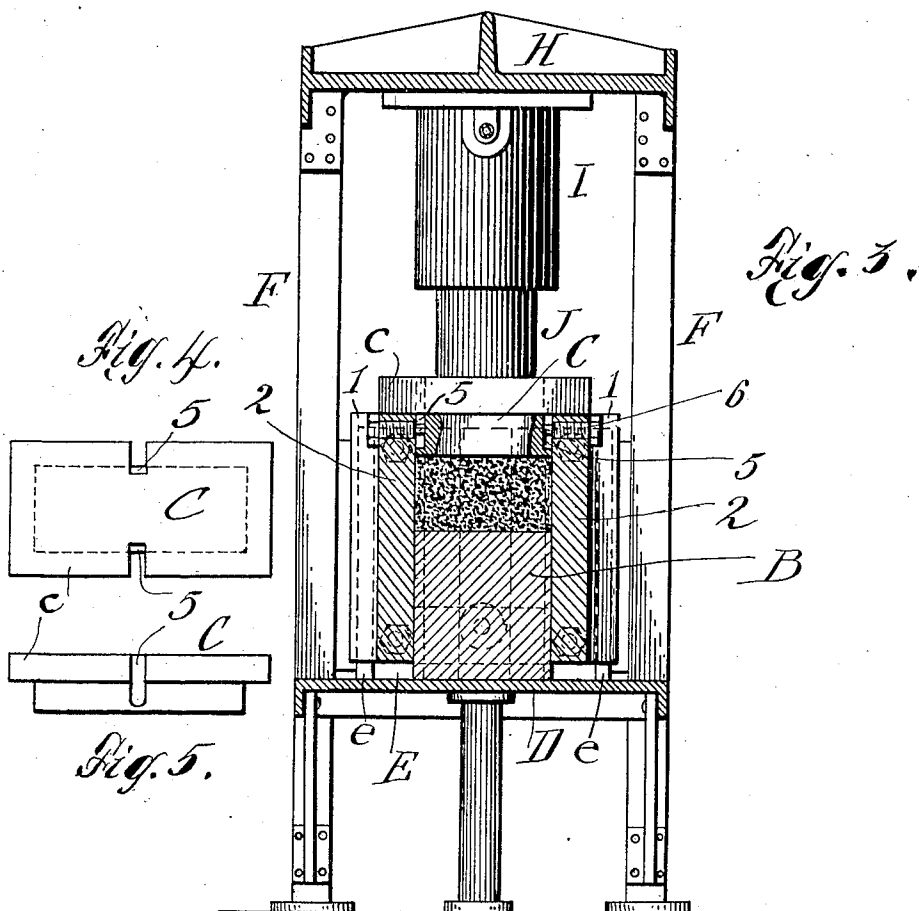
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2 SHEETS—SHEET 2.



Witnesses
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UNITED STATES PATENT OFFICE.

LOUIS H. K. BRODIE, OF BROOKLYN, NEW YORK.

MOLDING-MACHINE.

No. 876,322.

Specification of Letters Patent.

Patented Jan. 14, 1908.

Application filed December 22, 1906. Serial No. 349,057.

To all whom it may concern:

Be it known that I, LOUIS H. K. BRODIE, a citizen of the United States, and resident of Brooklyn, county of Kings, and State of New York, have invented certain new and useful Improvements in Molding-Machines, of which the following is a specification, reference being had to the accompanying drawing, forming a part thereof, in which similar letters of reference indicate corresponding parts.

This invention relates to molding machines for forming concrete building blocks under pressure; the object thereof being to provide an apparatus of this character which embodies novel features of durability, practicability and general construction, and which is adapted for producing a highly compressed and homogeneous product of any desirable contour, and having either extended face ornamentation or recesses and depressions.

The invention will be hereinafter fully described and specifically set forth in the annexed claims.

In the accompanying drawings forming part of this specification, Figure 1, is a sectional plan view taken on the line 1—1, of Fig. 2; Fig. 2, is a longitudinal sectional elevation taken on the line 2—2, of Fig. 1; Fig. 3, is a vertical sectional elevation taken on the line 3—3, of Fig. 2; Fig. 4, is a plan view of the top part of the mold; Fig. 5, is a side elevation thereof; Fig. 6, is a perspective view of a completed block formed by the machine, and Fig. 7, is a longitudinal sectional elevation illustrating a slightly modified form of mold.

In the practice of my invention I employ primarily a metallic box A, which in the example shown is rectangular in plan contour. This box embodies the detachable walls 1, 1 and 2, 2; the end walls 1, being provided with inner vertical grooves *a*, for engaging the ends of the side walls 2; and the said several walls are held together by means of the set-screws 3, whereby a rigid and strong structure is provided which is adapted for resisting considerable lateral pressure, but which may be readily disassembled for the purpose of removing a completed block. In a box of this construction I may form blocks having raised face ornamentation and also depressed recesses. For producing blocks having face-depressions the walls of the box are provided with raised parts, as *b*;

and to form raised face-ornamentation on the blocks depressions, as *f*, are formed in the walls of the box.

Secured within the box A, by means of a plurality of set-screws 4, is a base or bottom wall B, which extends outwardly and downwardly from the box A, for a considerable distance below the lower edges of the side walls. Fitted snugly within the upper end of the box A, is a plunger C, which is provided with a flange *c*, to limit its downward movement. This plunger is provided with vertical side grooves 5, which engage set-screws 6, the said screws being threaded through the walls 2, of the box A, for the purpose of locking the plunger within the said box in such a manner that it may not be moved upwardly while said screws are set, while at the same time a downward movement may be given to the plunger, as will be hereinafter fully described.

As a means for holding the mold securely on the platform D, of the press, I employ slides E, which are respectively provided with vertical ribs *e*, which act as guides and bear against the end walls 1, of the box A, so that said box may move downwardly between said slides with very little friction, while at the same time it is securely clamped between them to prevent lateral displacement. The said slides E, are moved back and forth, by means of the hand-screws G, which are threaded through the end walls F, of the frame-work of the press; the inner ends of the said screws being in pivotal engagement with the slides E, whereby said screws may turn in either direction, but the slides are constantly maintained in vertical position.

Located over the platform D, and secured to the upper frame-work H, is a hydraulic press I, having the extended piston J, for contact with the plunger C, for the purpose of forcing said plunger downwardly.

In the modification illustrated by Fig. 7, of the drawings, the top K, of the mold is secured directly to the box A, by means of the screws *k*. This construction may be employed for forming small blocks.

In the operation and use of my invention the box A, is connected to its bottom B, by means of the screws 4; then the box is filled with saturated plastic concrete approximately to the point shown in Fig. 2, of the drawings. Having filled the box the plunger C, is placed in position and secured against

removal by means of the screws 6, which bear against the shoulders formed by the bottom parts of the grooves 5. The mold is now in condition ready to be conveyed to the press, and as shown in the drawings it is placed on the platform D, and clamped between the slides E. Then the screws 4, are removed and pressure is exerted against the plunger C, by means of the piston J, of the hydraulic press I. This pressure forces the plunger C, downwardly compressing the mass at the top until the flange c, strikes the upper edge of the box A; then a continued downward movement of the piston J, forces the box A, downwardly around its bottom part B, causing pressure to be exerted practically against the bottom part of the mass; thus smooth faces are provided on all parts of the block and the major part of water contained in the mass is forced out; the process further produces a homogeneous block, which is highly compressed and which will rapidly set and harden owing to the removal of the said contained water.

In a mold of the character above described the same can be filled at a location remote from the press, and after it is pressed it may be conveyed to another location to dry: and it will be noted that the drying process is materially helped by the fact that most of the originally contained water in the plastic mass is forced out of the mold around the edges of the plunger C, and bottom B. The removal of the set or finished blocks is also facilitated because the several parts forming the mold are readily detachable.

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

1. A portable mold comprising a base and surrounding walls therefor which are normally connected but detachable, and means for detachably holding said surrounding walls together and in detachable connection with said base, and a top wall, said top wall detachably secured to the said surrounding walls, and means for securing said parts whereby the whole structure may be filled and then subjected to pressure, substantially as shown and described.

2. A portable mold for forming concrete blocks comprising an inwardly and upwardly extended base, four walls surrounding the same which are detachable from each other and are normally attached to the said base, and means connecting them, and a top wall which is also detachably secured to said surrounding walls, whereby the mold may be filled and then transported to a press, and when pressure is exerted against the said top wall, the walls surrounding the base are moved downwardly with the said top wall, substantially as shown and described.

In testimony that, I claim the foregoing as my invention, I have signed my name in presence of two witnesses, this 14th day of December 1906.

LOUIS H. K. BRODIE.

Witnesses:

C. C. Dow,
M. S. Dow.