

L. GIGUÈRE.
CONCRETE MOLD.

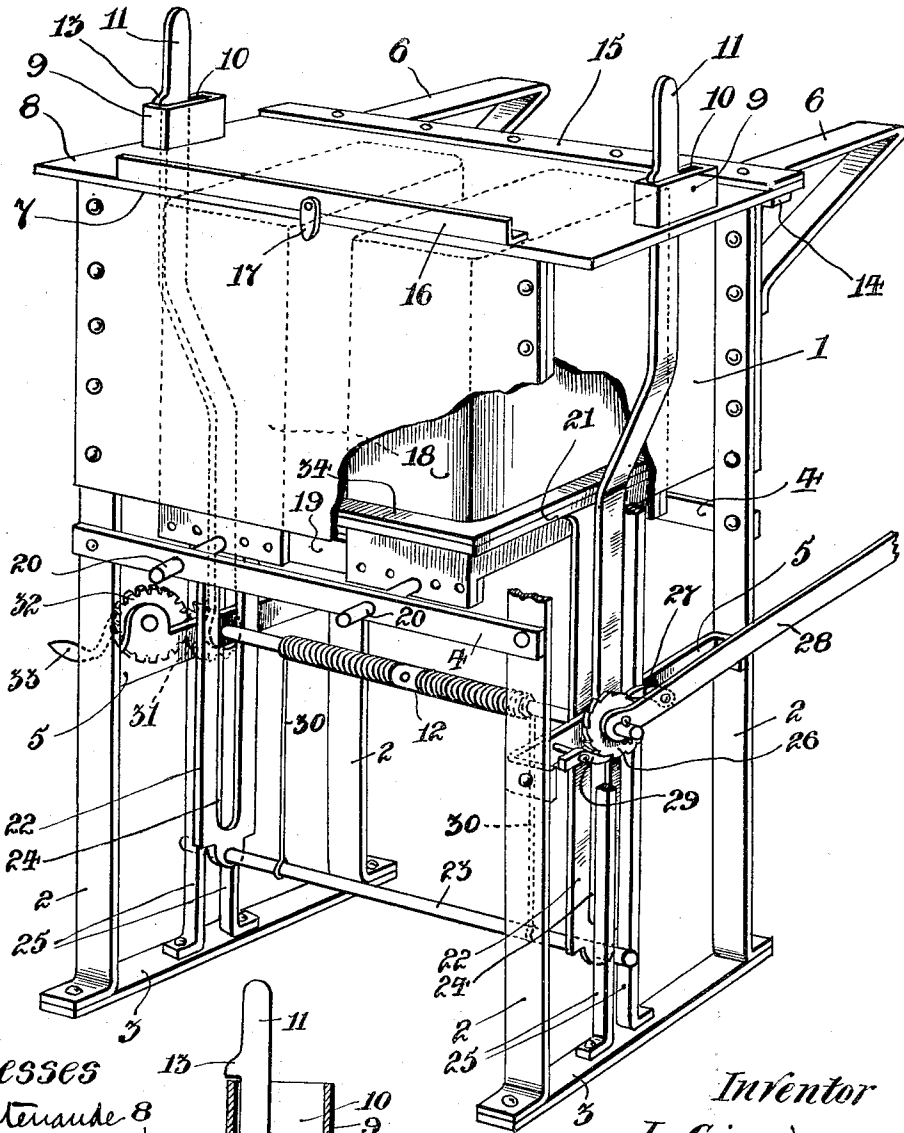
APPLICATION FILED APR. 5, 1913.

1,125,837.

Patented Jan. 19, 1915.

2 SHEETS-SHEET 1.

Fig. 1.



Witnesses

M. Patenaude
P. Jeanette

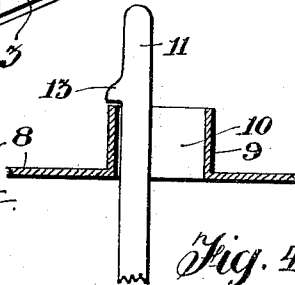


Fig. 4.

Inventor

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By

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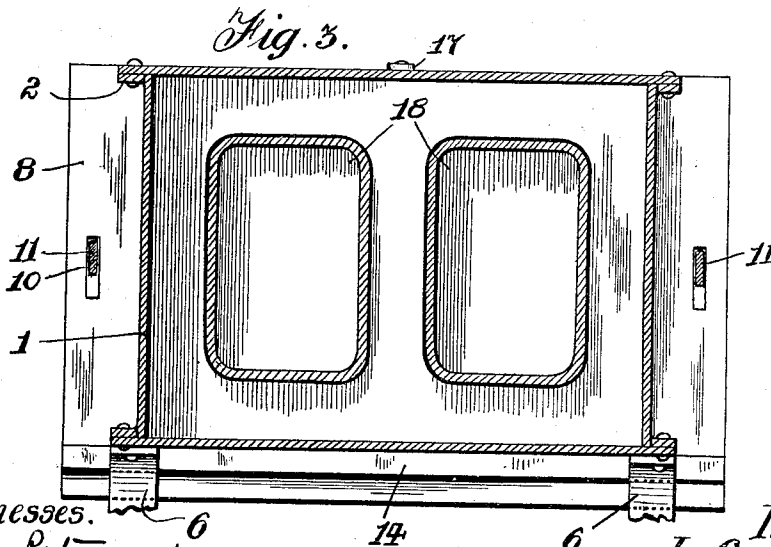
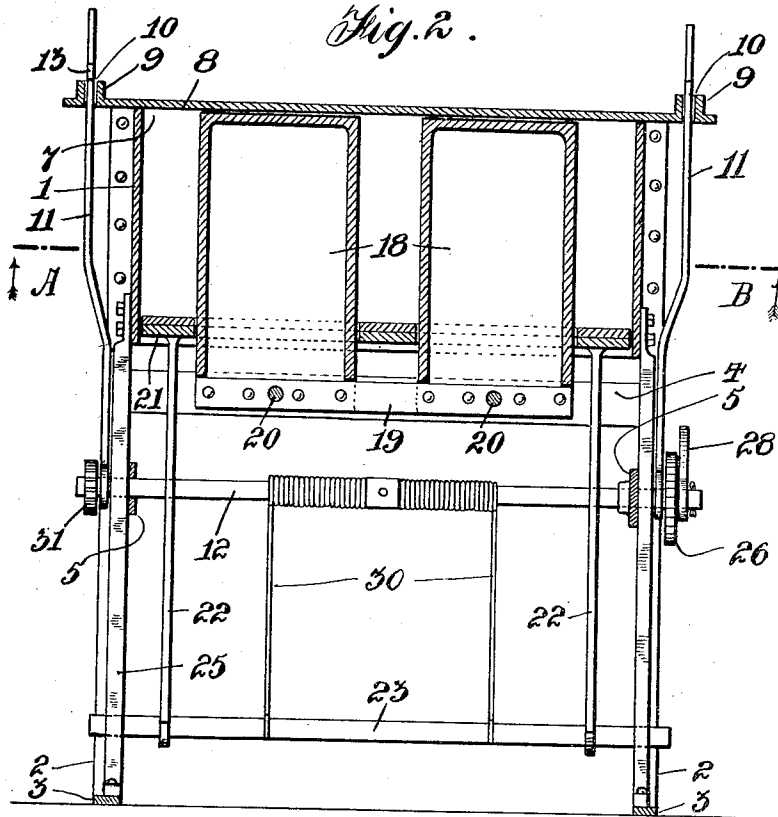
Attys

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2 SHEETS—SHEET 2.



Witnesses.
In Presence of
P. Jeannette

Inventor
L. Giguère
By J. J. Davis
Attys

UNITED STATES PATENT OFFICE.

LIMOGE GIGUÈRE, OF MONTREAL, QUEBEC, CANADA.

CONCRETE-MOLD.

1,125,837.

Specification of Letters Patent.

Patented Jan. 19, 1915.

Application filed April 5, 1913. Serial No. 759,006.

To all whom it may concern:

Be it known that I, LIMOGE GIGUÈRE, a subject of the King of Great Britain, of the city of Montreal, in the county of Hochelaga, in the Province of Quebec, in the Dominion of Canada, have invented certain new and useful Improvements Relating to Concrete-Molds, and do hereby declare that the following is a full, clear, and exact description of the same.

The invention is an improved concrete mold, and has for its object the provision of a machine for molding concrete blocks with great speed and facility and wherein great power can be obtained by hand for compressing the block and thus producing a better article from a point of view of durability.

Briefly the invention consists of a mold box open at two opposite sides or ends, a removable lid or cover forming an abutment plate being applied to the filling end and a movable pressure plate being applied to the opposite end, power being obtained through the medium of a shaft, on which cables are wound with their free ends being connected indirectly to the pressure plate so as to move it toward the abutment plate thereby compressing the concrete in the box between said abutment plate and pressure plate.

The invention will be better understood with the aid of the accompanying drawings, in which—

Figure 1 is a perspective view of the machine with a portion of the mold box broken away to disclose the interior. Fig. 2 is a vertical sectional view through the mold box and base. Fig. 3 is a cross sectional view on the dotted line A. B. in Fig. 2, and Fig. 4 is a fragmentary detail of a locking means for the abutment plate or cover.

Like numerals of reference indicate corresponding parts in each figure.

Referring to the drawings, 1 designates the mold box of any suitable shape according to the design of the block, herein shown of prism shape for the manufacture of a well known design of building block. The box 1 is supported on a base comprising the corner legs 2, braced at the bottom by the feet 3, and braced intermediately by a pair of bars 4 extending across and connecting the front pair of legs, while the feet 3 connect each side pair of legs.

5 are bars coupling each side pair of legs intermediate of their height.

6 are a pair of rearwardly extending brackets whose upper surfaces extend outwardly level with the open top 7 of the box 1 and forming supports for the abutment plate or cover 8 when slid back out of position to open up the box for molding purposes. 9 are tubular lugs, one at each end of the plate 4 and having the slots 10 therein through which extend the levers 11, said levers extending downwardly to a cross shaft 12, which is journaled at its ends in the bars 5, said levers 11 being pivoted at their lower extremities on said shaft. 13 are lugs on each of said levers 11, near their upper ends adapted to reach over the edge of the tubular lug 19 when the cover is in its closed position and thus lock said cover against upward movement. 14 is a stop at the rear under side of said cover 8 to limit its forward movement, said stop abutting the rear surface of the box. The plate 8 is strengthened by reinforcements 15 and 16 at the front and rear edges as it has to withstand the pressure applied when compressing the block in the box.

17 is a turn button depending from the reinforcement 16 and serving the double purpose of keeping the cover from rearward movement and preventing the bulging of the front side of the box 1 when the block is being compressed.

18 is a pair of cores coupled together at their lower ends by the strips 19 at front and rear and rigidly supported in the box by the rods 20 threaded across from front to rear through the bars 4 and through the lower ends of the cores.

21 is a pressure plate of corresponding shape to the interior of the box 1 and pierced to fit over the cores 18, said pressure plate being adapted to slide up and down within the box 1 and having the depending arms 22 coupled at their lower ends to a cross shaft 23 disposed parallel with and below the shaft 12, said arms 22 being slotted at 24 to accommodate the shaft 12 which is passed through the said slots. The shaft 23 at its outer ends extends between a pair of guiding bars 25 thus forming with the shaft 12 and the slots 22 a perfect guide for the pressure plate in its up and down movement.

26 is a ratchet toothed wheel rigidly secured to one end of the shaft 12 and en-

gaged by the pawl 27 pivoted to the operating lever 28, which in turn is loosely pivoted on the shaft 12 adjacent to the ratchet wheel 26.

29 is a spring pawl engaging the ratchet wheel 26 to prevent its sliding back when moved around by the pulling of the lever 28.

30 are cables connected at their lower ends to the shaft 23 and at their upper ends to the shaft 12 and adapted to be wound around the latter shaft when said shaft is rotated by the operating lever 28.

31 is a toothed pinion fixedly mounted on that end of the shaft 12 opposite to the ratchet wheel 26, and 32 is a gear wheel meshing with the pinion 31 and rotatably secured to the outer face of the adjacent bar 5.

33 is a crank handle rigidly secured to turn with the gear wheel 32.

In the operation of this invention the cover or plate 8 is slid back on to the brackets 6 by simply turning the button 17 and pushing the levers 11. The concrete to form the block is now poured into the box 1 through the open top 7 and fills the said box around the cores 18. Now the levers 11 are grasped at their upper ends and pulled forward thereby pulling the plate 8 into position over the box 1 until the stop 14 abuts the rear face of the box, then the handles 11 move forward a little farther in the slots 10 until the lugs 13 reach the edge of the lugs 9 thus forming solid abutments preventing vertical displacement of the plate 8. The button 17 is now turned down so that the cover is locked in all directions. An important feature that may be here mentioned is that the surplus concrete in the box will be nicely leveled off by the sliding into position of the plate or cover 8. Everything being ready the concrete has now to be compressed within the box in order to squeeze out the water and form the mass into a block of sufficient consistency to keep its shape when removed from the box. This is accomplished by pulling the handle 28 upwardly, thereby, through the medium of the pawl 27 and ratchet 26, rotating the shaft 12 and winding the cables on to said shaft thereby pulling up the lower end of said cables and shaft 23 therewith and pushing up the arms 22 and pressure plate 21, the latter squeezing the concrete in the box between itself and the plate 8, the surplus water passing out through the joints. This accomplished the cover is again slid back as before explained and to hasten the work of removing the block the crank handle 33 is turned to complete the winding up of the cables 30, thereby forcing the block off the cores and out of the box through the open end 7 from whence it may be taken away for

drying purposes. After turning the crank 33 to push out the block, the pawls 29 and 27 are thrown out of engagement with the ratchet wheel 26, and the pressure plate falls to the bottom of the box 1.

It should be mentioned that a loose plate 34 of exactly the same shape as the pressure plate 21 is dropped into the box before filling, and when carrying away the block this plate 34 is taken with it as a support so that the block is not likely to fall to pieces.

The machine herein described is of very simple construction and can therefore be cheaply produced and apart from the feature of the sliding cover and pressure plate a very important feature is the mechanism for moving the pressure plate upwardly, for in this respect it must be noticed that great power can be obtained with a long operating handle owing to the very short leverage of the radius of the shaft 12.

I reserve the right to make such modifications or additions to the construction herein described as may come within the scope of the following claims for novelty.

What I claim as my invention is:—

1. In a concrete mold, a frame, a box supported on said frame and open at its top for filling and removing, a cover for said open top, a pair of cover-operating levers pivoted at their lower ends to said frame, and at their upper ends passing through slots in said cover whereby, on the swinging of said levers, the cover plate is caused to slide in a horizontal plane into a position closing said open top, means for locking said cover plate in said position to form an abutment, a pressure plate in the bottom of said box and means for moving said pressure plate upwardly.

2. In a concrete mold, a frame, a box supported by said frame and open at the top and bottom, laterally extending brackets leading from the upper edge of said box, a cover plate adapted to slide in a horizontal plane from said brackets into a position closing the open top of said box, a pair of cover-operating levers pivoted at their lower ends to said frame and extending through slots in over hanging ends of said cover plate and each having a lug adapted to engage said cover at the edge of said slot in the closed position of the cover to lock the same against upward displacement, a pressure plate fitting the interior of said box and means for forcing said pressure plate upwardly.

Signed at the city of Montreal, Canada, this 5th day of March 1913.

LIMOGE GIGUÈRE.

Witnesses:

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