No. 804,890. PATENTED NOV. 21, 1905.

W. A. SHOCK.

MOLD FOR THE MANUFACTURE OF CEMENT BRICK.

APPLICATION FILED APR. 29, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

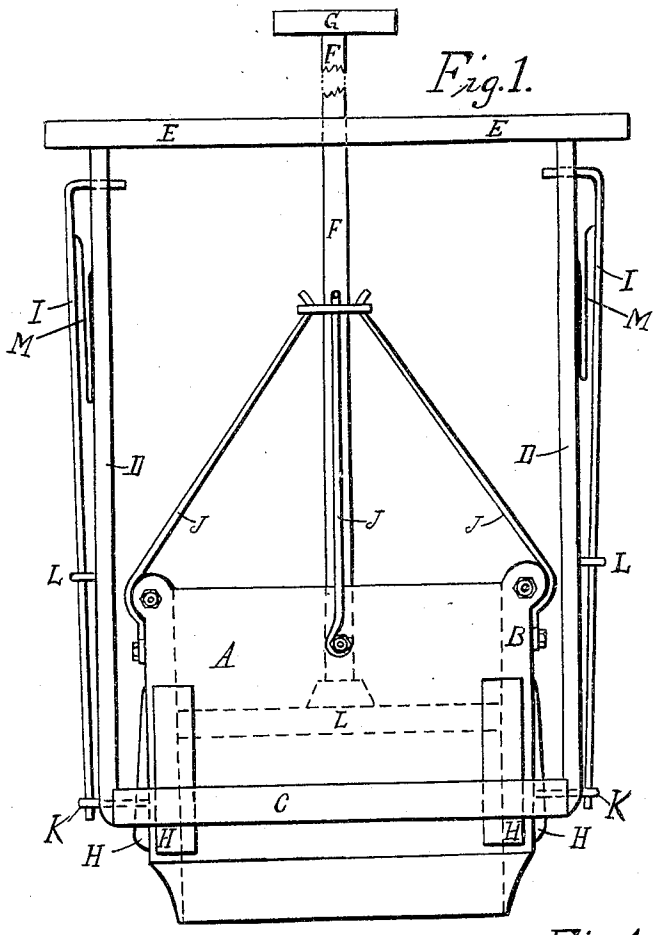


Fig. 2.

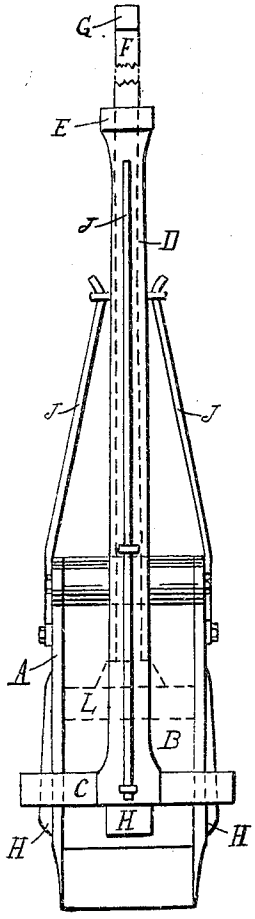


Fig. 3.

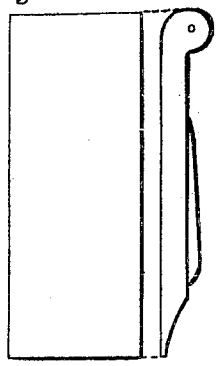
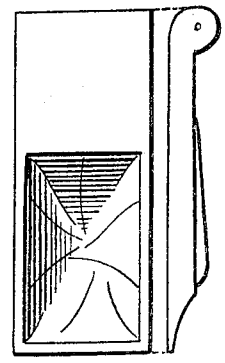


Fig. 4.



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2 SHEETS—SHEET 2.

Fig. 5.

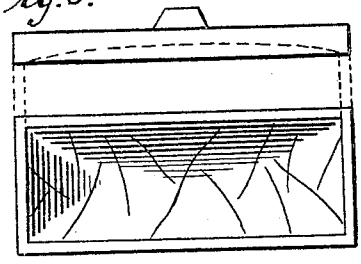


Fig. 6.

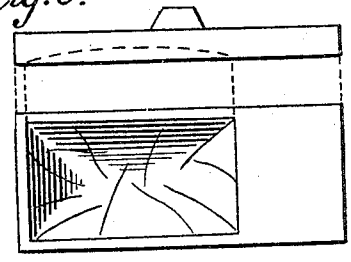


Fig. 7.

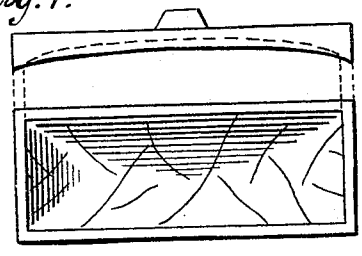


Fig. 8.

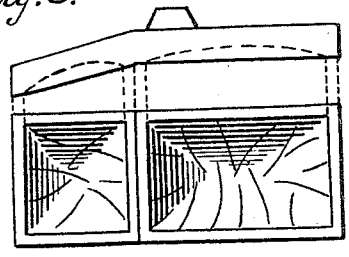
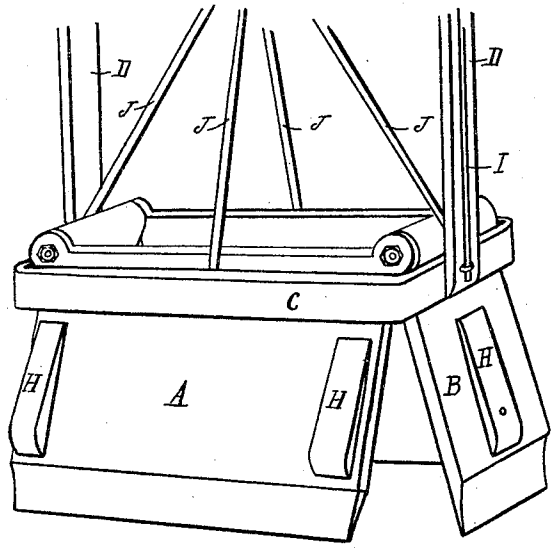


Fig. 9.



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UNITED STATES PATENT OFFICE.

WILLIAM A. SHOCK, OF HUNTINGTON, INDIANA.

MOLD FOR THE MANUFACTURE OF CEMENT BRICK.

No. 804,890. Specification of Letters Patent. Patented Nov. 21, 1905.

Application filed April 29, 1905. Serial No. 258,138.

To all whom it may concern:

Be it known that I, WILLIAM A. SHOCK, a citizen of the United States, residing at Huntington, in the county of Huntington and State of Indiana, have invented new and useful Improvements in Molds for the Manufacture of Cement Brick, of which the following is a specification.

My invention relates to improvements in a cement brick-mold, in which by reason of the fact that instead of a rigid mold with sides and ends rigidly fastened together I have fastened the sides and ends of the mold with a hinge-like attachment which enables the workman at will to remove the mold from the brick rather than discharge the brick from the mold; and the objects of my improvements are to provide, first, a simple and easy method of liberating the cement after it is compressed into the desired shape in the mold without the danger of destroying the perfect form of the brick, and, second, by instantly freeing the mold from all contact with the brick at all points at the same time the necessity of using time and caution in removing the brick from the mold is greatly lessened and the capacity of the workman consequently increased; third, by removal of one of the detachable and interchangeable ends of the mold and replacing with one so constructed as to mold the end of the brick into a rock-face to correspond with the rock-face on the front portion of the brick, this making a corner-brick, a process impossible in the use of the mold with rigid and immovable sides; fourth, by means of the use of different plates on the tamper-bar not only the ordinary brick for a straight wall can be molded, but bricks for an octagon corner or any angle and also a brick for a circular wall may be molded. These objects are attained by the mechanism illustrated in the accompanying drawings.

Figure 1 is a side view of the entire machine when closed. Fig. 2 is an end view of the machine when closed. Fig. 3 is a view of the smooth end plate of the mold, the view showing the inner surface and also the edge of the plate. Fig. 4 shows the end plate of the mold that will produce a brick with a rock-faced end, the view being that of the inner surface of the plate and the edge of the plate. Fig. 5 shows a view of the plate which, screwed to the tamper-bar, produces the rock-faced brick for the ordinary straight wall. Fig. 6 shows a view of the plate which, screwed to the tamper-bar, produces a brick with a partially smooth and partially rock-faced surface to be used in an angle when one wall is built against another. Fig. 7 shows a view of a plate which when screwed to the tamper-bar produces a brick with a rock-faced curved surface to be used in a circular wall. Fig. 8 shows a view of a plate which when screwed to the tamper-bar produces a brick with a rock-faced surface or an angle for an octagon or hexagon shaped building or tower. Fig. 9 shows a side view of the entire lower part of the machine when open as in the act of discharging the finished brick.

In Fig. 1 the plate A represents one side of the rectangular mold and is thirteen (13) inches in length, and the plate B represents one end of the same and is two and three-fourths ($2\frac{3}{4}$) inches in width, the plate directly opposite A being exactly like A and the plate opposite B being exactly llike B, all the plates being made of cast-iron or steel, the end plates fitting between the ends of the side plates, so as to form a rectangular space twelve (12) inches in length and two and one-half ($2\frac{1}{2}$) inches in width in the standard-sized machine. The side plates are attached to the end plates at the upper corners by means of a screw which passes loosely through the upper corner of the side plates and screws into the end plates, the holes in the side plates being larger than the screws and the heads not being driven entirely against the side plates, thus allowing the bottom of the plates to swing outward when released.

The plates are held in rigid position while the mold is being filled by a rectangular iron loop C, which passes entirely around the rectangular mold and coming in contact with the rectangular mold at points lugs H, there being two lugs H on each side plate and one lug H on each end plate. Lugs H are wedge-shaped with the thin portion of the wedge upward and are cast with and a part of the side and end plates.

The loop C is riveted firmly to the lower end of rods D, and rods D are made of iron and are firmly fastened at their upper end to cross-bar E E. When loop C is raised, the bottom of the side and end plates are thrown outward by springs J, which are made of spring-steel and so attached near the top of side plates A and end plates B that when the mold is closed, as in Fig. 1, springs J are tense; but when loop C is raised springs J cause plates A and plates B to assume the

position as seen in Fig. 9. The operator by pressing downward on E E pushes loop C to the position as shown in Fig. 1, where it is held in position by pins K, which pass freely through holes in loop C and into holes in end lugs H.

Pins K are firmly fastened to and a part of latches I, which work through a hole in fulcrums L, and when the machine is in the position as shown in Fig. 1 the springs M throw the upper end of latches I outward and press pins K into the holes in end lugs H.

The operator by pressing inward on latches I near the upper end cause the lower end of latch I to work outward, and thus withdraw pins K from the holes in end lugs H and frees loop C, so that it may be raised by the operator.

Fig. 5 shows a view of a plate which is screwed to the lower end of tamper-rod F in the position of L. By tamping this plate downward on the cement the face of the brick is made with a rock-surface, as indicated by the plate, and any other character of surface may be made on the face of the brick by simply removing the plate, Fig. 5, and screwing on tamper-rod F. The plates shown in Figs. 6, 7, or 8, giving a brick with part smooth and part rock face, curved rock face, and angle rock face, respectively, the only change necessary being the removal of one plate and the insertion of another.

In order to manufacture a brick with a rock-faced end for use on corners, it is necessary to remove one end plate B by withdrawing two screws passing into it through the side plates A and inserting end plate, Fig. 4, and operating as before.

The bottom of the mold is open and the machine is operated by having the bed of cement and sand properly prepared and mixed and deposited in a bed of the proper depth with a solid smooth surface. The machine is then lifted by the operator and placed down into the cement, so that the cement enters at the bottom. The operator then grasps the grip G and by working the tamper-rod F up and down the cement may be quickly and firmly tamped into a solid brick. The operator then lifts the machine to one side of the cement-bed and by grasping the end rods D and pressing the latch I inward and lifting on the end rods D the loop C will be lifted, and by action of the springs J the side plates A and end plates B will be removed from the brick, as shown in Fig. 9, after which the machine may be lifted away from the brick and closed by simply pressing downward on cross-bar E E, and thus make ready for the next brick.

I am aware that prior to my invention cement-brick machines have been made, and therefore I do not claim such invention broadly; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

1. A combination in a machine or mold for the manufacture of cement brick, of end and side plates attached together at the upper margin thereof by detachable bolts or screws, with wedge-like projections on side and end plates, with removable loop pressing against wedge-like projections forcing side and end plates into position when pressed downward, with tamper-plate fitting into mold from above, with springs attached to side and end plates throwing lower edge of side and end plates outward when released by raising loop, all substantially as set forth.

2. In a machine or mold of the character specified with open bottom, with sides and end plates attached with hinge-like attachments at the upper edge of side and end plates, with wedge-like projections on side and end plates, with removable loop pressing against wedge-like projections, with bottom of side and end plates free to swing outward when released by raising loop, with lower edge of side and end plates made thin to plunge downward into prepared bed of cement, with tamping-plate for tamping the face of material from the top for use as top plate, all substantially as set forth.

3. In a machine of the character specified with detachable and interchangeable end of mold the smooth end plate capable of being interchanged for end plate with rock-faced surface or end plate with angular or curved surface also with tamper or top plate, smooth, rock-faced, curved or angular surface, capable of being tamped down on the brick, thus producing any form of brick, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM A. SHOCK.

Witnesses:

CHARLES W. FRY,

ROBERT G. MITCHELL.