No. 807,062. PATENTED DEC. 12, 1905.

R. B. COLTRIN.

CEMENT MOLD.

APPLICATION FILED MAY 20, 1905.

Fig. 1.

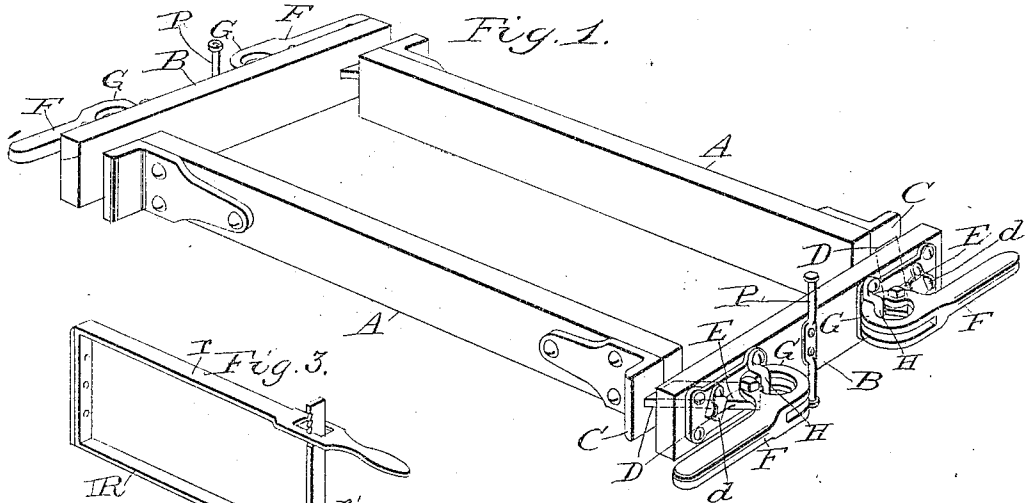
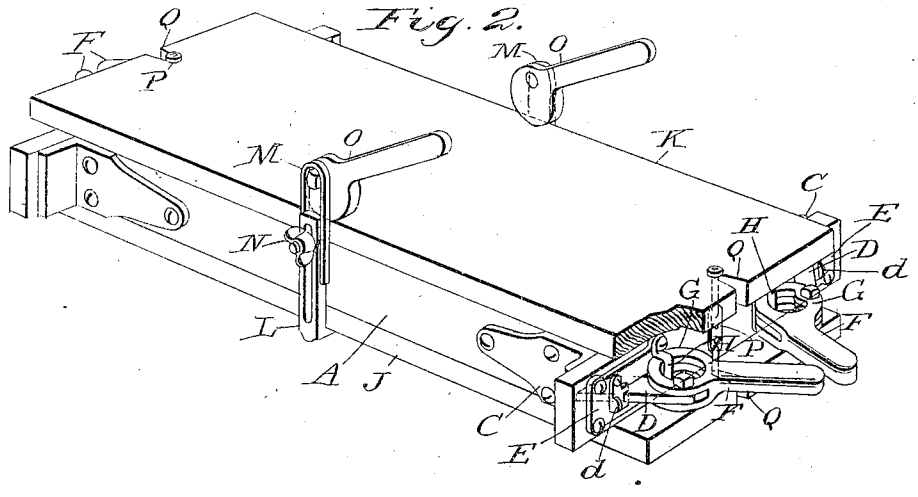


Fig. 3.

Fig. 2.



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UNITED STATES PATENT OFFICE.

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CEMENT-MOLD.

No. 807,062. Specification of Letters Patent. Patented Dec. 12, 1905.

Application filed May 20, 1905. Serial No. 261,407.

To all whom it may concern:

Be it known that I, ROBERT B. COLTRIN, a citizen of the United States, residing at Jackson, in the county of Jackson and State of Michigan, have invented certain new and useful Improvements in Cement-Molds; and I do hereby 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.

My invention relates to molds having separable sides and ends which are adapted to be closed and secured together and to be opened or separated for releasing the molded article. Molds of this class are used largely for making cement blocks or stone.

My invention consists of an improved apparatus of this character having simple and efficient means for connecting and operating the separable sides and ends, and, further, in combination with the mold, an effective device for clamping the top and bottom thereto.

The invention will hereinafter be fully described with reference to the accompanying drawings, which form a part of this specification, and then particularly pointed out and defined in the claims following the description.

In said drawings, Figure 1 is a perspective view showing the mold open. Fig. 2 is a perspective view showing the mold closed. Fig. 3 is a detail view of a clamp-frame.

A A denote the sides, and B B the ends, of the mold. These may be wooden boards or metal plates.

C C are irons bolted or otherwise attached to the outer faces of the side members A at the ends thereof. From these irons project arms or extensions D. The pair of said arms D at each end of the mold are arranged convergingly or inclined toward each other. Said arms D extend loosely through the end members B, the openings therefor being likewise inclined and shaped to provide a sliding fit on the arms.

E E are irons or plates on the outer faces of the end members B. The arms D extend also through these plates E, which are provided with slots or openings to receive said arms, said openings being continuations of the openings in the end members B, or, if desired, the openings in the end members B may be considerably larger than the arms D, while the openings in the plates E are shaped to fit slidably on said arms D to increase the ease of the sliding movement.

F F are cam-levers for opening and closing the mold. Two of such levers are provided at each end of the apparatus, being pivoted or fulcrumed on the ends of the inclined arms D D. These levers are manipulated by their handles, and their cams G bear against the end members B, or rather against the irons or bearing-plates E thereof. The cams G of the levers are shown bifurcated to embrace the arms D, to which they are pivoted, and said cams are also formed annular, and they pass through straps H on the irons or plates E. Said straps H may be integral with said plates E or bolted or screwed thereto and to the end members B.

The operation of the apparatus as thus constructed will be apparent from the drawings. In Fig. 1 the mold is shown open, the sides A A and ends B B being separated by reason of the position of the cam-levers F F. To close and tighten the mold, said cam-levers are moved to the position shown in Fig. 2, causing the cams G to bear forcibly against the end members B, or rather against the bearing-plates E thereof, and thus forcing said members inwardly against the ends of the side members A A. The inward movement of said end members B B upon the converging or inclined arms D D likewise has the effect of forcing the side members A A inwardly. Thus the side and end members are simultaneously closed and the mold is effectively tightened up. The reverse movement of the cam-levers opens the mold by reason of the engagement of the cams in the straps H. This engagement throws out the end members, and the riding outward of the end members on the inclined arms D D throws outward the side members.

In Fig. 2, where the mold is shown closed, J denotes a base or bottom plate or board, and K a top or cover.

The aforementioned device for clamping the top and cover to the mold is as follows: L denotes an iron having a lateral lug or extension at its lower end which engages under the bottom or base J of the mold. M is an iron adjustably attached to the iron L, as by means of the thumb-nut N, which is screwed on a bolt extending through a longitudinal slot in member L. This adjustment is to adapt the device to molds of different heights. To the upper iron M is pivoted or fulcrumed a cam-lever O. When the lever O is forced downward, its cam portion bears against the top of the mold, and thus rigidly clamps the top and bottom. Two or more of these de-

vices may be employed at opposite sides of the apparatus.

In Fig. 3 I have illustrated a spring-steel clamp-frame R for clamping around the mold, enabling the mold to be turned over before opening it to release it of its contents. The hinged piece r' may be of iron and is provided with teeth adapted to engage or hook to the top piece r, which is provided with a handle. When the mold is closed, it may be held rigidly in closed position by means of latches d, shown pivoted to the irons e and adapted to engage notches or slots in the oblique arms D.

P denotes irons on the end members B, having top and bottom extensions adapted to engage in notches or slots Q in the top and bottom J and K to hold the top and bottom boards in place.

In this specification and in the following claims the words "side" and "end" are used only relatively, it being understood for the purposes of this invention that the sides may be considered the ends, and vice versa.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. A mold having separable side and end members, arms extending from the ends of said side members and passing slidably through openings therefor in the end members, the arms at each end of the mold being inclined in converging directions, and devices mounted on said arms outside the end members for forcing them toward each other.

2. A mold having separable side and end members, arms extending from the ends of said side members and passsing slidably through openings therefor in the end members, the arms at each end of the mold being inclined in converging directions, and levers fulcrumed on said arms having means for forcing inwardly the end members, whereby the inward movement of the end members also forces inwardly the side members.

3. A mold having separable side and end members, arms extending from the ends of said side members and passing slidably through openings therefor in the end members, the arms at each end of the mold being inclined in converging directions, and levers pivoted to said arms outside of and connected to said end members for operating and closing the mold.

4. A mold having separable side and end members, arms extending from the ends of said side members and passing slidably through openings therefor in the end members, the arms at each end of the mold being inclined in converging directions, and levers pivoted to said arms having cams bearing against the end members.

5. A mold having separable side and end members, arms extending from the ends of said side members and passing slidably through openings therefor in the end members, the arms at each end of the mold being inclined in converging directions, and levers pivoted to said arms outside the end members having cams bearing against the end members, whereby the mold is operated for closing by forcing the cams against said end members, and means for separating by reverse movement of said levers.

6. A mold having separable side and end members, arms extending from the ends of said side members and passing slidably through openings therefor in the end members, the arms at each end of the mold being inclined in converging directions, and levers outside the mold pivoted to the said arms having cams bearing against the end members, said cams being annular, and straps on said end members engaged by said cams.

7. A mold having separable side and end members, arms extending from the ends of said side members and passing slidably through openings therefor in the end members, the arms at each end of the mold being inclined in converging directions, bearing-plates on the outer faces of the end members, and levers pivoted to said arms having cams bearing against said plates.

8. A mold having separable side and end members, arms extending from the ends of said side members and passing slidably through openings therefor in the end members, the arms at each end of the mold being inclined in converging directions, levers fulcrumed on said arms having means for forcing inwardly the end members whereby the inward movement of the end members also forces inwardly the side members, and latches on the end members adapted to engage catches in said oblique arms when the mold is closed.

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

ROBERT B. COLTRIN.

Witnesses:
JAMES VAN BUREN,
BERTHA L. TRINKAUS.