

H. MELCHER.
CEMENT WALL MOLD.
APPLICATION FILED MAY 27, 1912.

1,063,819.

Patented June 3, 1913.

2 SHEETS-SHEET 1.

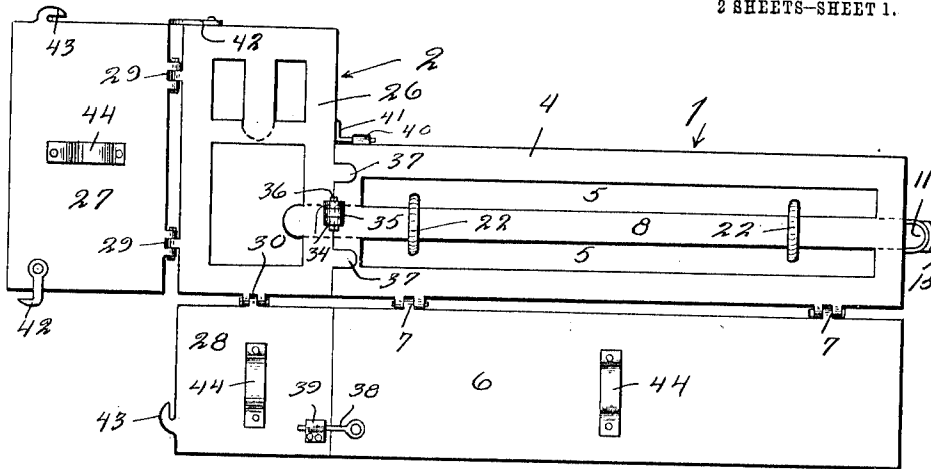


FIG. 1.

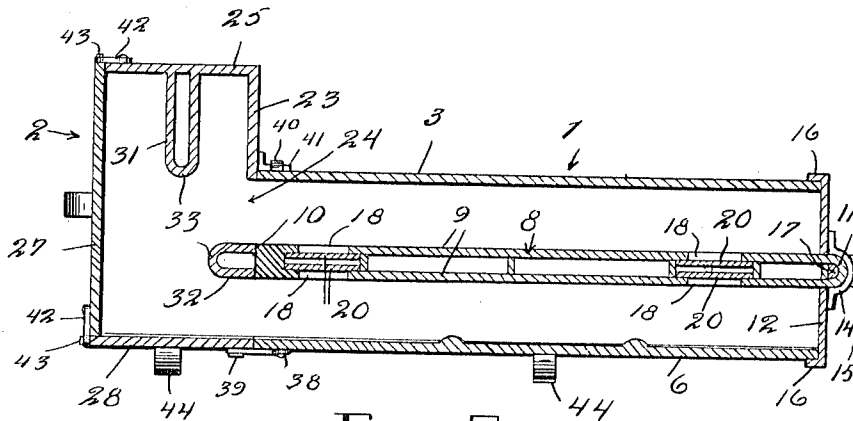


FIG. 2.

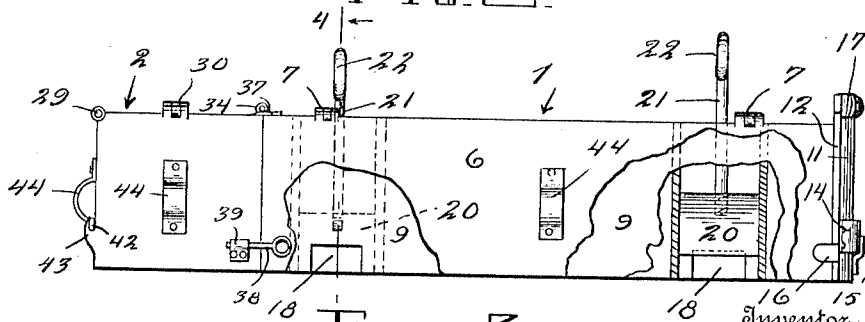


FIG. 3.

Witnesses
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2 SHEETS-SHEET 2.

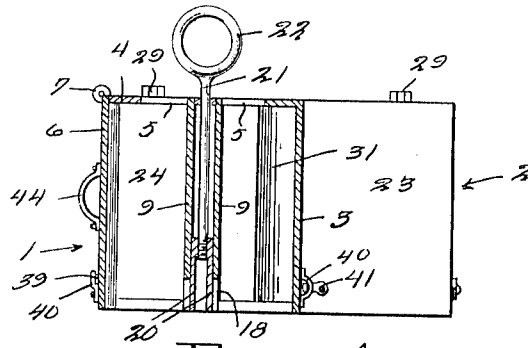


FIG. 4.

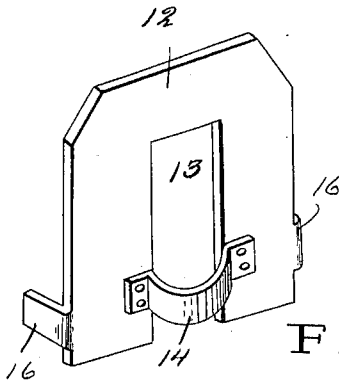


FIG. 5.

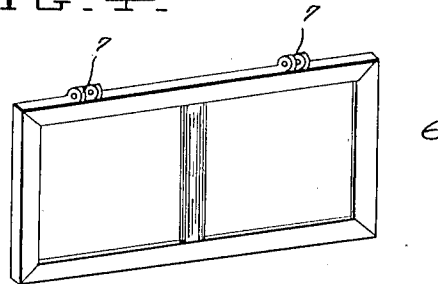


FIG. 6.

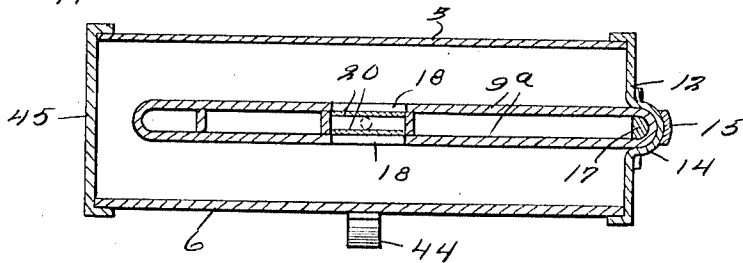


FIG. 7.

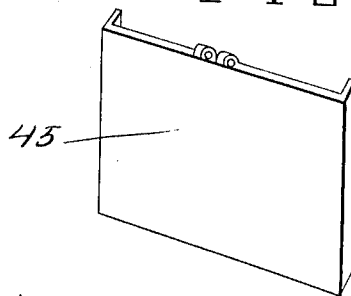


FIG. 8.

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UNITED STATES PATENT OFFICE.

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CEMENT-WALL MOLD.

1,063,819.

Specification of Letters Patent.

Patented June 3, 1913.

Application filed May 27, 1912. Serial No. 699,926.

To all whom it may concern:

Be it known that I, HENRY MELCHER, a citizen of the United States, residing at Logan, in the county of Hocking and State of Ohio, have invented certain new and useful Improvements in Cement-Wall Molds, of which the following is a specification.

My invention relates to cement wall molds and particularly to a mold structure for forming *in situ*, outer and inner walls having an air space between them, and securely tied in their spaced relation.

The object of the invention is to provide a mold structure of this character for forming plane wall sections either in connection with angular corner sections or separate therefrom.

Another object is to provide a mold for forming hollow walls in connection with solid corners.

An important object is to provide a mold formed with tie receiving means of novel character, for strengthening the spaced walls.

A still further object is the provision of means of this character which will be easily and quickly adjusted, operated and removed, and which will be simple in operation, efficient in use, inexpensive to manufacture, and durable in service.

With these and other objects in view, my invention consists in the novel construction and arrangement of parts as clearly defined in the course of the specification and illustrated in the accompanying drawings in which:—

Figure 1 is a top plan view of my mold structure as set up for forming a straight wall in connection with a corner, and showing the swinging plates thereof open and elevated, Fig. 2 is a horizontal section through the same, showing the swinging plates closed and locked, Fig. 3 is a front elevation of the same, parts being broken away, Fig. 4 is a cross section through the same on the line 4—4 of Fig. 3, Fig. 5 is a perspective view of a closure plate for one end of the mold, Fig. 6 is a perspective view of one of the swinging front plates, Fig. 7 is a horizontal section through a modified form of mold, and Fig. 8 is a view of another closure plate.

Referring more particularly to the drawings, the numeral 1 designates my mold structure, adapted for forming a plane section of wall, and 2 designates a corner mold

coöperating therewith. The mold section 1 comprises a rear plate 3, a top plate 4 rigidly secured thereto provided with openings 5, a swinging front plate 6 hinged thereto as shown at 7, and a core 8. The core 8 extends the entire length of the section 1 and comprises parallel longitudinal walls or plates 9 closed at their ends as shown at 10 and 11. It will be observed that the end 10 is straight and is flush with the end of the section, whereas the end 11 is curved and extends beyond the section 1 for connection with a closure plate 12. This plate is provided with a cut out portion 13 to receive the end 11 of the core 8, and a curved plate 14 to contact with the curved end 11 and engage within a clip or bracket 15 on the end 11. The plate 12 is further provided with ears 16 that engage the rear plates of the section 1 and the swinging plates 6 to lock the mold together. A pin 17 is inserted in the end 11 as shown to prevent the displacement of the plate 12. The parallel walls of the core 8 are provided with one or more sets of recesses 18 to receive the wall tying means commonly of bricks, cement block or other desired material. The size of these openings 18 is regulated by means of U-shaped plates 20 adapted to slide vertically within the core 8, and operated by means of rods 21 passing through apertures in the plate 4 and provided with handles 22. The section 2 comprises a rear plate 23, a rigid end plate 25, an apertured top plate 26, and swinging front and end plates 27 and 28 hinged to the top plate as shown at 29 and 30. The section 2 is provided with cores 31 and 32 which do not extend entirely through the mold. These cores comprise parallel walls closed at their ends as indicated at 33.

In order to secure the sections 1 and 2 together, I provide the top plate 26 with a hinge member 34 adapted to coöperate with a hinge member 35 upon the plate 4 and connected therewith by means of a removable pintle 36. Stops 37 are also provided upon the plate 26 to engage the plate 4. The hinged plate 6 is provided with a pivoted latch 38 adapted to engage a keeper 39 on the hinged plate 28. Further locking means comprises a bracket 40 mounted upon the plate 3 and adapted to receive a lug 41 upon the plate 23. The hinged plates 27 and 28 are locked in their closed positions by means of pivoted latches 42 coöperating with keepers 43.

Numeral 44 designates handles upon the several swinging plates whereby they may be easily swung open or shut.

In Figs. 7 and 8 I have shown a mold adapted to mold walls which it is desired to finish at the end without cooperating with a corner. In this instance the core walls 9^a do not extend entirely to the end of the mold, and the mold is closed by a flanged end plate 45 hinged to the hinge member 35. It will be understood that the front plates 6, 27 and 28 may be provided with any desired design upon their inner faces for producing various ornamental effects upon the exterior of the wall.

In use, my mold is set up in position upon the foundation walls previously built, and the tie rods or members are placed within the recesses 18 and extend nearly to the front and rear walls 6 and 3 respectively. The plates 20 are then pushed down into engagement with the ties to prevent cement from oozing through into the core. It will be noted that these sliding plates 20 serve as an adjustment so that tie rods or members of different thickness may be used in the openings 18. The angular or corner mold is securely attached to the straight wall mold as previously described. The swinging plate 6 is locked into position by means of the end plate 12 which engages the core 8, and which engages the front and rear plates by means of the ears 16. The swinging plates 27 and 28 are locked into place by means of the latches and keepers 42 and 43. The mold is then ready to fill. After the cement has been poured through the openings in the top plates 4 and 26, and allowed to "set" or harden, the latches and keepers 42 and 43 are disengaged, the pin 17 and end plate 12 are removed, and the swinging plates 6, 27 and 28 are swung outwardly to disengage from the molded wall. The mold can then be readily removed. To continue the straight wall, the mold section 2 is then dispensed with, and the section 1 is again set up in place upon the foundation, with its open end in engagement with the end of the completed wall section. The cement is then poured into the openings 5 and tamped as before. After the cement has hardened the mold is removed, and set up again in engagement with the end of the completed wall section, as before until the wall is completed. After one layer of the desired wall has been completed, the next layer is formed in the same way, but it is

advantageous to use either a longer or shorter straight wall mold connected with the corner mold for the first operation of the second layer, in order that the various joints of the wall will not be in vertical alinement.

It will be seen that thus a mold structure is provided which is simple, inexpensive and efficient.

It will be understood that various changes in the form, construction and arrangement of parts may be resorted to without departing from the spirit of the invention except as limited by the scope of the subjoined claims.

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

1. In a mold for hollow cement walls, comprising an inverted trough like structure having end closing plates and a core extending within said mold, openings in said core for receiving tying means, angular plates vertically movable within said core and hand operated means for raising or lowering said angular plates to partially close said openings.

2. In a cement wall mold for hollow walls, a trough shaped structure comprising fixed rear and top plates, a swinging front plate and a core extending longitudinally through said mold and projecting therebeyond, end closing means comprising a plate apertured to receive said core, a strip on said plate to engage said core, a bracket on said core to engage said plate, and ears on said plate to engage the front and rear plates of the mold.

3. In a cement wall mold, a straight wall mold comprising relatively fixed rear and apertured top plates, a swinging front plate, a detachable end plate, a core extending through said mold, tie receiving means in said core, and a corner mold cooperating therewith and detachably secured thereto, said corner mold comprising relatively stationary rear, end and apertured top plates, end and front plates connected with said plate, cores extending partly through said corner mold, and means to lock said swinging plates together.

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

HENRY MELCHER.

Witnesses:

FRANK ST. CLAIR,
CORNELIA VAIL.