P. F. GREULOCH.

CONCRETE WALL MOLD.

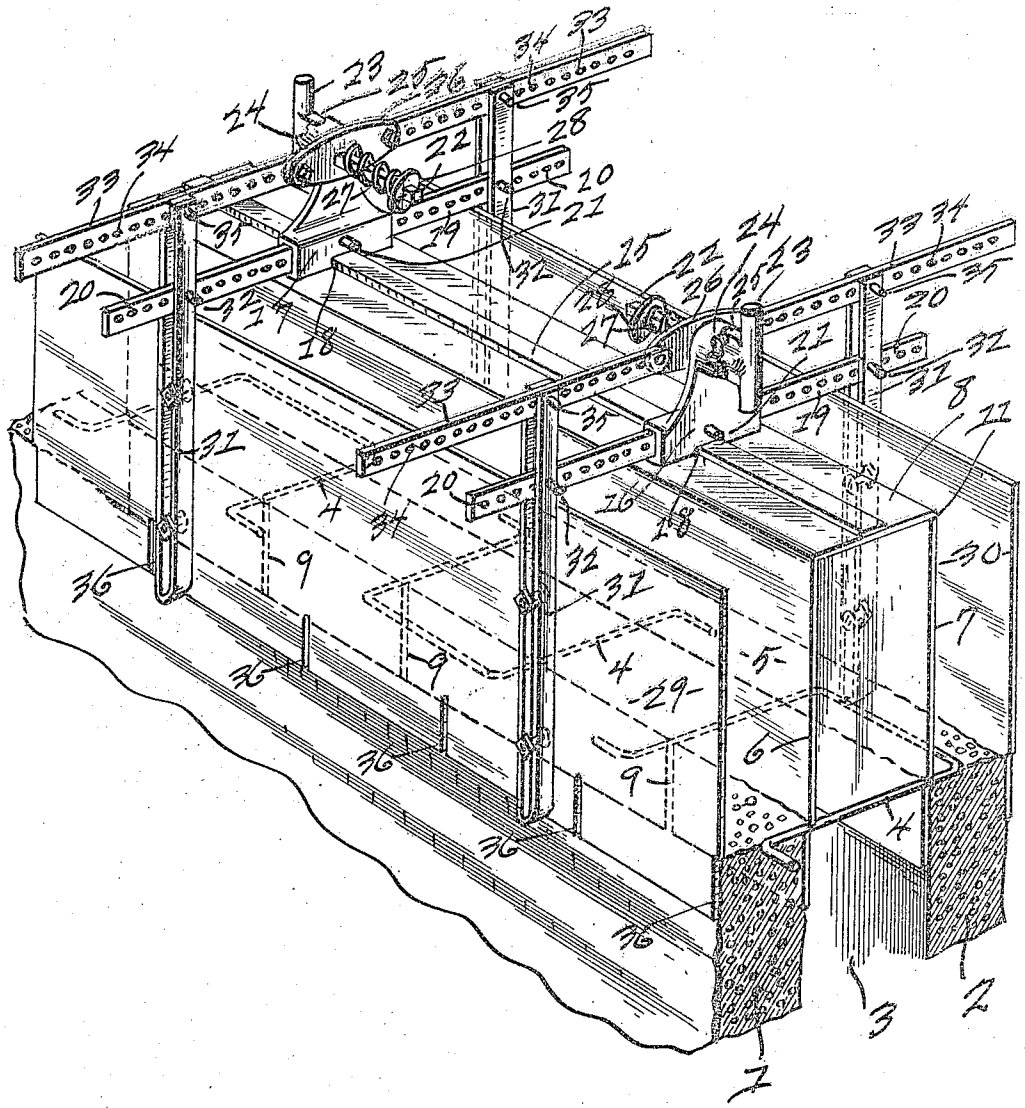
APPLICATION FILED JUNE 16, 1919.

1,322,784.

Patented Nov. 25, 1919.

2 SHEETS—SHEET 1.

Fig. 1.



Inventor

Philip F. Greuloch

By Earl A. Keller Atty

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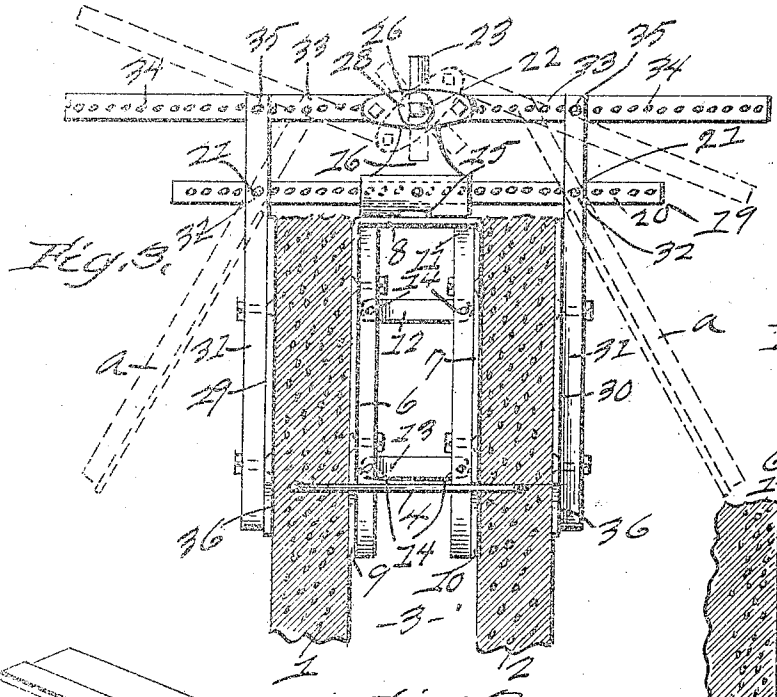


Fig. 3.

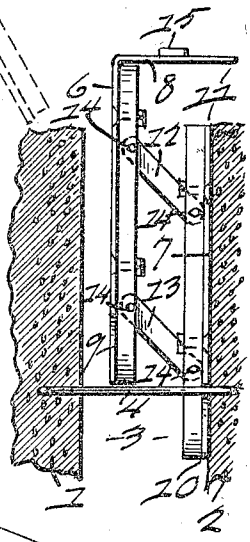


Fig. 4.

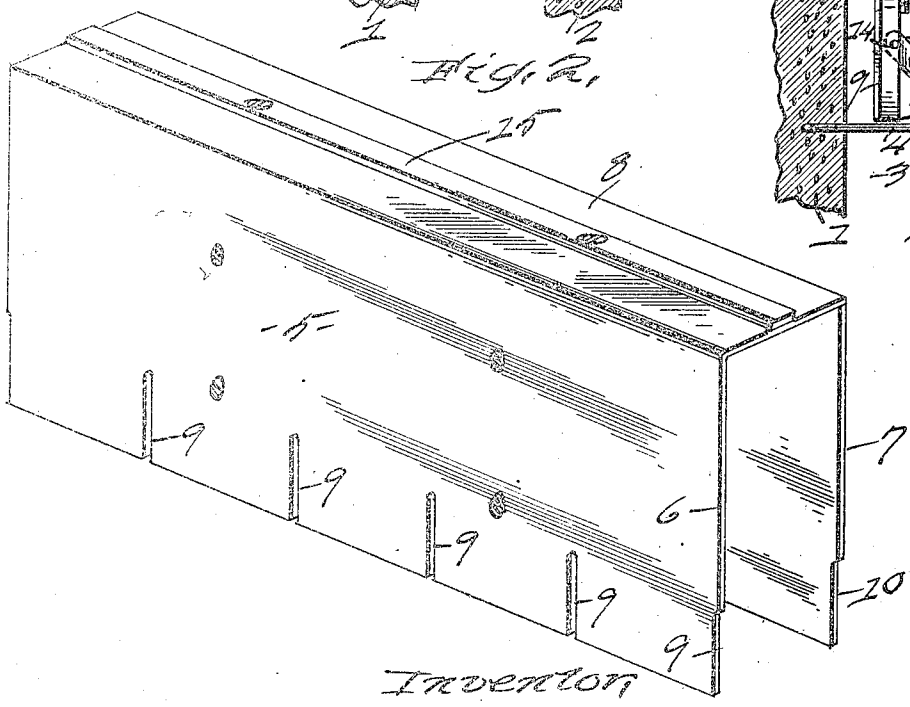


Fig. 2.

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UNITED STATES PATENT OFFICE.

PHILIP F. GREULOCH, OF TOLEDO, OHIO.

CONCRETE-WALL MOLD.

1,322,784. Specification of Letters Patent. Patented Nov. 25, 1919.

Application filed June 16, 1919. Serial No. 304,520.

To all whom it may concern:

Be it known that I, PHILIP F. GREULOCH, a citizen of the United States, residing at Toledo, in the county of Lucas and State of Ohio, have invented a new and useful Concrete-Wall Mold, of which the following is a specification.

My invention relates to improvements in concrete wall molds in which the mold is adapted to advance with and be supported by the wall as the construction of the same progresses. It has for its object to provide means whereby either a solid or hollow wall or partition may be constructed of any desired thickness and with any thickness of air space.

With this object in view my invention embodies the novel combination, arrangement and details of construction hereinafter described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of my complete wall mold showing the same in position upon a portion of a double wall already formed, the same being ready to receive another batch of concrete material; Fig. 2 is a perspective view of the collapsible air-space box; Fig. 3 is an end elevation of the complete wall mold showing in full lines the position of the parts while the wall is being formed, and showing in dotted lines the position of the side plates away from the wall and in readiness to be removed therefrom; Fig. 4 is an end elevation showing the manner in which the air-space box is collapsed and removed from the wall after the latter has been formed.

Referring to the drawings, the outer and inner sections of the double wall which has been constructed by the employment of my improved mold are indicated at 1 and 2 with the air space 3 between them. Upon the foundation or lower portion of the wall section already constructed are placed spaced tie rods 4 bent in any desired form adaptable for the purpose, those shown of U-form with bent ends in alternately reversed arrangement being preferred. Upon these tie rods is adapted to rest the air space box 5 having opposite faces 6 and 7, the face 6 being integral with the top 8 and both faces having slots 9 and 10 extending upwardly from their lower margins to receive the tie rods. The top 8 and the face 7 are therefore separable at 11 and 12 and 13 are links pivoted at their ends at 14 to the faces 6 and 7. The links 12 and 13 when the air space box is in position upon the wall for the reception of concrete material are adapted to be perpendicular to the faces 6 and 7, as shown in Fig. 3, thereby effectively resisting pressure when the concrete material is poured into the mold. The air space box is however readily removed by lifting the top 8 together with the side face 6, being integral therewith, to assume the position in Fig. 4, the distance between the faces of the air space box having been reduced by the operation. Extending longitudinally along the center line of the top 8 of the air space box is a raised rib 15 adapted to receive and guide castings 16 and 17, each formed with a recess 18 on its lower face to fit the rib 15, the castings 16 and 17 together with the parts carried thereby being lined up with the wall. 19 are bars provided with equally spaced perforations 20, and these bars are supported in the castings 16 and 17, pins 21 extending through perforations in the castings and through one of the perforations 20 securing the bars 19 in fixed relation to the castings. At the upper ends of the castings are rotatably mounted the stems 22 of the handles 23, the castings 16 and 17 having serrated faces 24 adapted to be engaged by shouldered portions 25 provided upon the handles and that portion of the stem extending beyond the castings is squared and carry rocker arms 26, compression springs 27 pressing between the rocker arms and fixed washers 28 upon the handle stems holding the shouldered portions of the handles in engagement with the serrations upon the castings and consequently holding the handles and the rocker arms carried thereby to the angular position to which they may be turned, as shown in dotted lines, Fig. 3. 29 and 30 are plates intended to serve as forms for the outer faces of the wall. These may be plain to form a plain wall or the outer plate may be formed to resemble rock faced masonry, laid brick, or any fanciful design to suit the individual taste. Plates 29 and 30 are secured to arms 31 pivoted near their upper ends to bars 19, being adjustable along said bars, pins 32 inserted through the arms 31 and through the bars 19 permitting the adjustment of the plates 29 and 30 to any desired wall thickness. 33 are bars connecting the ends of the rocker arms with the upper ends of

the arms 31, the bars 33 being also provided with spaced perforations 34 identical with those in the bars 19, pins 35 passed through the upper ends of the arms 31 and the perforations 34 permitting adjustment along the connecting bars 33. This arrangement by reason of the connecting bars being pivoted to the rocker arms causes the plates 29 and 30 to move to the position "*a*," "*a*," in dotted lines, Fig. 3, when the handles are operated. From the foregoing the operation of the device for building a double hollow wall will be understood. For building a single wall without air space, and for building partitions, the air space box is dispensed with and to support the plates 29 and 30 there are provided spaced slots 36 extending into the lower edges adapted to receive light iron or steel rods upon which the plates 29 and 30 rest, the rods extending beyond both faces of the solid wall and supporting the outer wall plates in the same manner that the U-shaped tie rods hereinbefore mentioned supported the air space box. After completing a section of solid wall the supporting rods are withdrawn, and the wall having been struck off to a level, they are again placed on the level top of the section just completed in readiness to again receive the mold to complete the wall to any desired height.

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

In a concrete wall mold, the combination with a hollow wall having transverse tie rods, an air space box having side faces provided with slots to receive the tie rods, and having a top provided with a longitudinal rib, links connecting the opposite interior faces of said air space box, castings supported upon the top of the air space box and maintained in alined position by the rib thereon, outer wall forms pivotally and adjustably supported upon said castings, operating handles rotatably mounted in said castings, rocker arms carried by the handles, and connections between the rocker arms and the outer wall forms, substantially as described.

PHILIP F. GREULOCH.