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MOLD FOR CONSTRUCTING CONCRETE HOUSES AND OTHER BUILDINGS.

APPLICATION FILED JUNE 2, 1920.

1,394,790.

Patented Oct. 25, 1921.

3 SHEETS—SHEET 1.

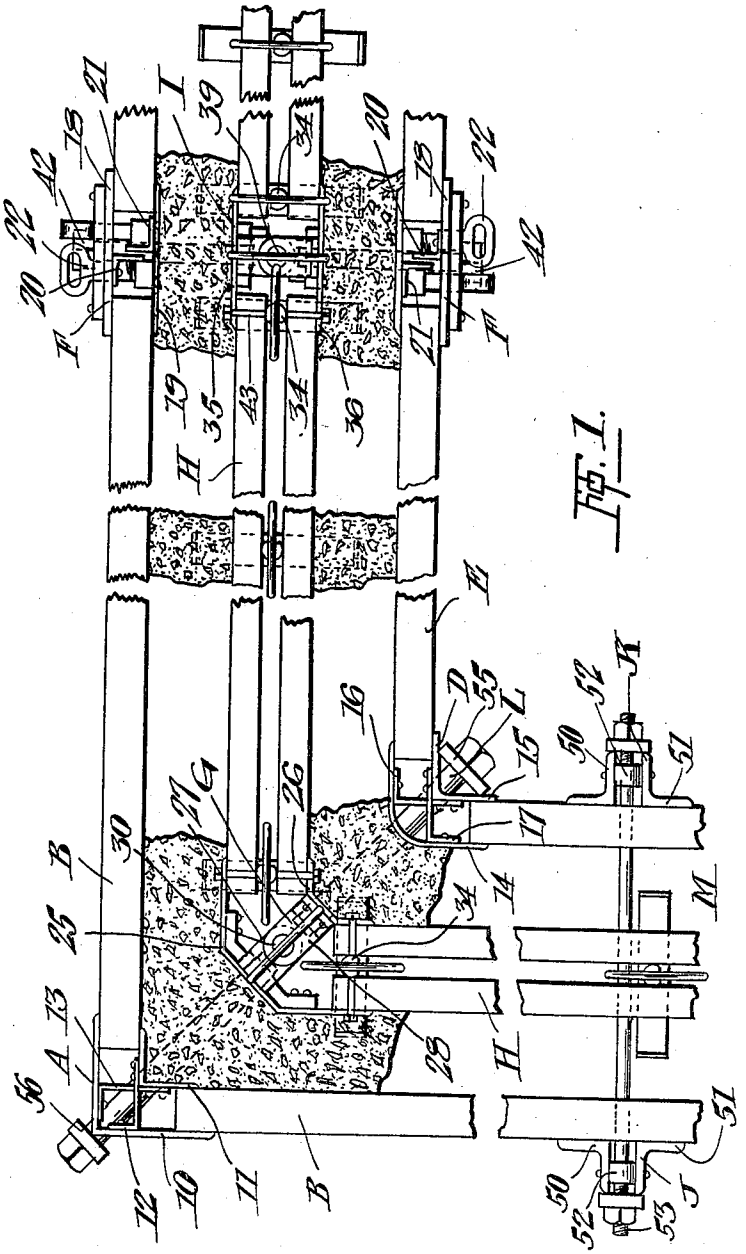


Fig. 1.

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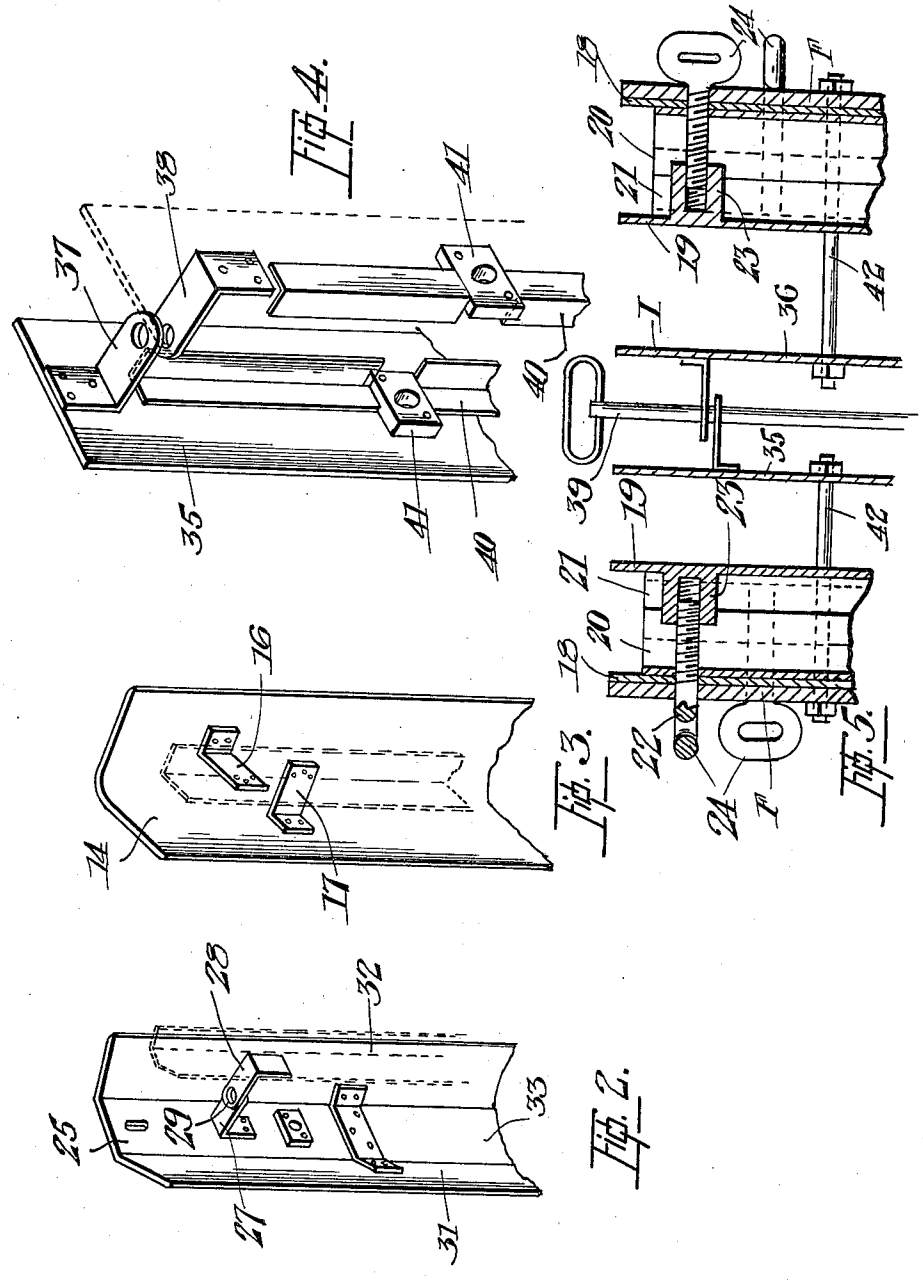
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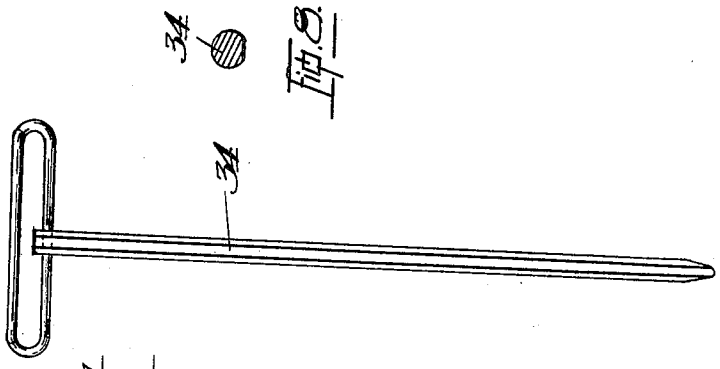


Fig. 8.

Fig. 7.

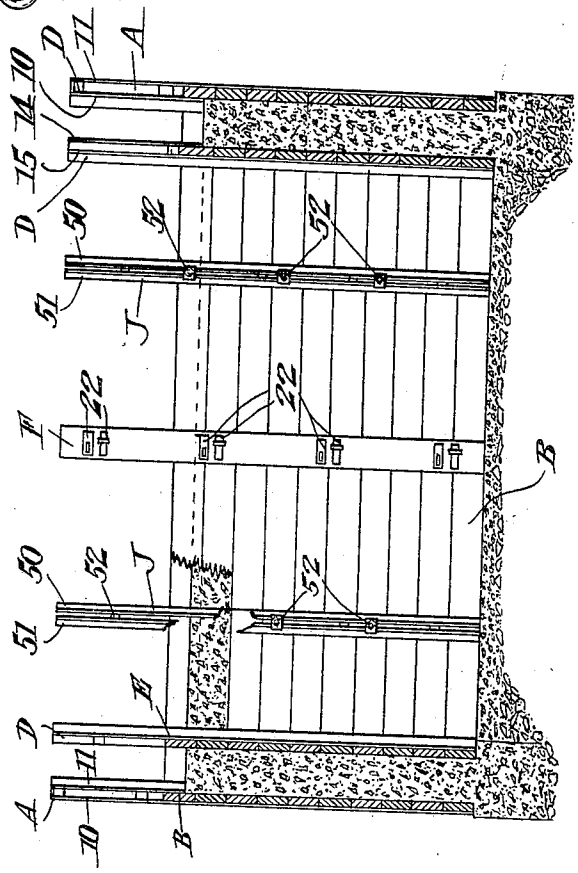


Fig. 6.

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UNITED STATES PATENT OFFICE.

WILLIAM HENRY ROUGHSEDGE, OF OTTAWA, CANADA.

MOLD FOR CONSTRUCTING CONCRETE HOUSES AND OTHER BUILDINGS.

1,394,790. Specification of Letters Patent. Patented Oct. 25, 1921.

Application filed June 2, 1920. Serial No. 385,913.

To all whom it may concern:

Be it known that I, WILLIAM HENRY ROUGHSEDGE, a subject of the King of Great Britain and Ireland, having a place of residence at 40 First avenue, in the city of Ottawa, Canada, have invented certain new and useful Improvements in Molds for Constructing Concrete Houses and other Buildings, of which the following is a specification.

This invention relates to improvements in molds for constructing complete all concrete continuous cavity buildings, and the objects of the invention are to provide a simple and easily operated set of molds which may be used for building concrete houses, and other structures, and by the use of which an improved hygienic and sanitary type of building may be erected at low cost and in a minimum space of time, and it consists essentially of a novel set of corner and extension standards adapted to support the mold boards in combination with continuous cavity standards and extension mold supporting members all constructed and arranged as hereinafter more fully set forth and described in the accompanying specification and drawings.

In the drawings:

Figure 1 is a sectional plan of an embodiment of the invention.

Fig. 2 is a perspective view of the cavity corner standard.

Fig. 3 is a perspective view of the inner corner standard.

Fig. 4 is a perspective view of the cavity extension standard.

Fig. 5 is a sectional detail through the outer extension standard.

Fig. 6 is a sectional elevation.

Fig. 7 is an elevation of the cam member.

Fig. 8 is a sectional detail in the cam tightening member.

In the drawings, like characters of reference indicate corresponding parts in all the figures.

The drawing represents the invention applied to the molds for concrete houses, in which the walls are constructed with a central cavity.

Referring to the drawings, A indicates the outside corner standard, it comprising an outer corner angle member 10, and an inner angle member 11 connected together by L-shaped braces 12 and 13, which are riveted or otherwise rigidly attached to each angle member, the said angle members being spaced apart to form sockets or recesses to receive the molding members or planks B, which are designed to mold the outer surface of the wall C.

D indicates the inner corner member, which also comprises substantially parallel outer and inner angle members 14 and 15, connected by L-shaped braces 16 and 17, and each of the angle members forming sockets to receive the molding members or planks E which mold the inner surface of the wall. When the wall is long it is necessary to provide extension standards or holding members for the molding member.

F represents these extension standards, each comprising an outer plate 18 and an inner plate 19, which are spaced apart and form sockets for the mold member, the plates being reinforced on the inner side by longitudinally extending angle bars 20 and 21, which in closed position overlap as shown.

The plates are held in closed position by means of clamping dimension screws 22, which extend through the outer plates into threaded sockets 23, which are secured in position to form an inner plate 19, and which screw bolts govern the thickness of the boards.

A plurality of clamping dimension screws are provided and constructed with respect to each other, and formed with handles 24 by which they may be turned and which also form an abutment against the outer plates, to provide rigidity.

G represents a cavity corner standard or retaining member adapted to support and hold the molding members which mold the surface of the central cavity in the wall, this member G comprising an outer angle member 25, and an inner angle member 26, the said angle members having bracket members 27 and 28 designed to overlap and formed with perforations 29 through which a central locking bar 30 is designed to be inserted, thus holding the corner members in extended rigid position.

Each of the angle members 25 and 26 is formed with one section 31 parallel with one wall, one section 32 parallel with the other wall which is at right angles to the first wall, and an angular connecting portion 33.

The inner molding members H are se-

cured to the angle members 25 and 26, and are maintained in spread position by vertically extending cam members 34.

I represents the cavity extension standards or supporting members provided where necessary throughout the length of the wall to connect the cavity molding member, each of the said cavity extension standards including parallel side plates 35 and 36, having overlapping perforated brackets or lugs 37 and 38 designed to receive a central locking pin 39, the plates 35 and 36 being suitably reinforced with angle members 40 and having at intervals threaded sockets 41 designed to receive transversely extending threaded locking pins which extend through locking pins 42, which extend through the walls into the socket, the opposing plate as well as the extension standards F being formed with suitable perforations to permit the passage of such pins.

The plates 35 and 36 and mold members H connected to them are held in extended position by transversely extending bolt members 43.

To give additional strength to the molding members when in position, I provide bracing members J and K on the outside and inside respectively, each including angle members 50 and 51, separated by spacers 52, the webs of the angle members extending outwardly from the mold boards, and being connected by clamping bolts 53 extending through the spacers 52, these bolts extending through all the molding members from one of the brace members J to the other K, having suitable clamping nuts thereon adapted to bear against the brace members.

An additional bracing and adjusting bolt L is provided extending diagonally through the corner standards, the nuts of which bear against washers 55 and 56 bearing against the outside and inside corner standards.

M represents a plurality of cam ties which are in the form of thin strips of metal of U-shaped formation embedded in the concrete and form a support for the bottom of the cam bars and designed to be left in the wall when the cam bars are withdrawn as hereinafter explained.

In using the invention the various standards or mold supporting members are placed in position as indicated in Fig. 1, the mold board members placed in position and the concrete board allowed to set, the cams 34 being previously turned to expanding position. After the concrete is set the cams 34 are moved to released position which permits the cavity stands or molds supporting members to collapse, permitting the cavity molding members H to collapse and be withdrawn from the cavity. The mold members on the outer and inner walls may also be withdrawn leaving the finished walls. Window, doors and other conveniences may be provided for in the house by suitable openings around which suitable forms of molds are provided.

As many changes could be made in the above construction, and many apparently widely different embodiments of my invention, within the scope of the claims, constructed without departing from the spirit or scope thereof, it is intended that all matter contained in the accompanying specification and drawings shall be interpreted as illustrative and not in a limiting sense.

What I claim as my invention is:

1. In a mold for concrete plates, a cavity mold board supporting member, comprising a pair of plates adapted to be secured to the mold board, overlapping brackets on the plates, a line of perforations, and a pin adapted to extend through the said perforations.

2. In a concrete mold for the purpose specified, extension side mold supporting member, comprising spaced plates, sockets on the inner plates, clamping screws extending through the outer plates into the sockets and reinforcing members hung on the said plates having the projecting wedges overlapping.

3. A concrete mold for the purpose specified, comprising inner and outer corner molds, each having angle members formed with sockets for the outer molding members, a cavity corner member having spaced plates having means adapted for attachment to the cavity molding members, cam members for separating the plates, means for limiting the separation, extension members on the outer and inner surfaces of the wall, each comprising spaced plates, means for clamping them together, the cavity extension mold comprising spaced plates, and overlapping perforated brackets, and a central pin extending through the brackets.

4. In a concrete mold for the purpose specified, a corner standard and mold board support comprising parallel angular members and L-shaped brackets connecting the same on the inside, one branch of each L-shaped bracket being connected to the inner side of the outer angular member, while the other branch is connected to the outer side of the inner member.

5. In a concrete mold, the combination with a mold board, of a bracing member thereon including angle members having their webs adjacent to, but separated from each other, a spacing member between the angle members and a clamping bolt extending through the spacing member having a nut thereon adapted to bear against the angle member.

6. In a concrete mold for the purpose specified, a cavity mold supporting member, comprising a pair of plates, a plurality of overlapping brackets on the plates, each

having perforations adapted to be alined, a pin adapted to extend through all of the perforations, and angle shaped reinforcing members extending between the brackets.

7. In a concrete mold for the purpose specified, extension side mold supporting members, comprising inner and spaced plates, sockets on the inner plates, clamping screws extending through the outer plates into the sockets, inner cavity mold supporting members comprising a pair of plates, overlapping brackets on the plates, having perforations adapted to be alined, and a pin adapted to extend through the said perforations.

8. In a concrete mold for the purpose specified, extension side mold supporting members, comprising inner and outerspaced plates, sockets on the inner plates, clamping screws extending through the outer plates into the sockets, inner cavity mold supporting members comprising a pair of plates, overlapping brackets on the plates, having perforations adapted to be alined, a pin adapted to extend through the said perforations, and bolts adapted to extend through the extension side mold supporting members to the plates of the cavity mold supporting members.

In witness whereof I have hereunto set my hand.

WILLIAM HENRY ROUGHSEDGE.