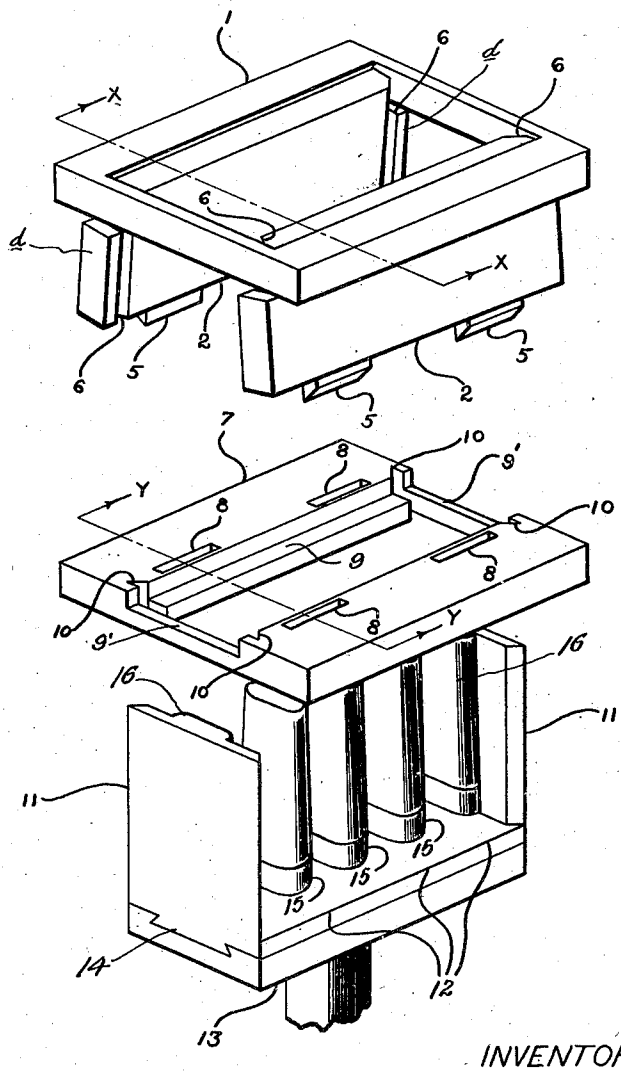
Sept. 21, 1948. C. B. VOEGE 2,449,732

MOLD FOR FORMING CEMENTITIOUS BLOCKS

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Fig. 1.



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Fig. 3.

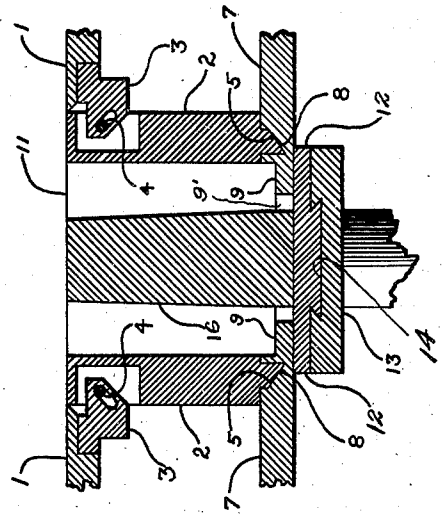


Fig. 2.

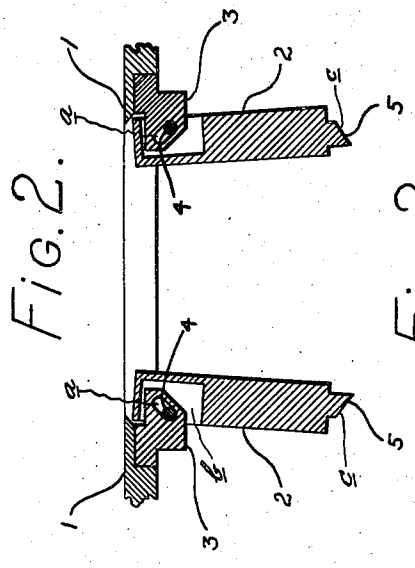
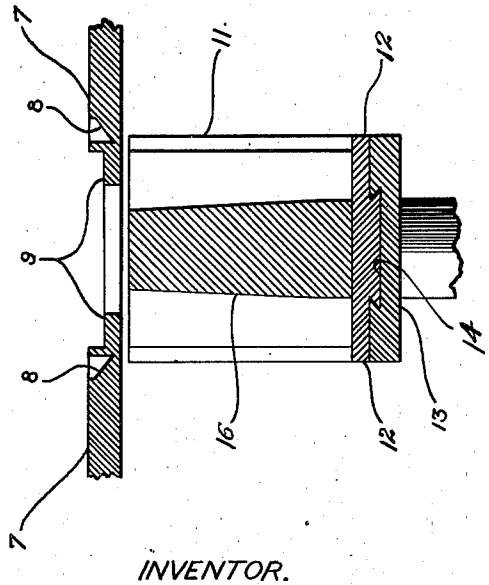


Fig. 2A.



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MOLD FOR FORMING CEMENTITIOUS BLOCKS

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Application January 11, 1946, Serial No. 640,529

3 Claims. (Cl. 25—121)

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This invention relates to molds and has relation more particularly to a mold especially designed and adapted for use in the production of hollow cementitious blocks, and it is a particular object of the invention to provide a mold including a form comprising separable walls coacting in a manner to assure a rigid structure during a molding operation.

Another object of the invention is to provide a mold including a bed plate with associated side and end walls, the side walls being swingingly carried by a top table and means coacting with said side walls and bed plate to assure correct positioning of the side walls when the mold is in assembly.

It is also an object of the invention to provide a mold of this kind including a table and bed plate, the bed plate having associated therewith end walls which freely pass through the table.

An additional object of the invention is to provide a mold including a top table and wherein the top of the mold cavity is on the same plane as the table top.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved mold whereby certain important advantages are attained, as will be hereinafter more fully set forth.

In order that my invention may be better understood, I will now proceed to describe the same with reference to the accompanying drawings, wherein:

Figure 1 is a view in perspective of a mold constructed in accordance with an embodiment of my invention, with the several units therein comprised in separated relation;

Figure 2 is a sectional view taken substantially on the line X—X of the top unit shown in Figure 1;

Figure 2ª is a sectional view taken substantially on the line Y—Y through the two lower units illustrated in Figure 1; and

Figure 3 is a sectional view taken through the various units of the mold in assembled relation.

In the embodiment of the invention as illustrated in the accompanying drawings, 1 denotes the mold top table or frame which is rectangular in form and defines a relatively large central opening. Associated with the side or longitudinal marginal portions of this opening of the table or frame 1 are the mold side walls 2 of desired dimensions and which have the major portion of their upper marginal edges extending within the opening of the table or frame 1, as is clearly illustrated in Figure 2 of the drawings.

At each end portion of the central opening of

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the table or frame 1 is a depending bracket 3 having an upwardly and inwardly inclined slot *a* through which passes a hinge pin 4 carried by a side wall 2, whereby said side wall is mounted for swinging movement. The pin 4 coacts with the slot *a* to assure proper or effective working assembly of the side wall 2, as will hereinafter be more clearly understood.

The bracket 3, as illustrated in Figure 2 of the drawings, extends inwardly of the central opening of the table or frame 1 and the upper marginal portion of the wall 2 in its outer face is provided with a pocket or recess *b* to accommodate said extended portion of the bracket 3.

The lower marginal edge of each of the side walls 2 adjacent each end thereof is provided with a relatively long depending tooth 5 having a downwardly and inwardly beveled outer face *c*. The opposite end portions of each of the side walls 2 are provided with the outwardly directed extensions *d* which underlie the adjacent end marginal portion of the table or frame 1 and disposed transversely across the inner face of the side wall 2 at the junctions of the extensions *d* and the side wall 2 are the guide slots 6.

The numeral 7 designates an intermediate table which is provided with a central opening of a length substantially equal to the length of the central opening of the top table 1 and said table 7 at the opposite sides of the central opening thereof and in relatively close proximity to its ends is provided with the upwardly opening slots or grooves 8, the bottom walls of which are beveled complemental to the beveled faces *c* of the teeth 5 of the side walls. The teeth 5, in the assembly of the mold, snugly fit within the slots or grooves 8 and the contact of the beveled faces *c* of the teeth 5 with the bottoms of the slots or grooves 8 assures positioning of the side walls 2 when the mold is in working assembly.

The table 7, along the marginal portions defining the sides of the central opening of said bed, is provided from above with the rabbets or grooves 9 to provide receiving guides for a pallet.

It is believed to be apparent that the inclined slots *a* with the contacting pins 4 further assure the effective placement of the side walls 2 in the mold assembly with the top of the mold cavity coplanar with the mold top table 1, as shown in Figure 3 of the drawings.

As is illustrated in Figure 1 of the drawings, the portions of the table 7 extending across the opposite ends of the central opening of said bed are provided with the guide recesses 9', the intermediate portions of which are coplanar with the

bottom faces of the rabbets 9 and with said recesses 9' bridging the space between the outwardly disposed or vertical inner walls of the rabbets 9.

At the extremities of the rabbets 9, the side walls of the central opening of the table 7 are provided with the guide slots 10 through which slidably engage the side marginal portions of the end walls 11. The side edges of these end walls 11 are inwardly beveled and the slots 10 are of corresponding form in cross section.

The end walls 11 are carried by a bed plate 12 which is detachably engaged with and held to a pressure head 13. As is illustrated in the accompanying drawings, this detachable connection is accomplished through a conventional beveled tongue and groove connection, as at 14.

The pressure head 13 may be supported in any manner desired as this in itself forms no particular part of the present invention.

The bed plate 12 at points spaced therealong and at the transverse center thereof is provided with the upstanding core members 15 while the inner faces of the end walls 11 in alignment with the core members 15 are provided with the inwardly directed semi-core members 16.

It is believed to be apparent that when the mold is properly assembled, a pallet (not shown) may be fed into the mold cavity from above or down through the top or, of course, can be fed into the mold in the process of assembling through the guide recesses 9'.

While the present mold structure was designed to form a part of a press structure, for operation by hydraulic pressure or other suitable power, it may be assembled and used as a unit independently of any press machine structure. In such case the assembling operation would involve first the lowering of the intermediate table onto the underlying part which comprises the bed plate, vertical end walls 11 and core members 15. It will be understood that the bed plate might be supported in any suitable manner during this operation. In the course of placing the intermediate table on the underlying bed plate, the table might be held momentarily at an elevation where the top surfaces of the guide recesses 9 and 9' are in the plane of the top edges of the walls 11 and the cores 15 and a pallet then inserted and slid along the guide recesses until it is in a position where it may move down onto the bed plate 12. The intermediate table may then be lowered until it comes to rest upon the bed plate 12 as shown in Figure 3.

After the intermediate table has been placed in position, either the top table may be lowered or the bed plate and intermediate table may be raised to extend the side walls 2 to a position where the teeth 5 will enter the notches or grooves 8. When the walls reach this position the bottom edges thereof will rest upon the top surfaces at the two sides of the opening of the intermediate table thus completing the mold structure as it is shown in Figure 3.

It will be understood, of course, that when the intermediate table is being assembled on the bed plate the beveled edges of the end walls 11 will pass into the slots 10 so that a locking connection between the intermediate table and the bed plate is obtained.

Where the mold structure forms a part of a press machine the bed plate 12 is carried upon the press plate or head 13 which in turn is supported for up and down movement by the carrying piston

13'. The intermediate table forms a part of a vertically moveable unit of the machine while the top table 1 forms a fixed part of the machine.

With such an arrangement of the mold structure as an integral part of a press structure the head 13 is first moved up until the top surfaces of the walls 11 and of the cores 15 are in the proper plane with respect to the guides 9 and 9' to receive a pallet, after which continued upward movement of the head 13 is maintained until the walls 11 and the cores 15 extend through the opening of the intermediate table and such table comes to rest upon the bed plate 12. The two coupled units are then continued upwardly until the teeth 5 engage in the slots 8 thus completing the assembling of the mold.

After the complete assembling of the mold the material to be cast therein is introduced and a suitable pressing element or top head is lowered to compress the material in the mold.

It is also believed to be obvious that under the pressure of the head 13, all of the elements of the mold will be maintained in effective working position with the side walls parallel. Upon initial release of pressure by the head 13, the side walls 2 will release, and upon continued withdrawal of the head 13, the end walls 11 will be entirely removed and thus permit the removal of the pallet and the block formed thereon. Obviously, as the walls 11 are sufficiently withdrawn, there will be a corresponding sufficient withdrawal of the core members 12.

The manner of tamping the cementitious or kindred material poured into the assembled mold forms no part of the present invention.

From the foregoing description it is thought to be obvious that a mold constructed in accordance with my invention is particularly well adapted for use by reason of the convenience and facility with which it may be assembled and operated.

I claim:

1. A mold comprising a top table, a carrying head, a bed plate carried by the head, opposed walls for the mold cavity carried by the head, opposed walls for the mold cavity carried by the table, and means for maintaining the walls of the mold in assembled relation.

2. A mold comprising a top table, a carrying head, a bed plate under the table, opposed walls for the mold cavity carried by the head, opposed side walls for the mold cavity carried by the table, said side walls being swingingly supported by the table, an intermediate table and coacting teeth and grooves carried by the side walls and the intermediate table for holding the side walls in assembled relation.

3. A mold comprising a top table provided with a central opening, side walls pivotally engaged with the table and extending along the opposed margins of the opening, said side walls being below the table, a bed plate, upstanding opposed walls carried by the bed plate to be received between the first-named walls, an intermediate table having a central opening and adapted to seat upon the bed plate, said intermediate table at opposite sides of the opening thereof having grooves in its top face, and teeth carried by the side walls to engage within the grooves, the outer faces of the teeth and the bottom walls of the grooves being on a complemental bevel to properly position the side walls, the end walls of the bed plate freely moving through the intermediate table.

CLAYTON B. VOEGE.