

Nov. 28, 1950

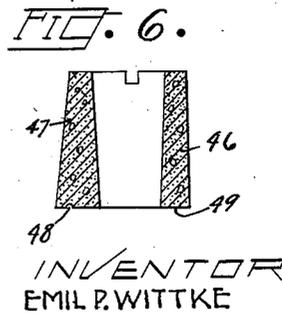
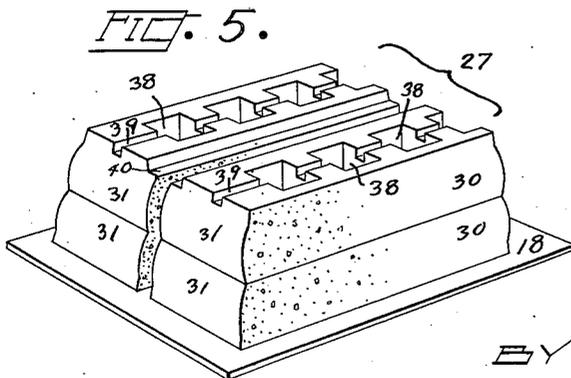
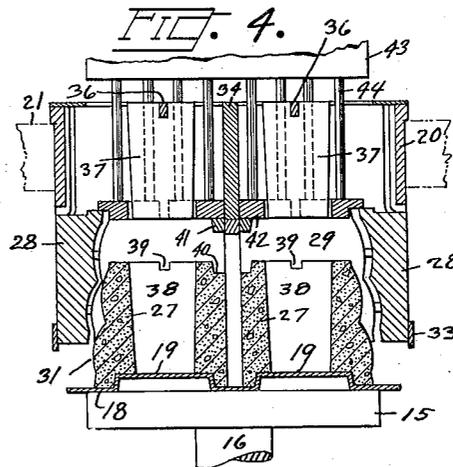
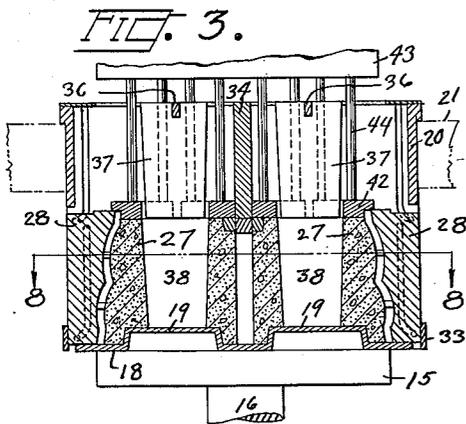
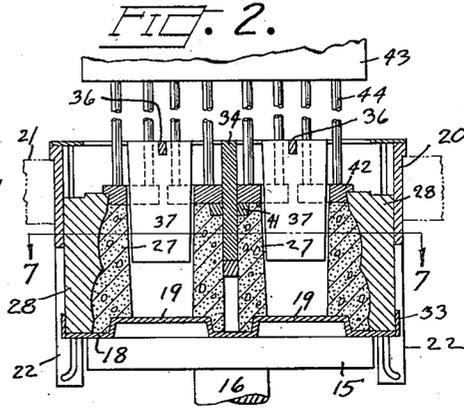
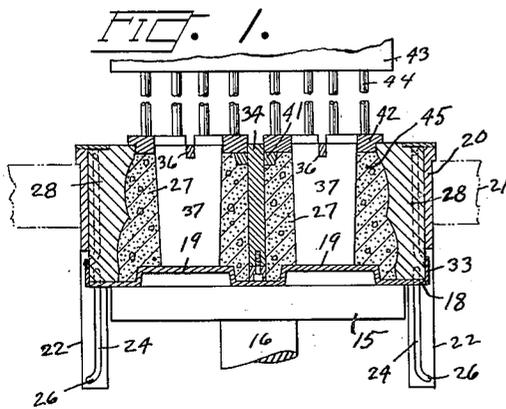
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2,532,049

MOLD FOR MAKING HOLLOW CONCRETE BLOCKS

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2 Sheets-Sheet 1



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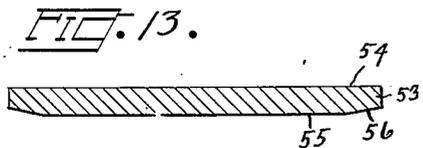
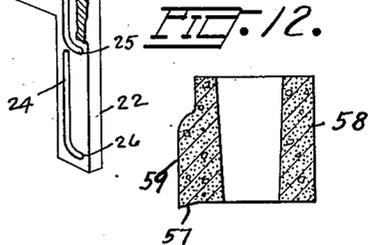
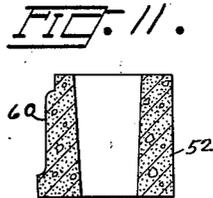
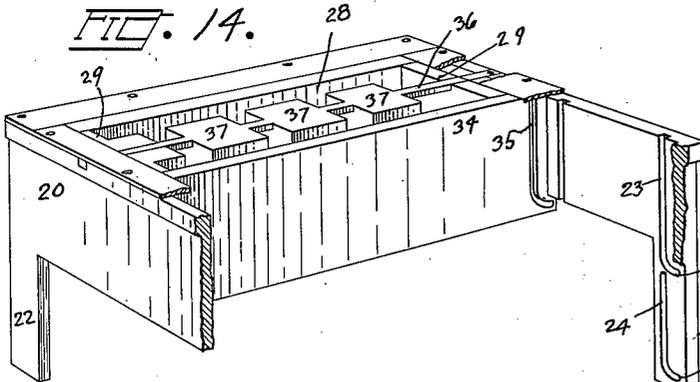
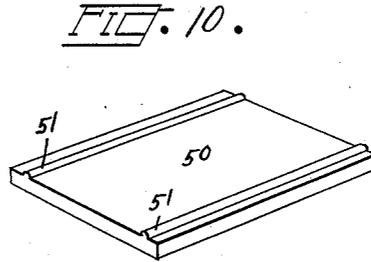
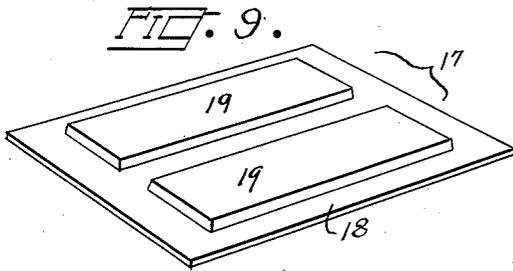
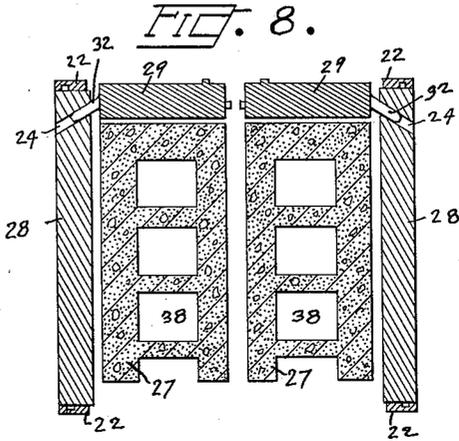
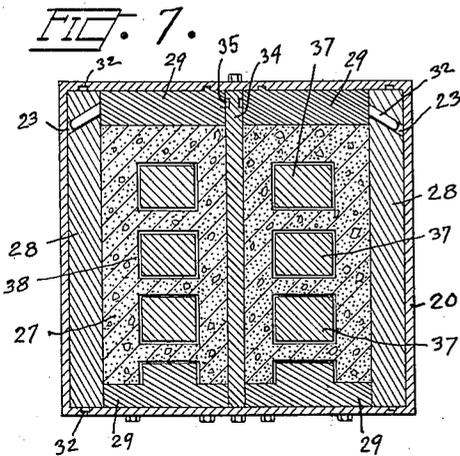
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MOLD FOR MAKING HOLLOW CONCRETE BLOCKS

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2 Sheets-Sheet 2



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2,532,049

MOLD FOR MAKING HOLLOW CONCRETE BLOCKS

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Application August 11, 1948, Serial No. 43,700

3 Claims. (Cl. 25-41)

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This invention relates generally to the art of fabricating building materials out of concrete and particularly to a mold for making hollow concrete blocks.

The main object of this invention is to construct a mold especially adapted for the making of concrete blocks, the details of which are set forth in my pending application, Serial No. 23,161, filed April 26, 1948.

The second object is to provide a block forming mold or attachment for existing machines, whereby a number of different forms of my special block may be produced.

I accomplish these and other objects in the manner set forth in the following specification as illustrated in the accompanying drawings, in which

Fig. 1 is a vertical section through the mold, showing the concrete mixture in place for making a form of block having a bottom recess.

Fig. 2 is a view similar to Fig. 1 but showing the molded block partially ejected.

Fig. 3 is similar to Fig. 2 but showing the side pieces moved away from the sides of the block.

Fig. 4 is a view similar to Fig. 3 but showing the complete removal of the block from the mold.

Fig. 5 is a perspective view showing a pair of completed blocks upon a pallet.

Fig. 6 is a sectional view through a block with a flat top and with a flat bottom having a groove under its outer edge.

Fig. 7 is a horizontal section taken along the line 7-7 in Fig. 2.

Fig. 8 is a section taken along the line 8-8 in Fig. 3.

Fig. 9 is a perspective view of a pallet for forming the blocks, having a recessed bottom.

Fig. 10 is a perspective view of a pallet for flat bottom blocks such as are shown in Fig. 6.

Fig. 11 is a section of a block having a flat top and bottom and a molded outer side.

Fig. 12 is a section of a block having a flat top and a depending drip edge and molded exterior.

Fig. 13 is a section of the pallet used to make the blocks shown in Figs. 11 and 12.

Fig. 14 is a fragmentary perspective view of the mold box with parts broken away and in section.

Like numbers of reference refer to the same or similar parts throughout the several views.

In the drawings, there is shown a table 15 of a concrete block forming molder whose table supporting piston 16 is hydraulically or mechanically operated.

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Referring in detail to my invention, there is shown a pallet 17 whose flat base 18 normally rests on the table 15 and whose raised portions 19 form the recessed under sides of the blocks shown in Figs. 1-4.

For the purpose of illustration, there is shown a mold box 20 which is box-like in form and is mounted on the stationary support 21. Extending downwardly from each corner of the box 20 is a leg 22 having formed therein the vertical raceways or grooves 23 and 24 whose lower ends 25 and 26 are curved outwardly.

When forming corner blocks 27, such as are shown in Fig. 5, it is necessary to use the movable liners 28 and 29 which form the molded outer faces 30 and 31 of the blocks 27. The shape of the outer face of the blocks to be formed may vary to suit the need and the only change required is in the shape of the elements 28 and 29.

Projecting from the ends of the members 28 and 29 are the pins 32 which occupy the grooves 23 and 24. A flange 33 is formed around the bottom of the liners 28 and 29 and serves to center the pallet 17 with relation to the liners 28 and 29.

In Fig. 7 is shown the arrangement of the parts in which the mold box 20 contains the long liners 28 and the short liners 29, the latter of which are separated by the dividing plate 34 which is provided with grooves 35 which conform to the grooves 23.

Extending across the form on each side of the dividing plate 34 are the core supporting bars 36 from which are suspended the cores 37 which form the holes 38 in the blocks 27.

The bars 36 form grooves 39 in the blocks 27 which permits cross ventilation and also affords a passageway for horizontal wiring.

In order to form the shoulder 40 on the innermost top edge of the block 27, I employ a shoulder forming bar 41 which is attached to the tamper foot 42 which is attached to the plunger 43 by the rods 44.

It is desirable to make the cores 37 hollow to facilitate their removal from the molded block. In such case, the upper end of the core is provided with one or more perforations.

It can be seen by an inspection of Figs. 1-4 that with the parts in the position shown in Fig. 1, the cores 37 and liners 28 and 29 rest upon the pallet 17 and that concrete 45 can be poured around the cores 37 and tamped by vibration or by operation of the tamper foot 42.

As the mold is filled, it moves downwardly as shown in Fig. 2, after which any additional

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downward movement of the foot 42 causes the pins 32 to enter the curved grooves 25 and 26 and move the liners 28 and 29 which are now below and clear of the box 20, to move away from the newly formed block 27 which block, resting on its pallet 17, is now carried down on the table 15 until it is free of the liners 28 and 29.

In Fig. 6 is shown a form of block 46 having an inclined face 47 instead of the curved sides of the blocks 27 and having the groove 48 formed on its under side 49.

The groove 48 is formed by using the pallet 50 shown in Fig. 10, in which the parallel ribs 51 form grooves 48 in two blocks at one time.

In the form of block 52 a flat top pallet 53 is used.

In Fig. 13 is shown the pallet 53 whose side 54 is a flat surface, while the side 55 has bevelled edges 56 to form the overhanging outer edge 57 of the block 58.

Illustrations show various forms of outer surfaces 59 and 60, the precise form of which is immaterial as long as the lower outer edge overhangs the upper outer edge of the next block below.

It can be seen from the foregoing that, by the use of my simple form of mold box on existing types of block forming machines, my special form of concrete block may be easily formed. It can also be seen that, owing to the outward movement of the liners 28 and 29, ornamental designs can be formed in the exterior of the blocks.

While in Fig. 7 one pair of liners 29 is shown bolted to the box 20, it is often desirable to make this liner slidable and to employ the pins 32 and

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grooves 35 as in the opposite liners, in order that all of the liners may move away from the block.

I claim:

1. A concrete block forming mold consisting of a stationary mold box, cores supported by said box, a pallet upon which said cores can rest, vertically and outwardly movable liners for said box and means for moving said liners outwardly and downwardly after they have cleared the lower edge of the box.

2. In a device of the class described, the combination of a vertically movable table, a pallet mounted on said table, a stationary mold box mounted over said table, liners vertically movable within said box and horizontally movable beneath said box, and a tamper for said mold adapted to move said liners downwardly through said box and horizontally away from the formed block below said box.

3. The device described in claim 2, characterized by having a stationary bar across said box and a plurality of cores depending from said bar to said pallet when said table is in an uppermost position.

EMIL PAUL WITTKE.

REFERENCES CITED

The following references are of record in the file of this patent:

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