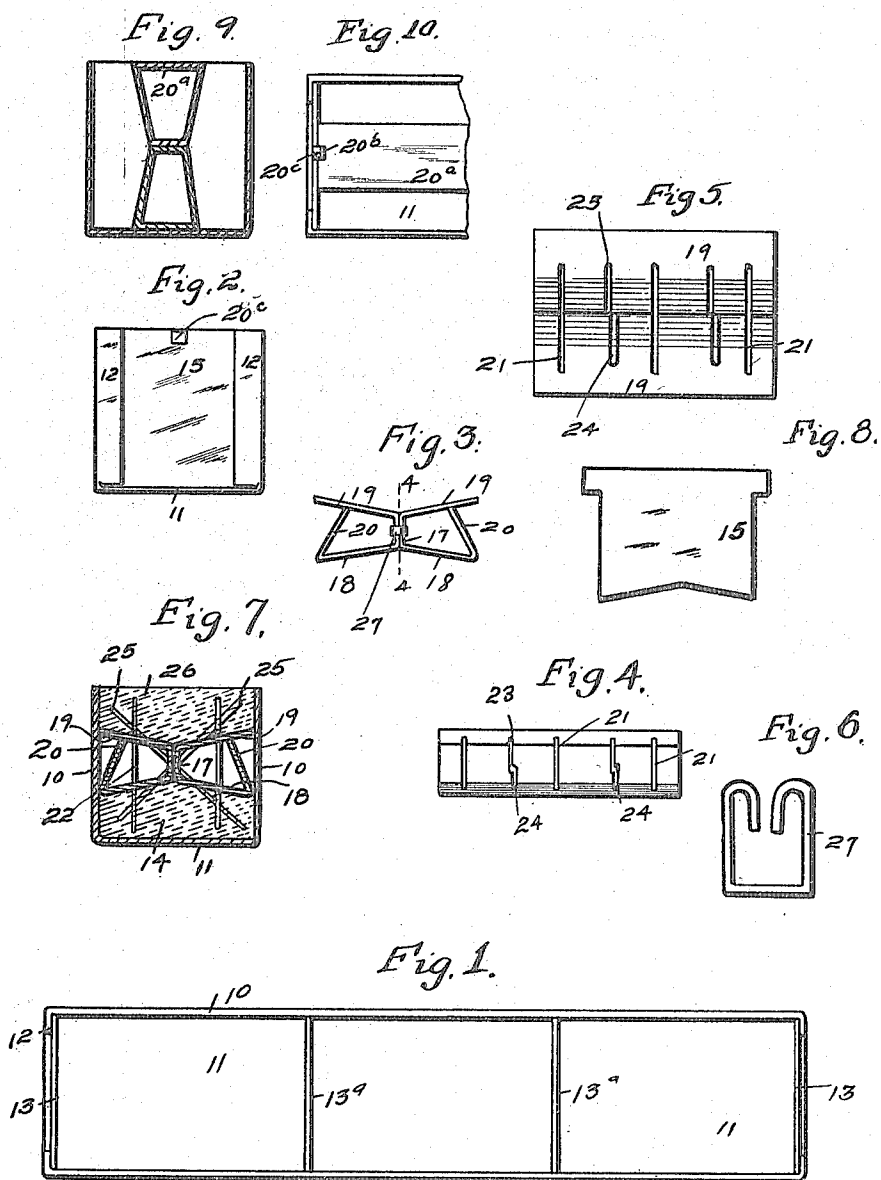


W. L. CUTLER.
BLOCK MOLD.
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BLOCK-MOLD.

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To all whom it may concern:

Be it known that I, WILLIS L. CUTLER, a citizen of the United States, and resident of Legrand, in the county of Marshall and State of Iowa, have invented a certain new and useful Block-Mold, of which the following is a specification.

The object of my invention is to provide a concrete block mold of simple, durable and inexpensive construction.

A further object is to provide such a mold which is especially adapted for use in making poured or slush concrete blocks of the type making a wall with a continuous air space.

A further object is to provide such a mold adapted to make blocks comprised of two bodies spaced from each other and connected by suitable reinforcing means.

A further object is to provide such a mold adapted to make a block of the kind mentioned, and for placing reinforcing in said blocks in a new and novel way for securing maximum strength to the block.

My invention consists in the construction, arrangement and combination of the various parts of the device whereby the objects contemplated are attained as hereinafter more fully set forth, pointed out in my claims and illustrated in the accompanying drawings, in which:

Figure 1 shows a top or plan view of the outer part of my improved mold. Fig. 2 shows an end elevation of the same. Fig. 3 shows an end elevation of the inner mold members, illustrating the method of applying the connecting clip. Fig. 4 shows a front elevation of one of the inner mold members, taken on the line 4—4 of Fig. 3. Fig. 5 shows a top or plan view of the two inner mold members placed together. Fig. 6 shows a top or plan view of the connecting clip. Fig. 7 shows a vertical, transverse, sectional view through the completed mold. Fig. 8 shows an end elevation of a tool used in connection with the mold. Fig. 9 shows a vertical sectional view through a mold having slightly modified forms of the inner mold member. Fig. 10 shows a top or plan view of the same.

In the accompanying drawings, I have shown an outer mold member or box comprising the upright side members which are indicated by the reference numeral 10, and a bottom member 11. The outer mold mem-

ber may be made of any suitable material such, for instance, as sheet metal. At the other ends, the side members are provided with opposite inwardly projecting portions 12, as shown in Fig. 1, adapted to engage a detachable end member 13. The box is preferably made long enough for several blocks, and the blocks are kept separate from each other by means of removable end members 13^a, similar in construction to the member 13.

In making blocks with my improved mold, the lower part of the mold is filled with slush concrete 14, the upper part of which is smoothed off with a tool 15, shown in Fig. 8, so that the upper surface of the concrete 14 is inclined from its central longitudinal line downwardly and outwardly, as illustrated in Fig. 7. I then place above the block portion formed by the concrete 14, the two inner mold members, which will now be described.

Each of the inner mold members comprises an inner upright member 17, a portion 18 extending downwardly and outwardly therefrom, from the lower edge thereof, a portion 19 extending upwardly and outwardly from the upper edge thereof, and a portion 20 extending inwardly and upwardly from the outer end of the portion 18 forming a support for the portion 19. The portions 18 are laid upon the inclined upper portions of the block formed from the concrete 14, and the members 17 are placed adjacent to each other, as clearly illustrated in Figs. 3 and 7.

The portions 17, 18 and 19 are provided with slots 21, as shown in Fig. 5. The slots 21 of one of the inner mold members are preferably arranged opposite the slots 21 of the other inner mold member. The slots 21 are so arranged that vertical reinforcing rods or wires 22 may be dropped downwardly between the inner mold members and then shoved laterally into the slush cement to their upright position at the outer ends of the slots 21, as illustrated in Fig. 7, whereby the blocks are provided with vertical reinforcing members. The members 19 and 17 of each inner mold member are provided with slots 23, as shown in Figs. 5 and 4. The slots 23 of one inner mold member do not register with the slots 23 of the other mold member but are arranged adjacent thereto. The portions 18 of each inner

mold member are provided with slots 24 which are arranged the same distance from the ends of the inner mold members as the slots 23 of the other inner mold member, so that the slots 23 of one inner mold member and slots 24 of the other inner mold member receive a rod or wire 25, inclined from its upper end downwardly and laterally, as shown in Fig. 7. The wires 25 are arranged as shown in pairs crossing at their middle point adjacent to each other between the upper and lower parts of the concrete block. The advantage of this arrangement will be hereinafter referred to. The inner mold members having been placed in position, and the reinforcing rods installed, the upper portion of the mold box is then filled with slush cement 26, as shown in Fig. 7. When the inner mold members are placed in position, their portions 17 are locked together by spring clip devices 27, as shown in Fig. 6. The spring clips 27 comprise substantially U-shaped members having at the free ends of their arms inwardly extending portions adapted to frictionally grip between them the adjacent walls of two of the cores. After one opposite pair of the inner mold members has been installed at one end of the mold block, one of the partition members 13^a is placed in position adjacent to the ends of the inner mold members, and the next pair of inner mold members are installed. After the blocks have been set in the mold box, the entire mold box is turned over and lifted upwardly away from the block. The members 13 and 13^a may then be withdrawn and the inner mold members pulled laterally from the box, leaving the reinforcing members in position, in the completed block.

It will readily be seen that when a box of the kind herein mentioned of simple construction, is employed, blocks of different lengths may be very easily made by varying the length of the inner mold members.

One of the advantages of my improved mold, which I consider of unusual importance lies in its adaptability for making slush or poured concrete blocks. Another of its important factors lies in the arrangement of the inner mold members, and particularly of the slots therein, whereby the reinforcing rods 22 are placed in position extending directly across from block to block, and in the arrangement of the slots 23 and 24, whereby the inclined reinforcing blocks 25 are placed in position affording a connection of greater strength compared to the reinforcing of a two-part block connected by the members 22 only. It will readily be seen that any direct pull of the portion 14 away from the portion 26 will be resisted not only by the members 22 with their full tensile strength, but also by the members 25 with their bending strength. On the other

hand a tendency to pull one member 26, for instance, laterally with relation to the member 14, will be resisted by the bending strength of the portion 26, and by the tensile strength of the members 25. To so position the reinforcing members as to place them in the positions described is believed to be a very important feature of my improved mold.

In Figs. 9 and 10 I have shown a slightly modified form of my mold. The outer mold box 10 is the same as hereinbefore described, but the inner mold members are made and arranged somewhat differently. The inner mold members are of the same shape as those heretofore described, with the exception that the members 20 are extended from the members 18 across the members 19, as illustrated in Fig. 9. The inner mold members are arranged in the box 10 with the member 20 of one of the inner mold members resting on the bottom of the box 10 along the central longitudinal line, and with the other inner mold member resting smaller end downwardly, on the first inner mold member. The reinforcing members are inserted in the inner mold members in the same way.

I have used the reference numeral 20^a to indicate the modified member of the inner molds. The ends of the members 20^a are provided with notches 20^b to receive inwardly projecting tongues 20^c formed on the slightly modified form of end member 13. The tongues 20^c received in the notches 20^b prevent lateral movement of the inner mold member, and when the inner molds are installed as shown in Figs. 9 and 10, the box on either side of the inner mold is simply filled with slush cement and the block completed.

It is understood that some changes may be made in the construction and arrangement of the parts of my improved mold, without departing from its essential features and purposes, and it is my intent to cover by this application any such changes which may be included within the scope of my claims.

I claim as my invention:

1. In a device of the class described, the combination of a mold box with a core member comprising an upper wall inclined from the side of the mold box downwardly and inwardly, a central, vertical wall, a lower wall inclined from said central wall downwardly and outwardly, and an upwardly and inwardly inclined brace member.

2. In a device of the class described, the combination of a mold box with a core member comprising an upper wall inclined from the side of the mold box downwardly and inwardly, a vertical wall, a lower wall inclined from said vertical wall downwardly and outwardly, an upwardly and inwardly inclined brace member, said core member

being provided with registering slots in the upper and the vertical wall members and in the lower and the vertical wall members.

3. In a device of the class described, the
5 combination of a mold box with a pair of cores each comprising an upper wall extending from the side of the mold box inwardly to the center of the mold box, a vertical wall, and a lower wall extending from the
10 lower edge of said vertical wall laterally to

the side of the mold box, the vertical walls of said mold members being arranged adjacent to each other, and clips for securing the ends of said vertical walls together.

Des Moines, Iowa, August 16, 1915.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."