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METHOD OF MANUFACTURING CONCRETE HEADER BLOCKS

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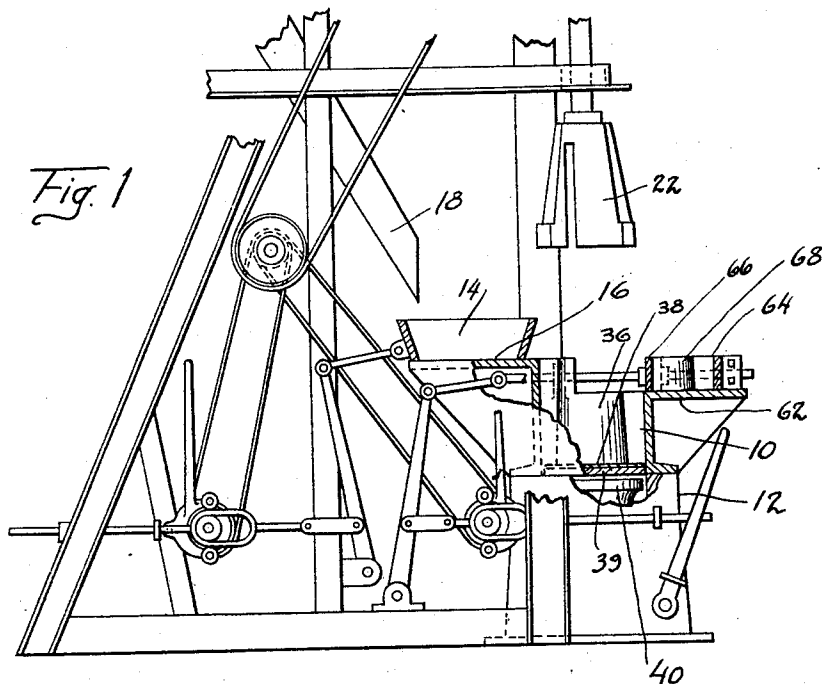
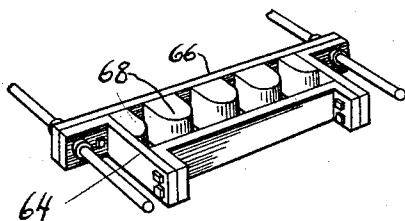


Fig. 2

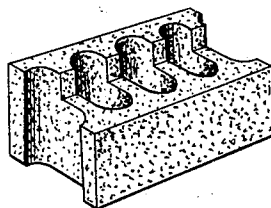


Fig. 3

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METHOD OF MANUFACTURING CONCRETE HEADER BLOCKS

Original application filed January 23, 1928, Serial No. 248,680. Divided and this application filed
January 24, 1930. Serial No. 423,024.

This invention relates to an improved method for the manufacture of concrete header blocks, particularly cinder blocks.

Because of the particular design of this unit the method of manufacturing so far, especially utilizing concrete, has been to tamp the concrete into hand molds and insert a block of wood or other core material into the mold for the purpose of molding out that section of the concrete into which the joints or tie units are subsequently to be placed. Such procedure makes it impossible to tamp the block uniformly through its entire volume. Furthermore, it is far more essential that concrete blocks of the header type be tamped uniformly and composed of a uniform consistency than any other concrete block by reason of the peculiar use to which they are put.

An object of our invention is to formulate a series of steps whereby these concrete header blocks may be molded in rapid succession and without the necessity of inserting the customary block of wood during the procedure, thereby permitting a uniform tamping and subsequent uniform consistency and strength of the concrete material.

This object we have accomplished by first forming a conventional rectangular block having substantially uniform depth and width, then tamping this rectangular block, and then removing a portion of this block from the mold, such portion being what is necessary to leave in the mold a block of header shape. The header block is then stripped from the mold and that portion which was first removed is then redeposited in the mold to form a part of the ensuing block.

In carrying out this improved process we prefer to employ apparatus such as is described in our copending application Serial No. 248,680, filed January 23, 1928, of which this application is a division, though other apparatus might be usable for the purpose.

Fig. 1 is a side elevation, partly in section, illustrating a means of carrying out my process, and

Figs. 2 and 3 are perspectives of a portion of the mold box and a completed header block, respectively.

We have illustrated our invention as embodied in association with apparatus wherein we have shown a machine for manufacturing concrete cinder blocks having a mold box 10 supported upon a frame 12 and adapted to be intermittently supplied with aggregate, or whatever material is being utilized to form the header block, by means of a hopper 14. For the purpose of manufacturing a plurality of these header blocks simultaneously this hopper 14 may be arranged to travel over a table 16 which receives the aggregate from a delivery spout 18, leading from any source of supply.

The aggregate is packed within the mold by a tamping device 22, which may or may not be coupled up for power actuation. This tamping member may be depressed by its own weight or may be otherwise actuated. The particular mode in which the material in the mold is tamped is immaterial insofar as this particular process is concerned. For purposes of illustration we have shown a plurality of tamping devices 22 and a mold box provided with a plurality of cores 36 formed therewith. These cores 36 are provided for the purpose of producing a block cored in the manner shown in Fig. 3. The tamping devices 22 travel downwardly between and around the cores to tamp the aggregate within the mold box.

A removable pallet 38 is provided, as well as a base plate 39 and plunger 40 which are adapted to be actuated for the purpose of lifting the pallet through the mold box to eject the block therefrom.

Our particular inventive concept resides in the manner in which these header blocks are formed after the ordinary rectangular block has been molded. After the block is completely molded in its substantially rectangular form the movable portion of the mold is shifted. This mold consists of a stationary portion 62 and a movable portion 64. The stationary portion is provided with side walls, a floor, which is really the pallet, and core members 36. The movable portion has a side wall and an end wall, as well as an intermediate wall 66 connecting the end wall portions and carrying a core portion 68. These core

portions 68 cooperate with the stationary core portions 66 where assembled together, the stationary and movable portions constituting a complete mold wherein cinder blocks of conventional rectangular shape having substantially uniform width and depth dimensions may be molded.

When this movable portion of the mold box is removed it carried with it onto table 92 that portion of the aggregate material which has been confined therein during the tamping operation. This movable portion of the mold is of such size and shape that it removes sufficient aggregate from the block to form a header block of the type illustrated in Fig. 3. The header block, as illustrated, is then stripped from the mold.

After the header block has been so stripped the movable portion of the mold is then returned to its initial position in combination with the stationary portion, bringing with it the aggregate removed thereby. It is obvious that this aggregate will now drop into the mold box or be forced therein by the tamping mechanism, and will then form a part of the next succeeding block. This operation is continued, and header blocks of this peculiar shape may be tamped out of the mold in rapid succession, as well as form of a uniformly tamped consistency throughout, in a manner which was impossible when utilizing the old method of inserting a filler block to take the place of our removable mold box portion.

We wish it understood that aggregate of varying character may be employed in our above specified process, although it is particularly adapted for use in the manufacture of what are commonly termed cinder blocks, and hereafter in the claims where the word "concrete" is used it is to be employed in this generic sense.

What we claim:

1. That method of manufacturing a concrete header block comprising depositing and tamping aggregate within a mold box to form a block of substantially uniform depth, and before the block is taken from the mold box removing in a direction transverse to that of the tamping a portion thereof to the required depth and width to form a header block, stripping the header block from the mold box, and redepositing within the mold box that portion of the block removed therefrom so that it will form a part of the next block.

2. That method of manufacturing concrete blocks having a cored structure comprising pouring material into a mold, packing the same, removing the surplus material from one side of said cored portion by bodily removal of a mold portion, removing the desired remaining portion of the packed material, returning the removed portion of the mold and its packed contents to its original position and repeating the operation, utilizing the re-

turned portion of the material as a base layer for each succeeding block.

In testimony whereof, we, THOMAS W. CASWELL and GEORGE A. KELLY, sign this specification.

THOMAS W. CASWELL.
GEORGE A. KELLY.