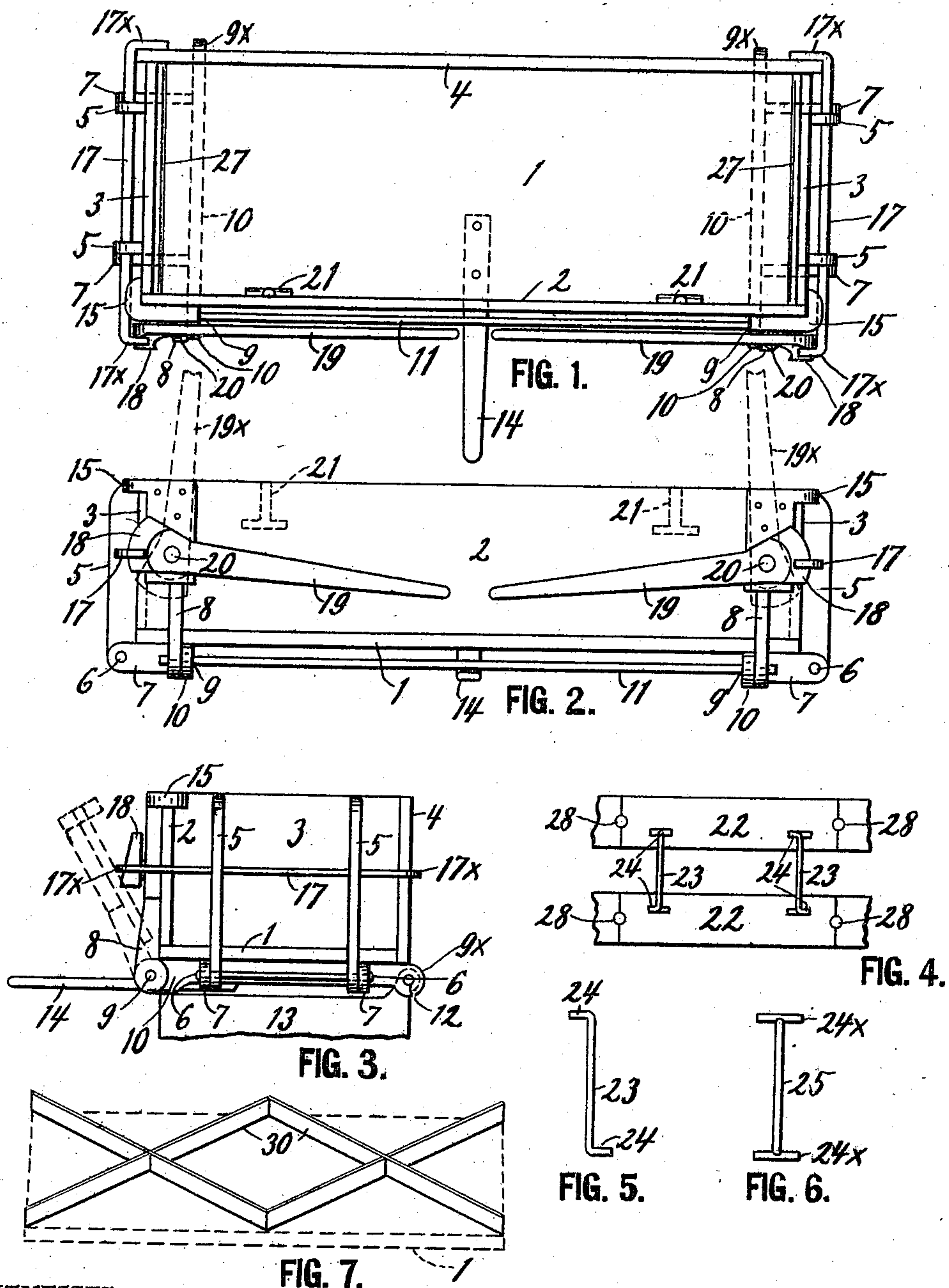


H. E. BAKER & W. R. JOHNSON.
CEMENT BLOCK MACHINE.
APPLICATION FILED MAY 26, 1909.

975,108.

Patented Nov. 8, 1910.



WITNESSES:

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UNITED STATES PATENT OFFICE.

HARRIE E. BAKER AND WALTER R. JOHNSON, OF INWOOD, IOWA.

CEMENT-BLOCK MACHINE.

Specification of Letters Patent.

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Application filed May 26, 1909. Serial No. 498,587.

To all whom it may concern:

Be it known that we, HARRIE E. BAKER and WALTER R. JOHNSON, citizens of the United States, residing at Inwood, in the county of Lyon and State of Iowa, have invented a new and useful Cement-Block Machine, of which the following is a specification.

Our invention relates to cement-block making machines of the type used for making building blocks; and the object is to provide a cheap, durable, efficient and easily operated device of said kind.

In the drawing: Figure 1 is a top view of the complete device. Fig. 2 is a front elevation of Fig. 1. Fig. 3 is a right hand end elevation of Fig. 2 showing the device pivotally mounted on a frame. Fig. 4 is a top view of a piece of wall made of blocks formed in our block machine. Fig. 5 is an elevation of a brace used in holding the blocks separated a certain distance. Fig. 6 is a modification of Fig. 5, and Fig. 7 is a device for confining variously colored mortar to different parts of each block.

Referring to the drawing by reference numerals, 1 designates the bottom, 2 the front board or wall, 3 the end boards and 4 the rear board of the mold or box commonly used in our device for forming the blocks.

Each end board has vertical cleats 5 with their lower ends pivoted at 6 to the outer ends of brackets 7 extending from under the bottom piece 1. The front board also has vertical cleats 8 pivoted at 9 to the outer ends of cleats 10 projecting from under the bottom to which they are secured. The pivot is a rod 11 extending lengthwise of the frame and thus serving as the pivot for both joints. The rear board or pallet 4 is not hinged but fits up against the rear edges of the end gates and the rear edge of the bottom, resting upon the rear ends 9^x of the cleats 10. Said ends are pivoted at 12 to a supporting frame 13 (see Fig. 3), on which the mold rests. There is also a handle 14 extending forwardly from under the mold and with which the mold may be tilted on the pivot 12 for purpose to be presently explained.

When a block is to be molded the sides and ends of the mold are swung up to their vertical position, and locked by the following means: Hooks 15 of the front board 2 take over the adjacent ends of the end boards, while the front and rear sides 2 and

4 are held by hooks 17^x formed at opposite ends of two bars 17, sliding in the cleats 5 of the ends boards, the rear hooks engaging the rear board directly while the front hooks are each engaged by a cam 18, pivoted at 20 to the cleat of the front board and having a long handle or lever 19 by which the cam is forced upward like a wedge between the hook and the cleat. With the mold in said position the concrete mortar is filled in, first a layer of extra strong mortar upon the bottom of the mold to form the face of the block exposed to the weather when put in a building. Good concrete may also be formed as a coating up along the sides and ends of the box, while the common concrete makes up the bulk of the block. After the block is thus formed the mold is by means of the lever 14 turned over so that the plate 4 becomes a horizontal supporting board on which the block is removed and allowed to dry sufficiently to be handled, another board taking its place for the next block to be formed. By swinging the lever 19 upward the cams release the ends and front board to allow the block to escape freely from the mold. The back 4 and front 2 form the top and bottom respectively of each block.

It is often desirable to build a wall double or with two sets or walls of blocks secured together with an air space between them. For this purpose we provide one or more T-shaped core blocks 21 on the inside of the front piece 2 and having each one of its ends terminating at the upper edge thereof (see Figs. 1 and 2) whereby one or more T-shaped grooves are provided in each cement block 22 (as best shown in Fig. 4) into which an anchor bar 23 with bent ends 24 is inserted in such a manner that each end will engage a groove in opposite blocks of the wall thus holding them a certain distance apart according to the length of the bars. A bar 25 with T shaped ends 24^x (as shown in Fig. 6) may also be used.

As shown in Fig. 1, we provide in each end of the mold a half round core 27, by which is formed a half round groove 28 in the block. In Fig. 4 is shown how these grooves in two meeting blocks form a cylindrical vertical opening which in building is filled with good mortar to make the joint strong and air tight. Said grooves also afford easy hand-holds for handling the blocks.

When it is desired to make each block of

several colors, we provide a tray 30 (see Fig. 7) made of narrow thin strips so crossing each other that the spaces between them form diamonds and half-diamonds, as shown, or any other desired forms. The tray is placed upon the bottom of the mold (the latter is shown only in dotted lines in Fig. 7) and mortar of different colors are put into the various spaces in the tray and fairly pressed down. The tray is then lifted out and the mold filled with common uniformly colored mortar; thus the face of the block will present a multicolored surface as if the wall was built in an expensive ornamental manner of various kinds of stone.

Having thus described our invention, what we claim is:—

1. In a mold for building blocks, the combination with a support, of a molding box having its bottom hinged with one edge to the support and adapted to rest upon the latter, a front side wall hinged to the bottom and having at its ends hooks adapted to take over the end walls, two end walls hinged to the bottom, a removable side wall supported near the hinges by which the bottom is secured to the support, horizontal, slidable non-rotatable bars carried by the end walls and having their ends formed with hooks adapted to hold the side walls upright, levers pivoted to the hinged side wall and provided with cams adapted to be forced in between the side wall and the adjacent hooks of the said bars, and a lever secured to the bottom of the mold and extending transversely and laterally therefrom, for the purpose of turning the mold over on its hinges.

vided with cams adapted to be forced in between the side wall and the adjacent hooks of the said bars.

2. In a mold for building blocks, the combination with a support, of a molding box having its bottom hinged with one edge to the support and adapted to rest upon the latter, a front side wall hinged to the bottom and having at its ends hooks adapted to take over the end walls, two end walls hinged to the bottom, a removable side wall supported near the hinges by which the bottom is secured to the support, horizontal, slidable non-rotatable bars carried by the end walls and having their ends formed with hooks adapted to hold the side walls upright, levers pivoted to the hinged side wall and provided with cams adapted to be forced in between the side wall and the adjacent hooks of the said bars, and a lever secured to the bottom of the mold and extending transversely and laterally therefrom, for the purpose of turning the mold over on its hinges.

In testimony whereof we affix our signatures, in presence of two witnesses.

HARRIE E. BAKER.
WALTER R. JOHNSON.

Witnesses:

D. J. HARRIS,
L. L. LEFFLER.