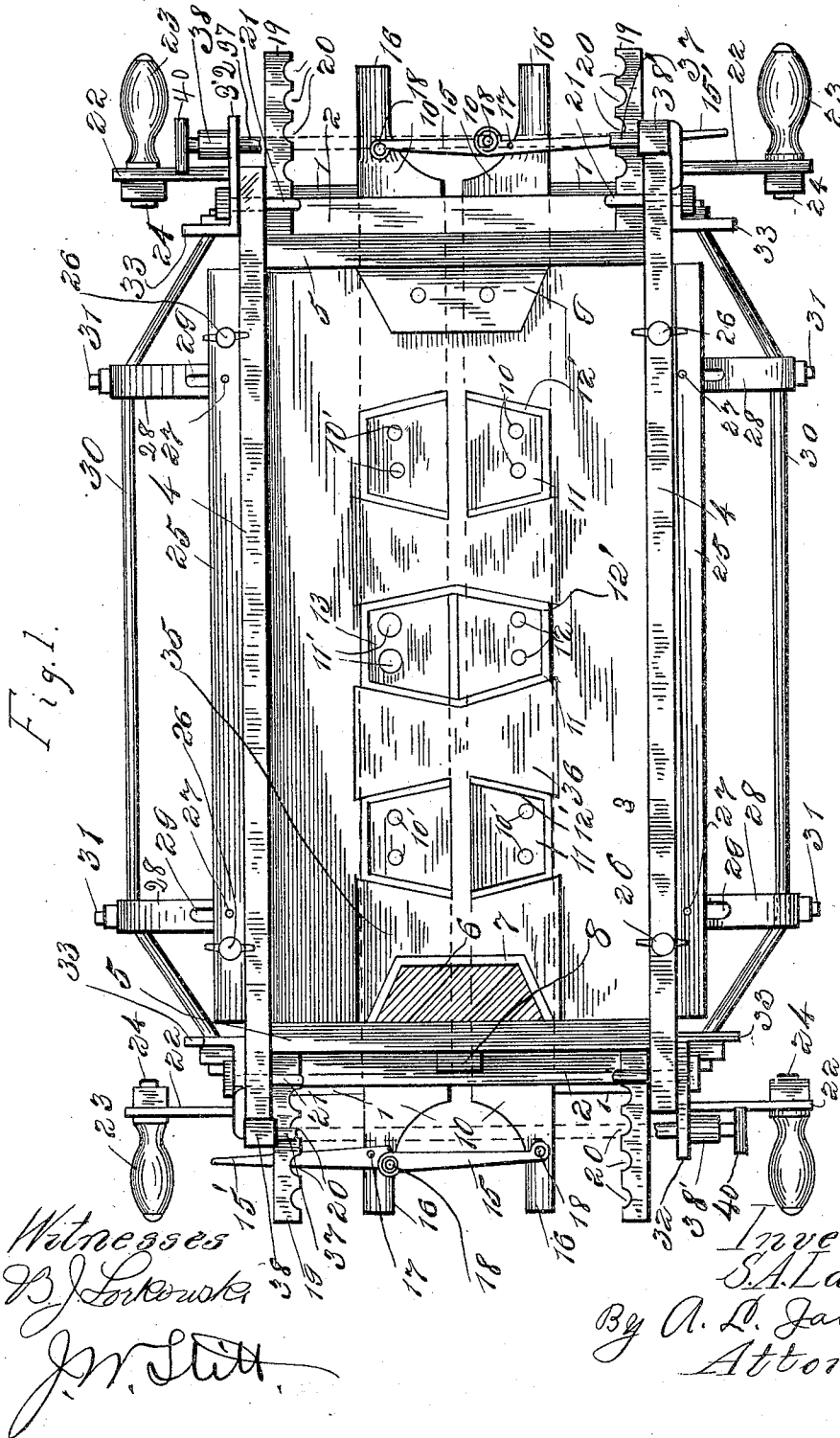


No. 836,448.

PATENTED NOV. 20, 1906.

S. A. LATIMER.
BUILDING BLOCK MACHINE.
APPLICATION FILED JULY 30, 1906.

4 SHEETS—SHEET 1.

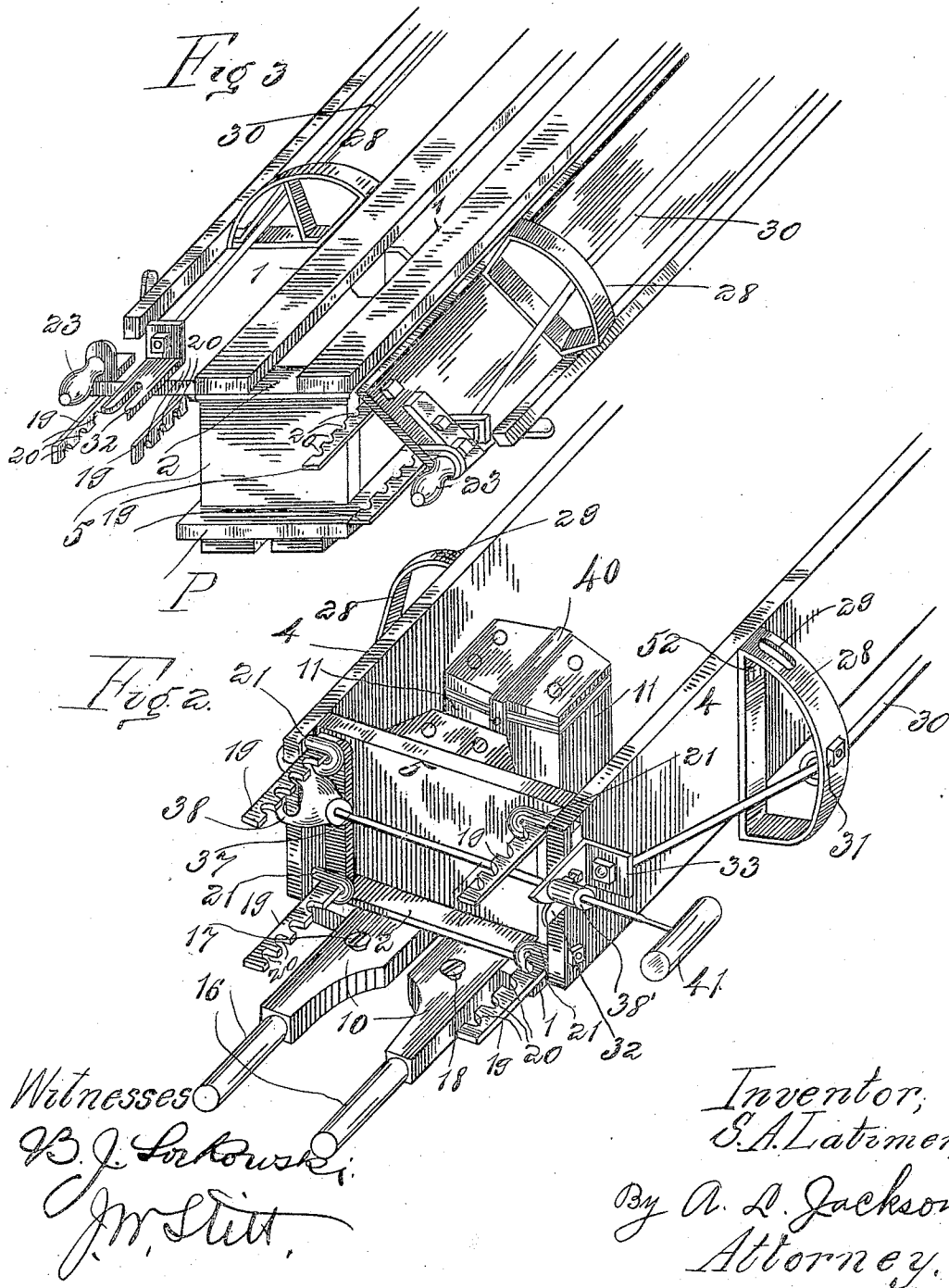


No. 836,448.

PATENTED NOV. 20, 1906.

S. A. LATIMER.
BUILDING BLOCK MACHINE.
APPLICATION FILED JULY 30, 1906.

4 SHEETS—SHEET 2.

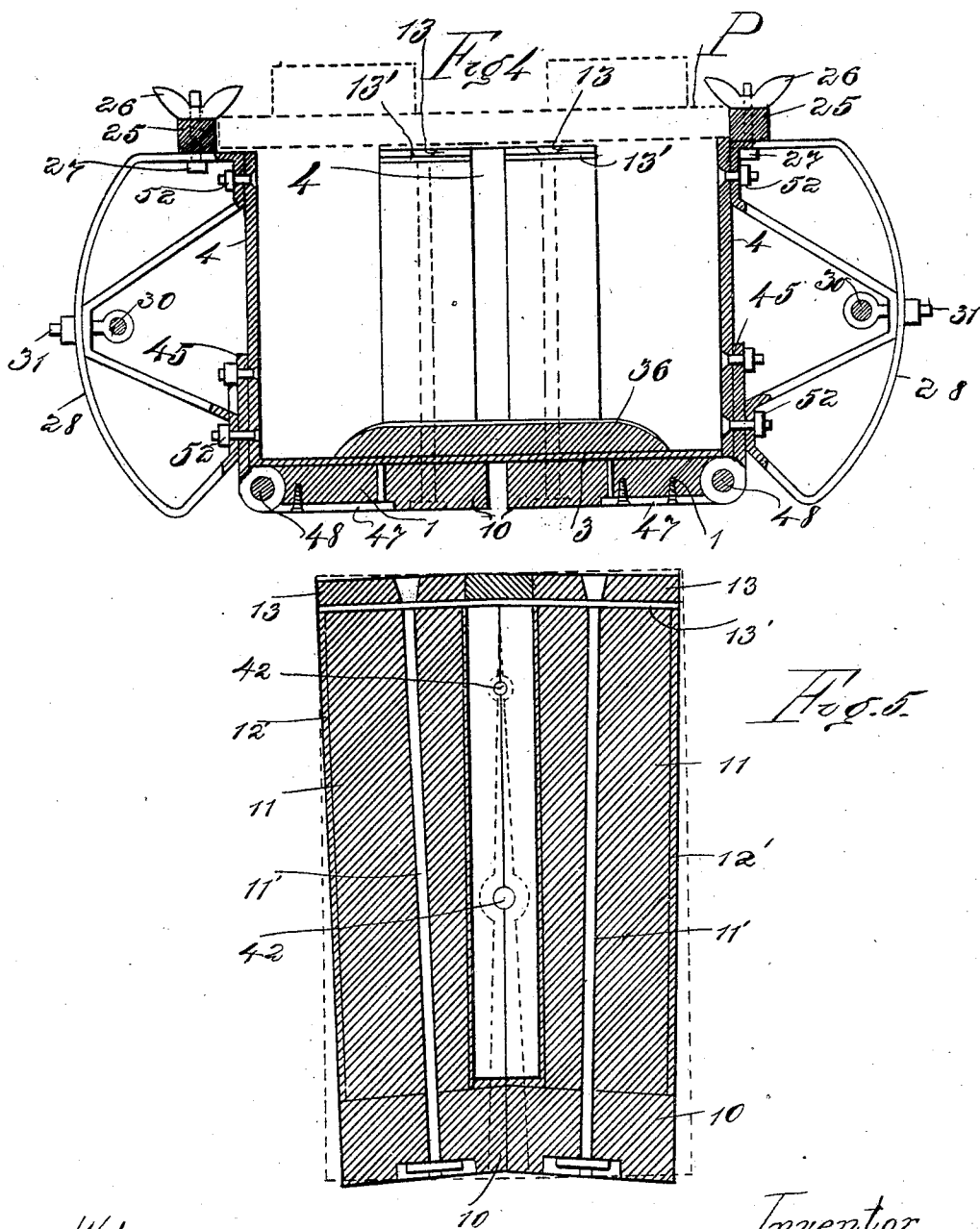


No. 836,448.

PATENTED NOV. 20, 1906.

S. A. LATIMER.
BUILDING BLOCK MACHINE.
APPLICATION FILED JULY 30, 1906.

4 SHEETS—SHEET 3.



Witnesses:-
W. J. Forkner
J. M. Stitt.

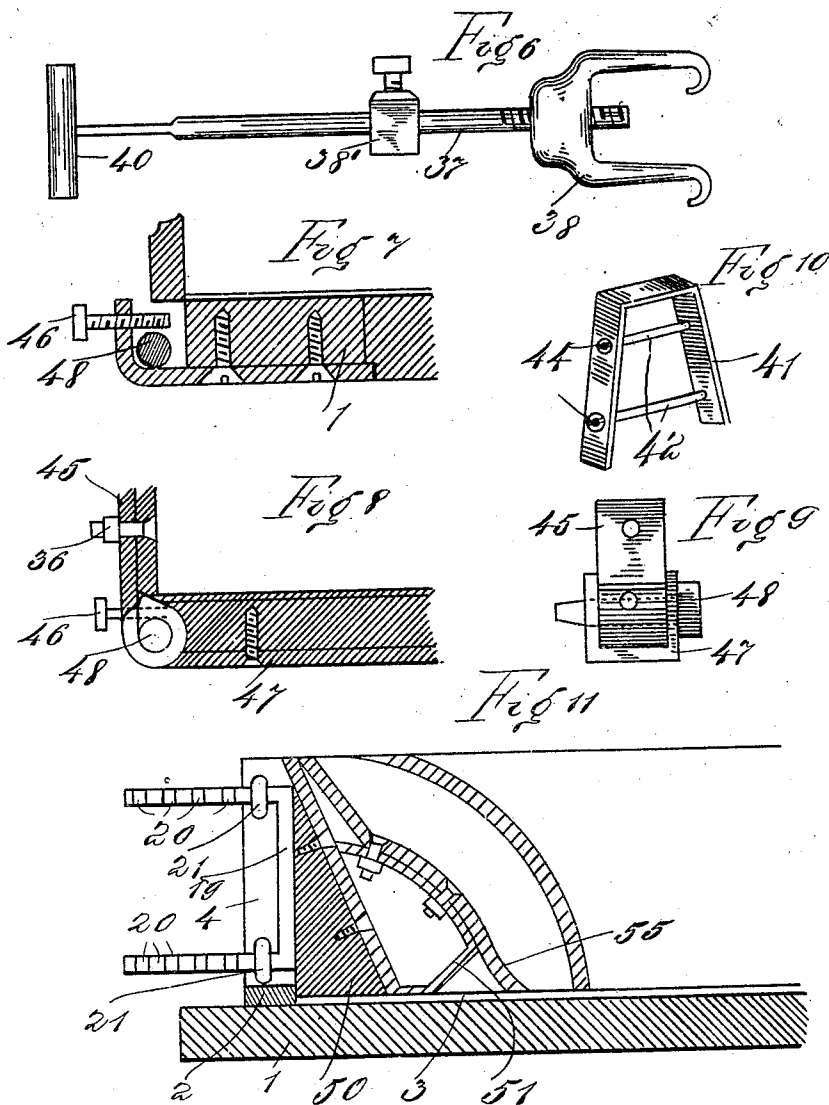
Inventor,
S. A. Latimer,
By A. L. Jackson,
Attorney.

No. 836,448.

PATENTED NOV. 20, 1906.

S. A. LATIMER.
BUILDING BLOCK MACHINE.
APPLICATION FILED JULY 30, 1906.

4 SHEETS—SHEET 4.



Witnesses:-

B. J. Lorkowski
J. W. Stitt

Inventor,
S. A. Latimer,
By A. L. Jackson,
Attorney.

UNITED STATES PATENT OFFICE.

SAMUEL A. LATIMER, OF BANGS, TEXAS, ASSIGNOR OF ONE-FOURTH TO JAMES J. DUNKIN, ONE-FIFTEENTH TO J. H. STACEY, ONE-FIFTEENTH TO A. L. HALL, ONE-FIFTEENTH TO R. S. PORTER, ONE-THIRTIETH TO S. F. HAYNES, ONE-THIRTIETH TO S. P. MARTIN, ONE-THIRTIETH TO LOUIS GARMES, ONE-THIRTIETH TO M. V. BROWDER, ONE-THIRTIETH TO I. C. BROWDER, ONE-THIRTIETH TO B. F. McARTHUR, ONE-THIRTIETH TO BID BYARS, ONE-THIRTIETH TO C. W. FOWLER, AND ONE-THIRTIETH TO WM. KOCH, OF BANGS, TEXAS.

BUILDING-BLOCK MACHINE.

No. 836,448.

Specification of Letters Patent.

Patented Nov. 20, 1906.

Application filed July 30, 1906. Serial No. 328,468.

To all whom it may concern:

Be it known that I, SAMUEL A. LATIMER, a citizen of the United States, residing at Bangs, in the county of Brown and State of Texas, have invented certain new and useful Improvements in Building-Block Machines, of which the following is a specification.

This invention relates to the type of building-block machines which are used for forming plastic material into artificial stone; and the object is to provide simple and efficient devices for forming concrete or other plastic material into blocks of desirable form for use in the construction of various kinds of buildings, and which devices are easily operated and can be manufactured at small cost.

One of the advantages of this machine is that it is so constructed that the machine can be inverted and removed from the block with facility and safety without breaking the blocks.

Another advantage is that the machine is adapted to make blocks of various desirable dimensions.

Other objects and advantages will be fully explained in the following description, and the invention will be more particularly pointed out in the claims.

Reference is had to the accompanying drawings, which form a part of this application and specification.

Figure 1 is a plan view of the machine shown in operative position, except that some of the cores are shown in sections and one of the contour-forming blocks is shown in section. Fig. 2 is a perspective view of one of the machines ready for receiving concrete or other material for making a block. Fig. 3 is a perspective view of the machine inverted, one side being opened and the other side half open. Fig. 4 is a vertical cross-section of the machine. Fig. 5 is a vertical cross-section of the cores on an enlarged scale. Fig. 6 is a detail view of the binding-clamp for the sides of the machine. Fig. 7 is a broken sectional view illustrating the manner of hinging the sides to the bottom.

Fig. 8 is a broken sectional view in a different plane from Fig. 7 and illustrating the hinging devices. Fig. 9 is a side elevation of the side of the hinging devices shown in Fig. 8. Fig. 10 is a perspective view of the core-saddle which is used to prevent the material from entering the interior of the cores when in operative positions. Fig. 11 illustrates a variation in the contour of impression-blocks of special or ornamental design for end walls with supporting-brackets for the special forms.

Similar characters of reference are used to indicate the same parts throughout the several views.

The mold is provided with base-beams 1, on which is secured a sheet-metal bottom 3. The beams are held in place and made rigid with each other by cross-beams 2, the beams 1 being adjustable on the bars or beams 2. A sheet-metal bottom 3 is placed on the base 2. Two of the base-pieces 10 are the core-carrying members and are made adjustable toward and from each other, and the adjustments of these members is accomplished by means of levers 15' and links 15. The links 15 are pivotally connected to one of the pieces 10, and the levers 15' are fulcrumed on the other members 10, and the links are pivotally connected to the levers 15'. A screw 17 may be used for the fulcrum of the lever 15', and a screw 18 may be used for the pivotal connection of link 15. The core-carrying members 10 terminate with purchases 16. The sides are hinged to the members 1 by loose pin-hinges consisting of the tapering pivot-bolt 48 and scrap-hinges 45 and 47, which engage the bolt 48 loosely. The uprights 45 have flanges which are perforated to receive the bolts 48. The pivot-bolt 48 is tapering, so that it may be wedged into the openings in the flanges of uprights 45. Lug-bolts 46 hold the pivot-bolt in position in the bases 47 and provide quick release when it is desirable to detach the side walls 4.

The sides 4 are held against outward or lateral movement by detachable binding-

clamps. The rod 37 runs through a projecting bracket 32 and screws into a hooked bolt or nut 38 at the other end. The bracket 32 has an open slot to receive the rod 37, so that this rod can be quickly removed. The hooked bolt 38 engages one of the side walls 4, and the bracket 32 is attached to the other side wall 4. A set-collar 38' is mounted on the rod 37 and is adjustable thereon, so that the walls 4 may be adjusted laterally. The rods 37 are provided with suitable heads 40. Handles 23 are attached to the side walls 4 by means of brackets 22 and bolts 24. The end walls 5 are placed loosely in between the side walls 4, and the end walls 5 rest against followers 19. The followers 19 are adjustable relative to the walls 4 and 5 (see Fig. 11) and are held at different adjustments by hook-bolts 21, the arms of the followers having notches 20 for the hook-bolts 21. A pallet P is placed on top of the walls 4 and 5 after the mold has been filled with material for convenience in placing the new blocks. When the block is complete and ready to be removed from the mold, the mold is inverted so that the block will lie on the pallet P. The sides 4 can be quickly released by lifting the rods 37 out of the brackets 32, which operation will release the hooks 38, and by detaching the hooks 21 from the followers 19. The sides 4 can then be swung outward on the loose pin-hinges, as shown in Fig. 3. Provision is made for easily turning the mold over. Rockers 28 are attached to the side walls 4 by means of screw-bolts 52 and truss-rods 30. The truss-rods 30 are secured in the brackets 33, which are attached to the side walls 4. The tension of the truss-rods 30 is regulated by the eyebolts 31. The truss-rods sustain the strain to which the side walls are subjected and permit the making of the side walls thin and much lighter than would be necessary without the truss-rods. It is only by the use of such truss-rods that a machine can be handled when the machine is made to form blocks of extreme length, as eight, ten, or twelve feet long.

The pallet P is placed on guideways 25 and secured in place by buttons 26. The guideways 25 are adjustable on the rockers 28 by reason of the slots 29 in the rockers and by the bolts 27. The pallet is placed on the mold when the required amount of material has been placed in the mold, and the buttons 26 hold the pallet in place. The guideways 25 and the pallet P may be removed or dispensed with in some cases and the blocks landed on level ground or moist sand to dry.

Blocks of any suitable contour may be attached to the end walls to form creases or impressions in the ends of the blocks. Fig. 1 shows one such block 6 in section and secured in place by a metal jacket 7 and by a screw-bolt 8. A similar block 9 is shown at the other end of the mold. Detachable

blocks 35 and 36 are attached to sheet-iron bottoms 3 and are made to any desired thickness to form a concave or cavity in the cross-bond of the concrete block. The cavities thus formed make continuous horizontal air-chambers, while the cores (hereinafter described) make vertical air-spaces, thereby giving free circulation of air in every direction through the interior of a wall constructed of such blocks. In Fig. 1 one block 35 is shown, and one block 36 is shown in this Fig. 1. Three cores 11 are shown in Fig. 1. The construction of the cores is illustrated in Fig. 5. 10' indicates the holes in the blocks for the bolts 11'. 13 indicates the metal plates for the protection of the blocks, and 12 indicates the holes in the metal plates for the bolts 11'. Each core is made of two blocks 11, which are connected together by a flexible metal plate 13'. The parts of the core are contracted and expanded by means of the core-carrying members 10, and these members 10 are operated by the links 15 and the levers 15'. The adaptability of the core members to be contracted facilitates the removal of the cores without breaking the newly-made block. When the core members have been moved toward each other, carrying with them the cores, the cores being attached to the core members by bolts 11', the core members may be raised up, withdrawing the cores from the blocks. The flexible plates 13' will allow the parts of the cores to swing toward each other at their lower ends. The cores 11 are preferably made of wood, and the wood is protected from the moisture of the material by sheet-metal lining 12'. A core-saddle 41 is placed above the flexible plate 13' and extended down on each side of the cores to close the space between the cores 11 down to the base of the cores. This prevents the material from passing between the cores. Wooden rungs 42 are provided and secured in place by screws 44. The rungs prevent the material from pressing the sides of the saddle against the cores. The screws are provided so that the saddle may be removed from the cores.

In operation the parts are assembled as in Figs. 1 and 2. The material is placed in the mold and tamped firmly until even with the tops of the walls 4 and 5. The pallet is then placed on the mold, the material being leveled so that the pallet will lie on the material and also on the tops of the walls. The pallet is then buttoned in place by the buttons 26. The mold is then inverted. After the mold is inverted the cores are contracted by means of the levers 15' and withdrawn from the block before the binding-clamps are removed. By withdrawing the cores before the binding-clamps are released the danger of cracking the blocks is avoided. The binding-clamps are removed by turning the rods 37 sufficient

to loosen the clamps and to cast off the forked or hooked nuts 38 at each end of the mold. The side walls 4 are swung out, as shown in Fig. 3. The mold can then be lifted from the newly-made block. The loose end walls will adhere to the material, but may be easily removed when the mold is to be set up again or reassembled for making another block.

The form of the ends of the blocks may be varied to any desirable shape. Impressions in the ends of the blocks are formed by removable blocks, and the blocks 6 and 9 may be replaced by special end walls 50 of varied contours, which are secured to supporting-brackets 51 and 55.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A mold comprising side and end walls and bottom, a base on which said bottom is mounted and to which the sides are pivotally connected, cores for said mold, means for holding said side and end walls in position, a part of said base constituting core-carrying members and the cores being made in two parts and attached to said members whereby said cores may be contracted for withdrawing the same from a completed block.

2. A mold comprising side and end walls and a bottom, a base for said bottom and to which base said side walls are pivotally connected, followers for said end walls having corrugated or notched arms, and hooked bolts engaging said side walls and said arms in the notches thereof, said end walls being made adjustable by said notched arms.

3. A mold comprising a base, side walls pivotally and detachably connected to said base, end walls, followers for holding said end walls at different adjustments, and binding-clamps for said side walls consisting of brackets attached to said side walls, rods engaging said brackets at one end, and nuts screwed on the other ends of said rods, said nuts having hooks formed integral therewith and engaging the ends of the opposite side walls.

4. A mold for making building-blocks comprising a base composed of beams, a sheet-metal bottom mounted on said base, side walls pivotally connected to said base, end walls between said side walls, means for holding said side and end walls in place, cores formed in two parts, a flexible plate connecting the upper ends of said parts, two of said base-beams being core-carrying members, one part of each core being connected to one of said core members and the other part of the core being connected to the other core member, said core members being movable whereby said cores may be contracted, and means for holding said side and end walls in place.

5. A mold for making building-blocks comprising a base composed of fixed and mov-

able members, a sheet-metal bottom mounted on said base, cores attached to said movable members, side walls pivotally and detachably connected to said base, removable and replaceable end walls between said side walls, means for holding said side and end walls in place, and rockers attached to said side walls whereby said mold may be inverted.

6. A mold comprising a base composed of movable and fixed members, contractible cores attached to said movable members, side walls pivotally connected to said fixed members, end walls placed between said side walls, means for holding said side and end walls in place, and rockers attached to the sides of said mold for inverting the mold, said core members terminating in purchases for convenience in raising the cores out of the new-made blocks.

7. A mold comprising a base, a bottom mounted on said base, side walls pivotally connected to said base, end walls mounted between said side walls, a part of said base being composed of removable core members, contractible cores attached to said core members, a pallet for covering said mold and to receive the new-made block when said mold is inverted, adjustable guideways for said pallet, and buttons carried by said guideways for holding said pallet in place.

8. A mold comprising a base, a bottom mounted on said base, side walls pivotally connected to said base, end walls mounted between said side walls, a part of said base being composed of removable core members, contractible cores attached to said core members, rockers attached to said side walls for inverting the mold, a pallet for covering said mold and for receiving the new-made block when the mold is inverted, guideways for said pallet adjustable on said rockers, and buttons carried by said guideways for holding said pallet in place.

9. A mold comprising a base, a bottom mounted on said base, side walls pivotally connected to said base, a part of said base being composed of removable core members, contractible cores attached to said core members, end walls carrying ornamental impression-blocks mounted between said side walls, followers for adjusting said end walls at various positions between said end walls, and detachable binding-clamps for said side walls.

10. A mold comprising a base composed of movable and fixed members, a bottom mounted on said base, side walls pivotally connected to the fixed members of said base, cores attached to said movable members of the base, end walls mounted between said side walls, means for holding said side and end walls in place, and truss-rods for strengthening said side walls attached to said side walls, and means for regulating the tension of said truss-rods.

11. A mold comprising a base, a bottom mounted on said base, side walls pivotally connected to said base, removable and contractible cores attached to said base, end walls mounted between said side walls, a pallet for said mold, rockers attached to said side walls, truss-rods attached to said side walls, and eyebolts cooperating with said rockers to regulate the tension of said truss-rods.

12. A mold having a base composed of movable and fixed members, the two movable members being the core-carrying members, a bottom mounted on said base, side walls pivotally connected to said base, end walls between said side walls, means for hold-

ing said side and end walls in place, cores attached to said core-carrying members, each core being made in two parts and connected together by a flexible plate, one of said parts being connected to one of said core members and the other part being connected to the other core member, and a core-saddle for closing the space between the parts of each core.

In testimony whereof I set my hand, in the presence of two witnesses, this 24th day of July, 1906.

SAMUEL A. LATIMER.

Witnesses:

B. H. WILSON,
SAM ALLEN.