No. 838,704. PATENTED DEC. 18, 1906.

J. B. FRANCISCO.

MOLD FOR THE MANUFACTURE OF CONCRETE BUILDING BLOCKS.

APPLICATION FILED JAN. 22, 1906.

2 SHEETS—SHEET 1.

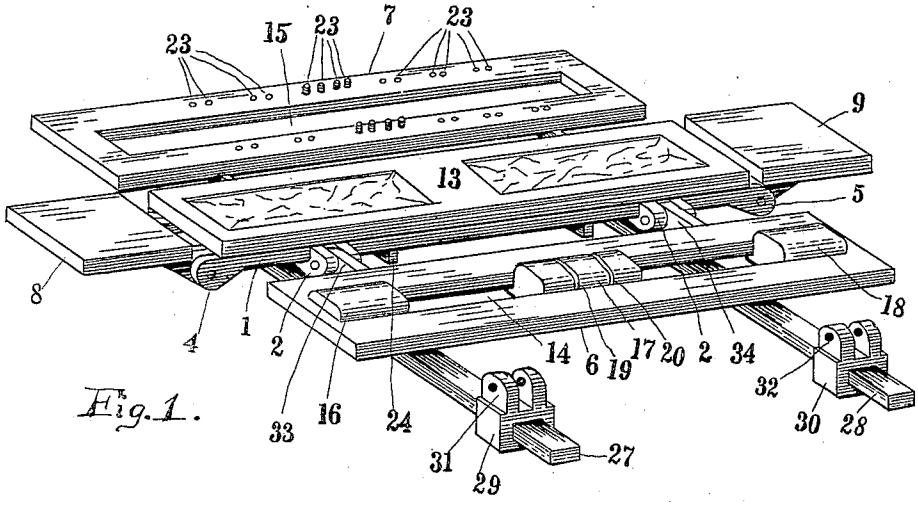

Fig. 1.

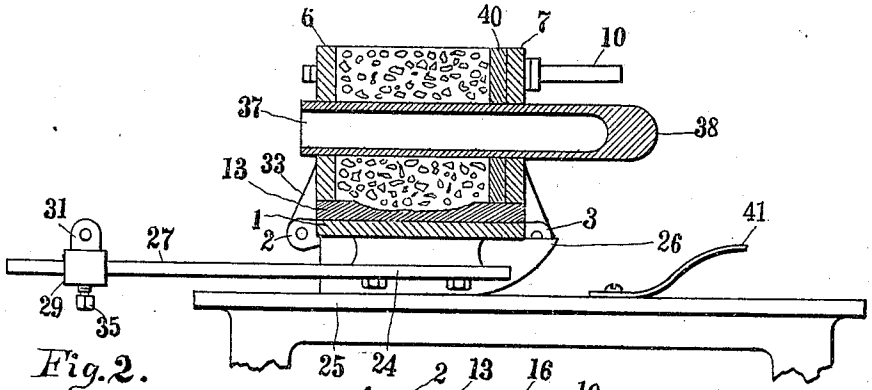

Fig. 2.

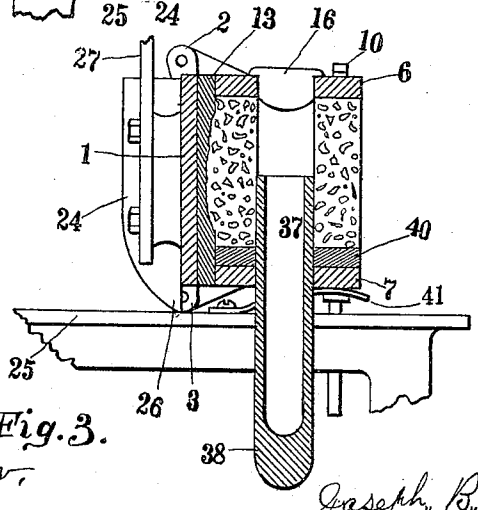

Fig. 3.

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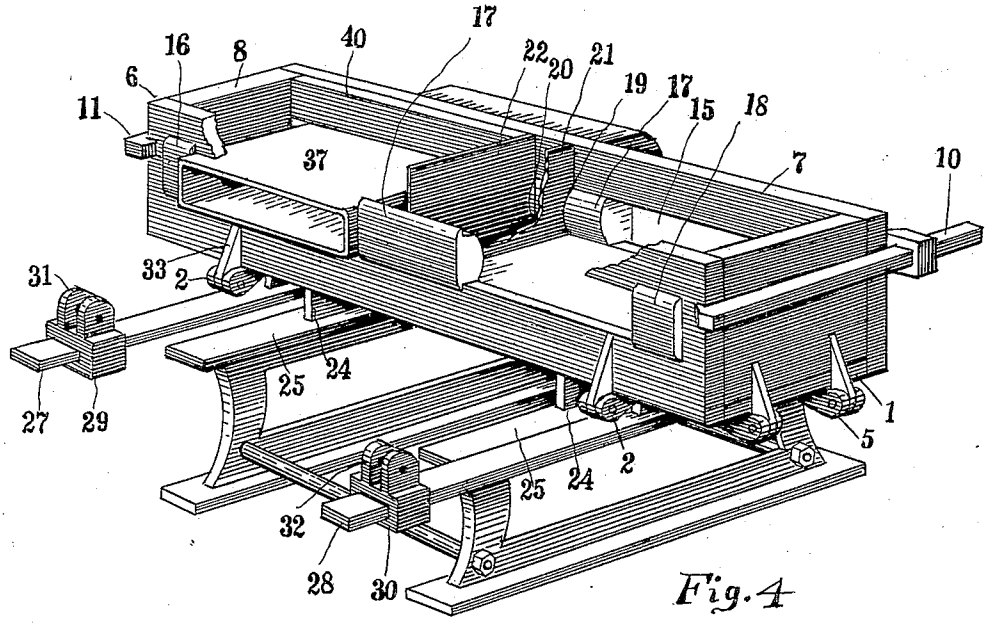

Fig. 4

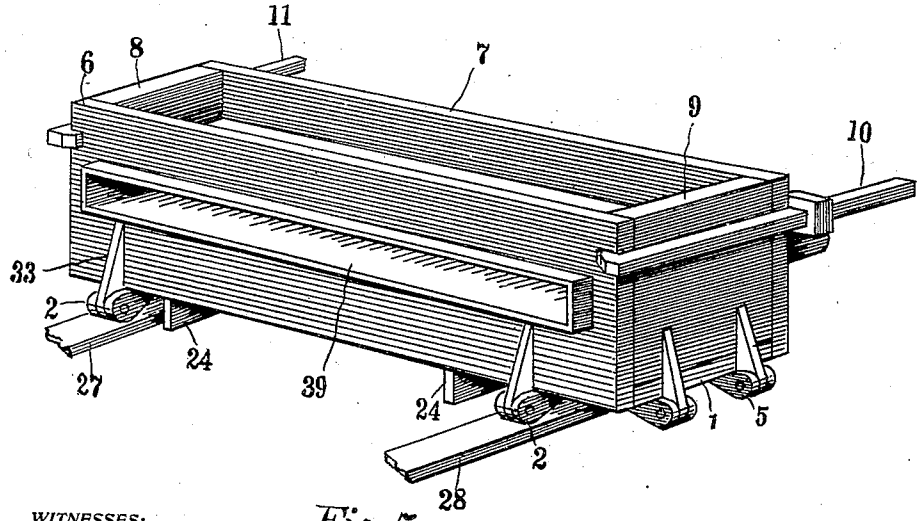

Fig. 5.

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MOLD FOR THE MANUFACTURE OF CONCRETE BUILDING-BLOCKS.

No. 838,704. Specification of Letters Patent. Patented Dec. 18, 1906.

Application filed January 22, 1906. Serial No. 297,360.

To all whom it may concern:

Be it known that I, JOSEPH B. FRANCISCO, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Molds for the Manufacture of Concrete Building-Blocks, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to certain new and useful improvements in molds for the manufacture of concrete building-blocks of the kind which consists of bottom and sides adjustably hinged together, the object being to form a mold which can be readily adjusted to the manufacture of various sizes and shapes of blocks of different lengths at once.

To this end my invention consists of a peculiarly-constructed arrangement and operation of the adjustable mold as it is fully hereinafter described, and shown in the accompanying drawings, in which—

Figure 1 is a view of the mold opened out flat with several slidable core-spacers to adjust so as to use different-size cores. Fig. 2 is a cross-section of the mold in position for filling, showing blocks with the core in place. Fig. 3 is a cross-section of the mold turned onto its side preparatory to opening, showing method of removing cores and mold resting on the foot-forming pivot-point and spring 41. Fig. 4 shows a partly-filled mold with the front broken away, revealing the method of placing the cores and partition-plates. Fig. 5 shows the mold illustrating method of making veneer blocks or slabs.

Like numerals refer to like parts in the various figures.

The bottom 1 has cast on its edges lugs 2, 3, 4, and 5, which engage hinge-eyes on the sides 6 and 7 and ends 8 and 9, forming hinges by which the sides and ends are flexibly attached to the bottom and of such form that when the sides and ends are turned upwardly to the bottom at right angles they form a tight box. The ends 8 and 9 fit between the sides 6 and 7, which are securely held in position by adjustable clamps 10 and 11. A removable face-plate 13, whose upper surface is of such form as may be desired, is placed upon the bottom plate and may be attached to it by screws or clamps or any other method. By leaving the face-plates out the bottom plate 1 forms a long plate to form long stone upon. By the use of removable face-plates 13 a great variety of lengths of stone may be made without the expense of a different mold for different-size blocks, as core-spacers may be adjusted to suit the plates of any length. Openings 14 and 15 in the sides 6 and 7 extend the length of the mold. The entire distance from the inner face of the end 8 to the inner face of the end 9 serves for the admission of cores 37, which extend rearward to form counterbalance-weights 38 to assist in turning the molds and also to cause the cores to drop automatically when the mold is turned on the sled-runner point and spring 41 by taking hold of the arm to turn the machine.

Spacers 16, 17, and 18 are fitted into the openings 14 and 15. There are several adjustable core-spacers 16, 17, and 18, which are held in place by screws, bolts, or clamps or in any other desired manner and serve to control the position and size of the core 37 and at the same time close the space not occupied by cores. The inner faces of the spacers 16, 17, and 18 project slightly beyond the inner face of the sides 6 and 7 and have slots 19 and 20, which serve to hold the partition-plates 21 and 22, by which the mold may be divided into any number of sections, thus adapting it to the manufacture of long blocks or several short blocks, as desired, by using the desired number of spacers.

In Fig. 1 are shown a multiplicity of screws projecting through the side 7 in such a manner that they may be turned back even with the inner face of the side, leaving its surface smooth, or they may be projected inwardly to form stops for holding the partitions 21 and 22. The partition-plates may be held in position by slots or other means. Cast on the under side of the bottom 1 are sled-runner-shaped feet 24, which rest on rails 25, are pointed, and extend backward in such a manner as to form pivots on which the mold may be easily rolled back onto its side 7 preparatory to opening, said side resting on pivot-point 26 and cushion 41, which carries the weight of the mold. There are also attached to the bottom 1 arms 27 and 28, which serve as handles for conveniently turning the mold over on its side 7. Slidably mounted on the arms 27 and 28 are hinge-blocks 29 and 30, having lugs 31 and 32 on their upper sides. When it is desired to widen, raise, or lower the mold, the hinge-blocks 29 and 30 may be placed on both ends of the arms 27 and 28. The hinge-pins may be removed from the

hinge 2, the lugs 33 and 34 will engage with the lugs 31 and 32, and the hinge inserted therein into the hinge-blocks 29 and 30 to adjust to the desired position and secured by set-screw 35.

The operation of the machine is as follows: The bottom 1 is placed horizontally, its feet resting on the track-rail 25, the sides 6 and 7 clamped against the ends 8 and 9 by the adjustable clamps 10 and 11, the core-spacers 16, 17, and 18 adjusted, and partition-plates 21 and 22 inserted. A false lining or pallet 40 is placed against the side 7, this pallet having a hole through it corresponding to the size of the core 37. Concrete is rammed into the mold until it reaches the level of the openings 14 and 15, when cores 37 are inserted through the openings 14 and 15, with the ends 38 extending outside the mold. When the cores 37 are inserted with the ends 38 extending out beyond the mold to form a weight to assist in turning the mold, the latter is easily rolled over onto its side 7. The adjustable clamps 10 and 11 are then released and the mold opened out and turned back, leaving the finished block upon the pallet 40, resting on the side 7. As soon as the mold is rolled over on the side 7 weight end 38 causes core 37 to slide out by its own weight through the pallet 40, supporting the block.

When desirous of using solid pallets, the cores are inserted from the front side and lifted out by hand and the core-spacers adjusted to suit. When it is desired to make veneer blocks or slabs, the core-spacers 16, 17, and 18 are removed and the long core 39 is used instead of the short core 37, thereby dividing the mold, as shown in Fig. 5, forming the veneer block.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A mold having adjustable hinged sides with openings therein for the introduction of cores, said open sides having adjustable spacers, which close those parts of the openings not occupied by the cores, as substantially set forth.

2. A mold having adjustable hinged sides with openings in said sides for the introduction of cores, said open sides having adjustable slotted spacers, which close those parts of the openings not occupied by the cores, partition-plates adjustably positioned transversely, and held in position by the spacers, as substantially set forth.

3. A mold having adjustable hinged sides with openings in said sides for the introduction of cores, said sides having adjustable slotted spacers, which close those parts of the openings not occupied by the cores, partition-plates adjustably positioned transversely, and held in position by said spacers, openings in said sides for the introduction of cores with weighted ends extending rearwardly to form counterweights to facilitate the turning of the mold, as substantially set forth.

4. A mold with adjustable hinged sides with the openings in said sides for the introduction of cores, said open sides having adjustable slotted spacers, which close those parts of the sides not occupied by the cores, partition-plates adjustably positioned transversely, and held in position by said spacers, openings in said sides for the introduction of cores with weighted ends extending rearwardly, to form counterweights to facilitate the turning of the mold and sled-runner-shaped feet extending beyond the sides of the mold to form pivot-points to turn the mold on a track, having the cushion 41, as substantially set forth.

5. A mold with adjustable hinged sides with openings in said sides for the introduction of cores, said sides having adjustable slotted spacers which close those parts of the openings not occupied by the cores, with partition-plates adjustably positioned transversely, and held in position by said adjustable spacers, openings in said sides for the introduction of weighted cores extending rearwardly, to form counterweights to facilitate the turning of the mold, sled-runner-shaped feet resting on tracks, said sled-runner-shaped feet extending beyond the sides of the mold to form pivot-points to turn the mold on the tracks and a cushion-spring 41 on the track, as substantially set forth.

6. A mold with adjustable hinged sides with openings in said sides for the introduction of cores, said open sides having adjustable spacers, which close those parts of the openings not occupied by the cores, partition-plates adjustably positioned transversely, and held in position with adjustable spacers having slots, openings in said sides for the introduction of cores with weighted ends extending rearwardly and passing entirely through the mold to form counterweights to facilitate the turning of the mold, sled-runner-shaped feet resting on tracks, said runner-shaped feet extending beyond the sides of mold to form pivot-points to turn the mold, on tracks carrying the cushion-spring 41, arms attached to the mold which serve as handles to facilitate in turning the mold, blocks slidably mounted on said arms; having lugs on the upper side for the purpose of attaching sides 6 and 7 so as to adjust the mold to the desired width and height, having a plurality of set-screws projecting through side 7 inwardly to form stops to hold partition-plates 22, as substantially set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOSEPH B. FRANCISCO.

Witnesses:

RAY S. BATES,

CHAS. M. FRANCISCO.