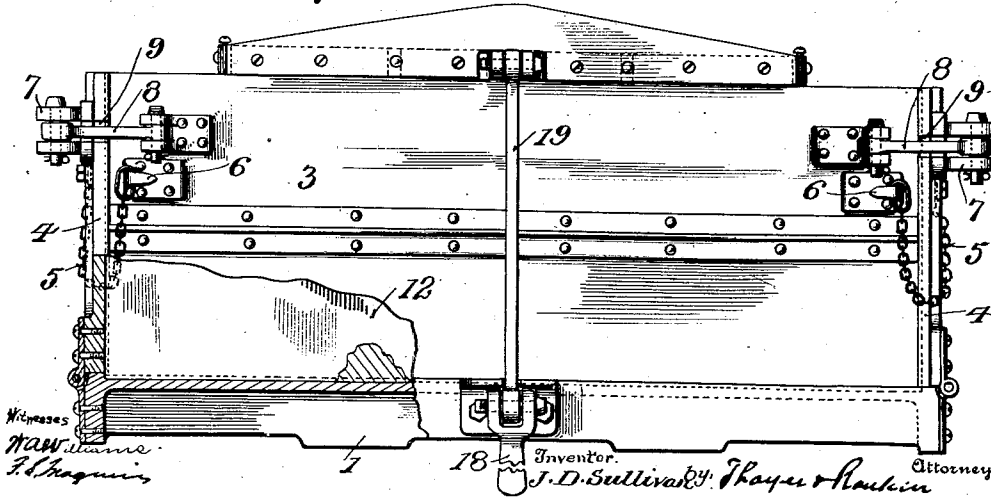
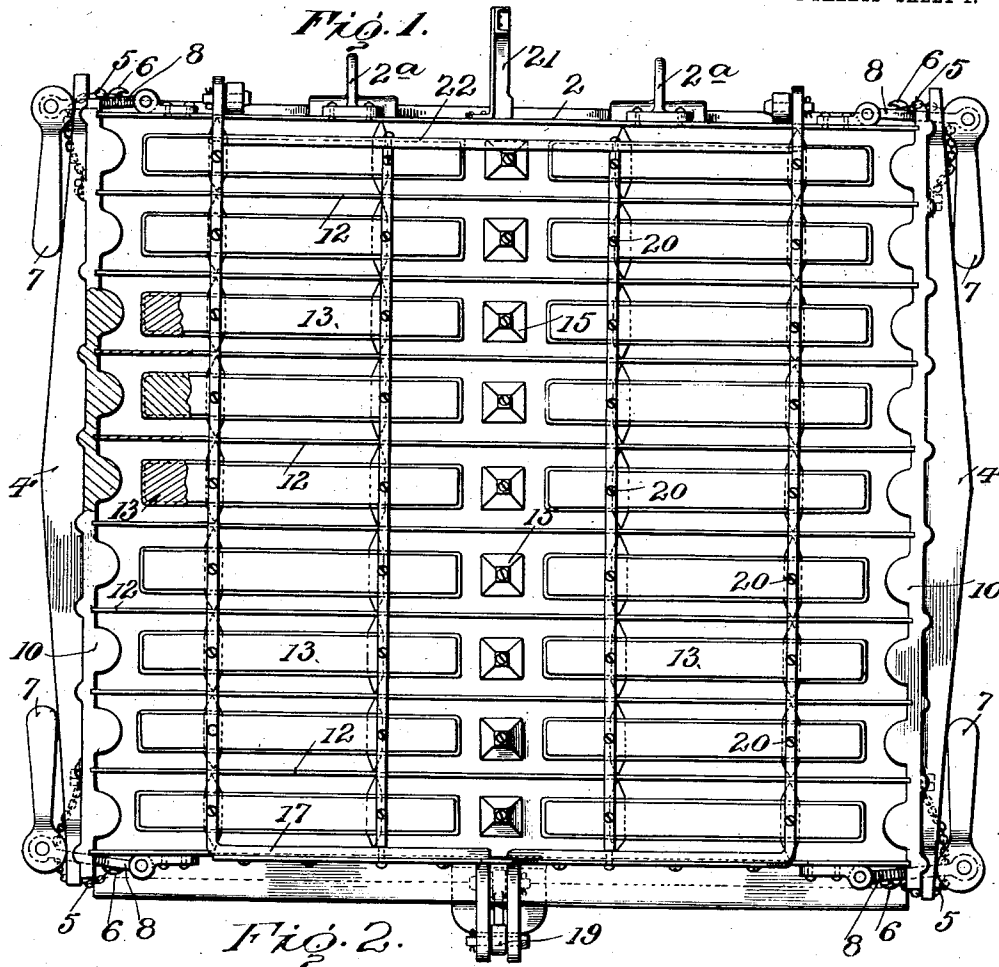


J. D. SULLIVAN.
MOLDING APPARATUS.
APPLICATION FILED MAY 4, 1908.

941,287.

Patented Nov. 23, 1909.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

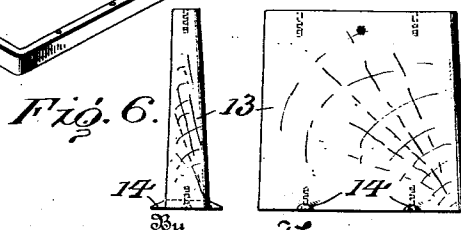
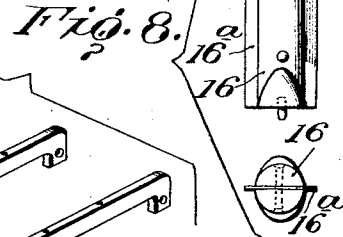
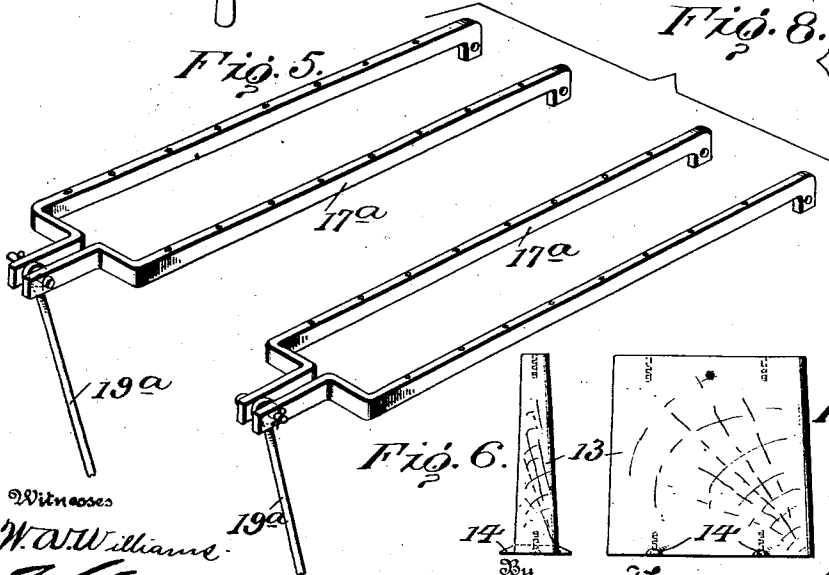
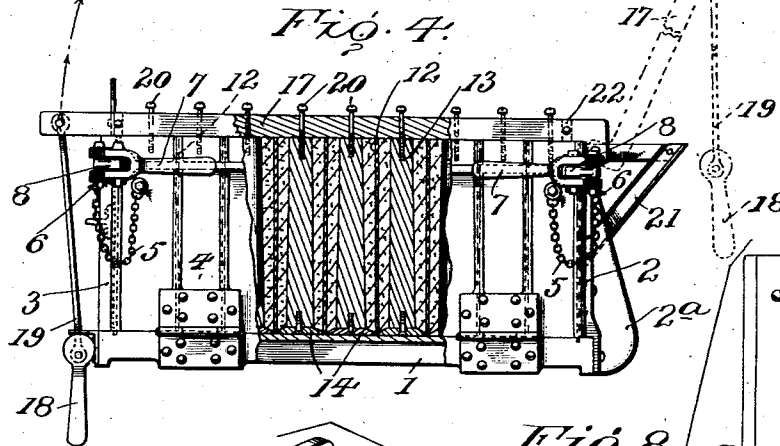
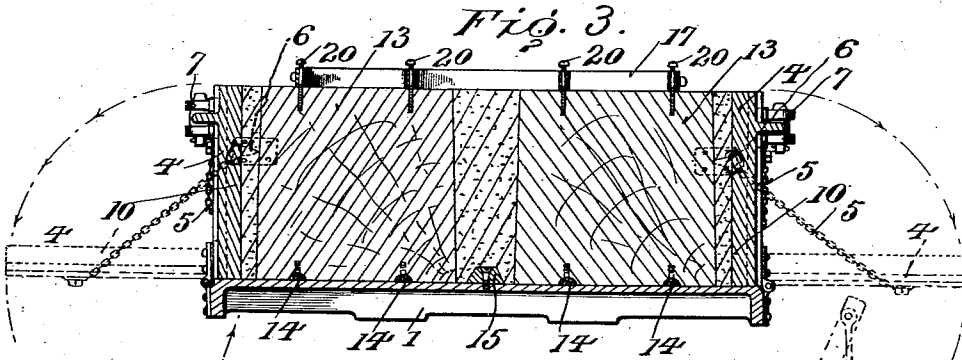


Fig. 7.
Inventor
J. D. Sullivan

Thayer & Rankin
Attorney

Witnesses
W. W. Williams
F. S. Chapman

UNITED STATES PATENT OFFICE.

JOHN D. SULLIVAN, OF SALT LAKE CITY, UTAH.

MOLDING APPARATUS.

941,287.

Specification of Letters Patent.

Patented Nov. 23, 1909.

Application filed May 4, 1908. Serial No. 430,805.

To all whom it may concern:

Be it known that I, JOHN D. SULLIVAN, of Salt Lake City, in the county of Salt Lake and State of Utah, have invented certain new and useful Improvements in Molding Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The primary object of this invention is to provide a simple and highly efficient machine for molding blocks for fireproof walls or partitions, and is specially designed for the manufacture of that type of block embraced by Letters Patent of the United States No. 876,605, issued to me on January 14th, 1908. And further objects are to enable blocks of either full or half lengths to be made in the same machine; and to permit the molded blocks to be readily and easily removed.

The invention will be hereinafter fully set forth and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view. Fig. 2 is an elevation. Fig. 3 is a cross sectional view. Fig. 4 is a view at right angles to Fig. 2, with parts broken away. Fig. 5 is a modification. Figs. 6 and 7 are views of a core. Fig. 8 shows a spacing core.

Referring to the drawings, 1 designates a base preferably of rectangular formation; 2 a side wall in the form of a plate rigidly secured by brackets 2^a to base 1; and 3 is a second wall corresponding in its rectangular formation to wall 2, but, unlike the latter, it is only detachably held in place. The two opposite end walls 4, at right angles to walls 2 and 3, are hinged at their lower edges to base 1 so that they may be readily lowered. The extent to which this may be done is controlled by chains 5, secured to walls 4 and to hooks 6 on side walls 2 and 3. The end walls 4 are locked in their upright positions by cam levers 7 acting against the outer faces thereof, such cam levers being connected by links 8 to side walls 2 and 3. The end walls are formed with slots 9 for the passage of these links, and on their inner faces are curved ribs 10 so as to present the necessary formation for shaping the ends of the blocks. Intermediate these ribs 10 are grooves to receive the ends of partitions 12 which consist of thin

rectangular plates, arranged parallel with each other, and forming in themselves walls for the several molding compartments.

13 designates a core, preferably of wood, and formed at its base with transverse recesses to receive spacing bars 14 by which the molds are held centrally between adjacent parallel partitions. In making large blocks, according to the plan shown in Fig. 1, two molds 13 are required, and between them is located a button 15 which is detachably held to the base by a screw or projection entering a hole thereof. On the other hand, when it is desired to form the blocks in halves, in lieu of buttons 15 I use cores 16 of such contour as to give to the blocks the necessary end recesses, such cores being retained centrally between the partitions by laterally projecting webs 16^a engaging the latter.

The cores 13 when positioned are held against accidental displacement by a retaining frame 17 which is shown as being pivotally secured to side wall 2. This frame is shown as composed of a series of parallel longitudinally-arranged bars connected at their ends. The frame at one end is pivoted and its free end is capable of being firmly locked by a cam lever 18 and link 19, such link being pivoted to the frame and projected through a slotted projection of the base against which the cam lever is designed to bear. The longitudinal members carry pins or screws 20 which are designed to contact with cores 13 to hold them in place. A bracket 21 secured to the outer side of wall 2 supports this retaining frame when in its open position to permit of the insertion or removal of the cores, cross-bar 22 of such frame resting on said bracket. The retaining frame may be formed in two sections as shown at 17^a in Fig. 5.

In practice, the several cores and partition plates are secured in position as well as the side wall 3 and the corresponding opposite walls 4. After the retaining frame has been lowered and locked the composition is forced into the compartments so as to entirely fill the spaces surrounding the several cores. After the material has sufficiently set the retaining frame is unlocked and thrown back, whereupon the opposite walls 4 are released and lowered on their hinges. Thereupon the operator may readily remove the blocks with little or no danger of injury thereto.

From what has been said it will be seen that I have provided an extremely simple and inexpensive form of molding apparatus for producing partition blocks of the necessary formation, and capable of making blocks of either full or half sizes.

I claim as my invention:—

1. A molding apparatus for forming a series of molded blocks comprising a base, two corresponding side walls, one of which is rigidly mounted on the base, two corresponding end walls hinged to said base, a series of spaced-apart partitions secured by opposite walls, cores located between and spaced apart from said partitions, a frame extending over the apparatus, and capable of being removed therefrom, said frame carrying means for detachably engaging and holding said cores in place during the molding operations, means for locking said frame, and means for locking the end walls and the side walls together, and means for limiting the outward movements of said end walls when freed of said locking means.

2. A molding apparatus comprising a base, opposite side walls, one of which is fixedly secured to said base, two hinged end walls, means for locking said end walls and side walls together, cores designed to be located on said base within said walls, a retaining frame pivotally secured at one end to said fixed side wall, and designed to extend over the top of the apparatus, means for holding the free end of said frame at the opposite side wall, and means carried by said frame for engaging the cores.

3. A molding apparatus comprising a base, corresponding side walls, and corresponding end walls, a series of spaced-apart partitions engaging at their ends the inner faces of said end walls, cores located in the compartments formed by said partitions, means for binding said walls together, a re-

taining frame pivoted at one end to one of the walls and extended over the top of the apparatus, means carried by said frame for engaging and holding the cores, and means for detachably locking the free end of such frame.

4. A molding apparatus comprising a base having corresponding side walls, one of which is fixedly secured thereto, two corresponding end walls, a series of spaced-apart partitions paralleling the side walls and supported by said end walls, cores located between said partitions, a retaining frame hinged to the fixedly held side wall and carrying pins for engaging said cores, and means for locking the free end of said frame, such means comprising a link and a cam lever to which the link is secured, such cam lever acting on a fixed part of the apparatus.

5. A molding apparatus comprising a base, opposite side walls, means for fixedly holding one of the side walls to said base, end walls hinged to said base, a series of spaced-apart partitions paralleling said side walls and supported by said end walls, means for locking the side walls and the end walls together, means for limiting the outward movements of the end walls, cores located between said partitions, a retaining frame pivoted to the fixedly-held side wall and having means for engaging said cores, means for locking the free end of said frame, and supports for the latter when in its open position.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

JOHN D. SULLIVAN.

Witnesses:

A. C. SULLIVAN,
R. J. STEPHENS.