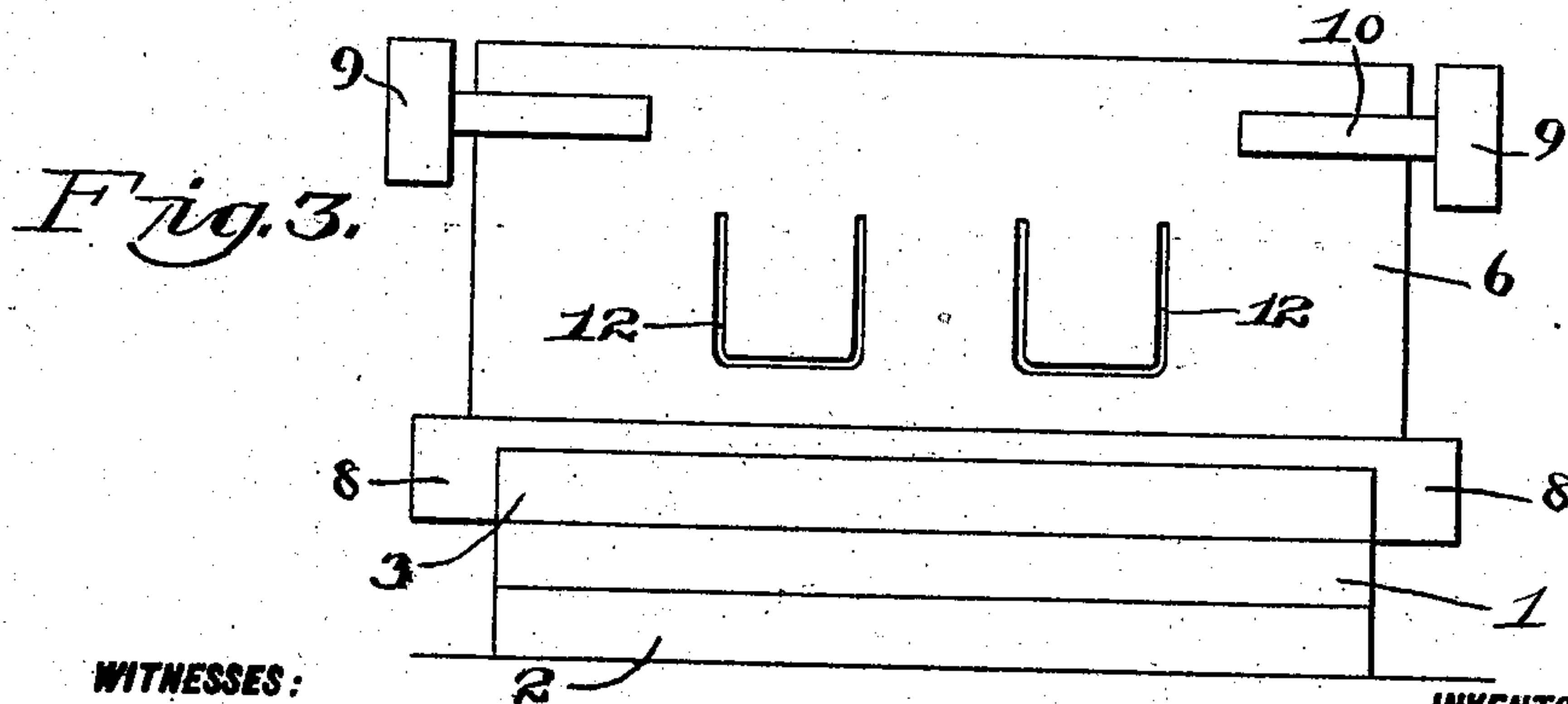
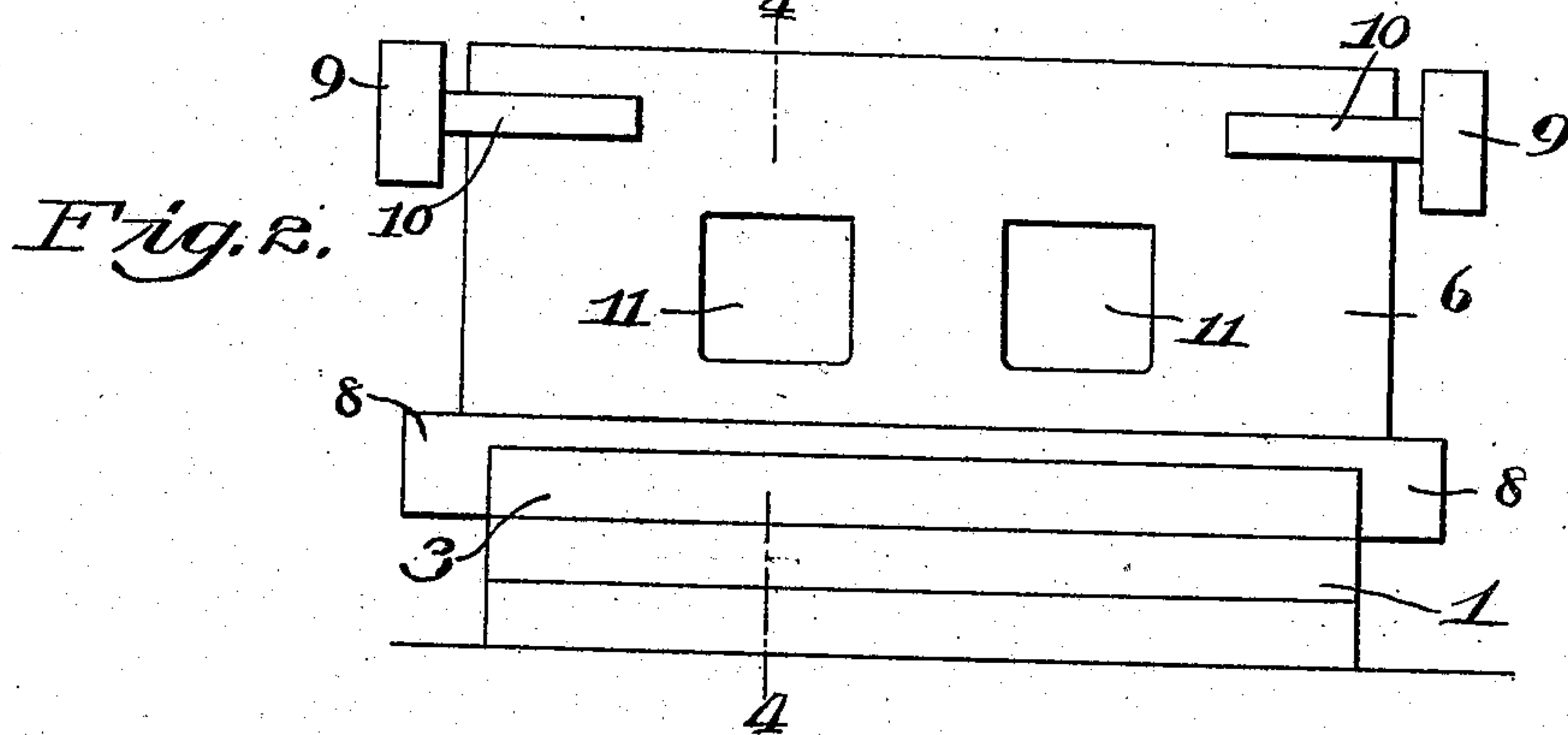
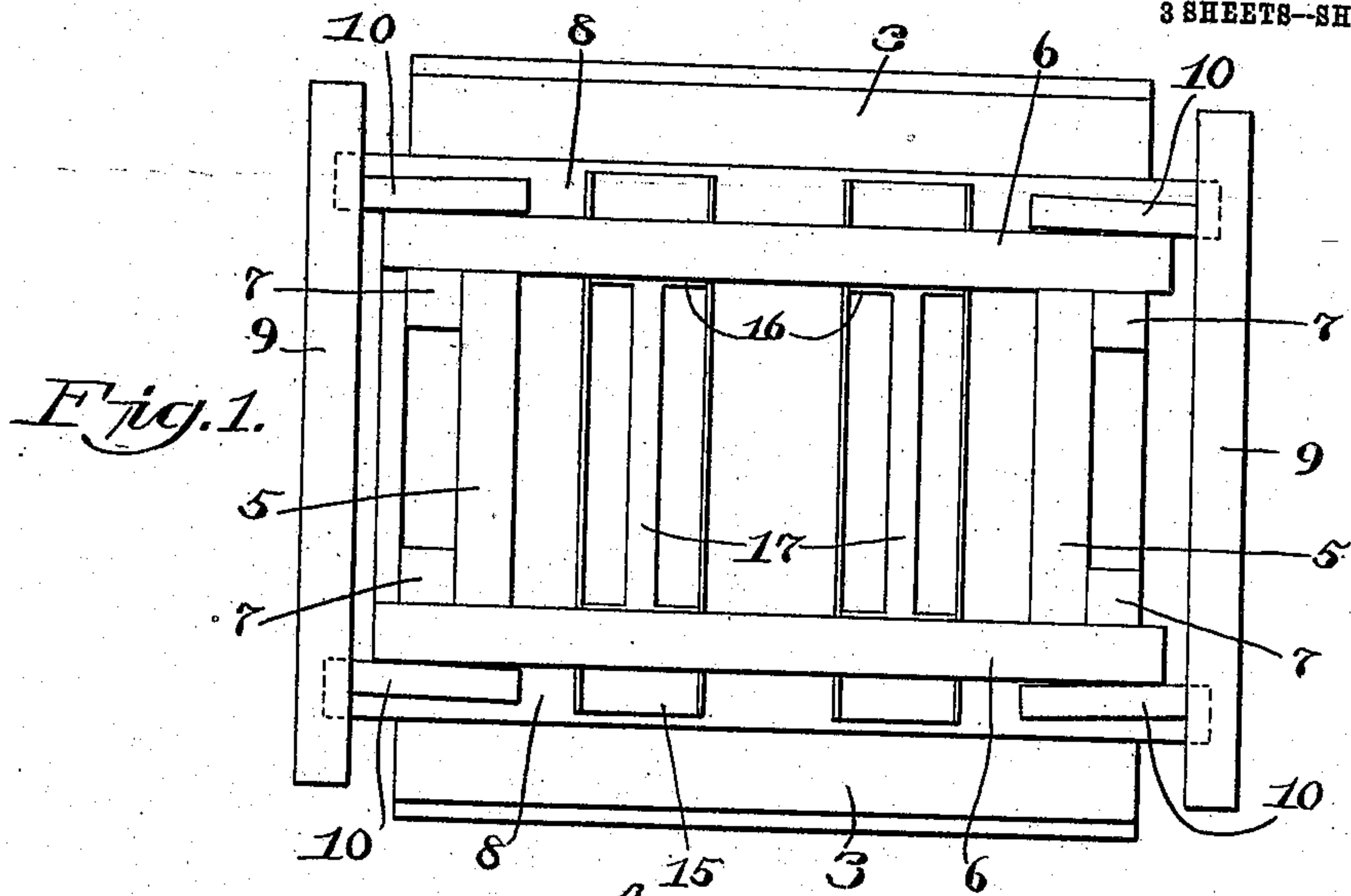


E. M. LANE.
MOLD FOR FORMING ARTIFICIAL STONE BLOCKS.
APPLICATION FILED SEPT. 17, 1908.

919,891.

Patented Apr. 27, 1909.

3 SHEETS—SHEET 1.



WITNESSES:

E. M. Lane
E. M. Lane

INVENTOR

Edward M. Lane
BY

A. V. Jones
ATTORNEY.

E. M. LANE.
MOLD FOR FORMING ARTIFICIAL STONE BLOCKS.
APPLICATION FILED SEPT. 17, 1908.

919,891.

Patented Apr. 27, 1909.
3 SHEETS—SHEET 2.

Fig. 4.

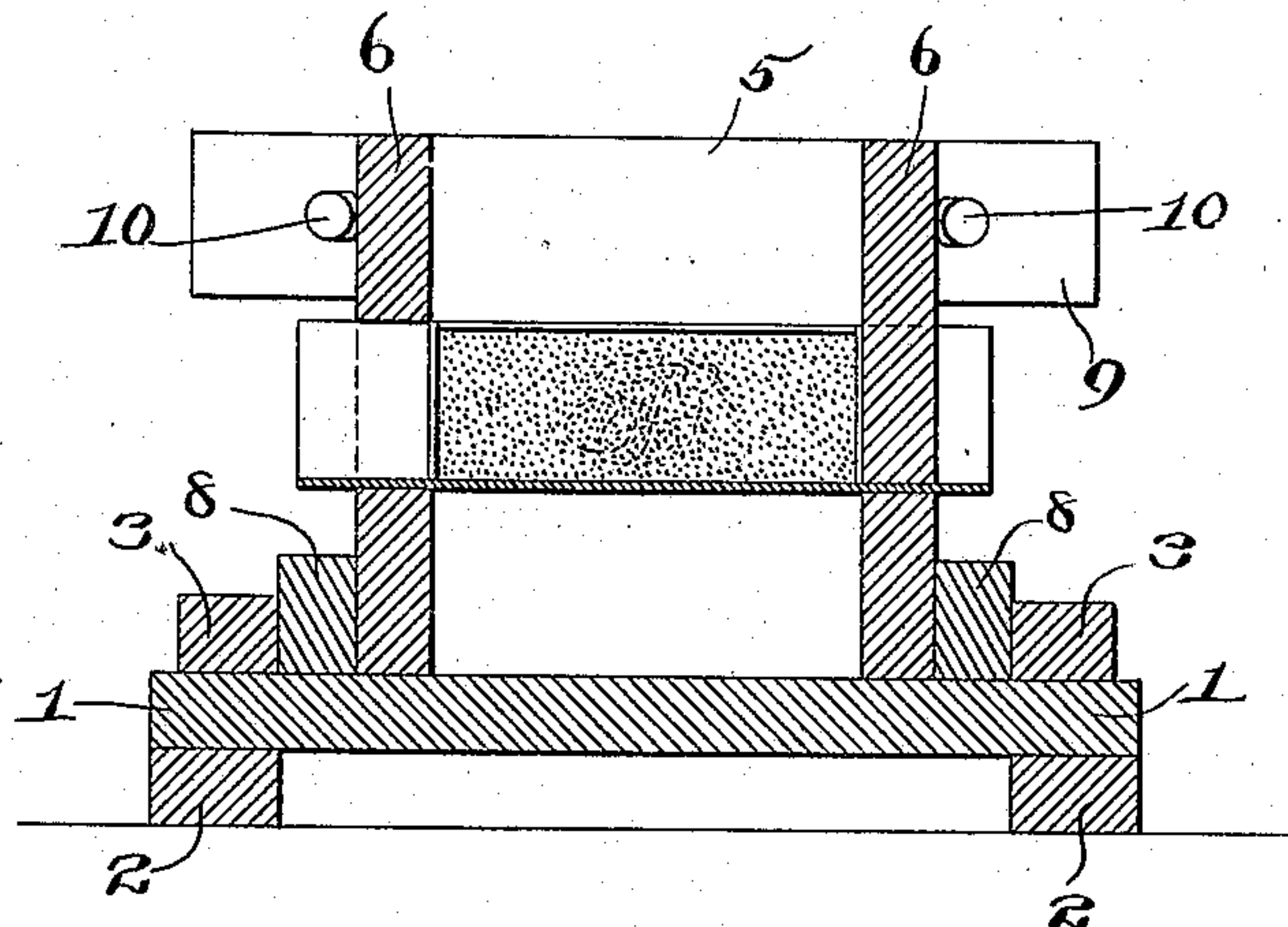
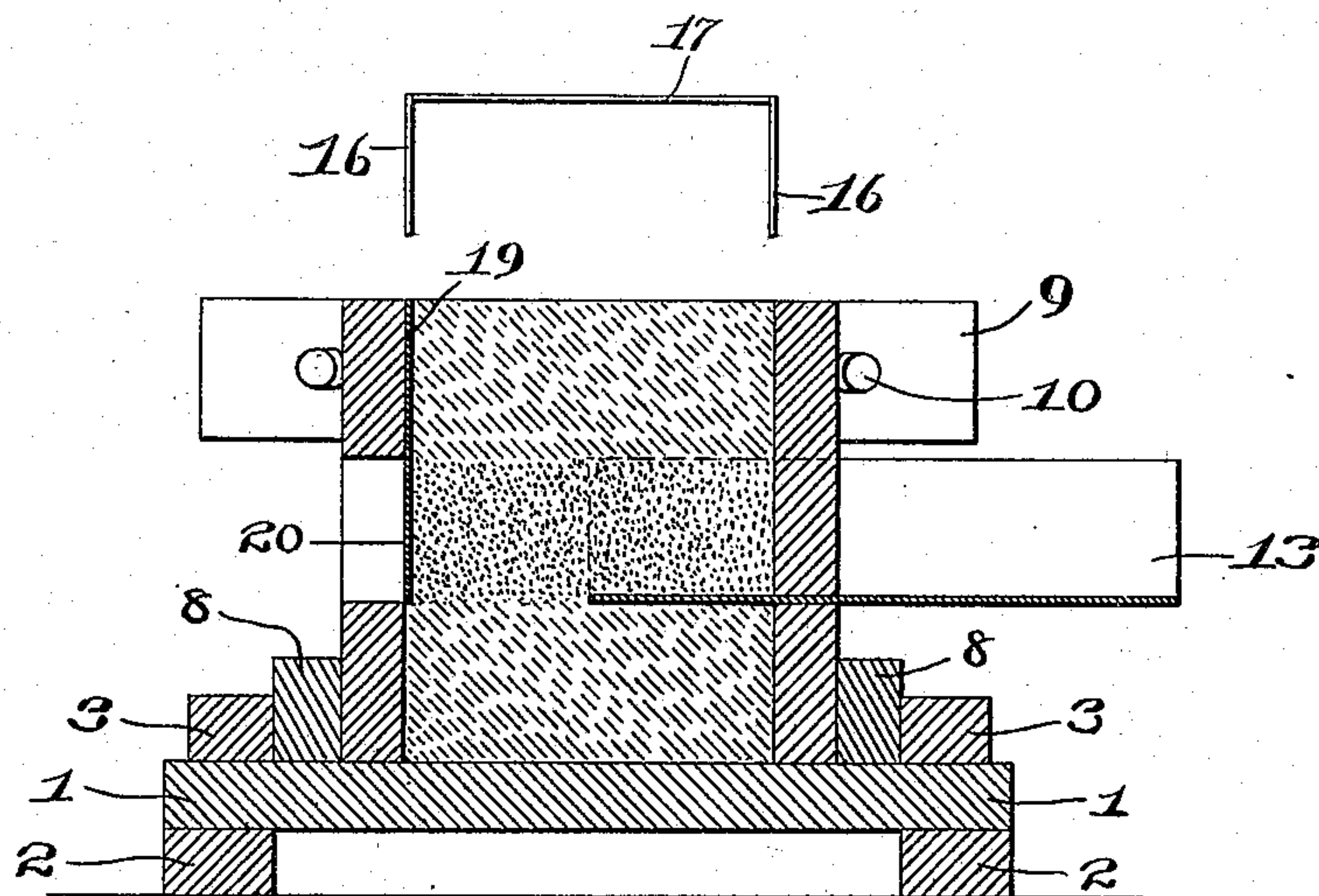


Fig. 5.



WITNESSES

E. M. Lane
E. M. Lane

INVENTOR

Edward M. Lane

BY

A. V. Jones

ATTORNEY

E. M. LANE.
MOLD FOR FORMING ARTIFICIAL STONE BLOCKS.
APPLICATION FILED SEPT. 17, 1908.

919,891.

Patented Apr. 27, 1909.
3 SHEETS—SHEET 3.

Fig. 6.

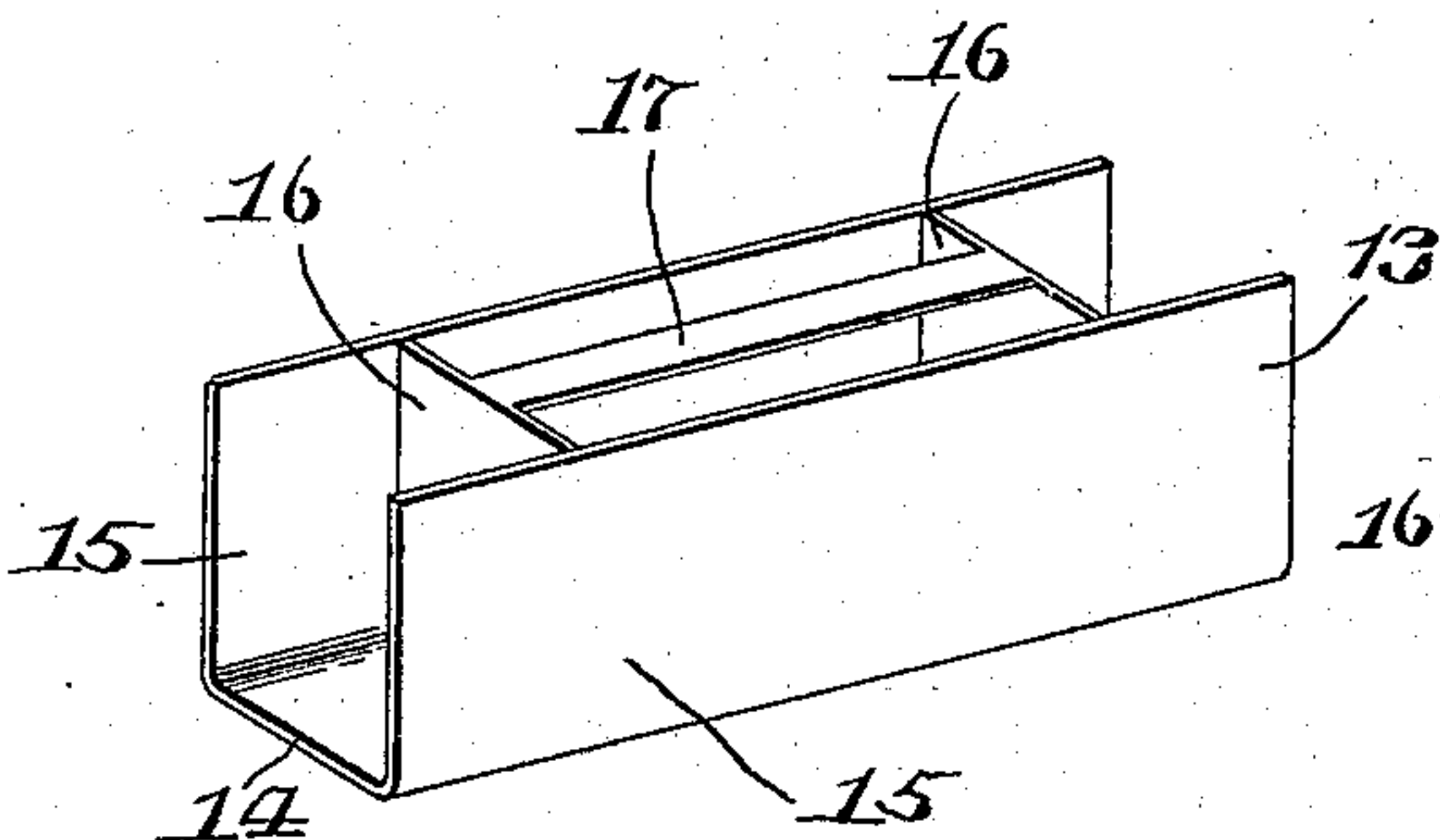


Fig. 9.

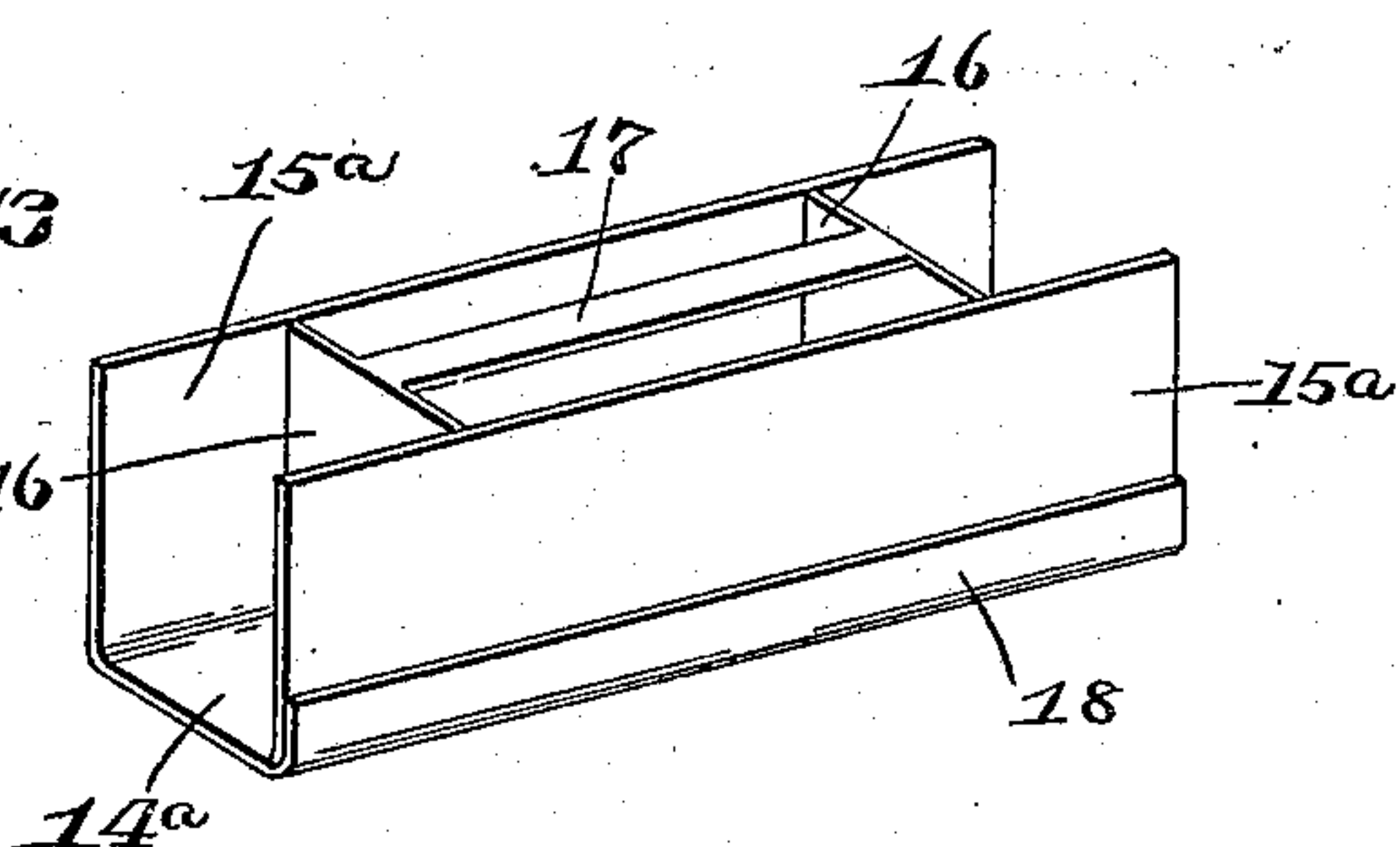


Fig. 7.

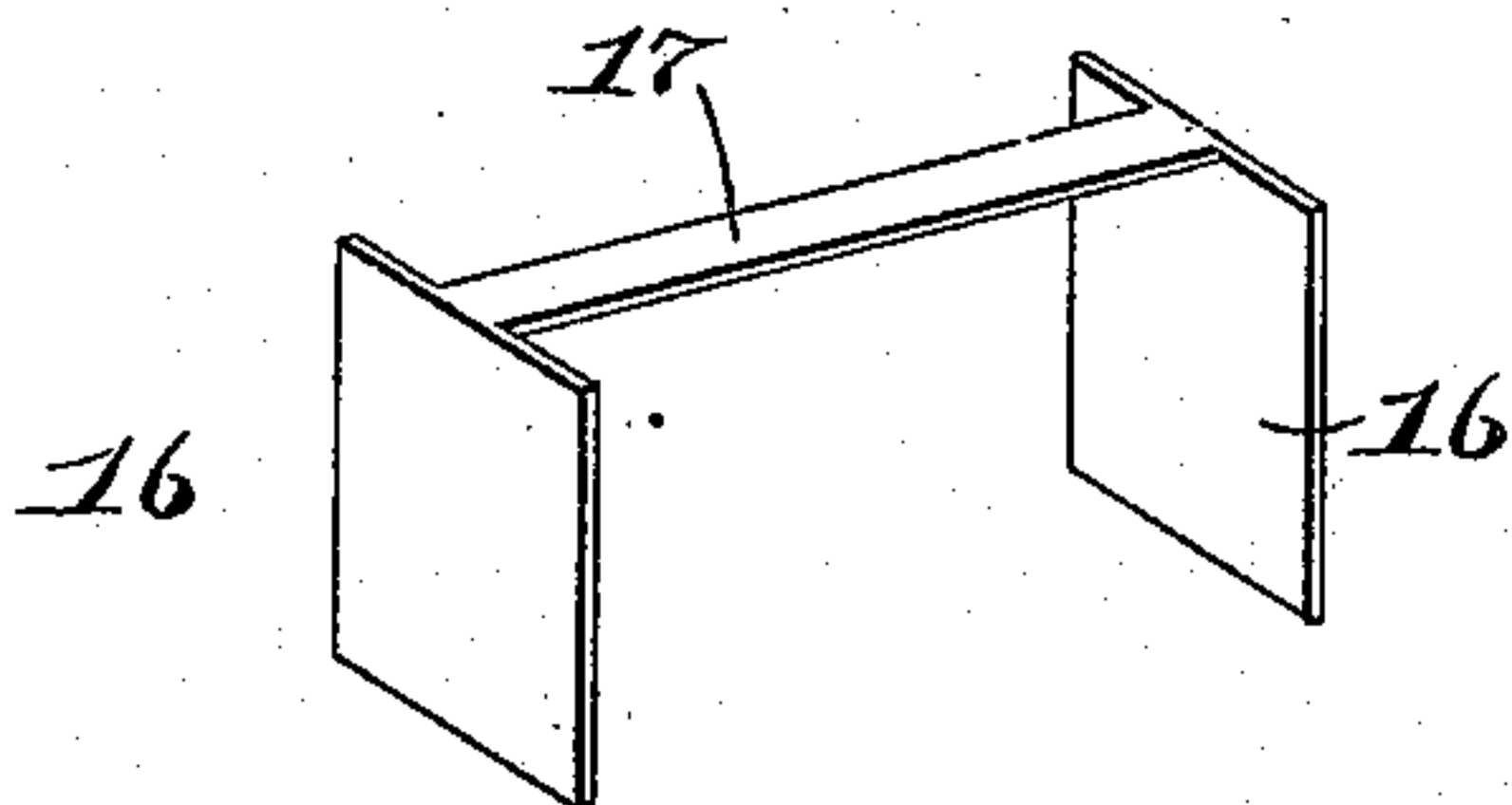


Fig. 10.

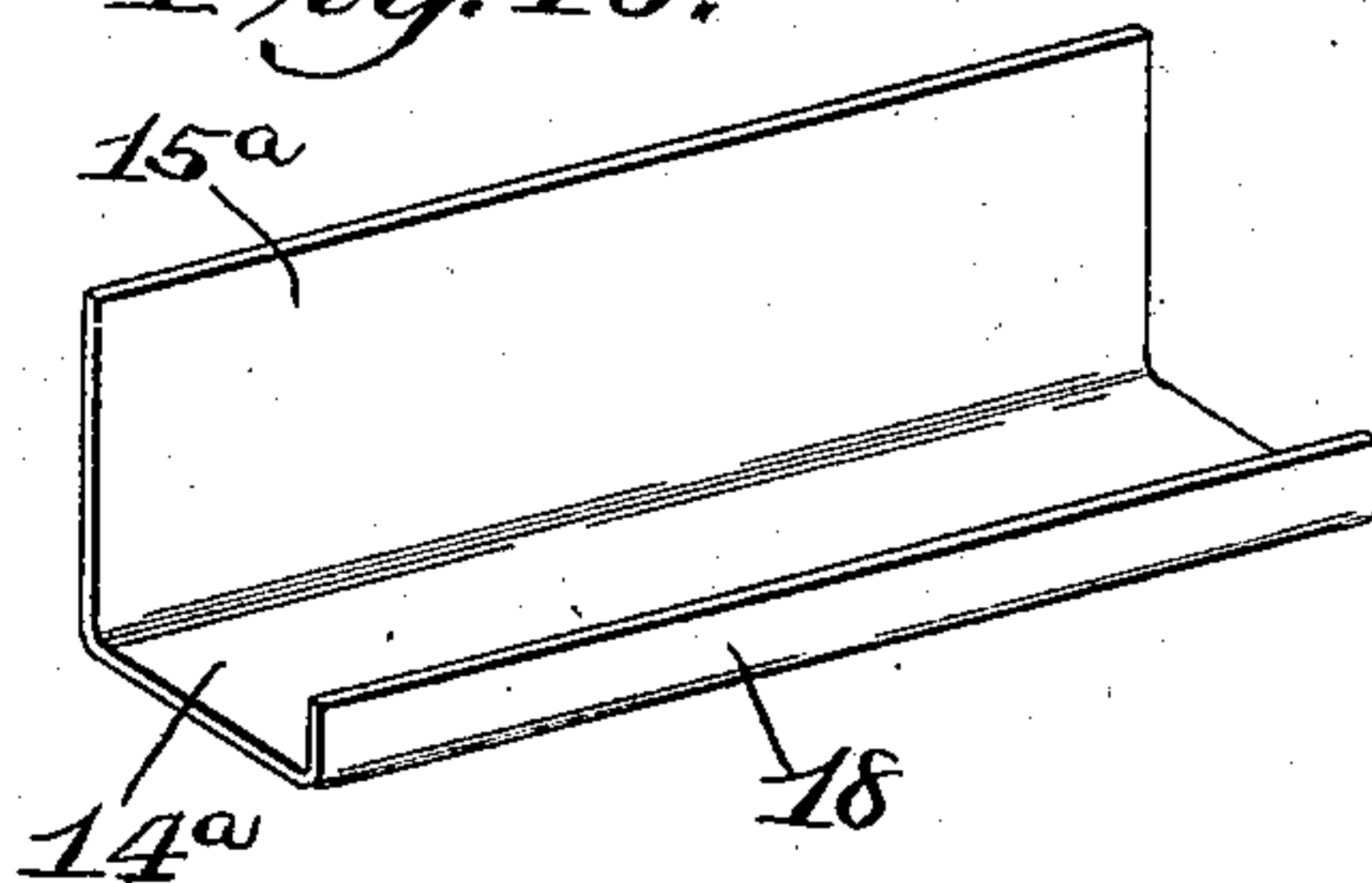


Fig. 8.

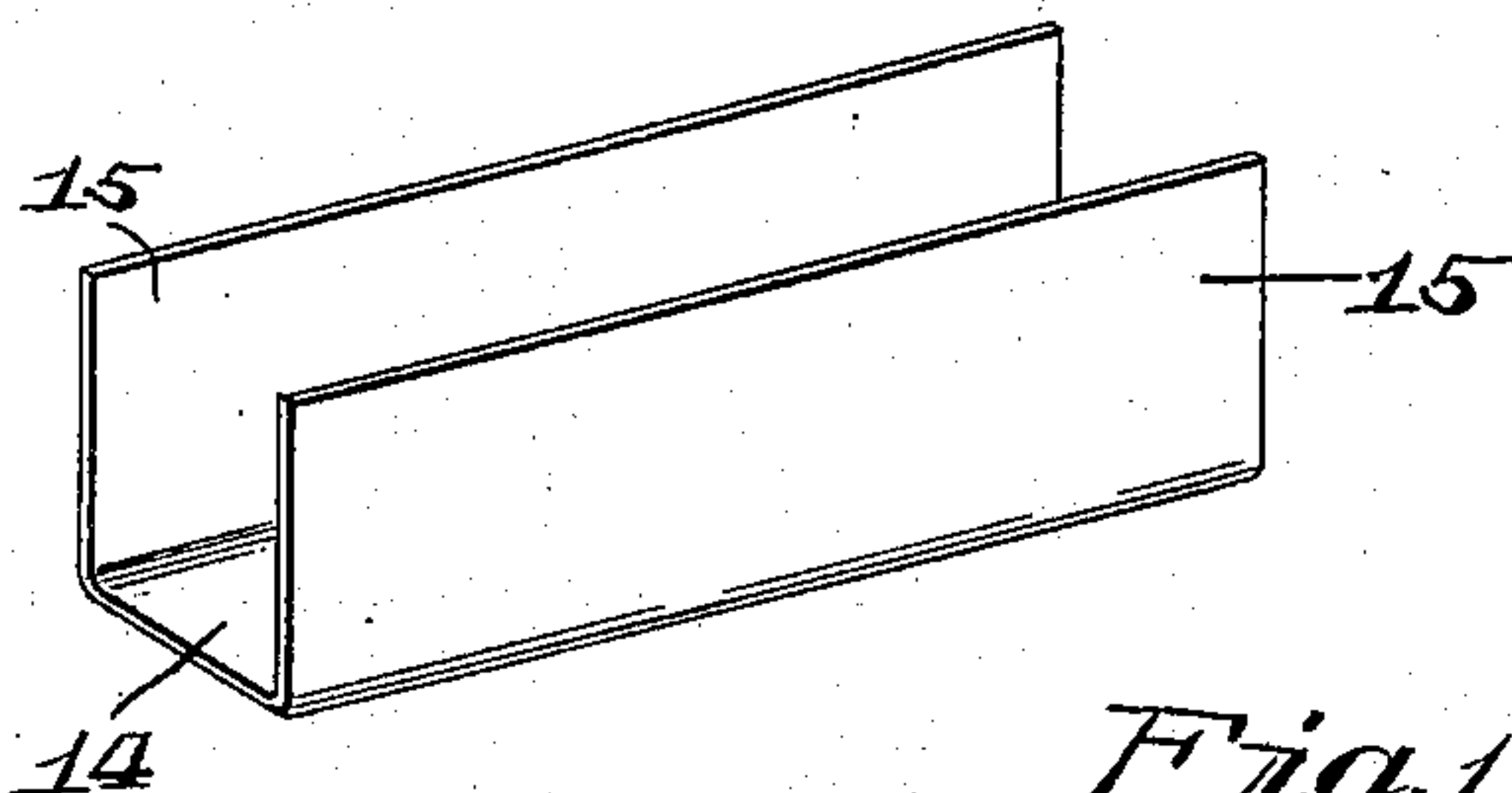


Fig. 11.

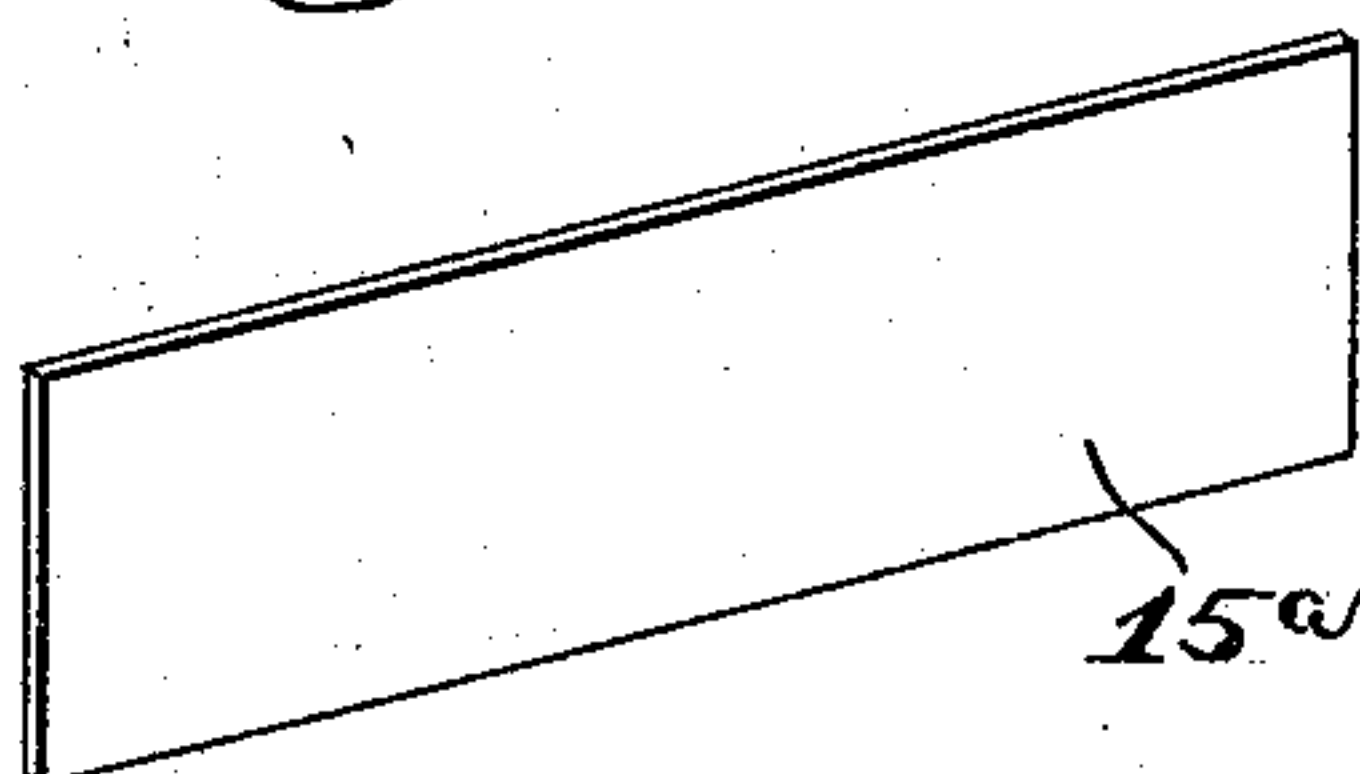
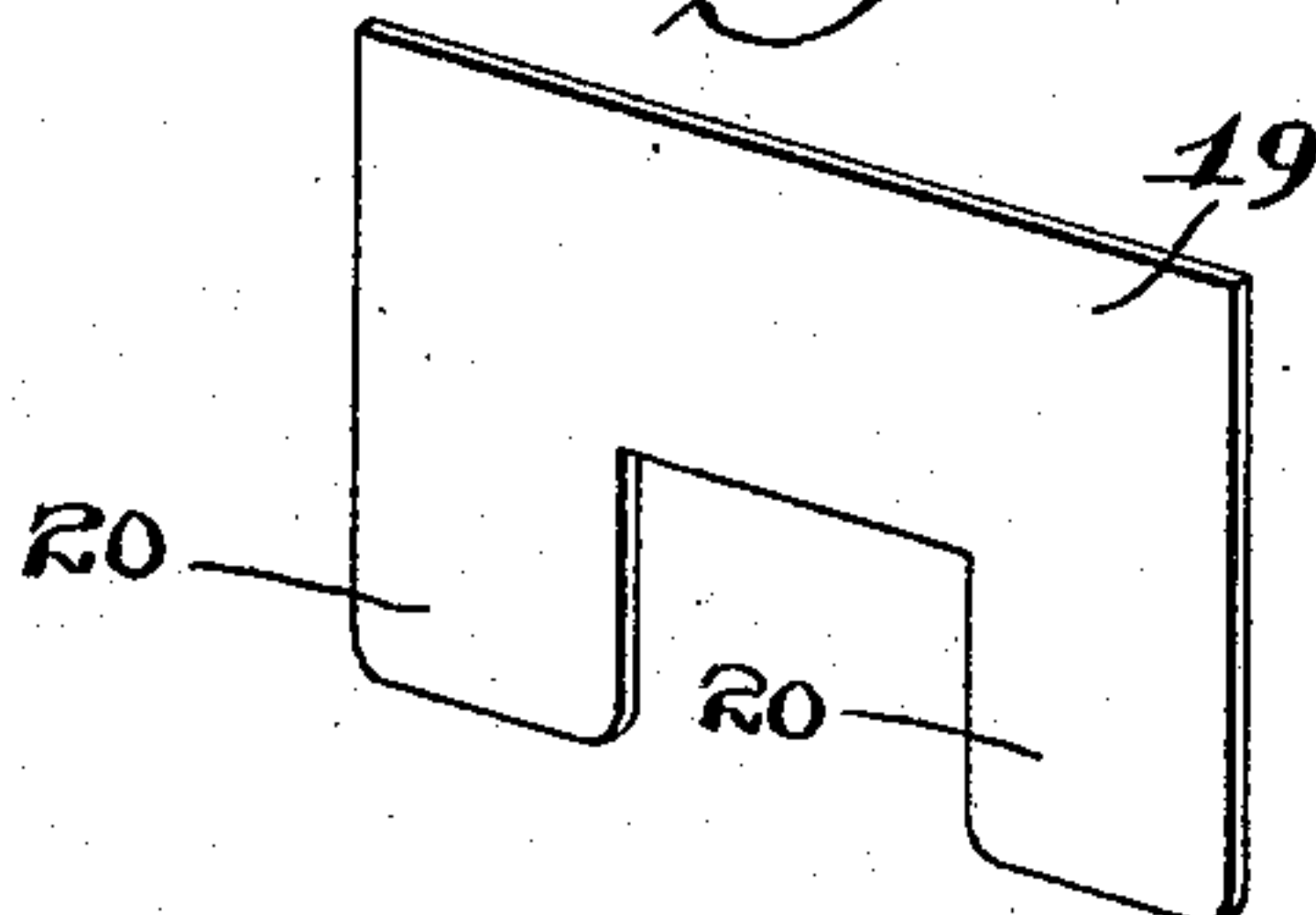


Fig. 12.



WITNESSES
E. M. Lane
E. W. Ware

BY

INVENTOR
Edward M. Lane
A. V. Jones
ATTORNEY

UNITED STATES PATENT OFFICE.

EDWARD M. LANE, OF HADDON HEIGHTS, NEW JERSEY.

MOLD FOR FORMING ARTIFICIAL-STONE BLOCKS.

No. 919,891.

Specification of Letters Patent.

Patented April 27, 1909.

Application filed September 17, 1908. Serial No. 453,443.

To all whom it may concern:

Be it known that I, EDWARD M. LANE, citizen of the United States, and resident of Haddon Heights, in the county of Camden and State of New Jersey, have invented certain new and useful Improvements in Molds for Forming Artificial-Stone Blocks, of which the following is a full, clear, and exact description.

10 This invention relates to improvements in molds for manufacturing artificial stone blocks.

The object of the invention is to provide a mold of simple and efficient construction 15 whereby the artificial stone blocks may be economically and expeditiously manufactured, and to this end the invention consists in the novel construction and combinations of parts which will be hereinafter fully described and particularly claimed.

In the drawings:—Figure 1 is a plan view of my improved mold. Fig. 2 is an elevation of one side thereof. Fig. 3 is an elevation of the opposite side thereof. Fig. 4 is a 25 vertical section as on the line 4—4 of Fig. 2. Fig. 5 is a view similar to Fig. 4 showing some of the parts in different positions. Fig. 6 is a perspective view of one form of core-former or support. Figs. 7 and 8 are perspective views of the two parts of the core support shown in Fig. 6. Fig. 9 is a perspective view of another form of core support. Figs. 10 and 11 are perspective views of parts of the core support shown in Fig. 9. 35 Fig. 12 is a perspective view of the member for supporting the ends of the cores.

1 designates the base or pallet board of the mold, to the bottom of which are secured suitable cleats, and to the top of which are 40 secured upwardly projecting ribs in the form of additional cleats 3. Resting upon the palette bar 1 are the end walls 5 and side walls 6 of the mold. The side walls 6 abut against the ends of the end walls 5, and thus 45 the side walls and the pallet board form a rectangular box for the reception of the stone compound to be molded into the building block.

The ends of the side walls 6 extend beyond 50 the end walls 5, and their inner faces are provided with projecting ribs 7 which take against the outer faces of the end walls 5 and form suitable supports to prevent outward movement thereof under the pressure of the 55 stone compound within the mold. Outward movement of the side walls 6 is prevented by

longitudinal members or bars 8 which are interposed and fill the spaces between the outer faces of the side walls 6 and the inner faces of the ribs 3. As a means for still further holding or clamping the side walls 6 60 firmly against the ends of the end walls 5 I provide a clamp at each end of the mold, each clamp comprising a bar 9 and pins 10 projecting therefrom, and adapted to engage 65 the outer faces of the side walls 6. The pins 10 diverge slightly so that, as the bars 9 are forced inwardly or toward each other, the pins 10 will engage the outer faces of the side walls 6 and force them inwardly into close 70 contact with the end walls 5 and at the same time bind against the walls 6 to hold the clamps in place.

One side wall 6 is provided with rectangular openings 11 therein, and the other or opposite side wall 6 is provided with substantially U-shaped slots 12, directly opposite the openings 11, the bottom and side walls of the openings 11 being in line with the bottom and outer walls of the slots 12, or substantially so. These openings 11 and slots 12 are 80 adapted to receive substantially U-shaped or channel core-supports 13, each of which comprises a bottom 14, and side walls 15. Each core support is provided with removable end walls 16, which are connected by a top bar 17. 85

The distance between the end walls 16 of each core support is equal to the distance between the inner faces of the side walls 6 of 90 the mold when they are assembled with the end walls 5; and each end wall 16 is arranged inwardly of the end of its core support 13 so that each core support 13 may be introduced to the mold by passing it through the opening 11 in one side wall, then through the interior of the mold, and then through the U-shaped slot in the opposite wall thereof, and brought to rest with the outer faces of 100 the end walls 16 of the core support in line with the inner faces of the side walls 6 of the mold, and with the ends of the U-shaped core-support extending through the opening 11 and slot 12, for a purpose hereinafter explained. 105

Instead of forming the bottom 14 and sides 15 of each core-support of a single piece of metal, as shown in Figs. 6 and 8, I may make one or both side walls 15 separate from the bottom 14. In Figs. 9, 10, and 11, 110 I have shown a substantially U-shaped core-support in which a bottom 14^a, one side wall

15^a extending upwardly from one side of the bottom, and a flange 18 extending upwardly from the other side of the bottom, are formed of a single piece of metal, and the other side wall 15^a is in the form of a flat plate abutting against the inner face of the flange 18, and made movable with relation to the bottom 14^a for a purpose hereinafter explained.

19 is a thin plate provided with downwardly projecting parts 20. The outer edge of each projecting part 20 is shaped to conform to the cross section of the interior of the U-shaped core-supports, and the distance between the parts 20 is such that they may be introduced to the core supports 13 when said supports are in position within the mold, for a purpose hereinafter explained.

Having thus far described the construction of the various parts of my improved mold, I shall now proceed to describe the operation of forming artificial stone blocks therewith. The core formers or supports 13 are employed when it is desired to manufacture blocks having air spaces or openings extending therethrough, and in manufacturing blocks of this character, the first operation is to clamp the end walls 5 and side walls 6 together upon the pallet board 1. The end walls 16 are then placed within the core formers or supports 13, as shown in Fig. 6, away from the mold, and the core-formers 13 are filled with sand between the end walls 16 and side walls 15, the sand being first wet or moistened, and, if desired, mixed with corn-starch or any suitable material which will assist in holding the particles of sand together. The core formers are now introduced to the mold, first through the openings 11 and then into the slots 12, and brought to rest in the position shown in Figs. 1 and 4, with the outer faces of the end walls 16 of the core supports 13 in line with the inner faces of the walls 6 of the mold.

The end walls 16 of the core supports are now removed from the supports out through the top of the mold, thus leaving the sand cores intact upon the U-shaped supports 13. The plate 19 is now introduced to the mold, the projections 20 being inserted into the core supports 13 to take the place of the end walls 16 adjacent the openings 11 in one side wall 6. The projections 20 thus form supports to prevent any accidental displacement through the openings 11 of the sand forming the cores. The mold is then filled with the plastic stone compound around the sand cores and the supports therefor, the compound being introduced to the mold between the sand cores so as not to disturb the tops thereof which are uncovered. After the plastic stone compound has been introduced to the mold, the U-shaped core-supports are withdrawn from the mold, (a support partially withdrawn being shown in Fig. 5), and they may be with-

drawn through either the openings 11 or the slots 12. When they are withdrawn through the openings 11, the projections 20 of the plate 19 serve as a means to engage the sand cores and prevent their withdrawal with their supports; and when the core supports are withdrawn through the slots 12, the flat portions of the side walls 6 forming the inner walls of the slots 12 and extending into the U-shaped core-supports serve as a means to engage the sand cores and prevent their withdrawal with their supports. While the U-shaped supports are being withdrawn, the plastic stone compound falls into engagement with the sand cores and fills the space previously occupied by their supports. The plate 19 is now removed to permit the stone compound to fill the space occupied thereby. This being done, the stone compound and the sand cores therein are permitted to remain in the mold until the compound has set or attained a degree of hardness sufficient to retain the shape given to it by the mold; whereupon, the end walls 5 and side walls 6 of the mold are removed from the pallet board by first removing the clamping bars and pins 9 and 10, and then removing the bars or members 8, thus permitting the direct outward or horizontal separation of the side walls 6 from the sides of the molded block, and then the direct outward or horizontal separation of the end walls 5 from the ends of the molded block. The block may then be permitted to remain upon the pallet board until it has attained the desired degree of hardness for handling, and the sand cores may then be removed from the block, thus leaving the finishing block with the air spaces or openings extending therethrough.

In some cases, depending upon the size and nature of the block being formed, it will be desirable to use the sand core former and support shown in Figs. 9, 10, and 11. When this form of core support is used, the bottom of the support 14^a with its integral side wall 15^a may be withdrawn from the mold before the remaining side wall 15^a is withdrawn therefrom, thus preventing any liability of buckling or shortening of the sand core due to its vertical engagement with the walls of the core support, which might occur if the bottom and the two side walls of the U-shaped support were withdrawn at the same time as a unit.

While it is desirable to employ the U-shaped slots in one of the side walls 6 of the mold, the same may be dispensed with; in which event, the U-shaped core supports may be introduced to the mold through the openings 11 in one side wall until their inner ends abut against the other side wall; whereupon, the artificial stone block may be formed as hereinbefore described, and the core supports withdrawn from the mold through the openings 11.

Having thus described my invention, I claim:—

1. The combination of a mold having an opening in a wall thereof, a core support movable through said opening from within the mold, and means to engage a core and prevent its removal from the mold with the support.

2. The combination of a mold having an opening in a wall thereof, a core support having a bottom and side walls, said support being movable through said opening from within the mold, and means extending between said side walls to engage a core and prevent its removal from the mold with the support.

3. The combination of a mold having an opening in a wall thereof, a core support having a bottom and side walls, one side wall being movable with relation to the bottom and said support being movable through said opening from within the mold, and means extending between said side walls to engage a core and prevent its removal from the mold with the support.

4. The combination of a mold having an opening in a wall thereof, a core support having a bottom, side walls and vertically removable end walls, said support being movable through said opening from within the mold, and means extending between said side walls to engage a core and prevent its removal from the mold with the support.

5. The combination of a mold having an opening in a wall thereof, a core support having a bottom, side walls and vertically removable end walls, one side wall being movable with relation to the bottom and said support being movable through said opening from within the mold; and means extending between said side walls to engage a core, and prevent its removal from the mold with the support.

6. The combination of a mold having an opening in a wall thereof, a core support having a bottom, a side wall extending from one side of the bottom, a flange extending

from the other side of the bottom and another side wall engaged with said flange and movable with relation to the bottom, and means extending between said side walls to engage a core and prevent its removal from the mold with the support.

7. The combination of a mold having an opening in a wall thereof, a core support having a bottom, vertically removable end walls, a side wall extending from one side of the bottom, a flange extending from the other side of the bottom and another side wall engaged with said flange and movable with relation to the bottom; and means extending between said side walls to engage a core and prevent its removal from the mold with the support.

8. The combination of a mold having an opening in a wall thereof, a core support having a bottom and side walls, said support being movable through said opening from within the mold, and a removable member adapted to be placed between the side walls of said support and adjacent said opening.

9. The combination of a mold, two opposite side walls of which are provided with openings, a removable core support extending through said mold and the openings in the side walls thereof, and means to engage a core and prevent its removal from the mold with the support.

10. The combination of a mold one side wall of which is provided with an opening therein and the opposite side wall of which is provided with a substantially U-shaped slot opposite to said opening, and a substantially U-shaped core support adapted to extend through said mold and said opening and said slot, and to be removed from the mold through said slot.

In testimony whereof, I have hereunto affixed my signature.

EDWARD M. LANE.

Witnesses:

S. I. HARPER,
A. V. GROUPE.