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PATENTED OCT. 31, 1905.

D. McILRAVY.
MACHINE FOR PRODUCING ARTIFICIAL STONE.

APPLICATION FILED APR. 11, 1905.

2 SHEETS—SHEET 1.

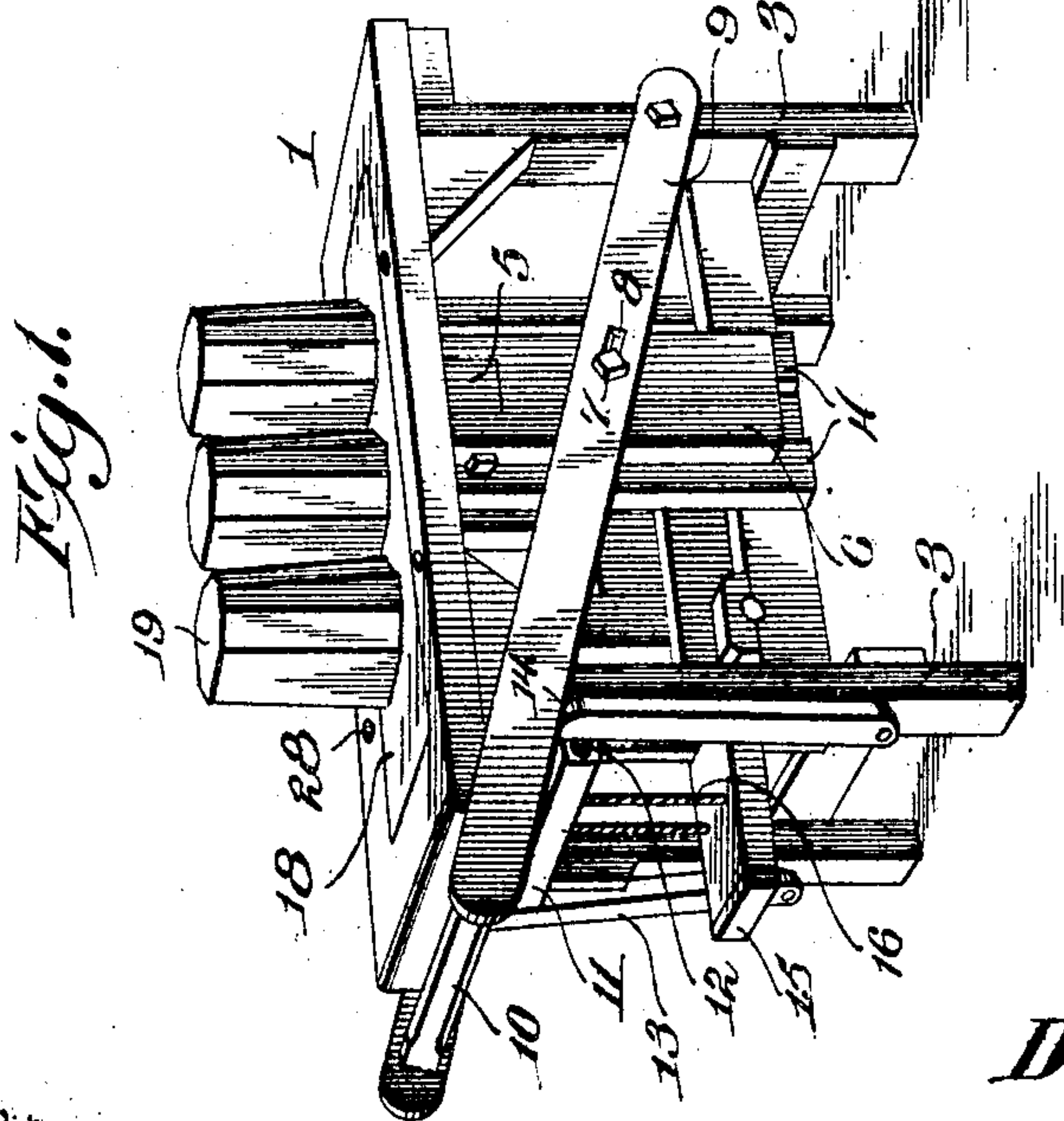
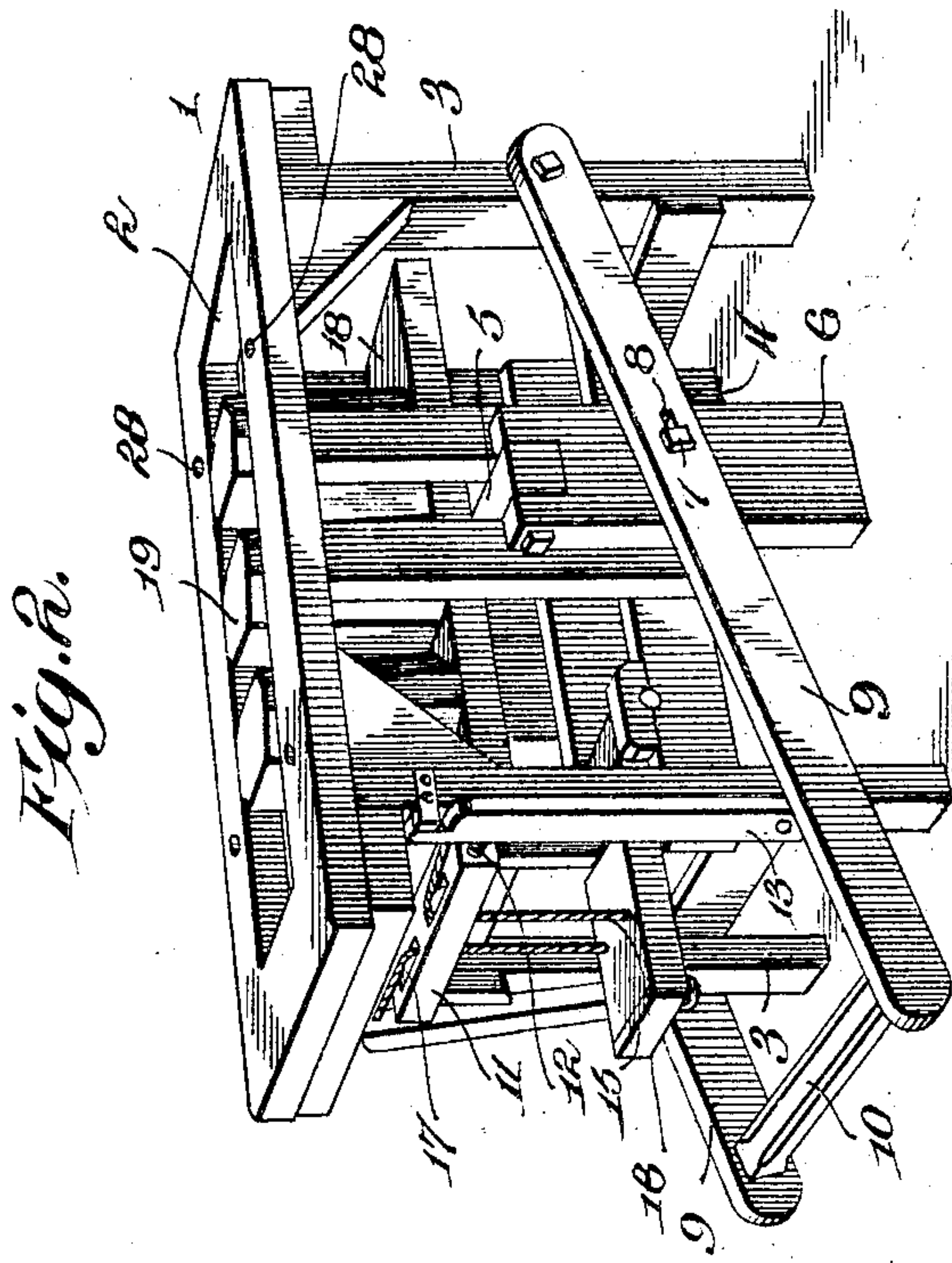
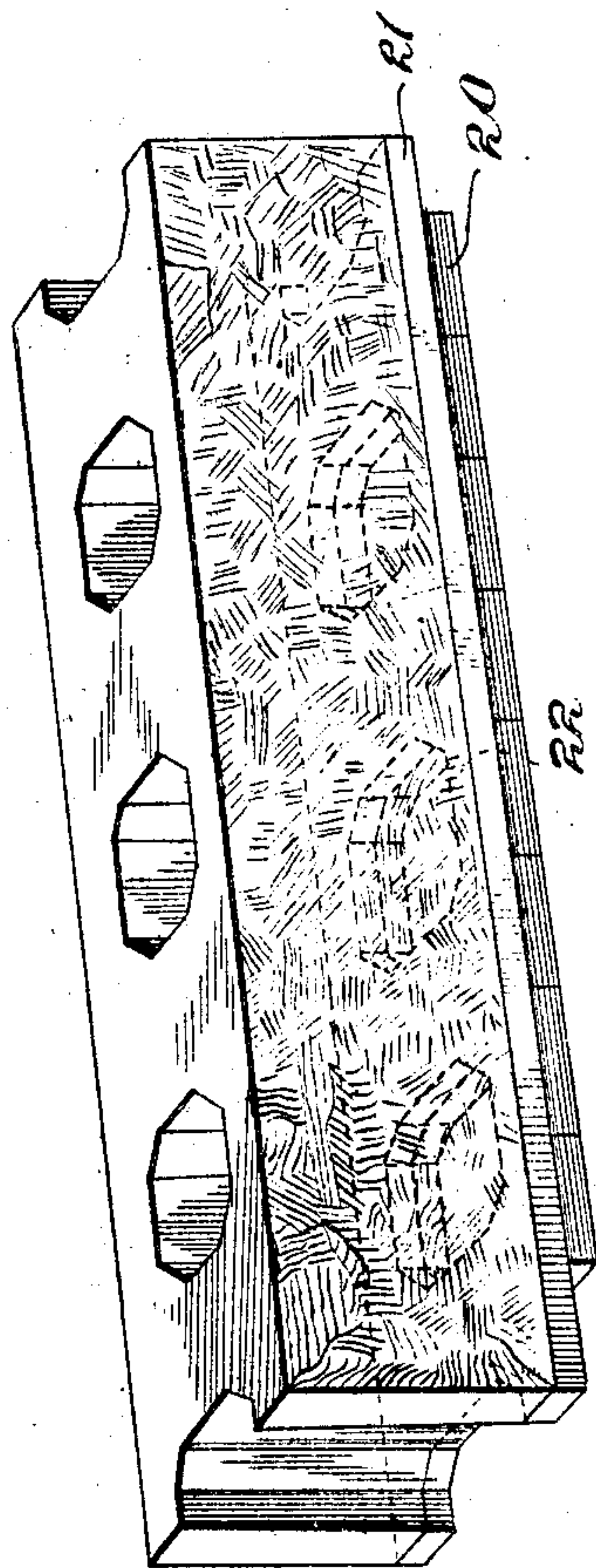


Fig. 3.



Witnesses

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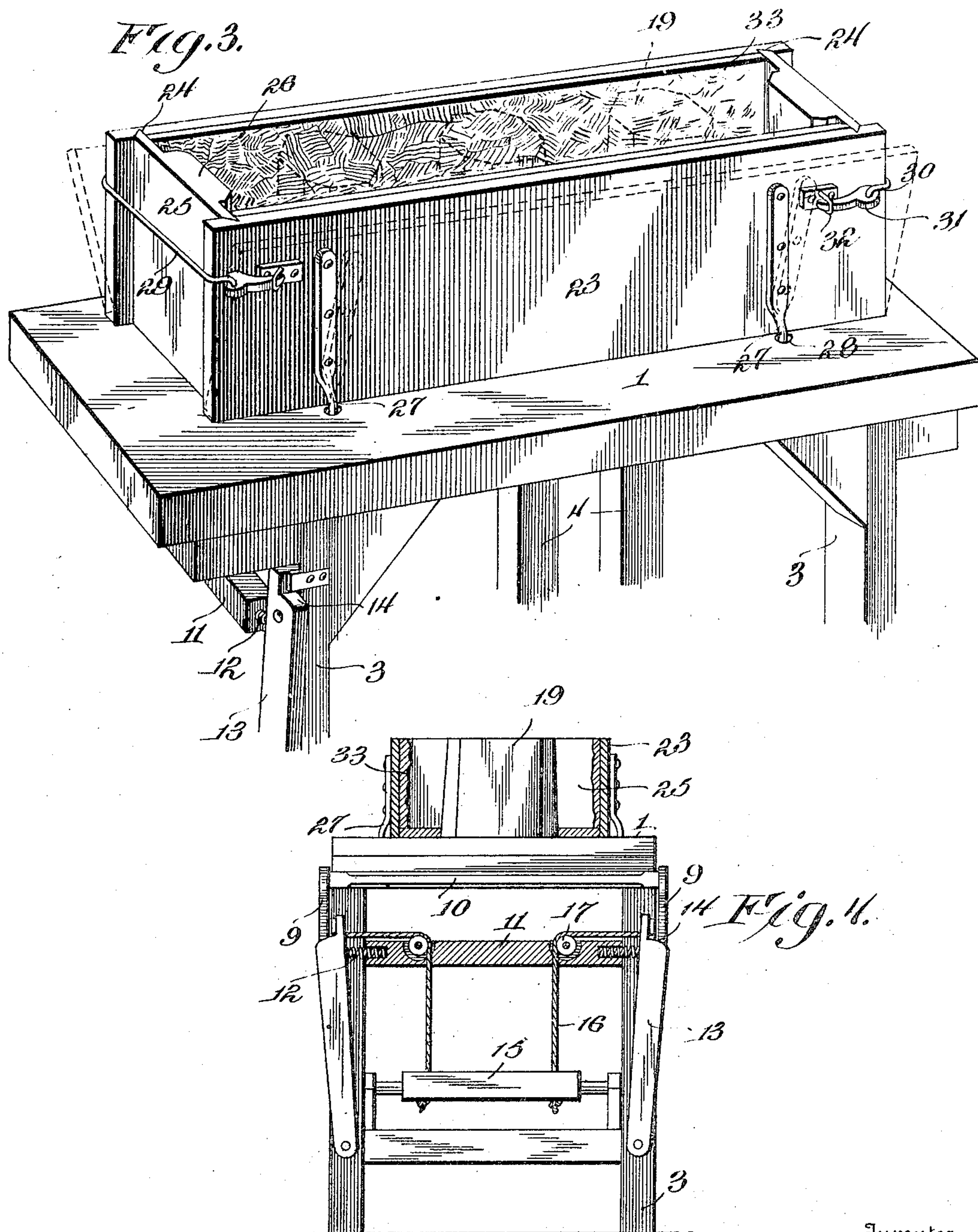
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

DAVID McILRAVY, OF RICEVILLE, IOWA.

MACHINE FOR PRODUCING ARTIFICIAL STONE.

No. 803,014.

Specification of Letters Patent.

Patented Oct. 31, 1905.

Application filed April 11, 1905. Serial No. 254,924.

To all whom it may concern:

Be it known that I, DAVID McILRAVY, a citizen of the United States, residing at Riceville, in the county of Mitchell and State of Iowa, have invented certain new and useful Improvements in Machines for Producing Artificial Stone; 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.

My invention relates to machines for producing artificial-stone building-blocks; and its object is to provide a simple and inexpensive device of this character which can be easily manipulated and which has means whereby a block can be readily shaped and subsequently removed.

Another object is to provide a mold formed of removable panels formed and assembled in such a manner as to substantially prevent material from adhering thereto, so as to necessitate frequent cleaning.

Another object is to provide cores for the mold which are adapted to be raised and lowered manually by means of simple mechanism provided for that purpose.

With the above and other objects in view the invention consists of a table having an opening therein adapted to receive a base, from which extend a desired number of cores. This base is supported by a slide adapted to be operated manually by means of levers connected to the table, and means are employed for automatically locking the lever in such a position as to hold the base when raised.

The invention also consists of a mold comprising a false bottom adapted to be placed around the cores and to be surrounded by side and end panels, which are secured by means of clamping devices provided for them. The panels can be quickly removed from assembled position and the cores pulled downward, so that the false bottom can be carried to any desired point with the formed block in position thereon.

The invention also consists of the further novel constructions and combinations of parts hereinafter more fully described, and pointed out in the claims.

In the accompanying drawings I have shown the preferred form of my invention.

In said drawings, Figure 1 is a perspective view of the machine, showing the cores locked in raised position. Fig. 2 is a similar view showing the cores in lowered position. Fig.

3 is an enlarged perspective view of the mold, the positions of the cores therein being indicated by dotted lines. Fig. 4 is a transverse section through the machine with the parts in position to receive material for forming a block, and Fig. 5 is a perspective view of a formed block in position upon a false bottom.

Referring to the figures by numerals of reference, 1 is the top of a table, having a preferably rectangular opening 2 therein, and this top is supported adjacent its corners by standards 3, suitably braced. Parallel guide-strips 4 extend downward from the center of each side of the top, and between them is mounted a cross-bar 5, to which are secured slides 6. Each slide has a projection 7 thereon, and these projections extend through slots 8, formed in levers 9, which are pivoted to the standards 3 at one end of the table. The other ends of the levers are connected by a cross-bar 10, which also forms a grip, whereby the levers may be readily raised or lowered manually. A cross-strip 11 is secured between two standards and projects forward therefrom, and mounted within the ends of this strip are coiled springs 12, which constantly exert an outward pressure upon locking-strips 13, which are pivoted to two of the standards and have shoulders 14 for projecting under the levers 9 and supporting them. The two locking-strips are connected to a treadle 15 by means of ropes 16, mounted on pulleys 17 in strip 11. It will therefore be seen that when the treadle is depressed the two strips 13 will be simultaneously drawn inward and release the two levers 9.

A base 18 is secured upon the cross-bar 5 and is of such size as to fit snugly within the opening 2 when the levers 9 and the cross-bar 5 are raised. This base supports a plurality of cores 19 of any suitable contour in cross-section and preferably tapered from their lower to their upper ends.

The body of the mold used in connection with the machine comprises a false bottom 20, having its ends reduced in thickness to form grips 21, and this false bottom is adapted to rest on the table and has openings 22 for the reception of the cores 19. The side walls 23 of the mold are adapted to abut against the opposite edges of the false bottom 20 and are curved adjacent their ends, as shown at 24, for the reception of the beveled edges of end walls 25. These end walls are preferably formed with projecting portions 26,

equal in area and contour to one-half of each of the cores 19. The side walls are held in place by stems 27, which project downward therefrom into openings 28, formed in the top 1, and are clamped upon the end walls 25 by means of rods 29, having parallel extensions 30, which overlap the side walls and form pivots for cams 31. These cams are adapted to be locked against movement by means of pivoted loops 32, secured to the side walls or in any other suitable manner. A suitably-finished lining 33 may be inserted into the mold so as to contact with the inner surface of one side wall and give any desired finish to the formed block. It will of course be understood that the end walls 25 may have projections 26 of any preferred outline and dimensions.

When it is desired to form a block by means of the machine herein described, the base 18 and cores 19 are raised by means of levers 9, and said levers are locked automatically by the strips 13. The false bottom 20 is then placed upon the table with the cores projecting through openings 22, and the mold is set up around it in the manner herein described. The cement or other material of which the block is to be formed is packed within the mold and around the cores, and when it is desired to remove the formed block the cams 31 are released from their loops 32 and swung so as to release the rods 29. The side panels 23 can then be swung laterally, as shown by dotted lines on Fig. 3, and raised from engagement with the table, and the end walls 25 can also be withdrawn from the ends of the block. Treadle 15 is subsequently depressed and causes the levers 9 to be simultaneously released. Said levers can then be forced downward and will pull the tapered cores 19 out of the block and the false bottom. The block can then be conveyed upon the bottom 20 to any suitable place, where it can be left to "set." Another false bottom can subsequently be placed upon the table and the operation above described repeated.

A machine such as herein described dispenses with the use of gearing, sprockets, and other like machine elements which become clogged by sand, gravel, &c., and are therefore quickly rendered inoperative. Moreover, the cores can be raised and lowered very easily, and therefore it is only necessary to employ one man to operate each machine. It will of course be understood that the linings 33 can have surfaces of different contours to produce blocks simulating cut stone, &c., or, if desired, the linings may be dispensed with.

In the foregoing description I have shown the preferred form of my invention; but I do not limit myself thereto, as I am aware that

modifications may be made therein without departing from the spirit or sacrificing the advantages thereof, and I therefore reserve the right to make such changes as fairly fall within the scope of my invention.

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

1. In a machine of the character described the combination with a table having an opening in the top thereof, and guides connected to the table and extending below the top; of a slide mounted within the guides, a base supported thereby and adapted to assume a position in the opening to close the same, a core upon the base, simultaneously-movable levers connected to the slide, locking-strips adapted to automatically engage the levers, and means for simultaneously retracting said strips from engaging with the levers.

2. In a machine of the character described the combination with a table having an opening therein; of guides extending at right angles from the table, a slide movable within the guides, a base supported thereby and adapted to close the opening in the table, a core upon the base, operating devices connected to the slide and table, spring-controlled means for automatically locking the operating devices in one position, means for simultaneously retracting the locking means from engagement with the operating devices, and a sectional mold upon the table and comprising a false bottom mounted on the top and base, side and end panels, and means for clamping the panels together, all of said panels being separate and removable.

3. In a machine of the character described the combination with a table having an opening therein; of guides extending at right angles from the table, a slide movable within the guides, a base supported thereby and adapted to close the opening, a core upon the base, operating devices connected to the slide and table, spring-controlled pivoted strips for automatically locking the operating devices in one position, means for simultaneously retracting the strips from the operating devices, and a sectional mold upon the table and comprising a false bottom mounted on the top and base, side and end panels, and means for clamping the panels together, all of said panels being separate and removable.

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

DAVID McILRAVY.

Witnesses:

J. S. POTTER,
S. R. URE.