

No. 894,744.

PATENTED JULY 28, 1908.

W. H. PHILLIPS.  
MACHINE FOR MOLDING CONCRETE BLOCKS.

APPLICATION FILED JULY 29, 1907.

2 SHEETS—SHEET 1.

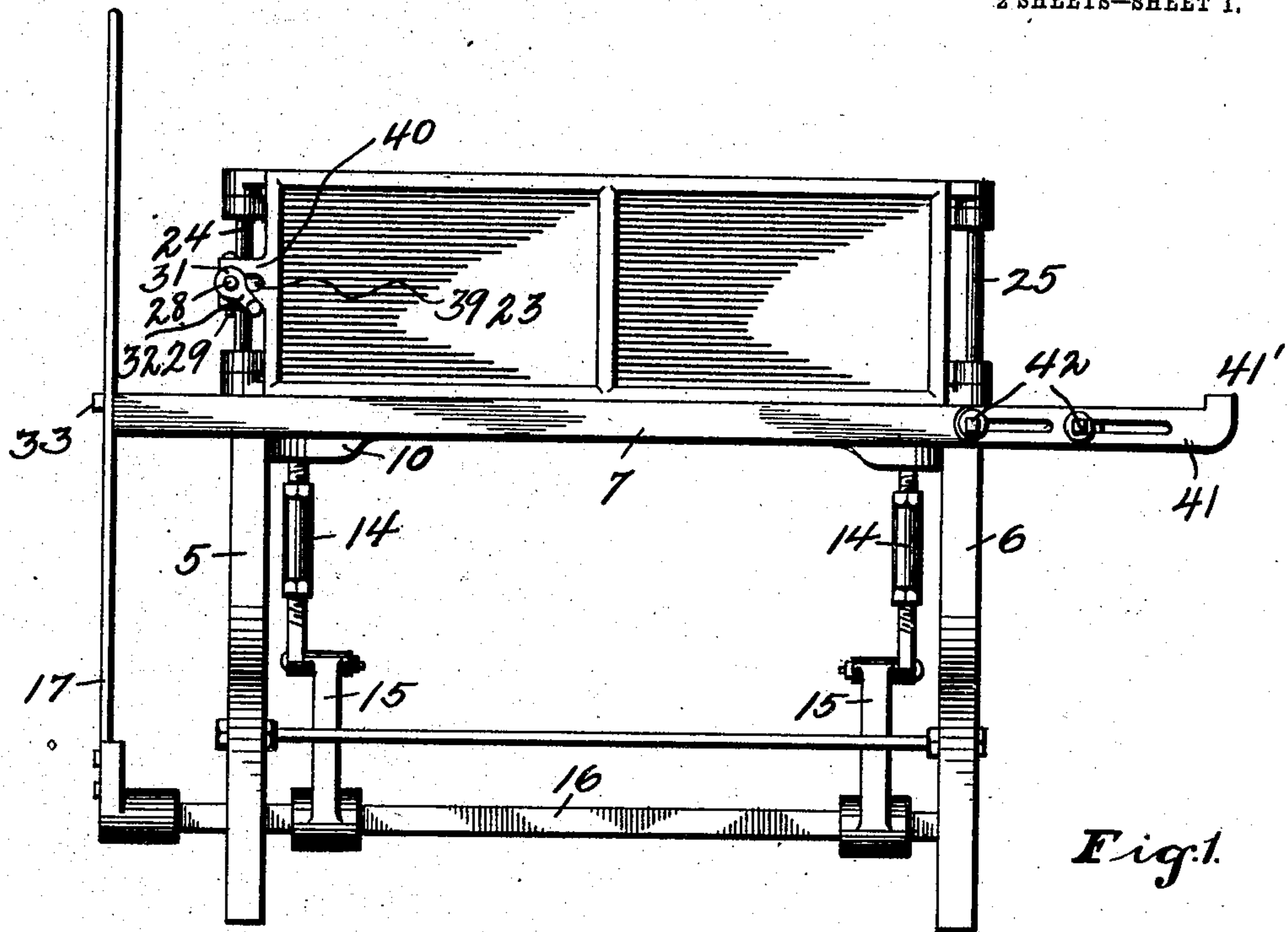


Fig. 1.

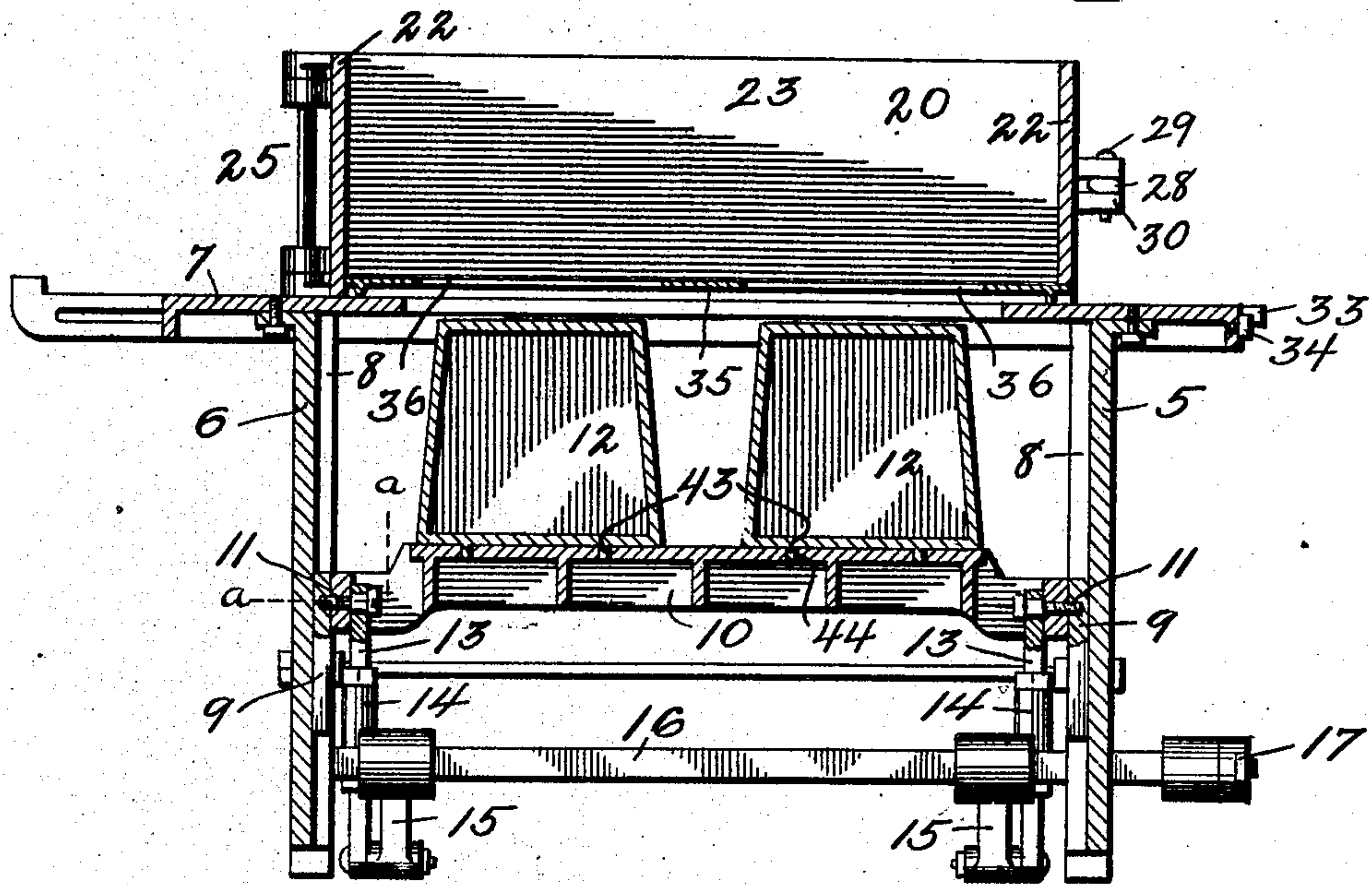


Fig. 2.

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Witnesses

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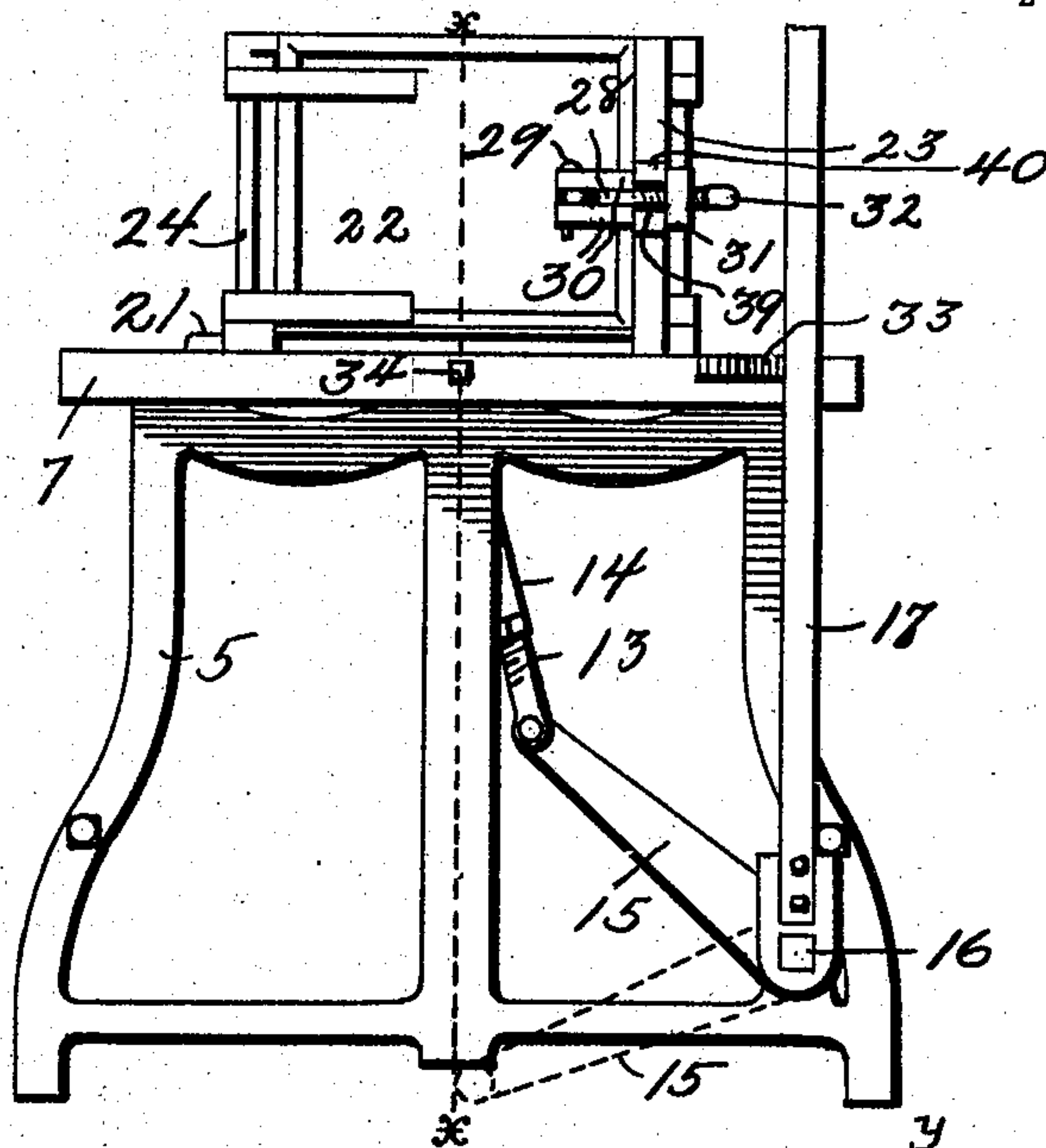


Fig. 3.

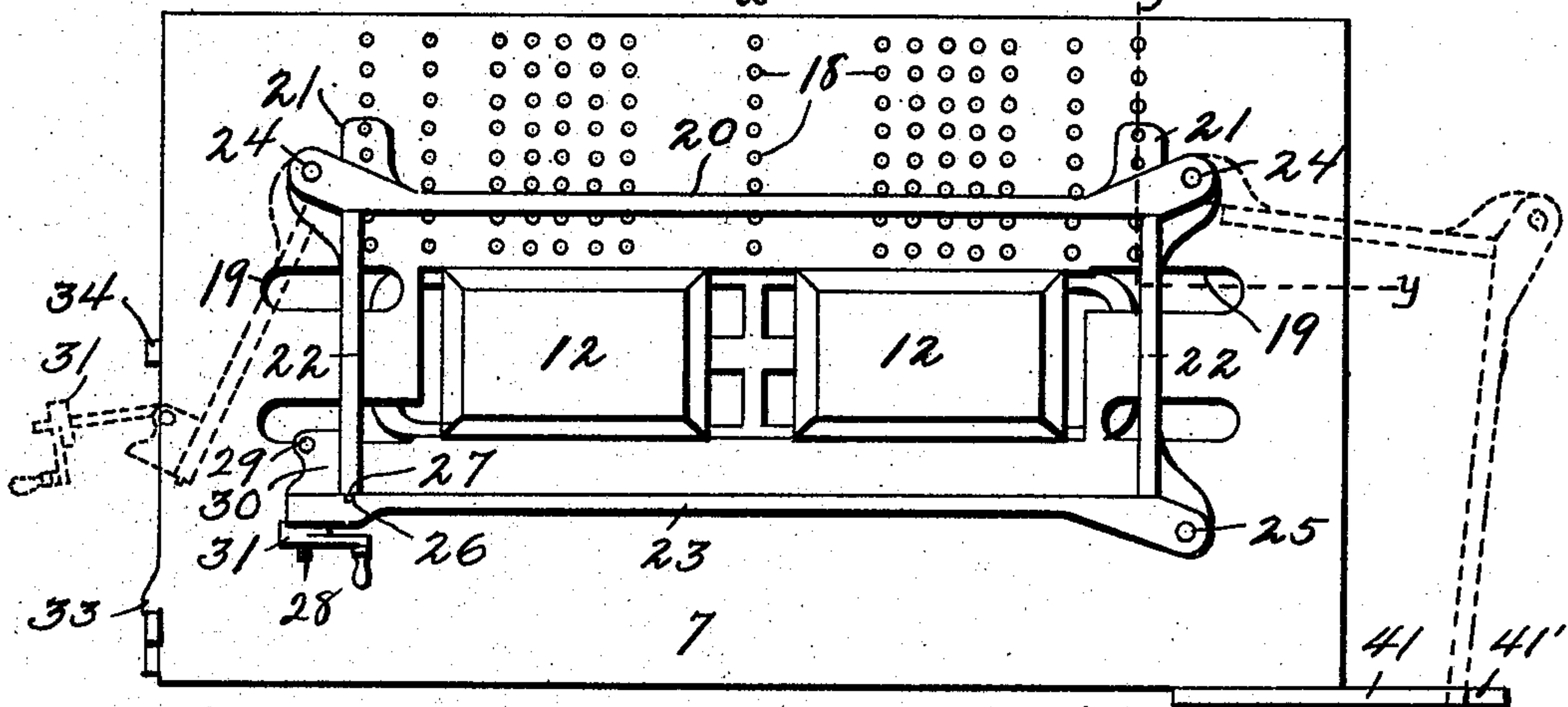


Fig. 4.

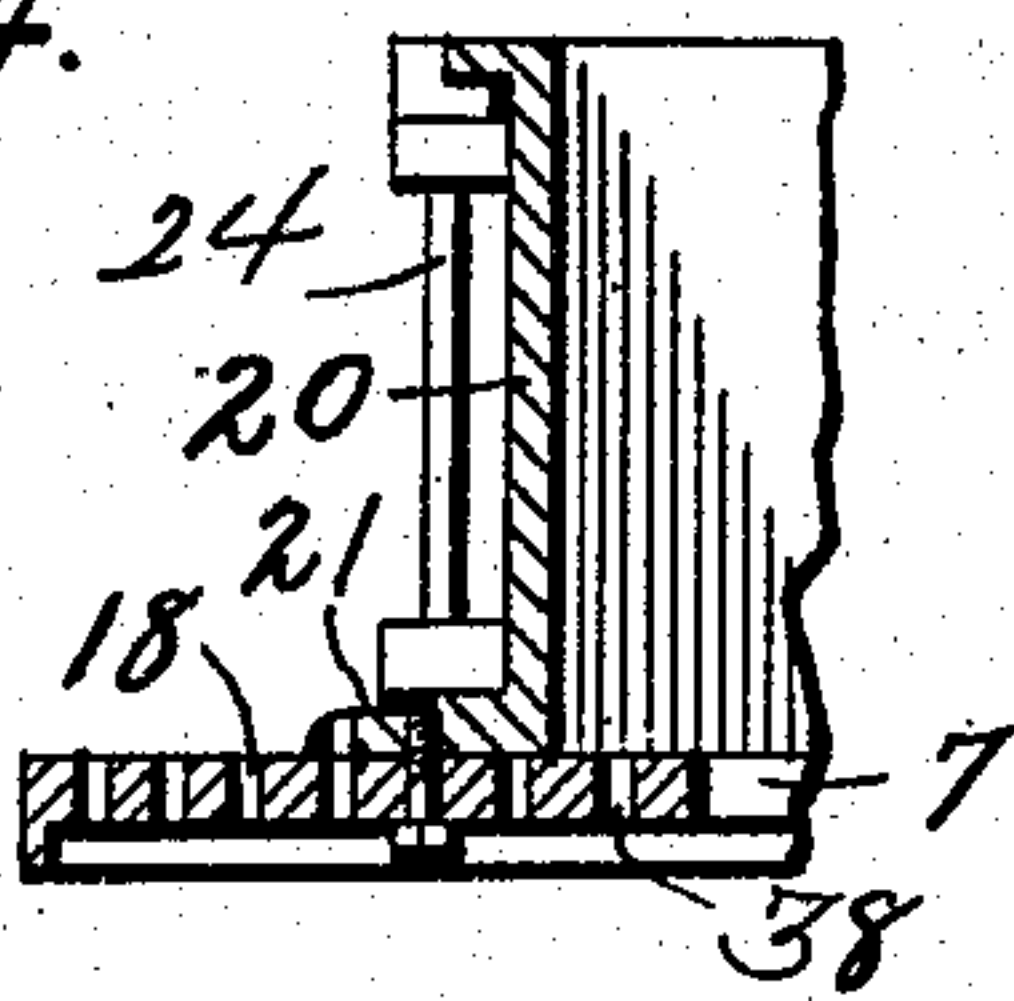


Fig. 5.

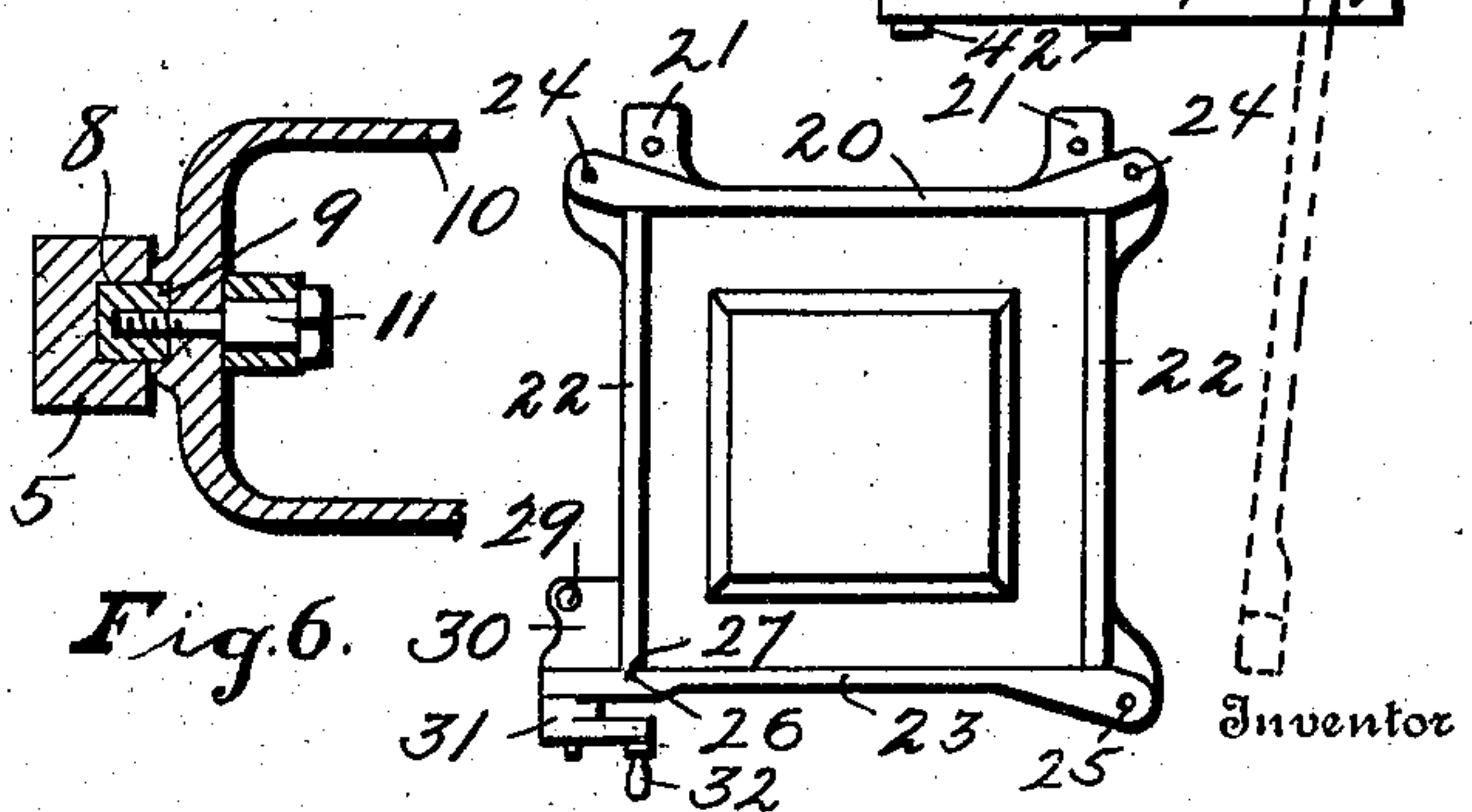


Fig. 6.

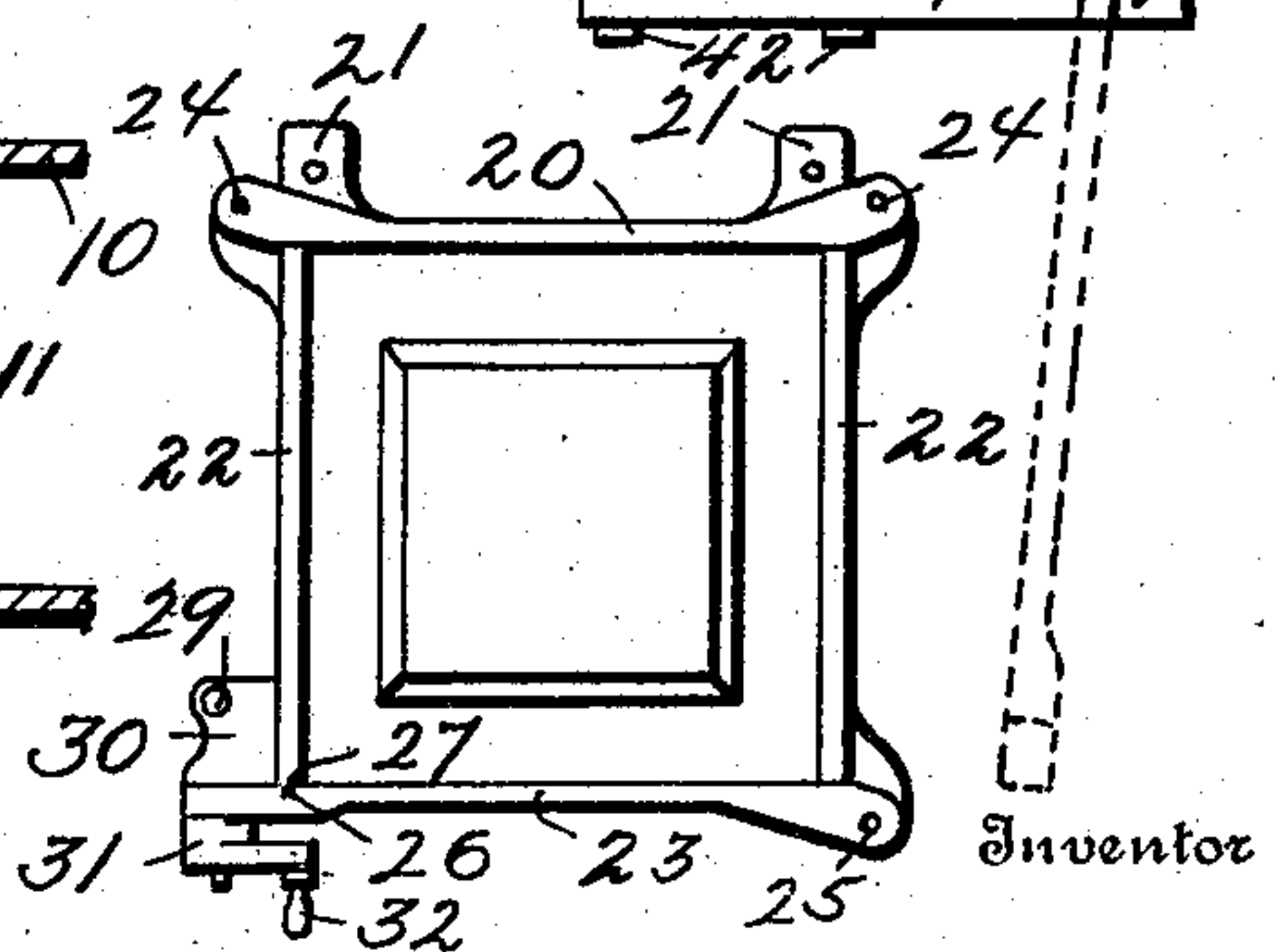


Fig. 7. William H. Phillips

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# UNITED STATES PATENT OFFICE.

WILLIAM H. PHILLIPS, OF COLUMBUS, OHIO.

## MACHINE FOR MOLDING CONCRETE BLOCKS.

No. 894,744.

Specification of Letters Patent.

Patented July 28, 1908.

Application filed July 29, 1907. Serial No. 386,049.

*To all whom it may concern:*

Be it known that I, WILLIAM H. PHILLIPS, 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 Machines for Molding Concrete Blocks, of which the following is a specification.

My invention relates to machines for molding concrete blocks and has for its object the provision of a device of this character constructed in such manner that blocks of varying sizes and shapes may be readily molded therein.

Further objects and advantages of the invention will be set forth in the detailed description which now follows.

In the accompanying drawings: Figure 1 is a side elevation of a concrete block machine constructed in accordance with the invention, Fig. 2 is a central vertical section upon line  $x-x$  of Fig. 3 looking toward the rock shaft, Fig. 3 is an end elevation of the machine, Fig. 4 is a plan view of the machine with the pallet of the mold box omitted, Fig. 5 is a detail sectional view of the rear side of the mold box, Fig. 6 is a horizontal section upon line  $a-a$  of Fig. 2, and, Fig. 7 is a detail view of a modified form of mold box.

Like numerals designate corresponding parts in all of the figures of the drawings.

Referring to the drawings, the numerals 5 and 6 designate standards which serve to support a top plate 7, said top plate and said standard forming the frame of the machine. Slidably disposed in ways 8 formed in the standards 5 and 6 are blocks 9 to which a cross head 10 is secured by bolts 11. This cross head supports and carries hollow metallic cores 12. The upper ends of links 13 are connected to the bolts 11 and said links are provided with turn-buckles 14 by means of which their length may be varied and consequently the throw of the cross-head 10 may be regulated. The lower ends of the links 13 are connected to the ends of levers 15. These levers 15 are mounted upon a rock shaft 16, to which movement may be imparted by a handle 17. The plate 7 has a plurality of perforations 18 and a plurality of slots 19 formed therein for a purpose which will be hereinafter set forth. The mold box comprises a rear wall 20 from which perforated lugs 21 extend, end walls 22 and a front wall 23. The end walls 22 are pivoted to the rear wall 20 at 24, while the front wall 23 is piv-

oted to one of the end walls 22 at 25. At its opposite end the front wall 23 is provided with a notch 26 which receives a tenon 27 of the other end wall 22. A bolt 28 is pivoted by a pin 29 between lugs 30 carried by one of the end walls 22. A nut 31 is threaded upon the outer end of this bolt and is provided with a handle 32 by which it may be rotated.

The form of the mold box illustrated in Fig. 7, is the same as that illustrated in the other figures of the drawing and the same reference numerals have been applied to like parts therein.

Stop lugs 33 and 34 are carried upon one end of the plate 7 and serve a purpose which will be hereinafter set forth. When the sides of the mold box are closed, a bottom for the mold box is formed by a pallet 35, said pallet having openings 36 formed therethrough for the passage of the cores 12.

The operation of the device is as follows: The mold box is secured in position upon the plate 7 by bolts 38 which pass through the openings 18 and are threaded into the lugs 21. It is by these means that the rear wall 20 of the mold box is secured in position, the end walls and the front wall being supported from this rear wall by means of the hinges 24 and 25. When the walls are swung back into the position illustrated in Fig. 4, the bolt 28 is swung into such position that it lies in a slot 39 formed in a lug 40 which is carried by the end of the front wall 23. The nut 31 is then rotated to draw all of the parts together, this rotation of the nut 31 squaring or truing up the mold box. The handle 17 is then pulled over until it engages behind the lug 33 (see Fig. 2). This rocks the shaft 16 and throws the levers 15 to the full line position illustrated in Fig. 3. This movement of the levers 15 through the links 13 elevates the cross-head 10 and consequently lifts the cores 12 until they project into the mold box, the tops of said cores when the lever lies in the position just described, lying substantially level with the top of the mold box. After the material of which the block is formed, has been tamped around the cores, the handle 17 is disengaged from behind the lug 33 and thrown toward the left in Fig. 3. This withdraws the cores from the mold box after which the nut 31 may be loosened and the front and end walls swung away from the molded blocks as illustrated in dotted lines in Fig. 4.

An adjustable supporting plate 41 is car-



ried by the plate 7, the end of this plate being provided with a lug 41' which acts as a stop for the front wall of the mold box when said front wall is swung to the dotted line position illustrated in Fig. 4. The plate 40 is rendered adjustable by being slotted for the reception of screws 42, which pass through said slots and are threaded into the plate 7.

By referring to Fig. 2, it will be seen that the cores 12 are provided upon their lower faces with tenons 43 which enter recesses 44 of the cross-head. These cores are therefore removably mounted upon the cross-head and may be readily removed and others substituted therefor when desired.

It is sometimes desirable to mold blocks of but half the usual height. When it is desired to do this, a mold box of the proper height is substituted by removing the bolts 38 and placing the new box in position. Cores of substantially half the height of the cores 12 are then substituted for said cores and the handle 17 is thrown over to the position illustrated in Fig. 3. This elevates the cores as hereinbefore described. When it is desired to lower these half cores, however, the handle 17 when shoved over to the left in Fig. 3, is only moved over until it engages the lug 34 instead of being permitted to move over past said lug as in the previous case.

When it is desired to mold porch column blocks, the mold shown in Fig. 7 is substituted for that shown in Fig. 4, the series of perforations 18 formed in the plate 7 readily allowing this to be done. These perforations are spaced given distances apart. For instance, the spaces between certain of the holes are one inch apart; between other rows of holes the distance is two inches. By thus arranging these perforations it is possible by selecting a mold box which will extend between given rows of holes, to determine the size of the block to be molded without meas-

uring. The slots 19 permit hooks to be inserted beneath the ends of the pallets for the purpose of lifting the pallet and the molded block from the plate 7.

From the foregoing description, it will be seen that the machine herein shown and described, is adapted to mold concrete blocks of any desired size or shape by merely substituting the proper sized and shaped mold box and pallets.

While the elements shown and described are well adapted to serve the purposes for which they are intended, it is to be understood that the invention is not limited to the precise construction set forth, but includes within its purview such changes as may be made within the scope of the appended claims.

What I claim, is:

In a machine of the character described, the combination with a supporting frame, of a rock shaft journaled in said frame, a vertically movable cross-head mounted in ways formed in said frame, arms rigidly secured to the rock shaft, turn-buckle connections between the outer ends of said arms and the cross-head, removable cores carried by the cross-head, a removable mold box supported upon the frame, one of the walls of said mold box being hinged to and supported by the first named walls, and a member longitudinally adjustable with relation to the frame and carried by said frame, said member having an upturned projection 41' adapted to limit the swinging movement of the front wall of said mold box.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM H. PHILLIPS.

Witnesses:

L. CARL STOUGHTON,  
A. L. PHELPS.