

No. 792,151.

PATENTED JUNE 13, 1905.

J. M. McDOWELL.  
MACHINE FOR MOLDING PLASTIC BLOCKS.

APPLICATION FILED MAY 19, 1904.

2 SHEETS—SHEET 1.

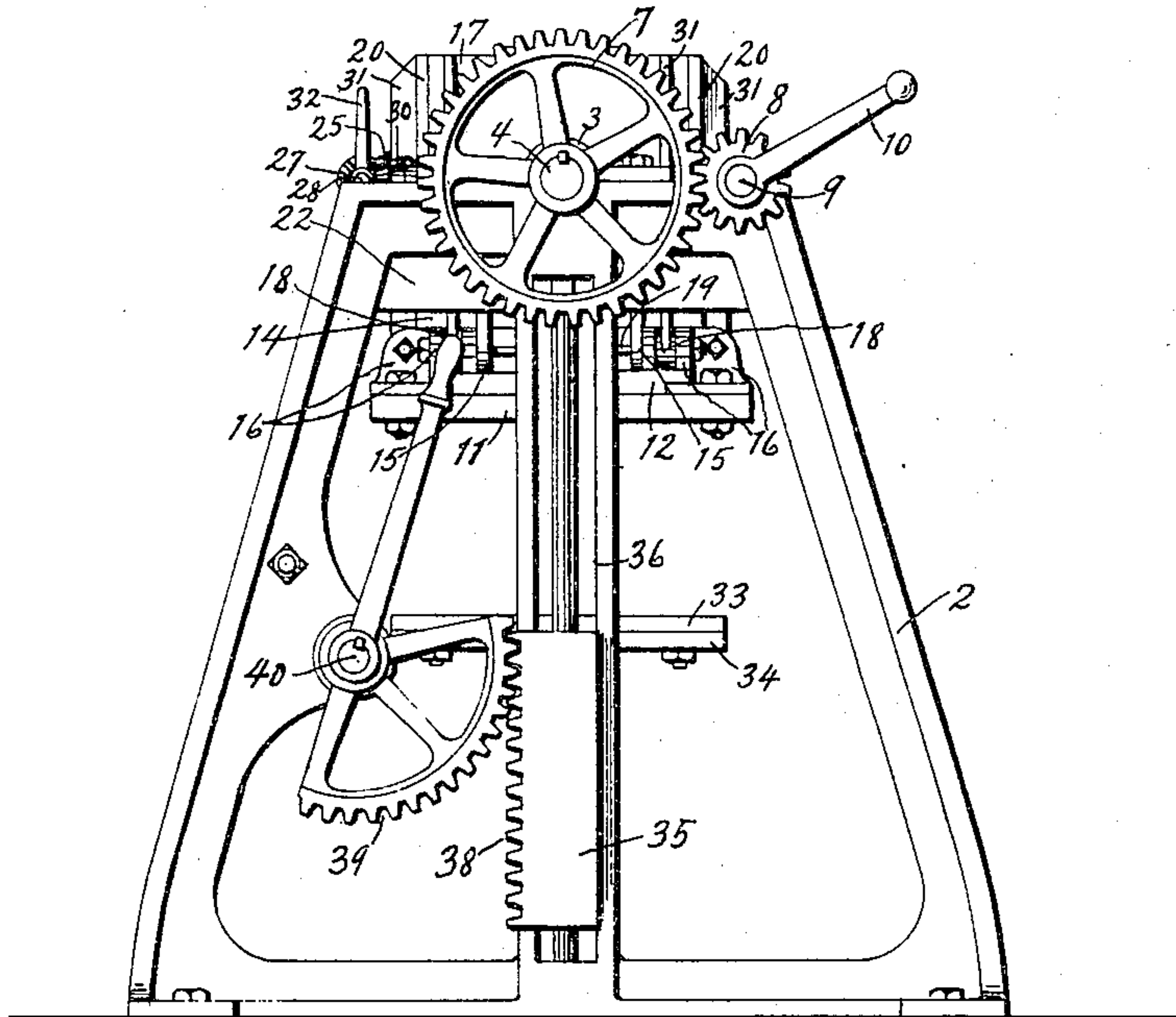


Fig. 1

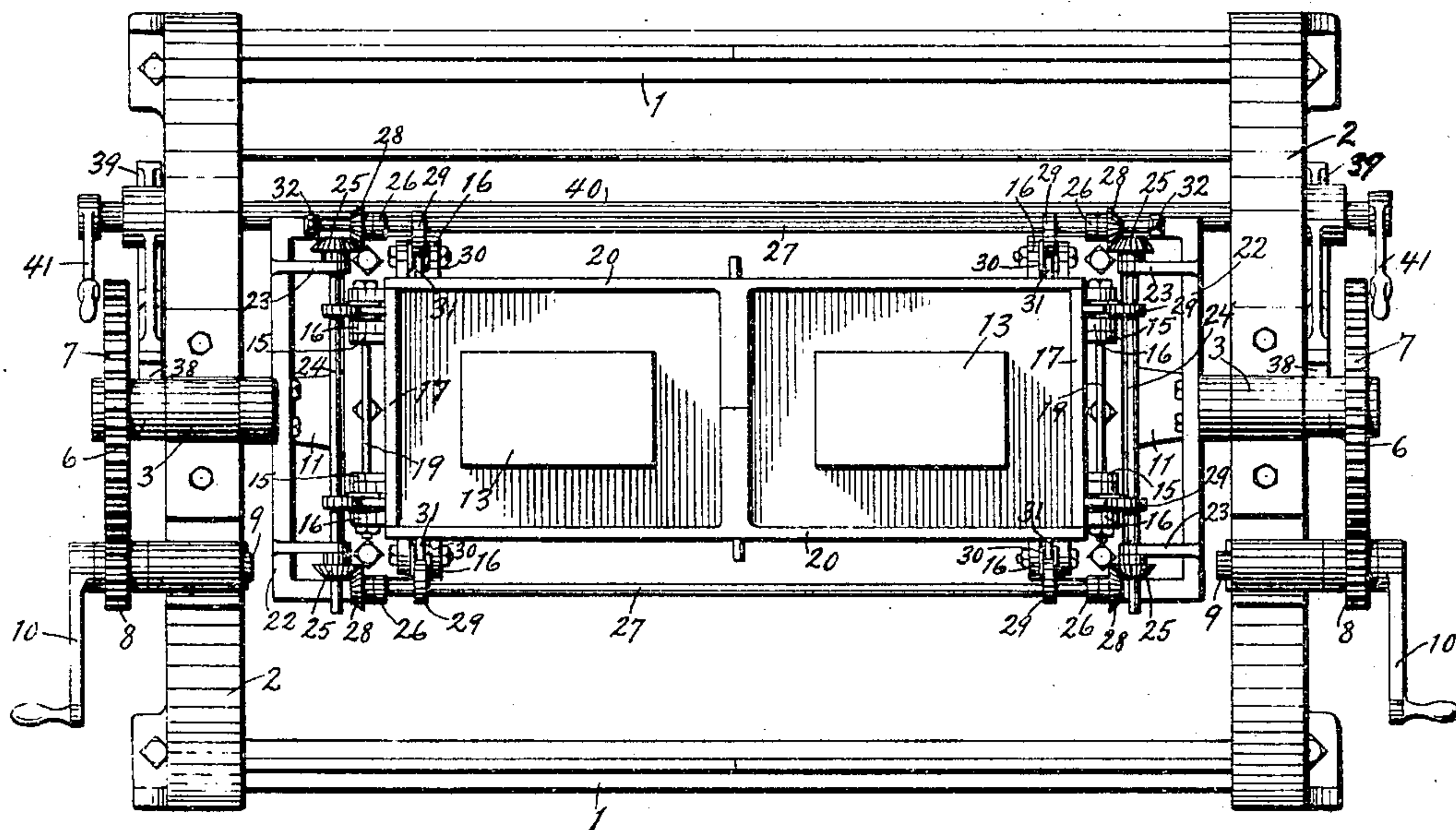


Fig. 2

WITNESSES:

H. D. Kanode.

M. B. E. H. H.

INVENTOR

Joseph M. McDowell

BY

Shepherd & Parker  
ATTORNEYS.

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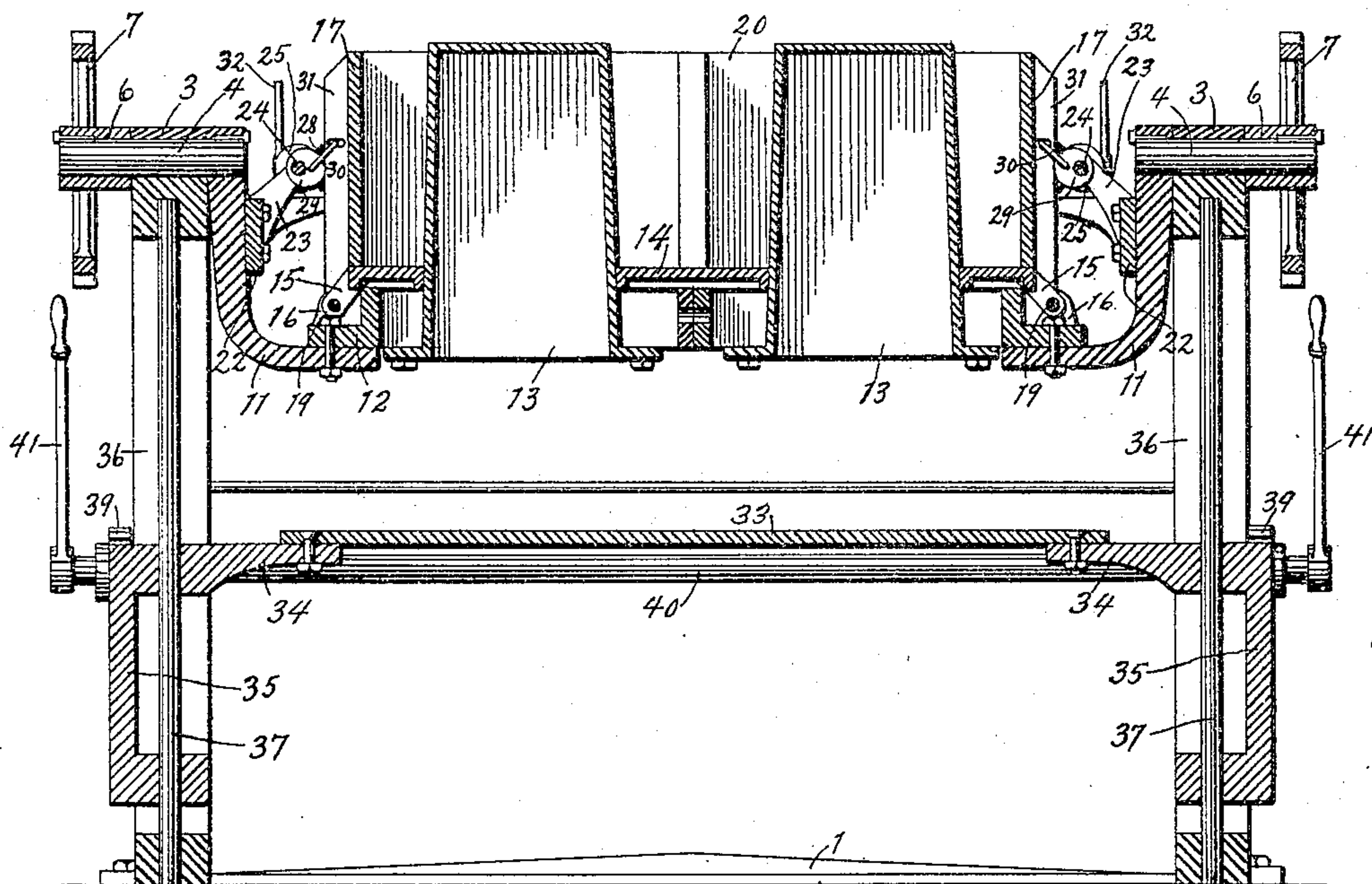


Fig. 3

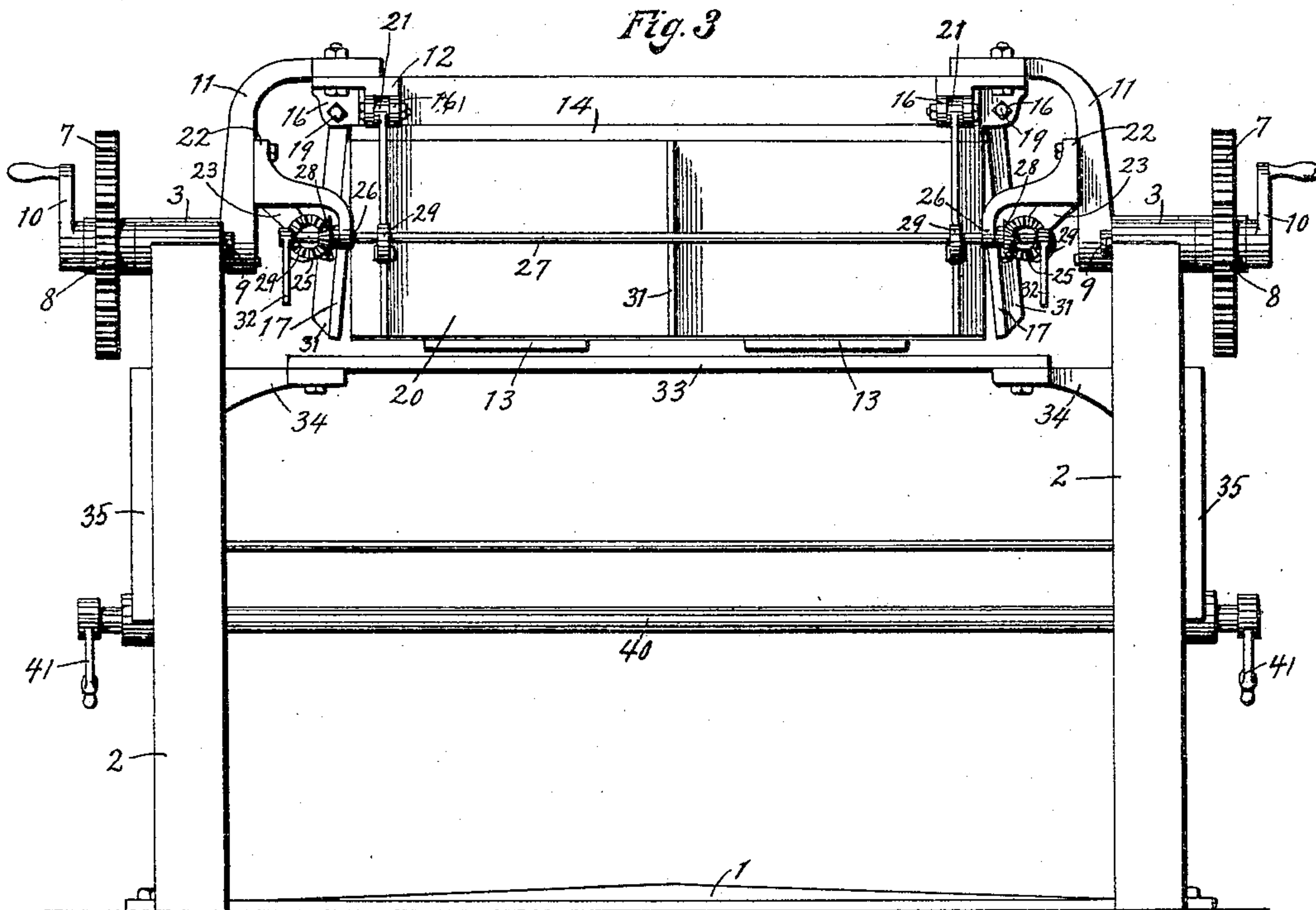


Fig. 4

WITNESSES

H. D. Kanode.

M. B. Schley

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# UNITED STATES PATENT OFFICE.

JOSEPH M. McDOWELL, OF COLUMBUS, OHIO.

## MACHINE FOR MOLDING PLASTIC BLOCKS.

SPECIFICATION forming part of Letters Patent No. 792,151, dated June 13, 1905.

Application filed May 19, 1904. Serial No. 208,710.

*To all whom it may concern:*

Be it known that I, JOSEPH M. McDOWELL, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented a certain new and useful Improvement in Machines for Molding Plastic Blocks, of which the following is a specification.

My invention relates to a new and useful improvement in machines for molding plastic blocks.

The object of the invention is to provide a superior means whereby the block may be readily discharged from the machine and through which means the liability of cracking and chipping the block through excessive handling is obviated.

Finally, the object of the invention is to provide a device of the character described that will be strong, durable, and efficient, and comparatively simple and inexpensive to manufacture and one in which the several parts will not be liable to get out of working order.

With the above and other objects in view the invention consists of the novel details of construction and operation, a preferable embodiment of which is described in the specification and illustrated in the drawings, wherein—

Figure 1 is an end elevation of the machine. Fig. 2 is a top plan view of the machine. Fig. 3 is a vertical section, and Fig. 4 is a front elevation showing the mold-box in its inverted position.

In the drawings the numeral 1 represents the frame, which comprises end standards 2. Supported in bearing-boxes 3 on the upper ends of the standards are trunnions 4, which have keyed on their outer ends the elongated hubs 6 of the gears 7, each of which meshes with a pinion 8, mounted on a stub-shaft 9, supported from the standard 2 and connected with an operating-crank 10, by the rotation of which the trunnion 4 is revolved through the pinion 8 and gear 9. The inner ends of the trunnions 4 project from the bearing-boxes 3 and have keyed thereon the brackets 11. The brackets have bolted on their lower horizontal portions the opposite ends of a

suitable bed-plate 12. The bed-plate 12 fixedly supports a pair of upright tapering hollow cores 13, about which is disposed a pallet 14, which rests upon the bed-plate and is provided with downwardly-projecting lugs 15, by which it is secured in place. Hinge-lugs 16 are formed on the bed-plate along its sides and ends. End doors 17, having hinge-lugs 18 registering with the hinge-lugs 16, are disposed at each end of the bed-plate. Rods 19 passing through the hinge-lugs also pass through the lugs 15 of the pallet, thus pivotally securing the doors and fixedly holding the pallet in place. Side doors 20 have hinge-lugs 21 pivotally connected with the hinge-lugs 16, whereby the said side doors may be swung outwardly.

Yokes 22 are bolted to the inner sides of the brackets 11 intermediately of the height thereof, from which project supports 23, in which are pivotally mounted shafts 24, substantially parallel to the end doors. The shafts 24 support on each end bevel-gears 25, one of which is slidably mounted, so that an adjustable bed-plate may be used with the machine. On the ends of the yoke 22 are bearing-boxes 26, which support longitudinal shafts 27, having fixed on their ends bevel-gears 28 in mesh with the bevel-gears 25. Each of the shafts 24 and 27 is provided with cams 29, having their projecting portions normally extending toward the side and end doors, to which it is connected by means of links 30. The cams 29 bear against ribs 31, formed on the doors, which facilitates in opening and closing the same. A handle 32 is fixed on one end of one of the shafts 27, which when swung outward rocks the various shafts, thereby swinging the cams 29 upward, and which, owing to their connection with the doors, cause the same to be drawn outward, and, vice versa, when the handle is returned the cams 29 bearing against the ribs 31 force the doors inward and hold them in their normal positions.

It will be observed that when either of the cranks 10 is turned, thus setting the pinion 8 and gear 7 in motion, the brackets 11, supporting the bed-plate and the doors, which may be termed the "mold-box," are swung



outward and upward, thereby inverting the mold-box, causing it to assume the position shown in Fig. 4, from which position the block may be discharged by manipulating the handle 32 to swing the doors 17 and 20 outwardly.

In order to receive the block and prevent jarring of the same in the discharge, a platform 33 is provided. The platform is supported upon the inwardly-projecting arms 34 of the sliding blocks 35. The blocks 35 slide in guideways 36, formed in the end standards 2 upon rods 37, and are formed with laterally-extending racks 38, projecting on the outside of the standards 2. Segmental racks 39, pivoted upon shafts 40, mesh with the racks and are provided with levers 41, by which they are swung to elevate the blocks 35, and thus raise the platform 33 to the position shown in Fig. 4, where it lies in close proximity to the tops of the cores 13 to receive the block as it is discharged.

Of course it is to be understood that after the mold-box is swung to the inverted position and before the doors are pulled outward the platform is raised, so as to prevent the block from falling from the box, and thereby being damaged. When the platform has been raised, the doors are pulled outward, as heretofore described, thus discharging the molded block on the platform, which is then lowered to the position shown in Fig. 4, from which point it may be readily removed to a suitable truck, which preferably would have a height equal to the lowered position of the platform, so that the block might be readily shoved from the platform onto the truck and removed from the machine. The mold-box being returned to its normal position and the doors closed, material is placed therein and the process of molding the blocks continued.

It is apparent that an expeditious means for discharging the block is provided and that the liability of damaging the block is greatly obviated. By such an arrangement much time may be saved over other methods in which it has been the practice to remove the block from the mold-box by means of grapples and the like.

I do not wish to limit myself to the exact details of construction and operation herein set forth, as I may make various changes in

the same without departing from the spirit of my invention.

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

1. In a machine for molding plastic blocks, the combination with supports, of an invertible frame pivotally mounted upon the supports, fixed cores associated with the frame, a mold-box arranged about the cores having side and end doors hinged adjacent to its bottom, means for inverting the frame and mold-box, and means for opening the doors outward when the mold-box and frame have been inverted.

2. In a machine of the type set forth, the combination with a frame, of an invertible mold-box provided with fixed cores and having hinged side and end doors, means for moving said doors outward, means for inverting said mold-box, and a vertically-movable platform associated with said mold-box and frame for delivering the molded blocks.

3. In a machine for molding plastic blocks, the combination with supports, of a frame pivotally mounted upon the supports, cores associated with the frame, a mold-box having hinged end and side doors arranged about the cores, and mechanism for opening the doors comprising shafts rotatably connected together and also connected to the doors.

4. In a machine of the type set forth, the combination with a frame, of an invertible mold-box having hinged side and end doors, means for moving said doors, means for inverting said mold-box, a vertically-movable platform mounted on said frame, and means for moving said platform.

5. In a machine of the type set forth, the combination with a frame having guideways, of brackets swingingly mounted upon the frame, a mold-box having fixed cores and hinged side and end doors supported upon the brackets, means for moving said doors also supported from the brackets, means for swinging the brackets, sliding blocks mounted in the guideways of the frame, a platform supported by the blocks, and means for moving the blocks.

JOSEPH M. McDOWELL.

In presence of—

M. B. SCHLEY,

W. L. MORROW.