

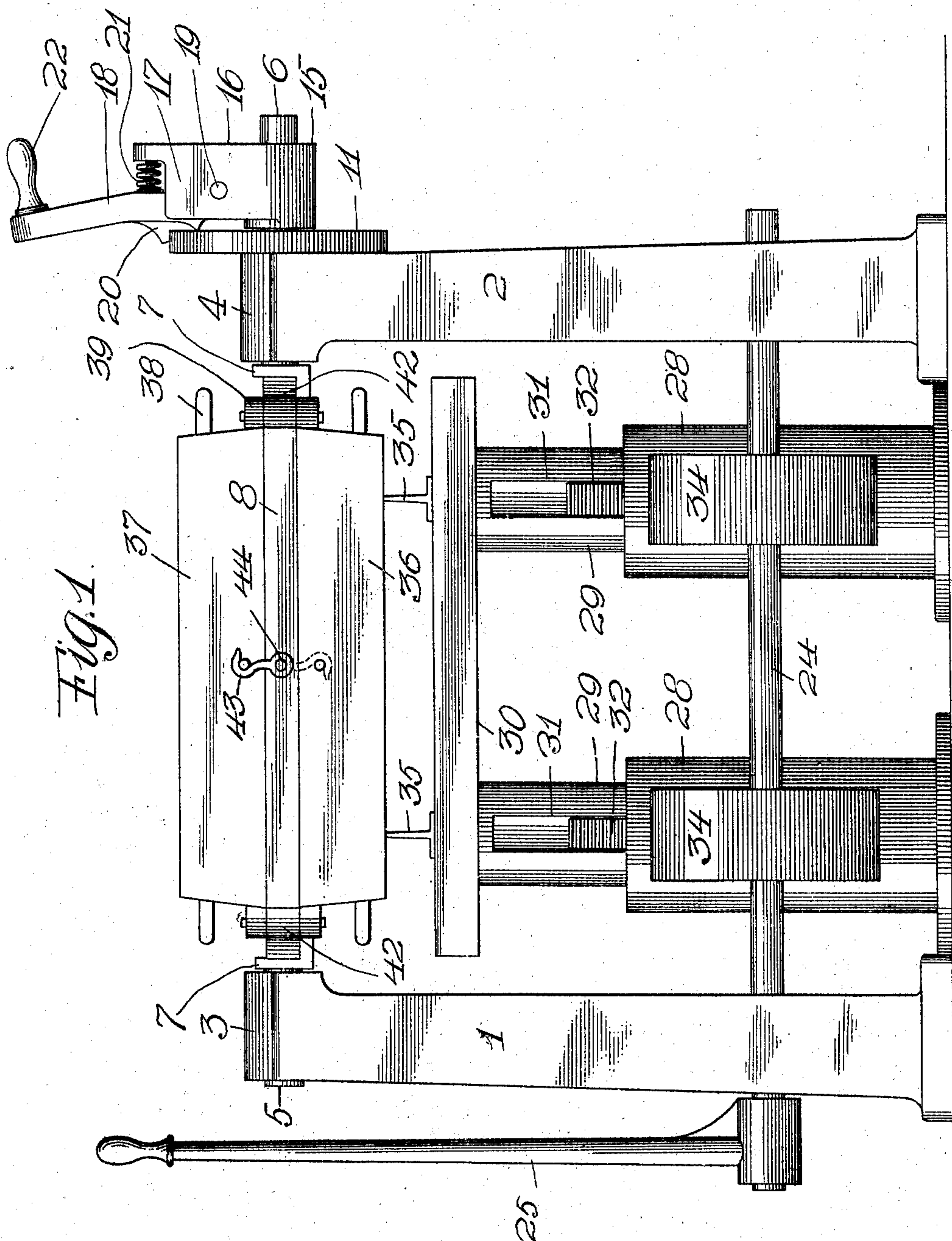
J. L. HUNTER.
MOLDING MACHINE.

APPLICATION FILED APR. 29, 1910.

966,920.

Patented Aug. 9, 1910.

3 SHEETS—SHEET 1.



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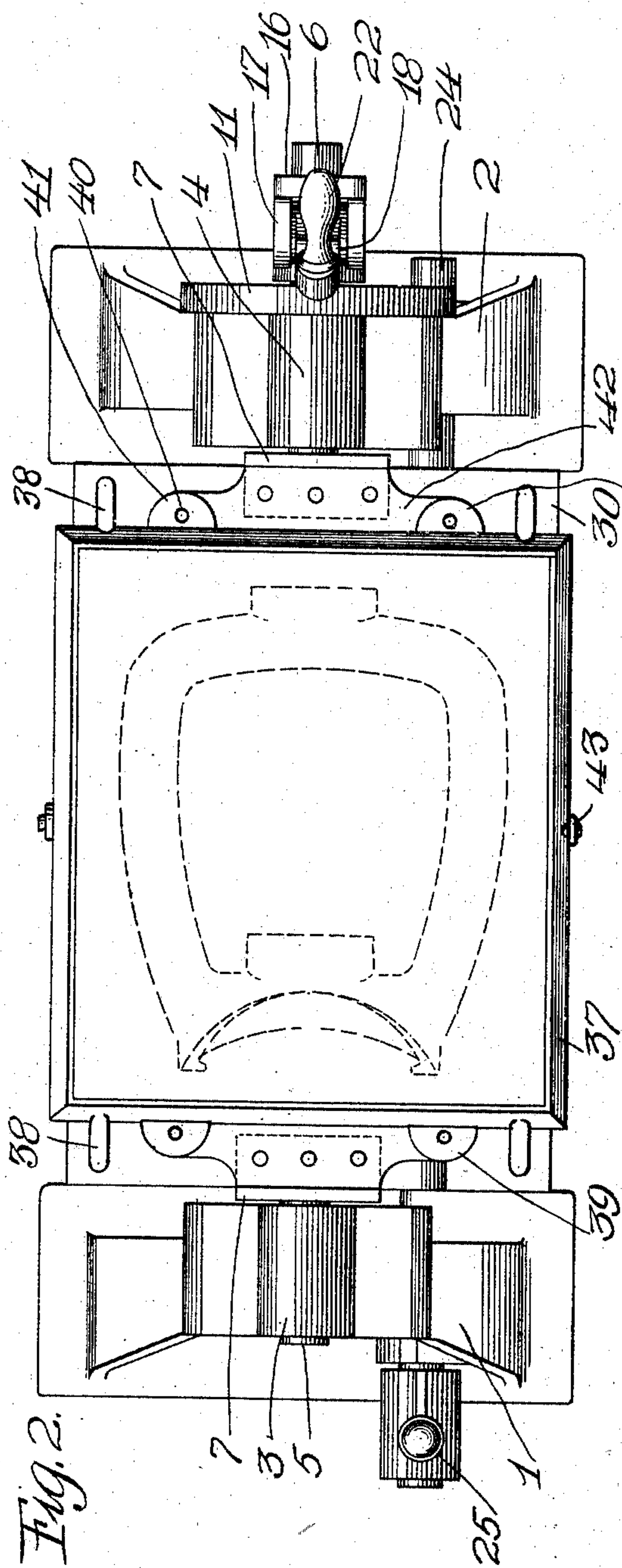


Fig. 2.

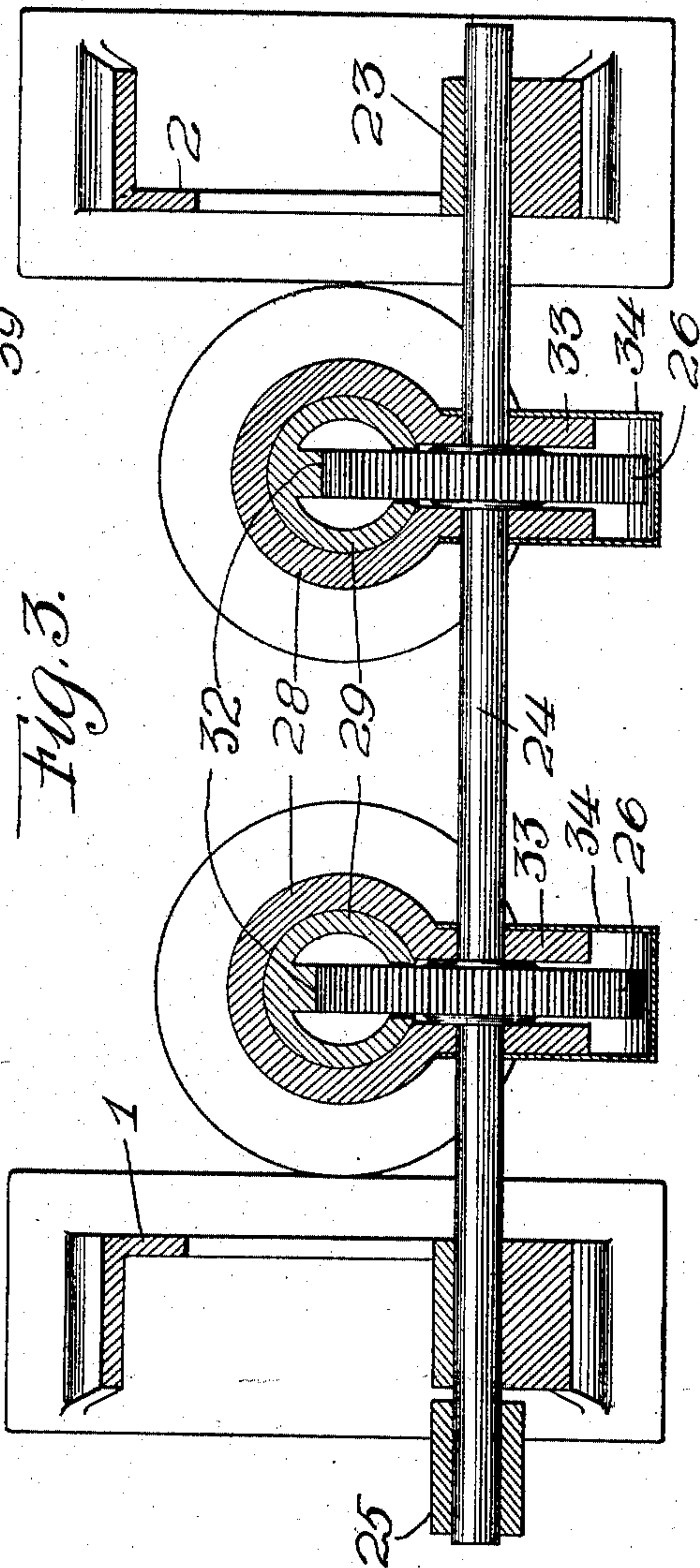


Fig. 3.

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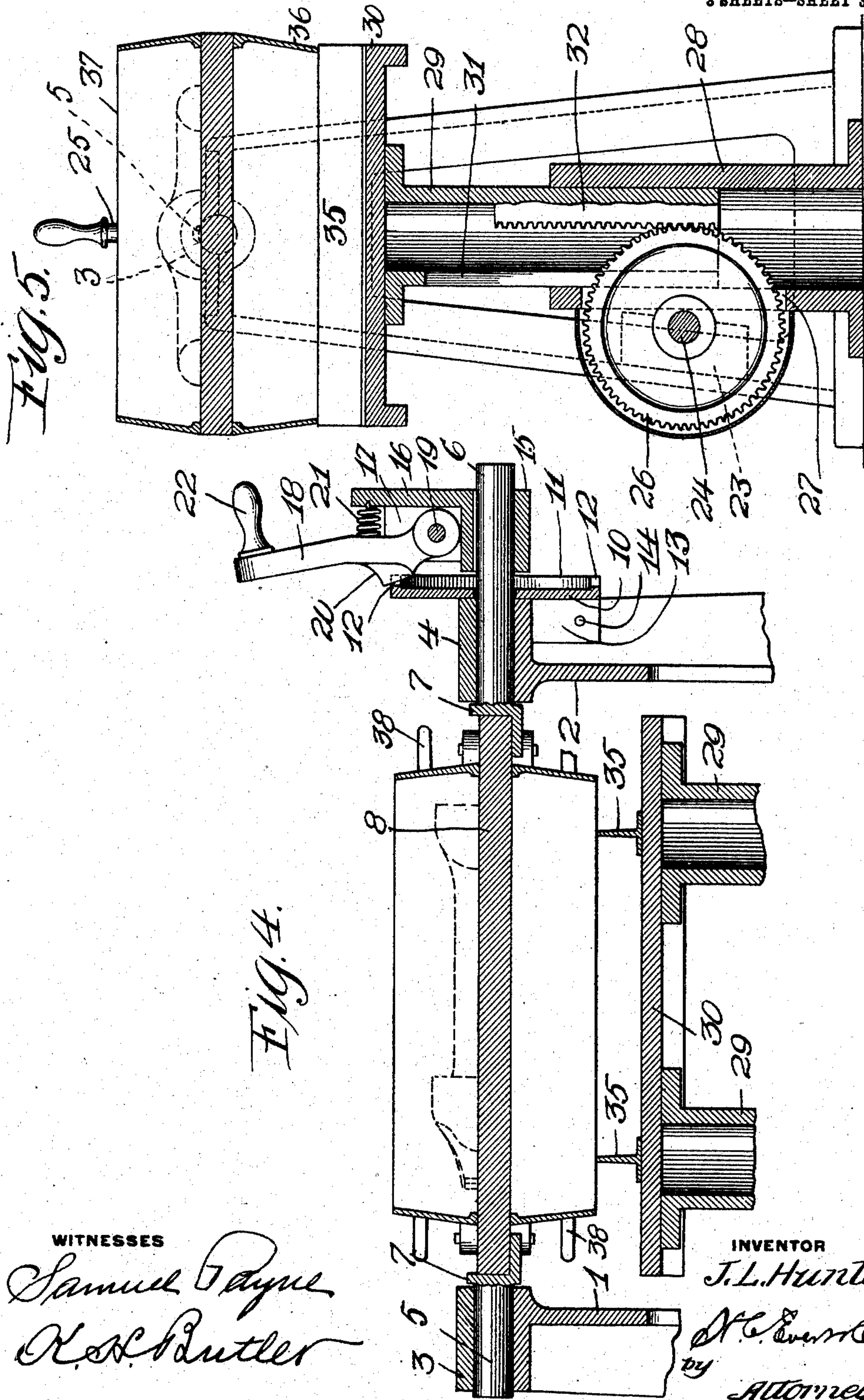
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UNITED STATES PATENT OFFICE.

JAMES L. HUNTER, OF PITTSBURG, PENNSYLVANIA.

MOLDING-MACHINE.

966,920.

Specification of Letters Patent.

Patented Aug. 9, 1910.

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To all whom it may concern:

Be it known that I, JAMES L. HUNTER, a citizen of the United States of America, residing at N. S. Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Molding-Machines, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to molding machines particularly designed for producing various kinds of ware, especially the ware used in lavatories, as basins, brackets, etc.

The object of my invention is to provide positive and reliable means for tiltably supporting a match plate to which is detachably connected a drag or cheek, and in connection with the machine a table is used and means provided for raising and lowering the table, whereby either the drag or the cheek can be lowered below the match plate to provide clearance for the same when being swung on its axis.

My invention in its broadest aspect aims to facilitate the various operations in handling the parts of a mold in producing various kinds of ware, and with this understanding of my invention, reference will now be had to the drawings forming part of this specification, wherein there is illustrated a preferred embodiment of the invention, but it is to be understood that the structural elements thereof can be varied or changed, as to the size, shape and manner of assemblage without departing from the spirit and scope of the invention.

In the drawings:—Figure 1 is a front elevation of a machine in accordance with my invention, Fig. 2 is a plan of the same, Fig. 3 is a horizontal sectional view of the machine, Fig. 4 is a longitudinal sectional view of the upper portion of the machine, and Fig. 5 is a vertical cross sectional view of the same.

In the drawings the reference numerals 1 and 2 denote inverted V-shaped frames having the upper ends thereof provided with bearings 3 and 4 for the trunnions 5 and 6 of confronting angle brackets 7 adapted to support the ends of a match plate 8, said plate being suitably connected to the angle brackets 7.

The outer side of the bearing 4 of the frame 2 is provided with a circular head 10 having an annular flange 11 provided with two diametrically opposed notches 12,

said head being secured to the frame by an extension 13 and suitable fastening means 14.

Keyed or otherwise fixed upon the trunnion 6 adjacent to the head 10 is a sleeve 15 having a radially disposed extension 16 provided with oppositely disposed side plates 17, these plates forming a pocket for the lower end of a locking lever 18. The locking lever 18 has the lower end thereof pivotally mounted upon a pin 19 carried by the side plate 17, and the outer edge of said lever is provided with a tooth 20 adapted to engage in one of the notches 12, said tooth being normally held in engagement with the head 10 by a compression spring 21 arranged between the extension 16 and the lever 18. The upper end of the lever 18 is provided with a handle or crank 22, whereby the lever can be moved out of engagement with the head 10 and the trunnion 6 rotated. Since the trunnion 5 is connected to the trunnion 6 through the medium of the match plate 8, said match plate can be inverted from time to time as occasion requires during the production or molding of an article.

The frames 1 and 2 at the forward sides thereof are provided with bearing blocks 23 and trunnioned in these bearing blocks is a rock shaft 24, said shaft adjacent to the frame 1 being provided with an upwardly extending lever 25 for rocking said shaft. Mounted upon the rock shaft 24 between the frames 1 and 2 are large pinions 26, and these pinions are adapted to extend through vertical slots 27 provided therefor in tubular guides 28 located centrally of the machine beneath the match plate 8. Adjustably mounted in the tubular guides 28 are tubular supports 29 for a table 30, said supports having slots 31 formed therein providing clearance for the pinions 26, whereby said pinions can mesh with racks 32 carried by the inner rear sides of the supports 29. The rock shaft 24 extends through side extensions 33 of the guides 28 and it is between these extensions that the pinions 26 are located. Secured to the outer sides of said extensions are semi-cylindrical hoods or guards 34 adapted to prevent the operator of the machine from contacting with the pinions 26, besides preventing sand or other matter from interfering with the operation of the pinions.

The table 30 is provided with two transverse parallel inverted T-bars 35 adapted to support a drag 36 or a cheek 37, both of

which are rectangular in plan and have the side walls thereof inclined, whereby with either in proper position tamped or packed sand will be retained in the drag or cheek.

5 The drag and cheek have the ends thereof provided with handles 38 whereby they can be conveniently moved, and the ends are also provided with apertured lugs 39 whereby they can receive centering pins 40 carried by the end extensions 42 of the match plate 8.

10 The sides of the drag and cheek are provided with pins 43 adapted to be engaged by pivoted hooks 44 carried by the longitudinal edges of the match plate 8.

15 The pattern or the article to be produced by the machine has the parts thereof secured to the match plate 8, and assuming that the drag has been filled with sand and thoroughly tamped, the match plate 8 is inverted, this being accomplished when the table is in a lowered position. Immediately upon the match plate being inverted, the table is raised to engage the drag, the drag released from the match plate and the table

20 30 lowered. It is at this point of the operation that I desire to call attention to the fact that the drag or cheek can always be positively and accurately removed from the pattern connected to the match plate 8, as the cheek or drag can be easily, quickly and more accurately removed than by the hand.

30 In the hand operation, the sand has a tendency to adhere to the pattern, thus necessitating the "patching" of the sand formation before the same can be used. In withdrawing the sand from the pattern, the same is accurately moved away from the pattern, thus preventing the sand from adhering to the pattern, thereby eliminating the labor

40 and time heretofore necessary for patching the molding sand. After the drag has been lowered, the match plate is reversed and the cheek is similarly packed with sand, and after being prepared is removed from the match plate, the drag removed from the table 30, suitable gates provided in the drag and cheek and then the mold is ready to receive the molten metal or other material to be cast in the cavities in the sand provided

50 by the pattern.

A machine in accordance with my inven-

tion can be operated in various manners to produce various kinds of work, and it is preferable to make the same in its entirety of strong and durable metal.

In the drawings I have illustrated by dotted lines an article, as a lamp frame that can be produced by my machine.

Having now described by invention what I claim as new, is:—

A machine for the purpose set forth comprising a pair of frames, a tiltable match plate, a pair of trunnions connected to said match plate and journaled in said frames, one of said trunnions projecting from its respective frame, a drag adapted to be connected to one side of said plate, a cheek adapted to be connected to the opposite side of said plate, a table arranged below the match plate and provided with a pair of transversely-extending inverted T-bars spaced from each other, a pair of tubular guides arranged below the table and each provided with a pair of lateral extensions, a rock shaft journaled in said frames and projecting through said extensions, a pair of vertically adjustable supports for said table, said supports mounted in said guides, a rack carried by and within each of said supports, a pair of pinions fixed to said rock shaft between said extensions and engaging said racks for vertically moving the supports when the rock shaft is actuated, a lever connected to one end of the rock shaft for actuating it, a slotted member connected to one of the frames and through which projects the elongated trunnion, a sleeve mounted upon the elongated trunnion and arranged in proximity to said slotted member, a radially-disposed extension carried by the sleeve and provided with oppositely-disposed side plates, and a spring-pressed locking lever pivotally-connected to said side plates and provided with a tooth adapted to engage in said slotted member to arrest movement of said trunnions.

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

JAMES L. HUNTER.

Witnesses:

A. H. RABERG,
K. H. BUTLER.