

No. 812,291.

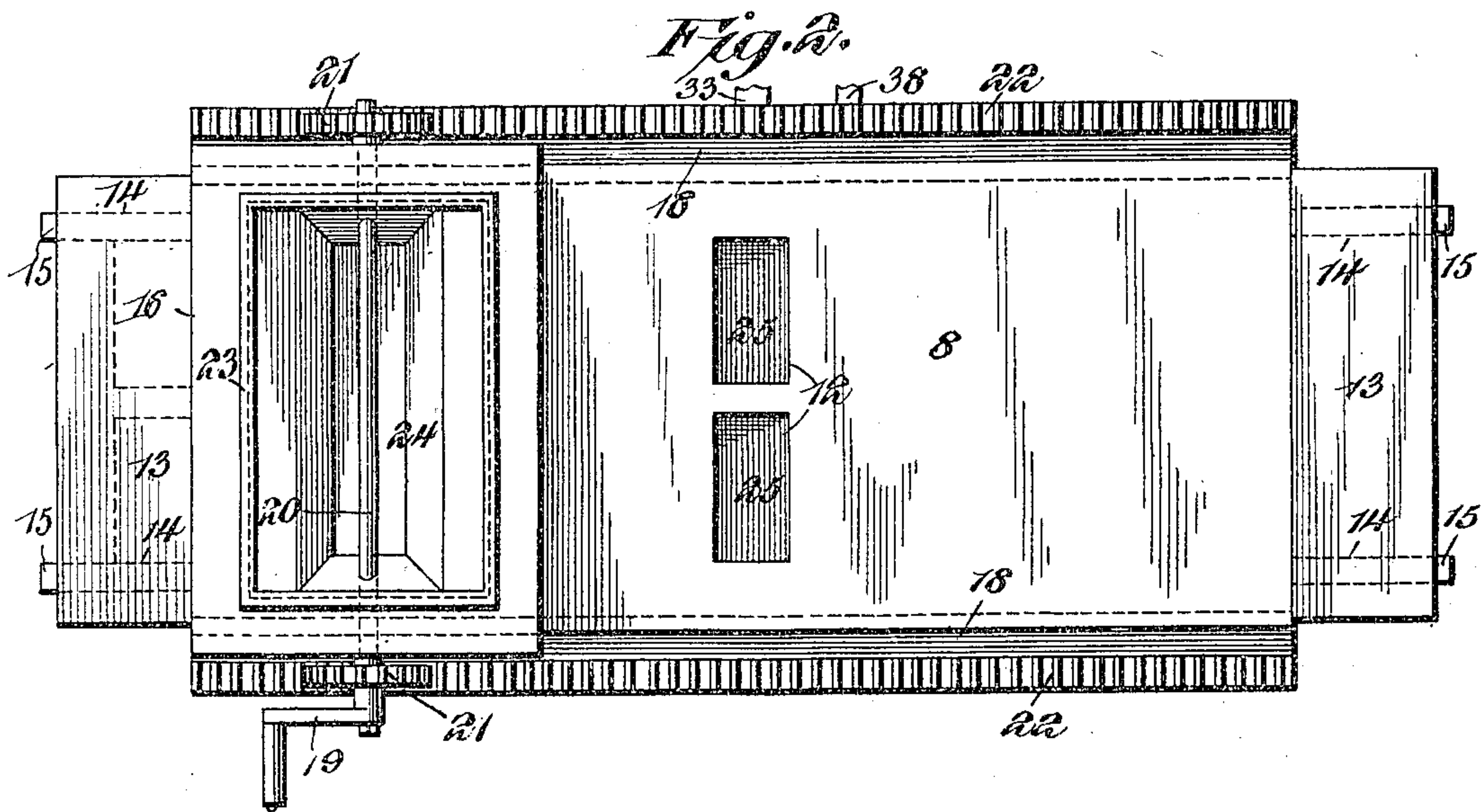
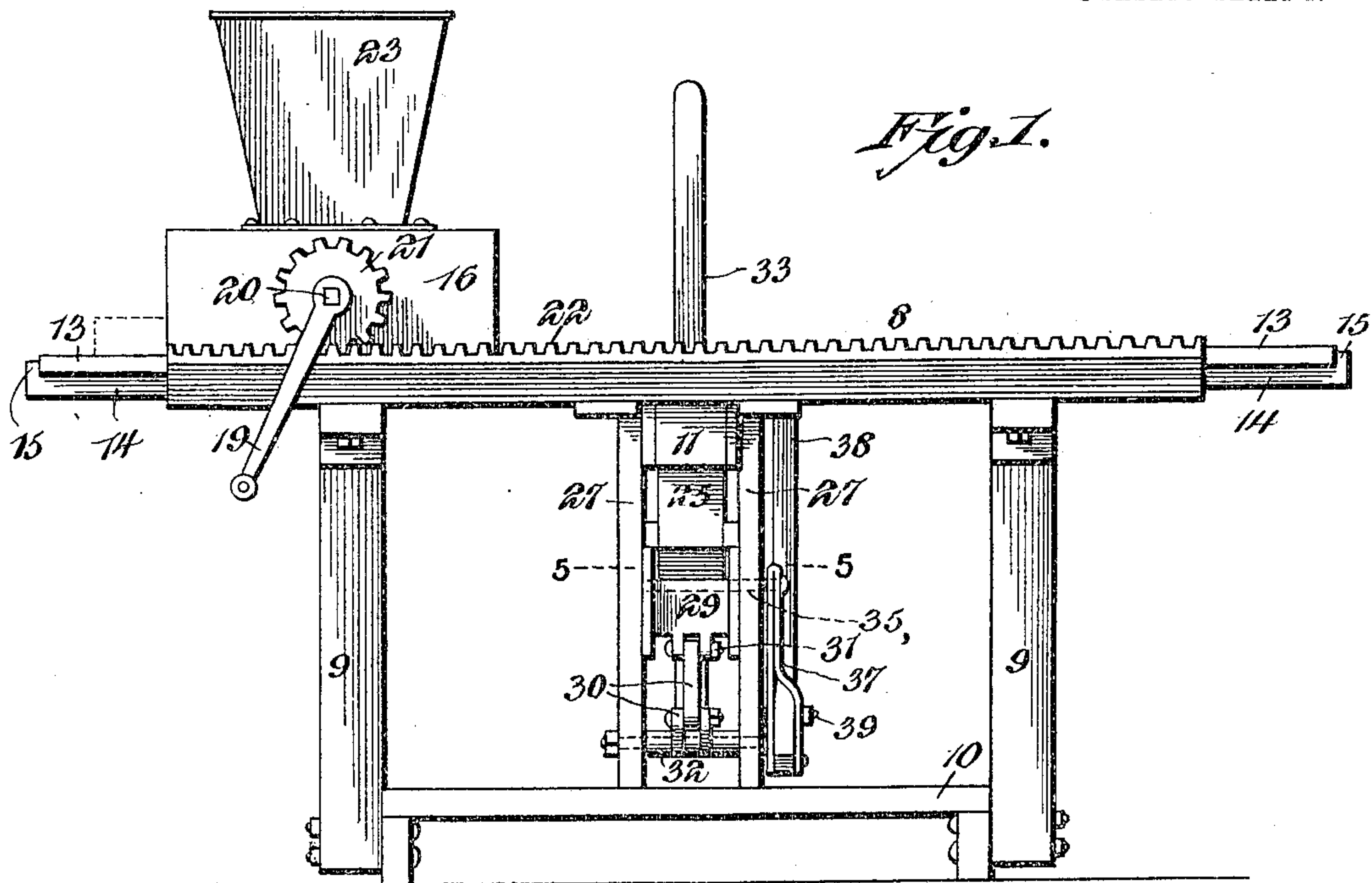
PATENTED FEB. 13, 1906.

L. M. PRATT & E. H. VAN NATTA.

MOLDING MACHINE.

APPLICATION FILED MAY 4, 1905.

2 SHEETS—SHEET 1.



Witnesses
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 Attorney

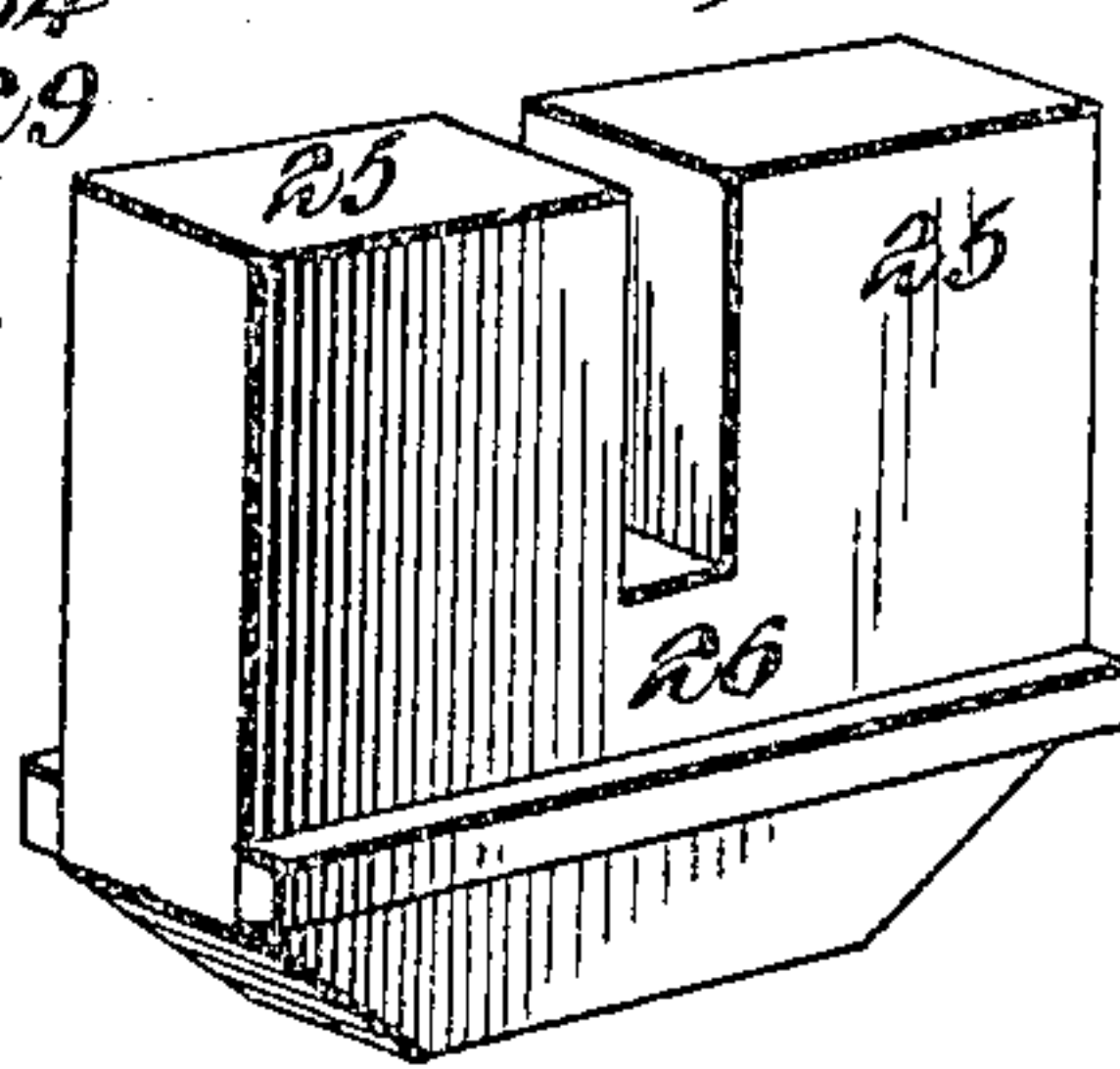
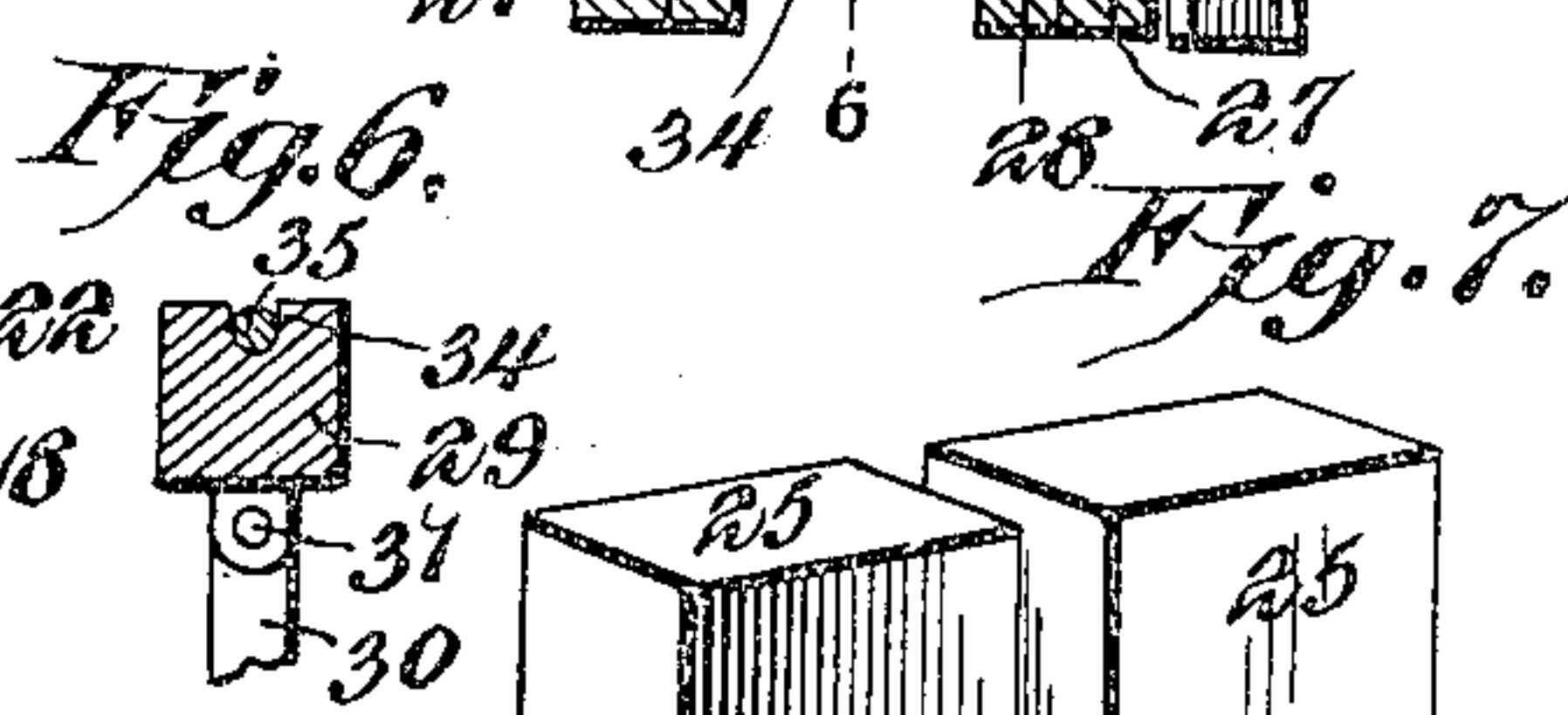
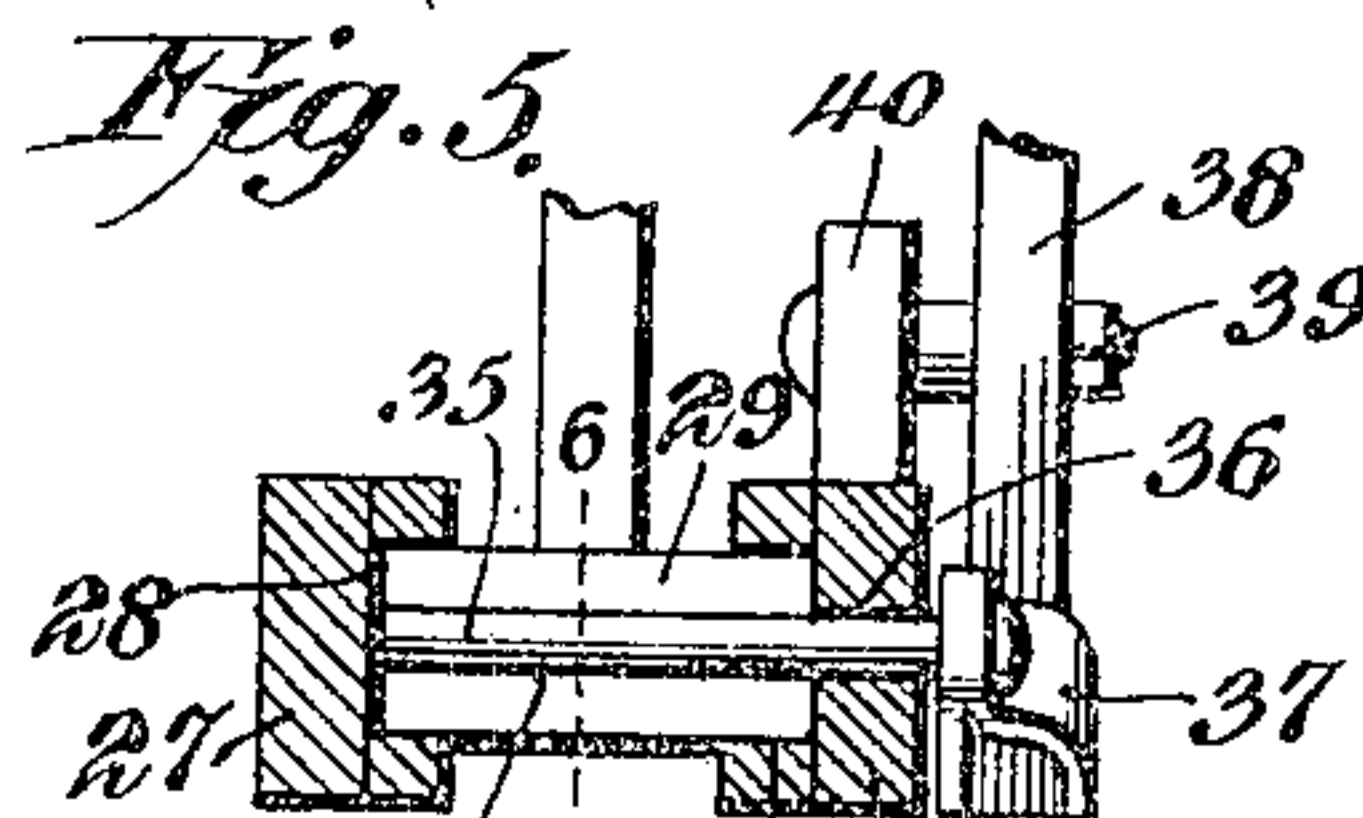
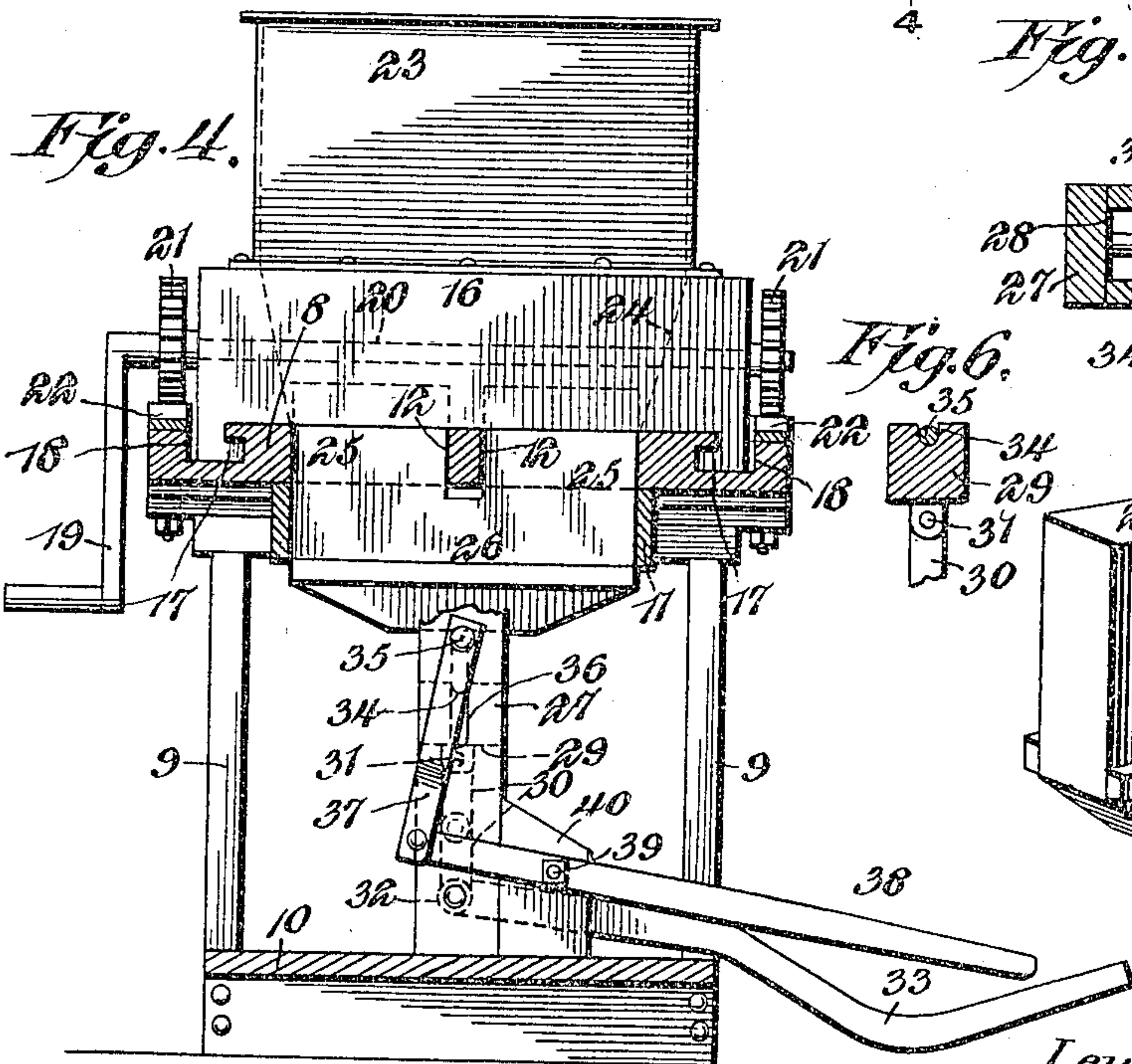
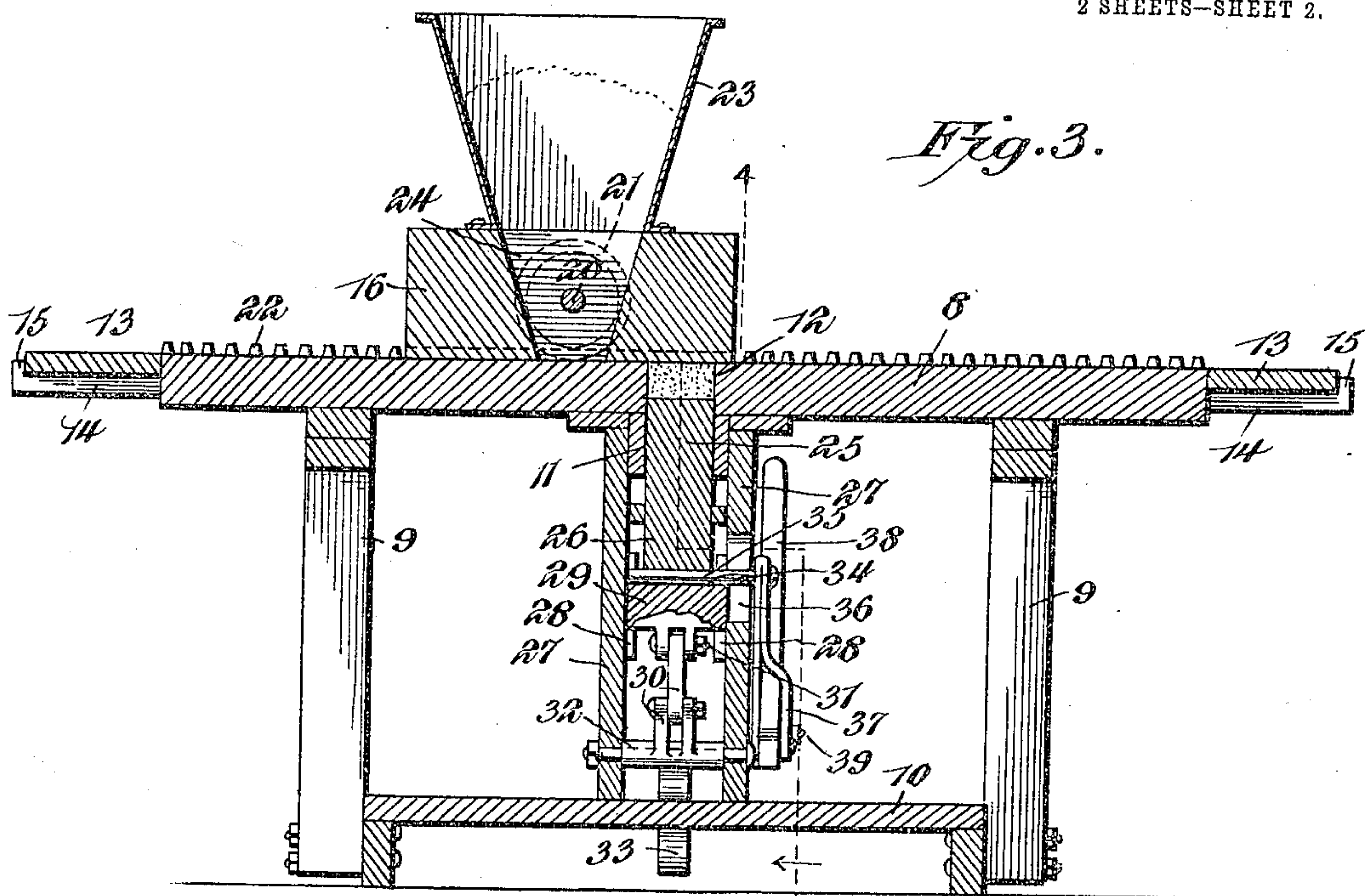
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UNITED STATES PATENT OFFICE,

LEWIS M. PRATT AND ERASTUS H. VAN NATTA, OF BELLEVILLE,
KANSAS; SAID PRATT ASSIGNOR TO SAID VAN NATTA.

MOLDING-MACHINE.

No. 812,291.

Specification of Letters Patent.

Patented Feb. 13, 1906.

Application filed May 4, 1905. Serial No. 258,861.

To all whom it may concern:

Be it known that we, LEWIS M. PRATT and ERASTUS H. VAN NATTA, citizens of the United States, residing at Belleville, in the county of Republic and State of Kansas, have invented a new and useful Molding-Machine, of which the following is a specification.

The present invention relates to means for molding bricks, tiles, concrete blocks, and analogous articles.

One of the objects is to provide a simple machine of a novel nature whereby such articles can be efficiently and expeditiously manufactured.

A further object is to provide novel means for effecting the pressing of the bricks or blocks, the expulsion of the same from the molds, and the delivery of the molded articles to pallets or supports conveniently located and readily detachable from the machine.

The preferred embodiment of the invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a side elevation of the same. Fig. 2 is a top plan view. Fig. 3 is a longitudinal sectional view. Fig. 4 is a cross-sectional view on the line 4 4 of Fig. 3. Fig. 5 is a detail cross-sectional view on the line 5 5 of Fig. 1. Fig. 6 is a detail sectional view on the line 6 6 of Fig. 5. Fig. 7 is a perspective view of the plunger.

Similar reference-numerals designate corresponding parts in all the figures of the drawings.

In the embodiment illustrated a table is employed comprising a top 8, supported by legs 9, the lower ends of which are fastened to a base 10. Located in the table and suspended from the top thereof are molds 11, that may be of any desired configuration and have openings 12 in their tops, which extend through the top of the table, as shown in Fig. 2. At the ends of the table are supports for pallets 13, said supports being in the form of spaced bracket-hooks 14, extending longitudinally beyond said table ends and having upturned stop-lugs 15 at their free ends, the spaces between the stop-lugs and the adjacent ends of the table being sufficient to snugly receive the pallets.

A carriage comprising a body 16 is mounted to slide longitudinally upon the table-top, being provided with depending inturned flange portions 17, that are slidably interlocked in

guideways 18, formed in the opposite margins of the table-top. The carriage is operated from a handle-crank 19, secured to a shaft 20, journaled in the body 16 and having gear-wheels 21, meshing with racks 22, located on the opposite side margins of the table-top. A hopper 23 for containing the material to be molded forms a part of the carriage and has a delivery-mouth 24 extending through the central portion of the body 16, the lower end of said mouth being of substantially the width of the openings 12 of the molds.

The bottoms of the molds 11 are formed by the upper ends of plungers 25, slidably mounted therein and projecting from the bottoms of said molds, the plungers being connected at their lower ends, as shown at 26. This connecting portion is slidably mounted between standards 27, located between the base 10 and the table-top 8 and on opposite sides of the mold, said standards having guideways 28 in their inner opposing sides.

A reciprocatory head 29 is slidably mounted in the guideways 28 and bears against the lower portion of the connection 26 between the plungers 25. Said head is adapted to be elevated and lowered by means of a toggle consisting of pivotally-connected links 30, the upper of which is pivotally connected, as shown at 31, to the lower portion of the head, the lower constituting, in effect, crank-arms carried by a sleeve 32, that is journaled to and between the lower portions of the standards 27. This sleeve also carries an operating-lever 33, located at one side of the machine.

Interposed between the head 29 and the plungers and normally seated in a socket 34 in the former is an operating device in the form of a rod 35, one end portion of which is slidably mounted in a slot 36 in one of the standards and is carried by a link 37, pivotally connected to one end of a lever 38, said lever being fulcrumed, as shown at 39, on a bracket 40, connected to one side of one of the standards 27.

In operating the machine the material to be molded is first placed in the hopper 23. The levers 33 and 38 are elevated, thereby depressing the plungers in the mold. Thereupon the carriage is moved so that the delivery-mouth 24 of the hopper is over the mold. The material will therefore fill said molds, and afterward the carriage is moved

until one of the end portions thereof covers the upper ends of said molds. The lever 33 is then depressed, and as a consequence the toggle will be straightened, so that the head and plungers will be elevated to press the material in the mold, whereupon the carriage is moved to one side of the openings 12 and the other lever 38 is depressed. This movement causes the operating-rod 35 to elevate the plungers away from the head 29, thus ejecting the molded articles from the molds and at one side of the carriage. This operation is repeated, the carriage being consecutively moved on opposite sides of the molds, and therefore the bricks or other articles will be moved onto the pallets. As soon as these pallets are filled they are detached from the machine and substituted by others. It will therefore be seen that a machine is provided by means of which bricks, building-blocks, and the like can be expeditiously and efficiently molded. While two molds have been shown in the present embodiment, it will be apparent that the number thereof is not limited and one or more may be employed, as desired, thus increasing or decreasing the output of the machine.

From the foregoing it is thought that the construction, operation, and many advantages of the herein-described invention will be apparent to those skilled in the art without further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a molding-machine, the combination with a mold, of a reciprocatory plunger movable therein, a reciprocatory head against which the plunger detachably bears, an actuating hand-lever fulcrumed beneath the head and having an angularly-disposed link member rigidly carried thereby, another link member pivoted at one end to the said angularly-disposed link member and pivoted at its other end to the head, and independently manually operated means engaging the plunger to move the same away from the head.

2. In a molding-machine, the combination with a mold, of a reciprocatory plunger movable therein, a reciprocatory head detachably bearing against the plunger, toggle-lever mechanism pivotally connected to the head for moving the same and thereby the plunger, a rod interposed between the head and plunger and bearing against the latter to carry the same away from the head, said rod being detachable from the head, and a lever having a link connection with the rod.

3. In a molding-machine, the combination with a table having a mold therein, of means mounted on the table for feeding material to the mold, a reciprocatory plunger movable in the mold, a reciprocatory head against which the plunger detachably bears, an actuating hand-lever fulcrumed beneath the head and having an angularly-disposed link member rigidly carried at its inner end, the outer end of said lever projecting beyond the table, another link member pivoted at one end to said angularly-disposed link member and pivoted at its other end to the head, another manually-actuated lever fulcrumed beneath the table and projecting beyond the same, and means connected to the inner end of the latter lever and associated with the plunger for moving the same away from the head.

4. In a molding-machine, the combination with a mold, of a reciprocatory pressing and ejecting plunger movable therein, spaced guides located beneath the mold, one of said guides having a slot, a reciprocatory head slidably mounted on the guides and detachably engaging the plunger, toggle-links pivoted to each other and to the head for reciprocating the same, a lever having a fixed connection with the lower set of links for moving the same, a reciprocatory device passing through the slot of the guide and engaging the plunger to carry the same away from the head, and a lever having a link connection with said device.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

LEWIS M. PRATT.

ERASTUS H. VAN NATTA.

Witnesses:

WELDON WORRELL,
S. B. WORRELL.