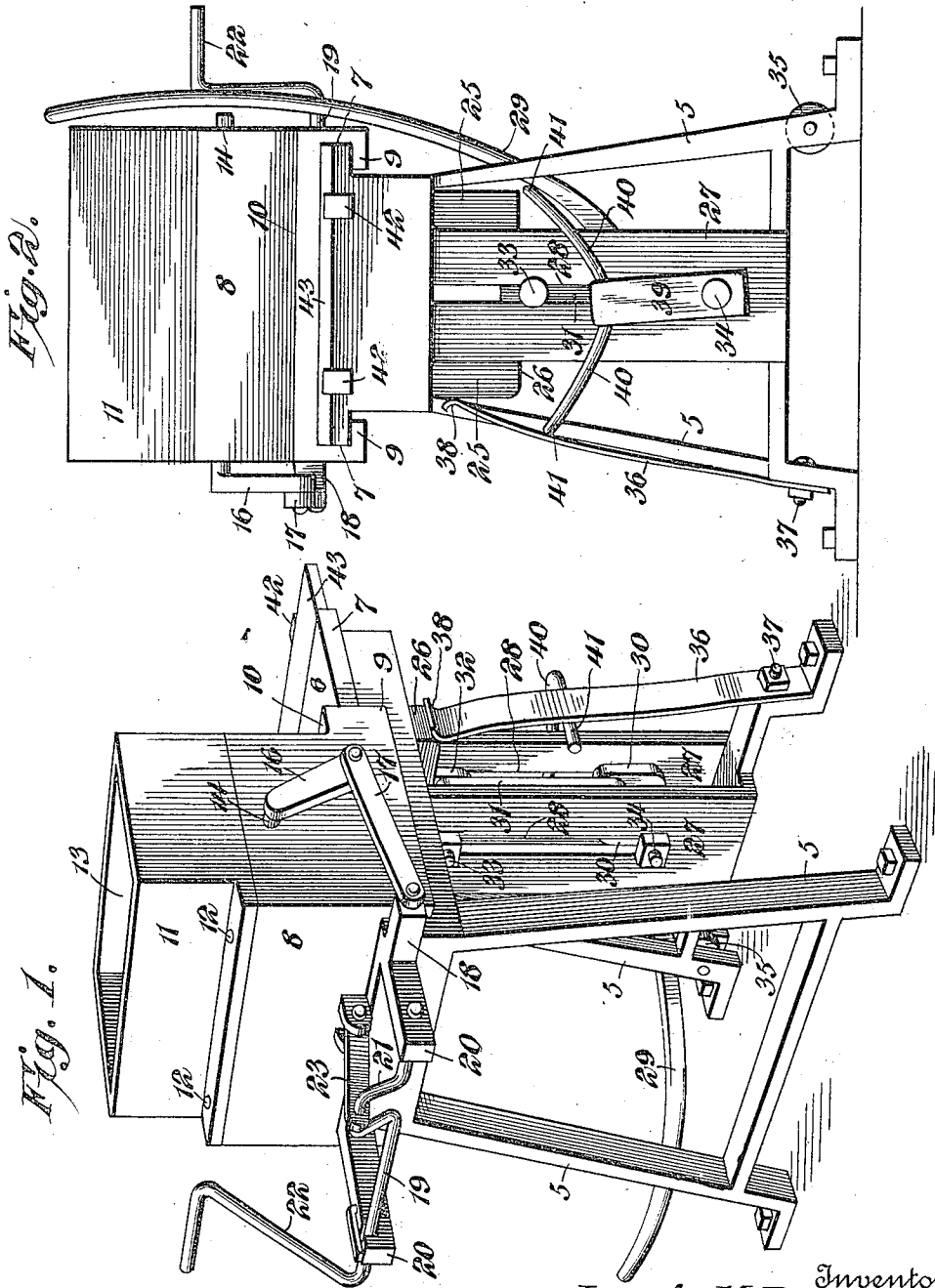


No. 839,419.

PATENTED DEC. 25, 1906.

L. M. PRATT.
MOLDING MACHINE.
APPLICATION FILED MAR. 27, 1906.

2 SHEETS—SHEET 1.



Witnesses
Howard D. Cor.
B. G. Foster

Inventor,
Lewis M. Pratt,
By
E. J. Siggers
Attorney

No. 839,419.

PATENTED DEC. 25, 1906.

L. M. PRATT.
MOLDING MACHINE.
APPLICATION FILED MAR. 27, 1906.

2 SHEETS—SHEET 2.

Fig. 4.

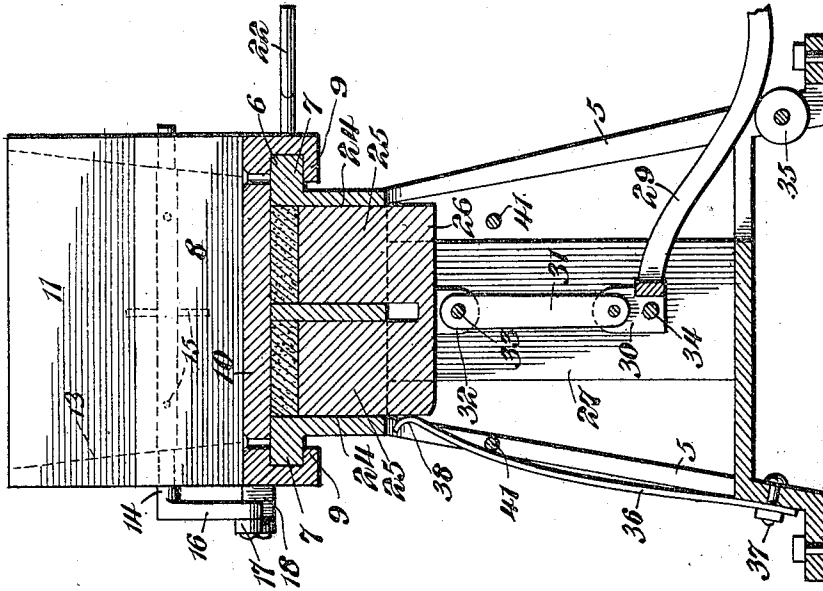
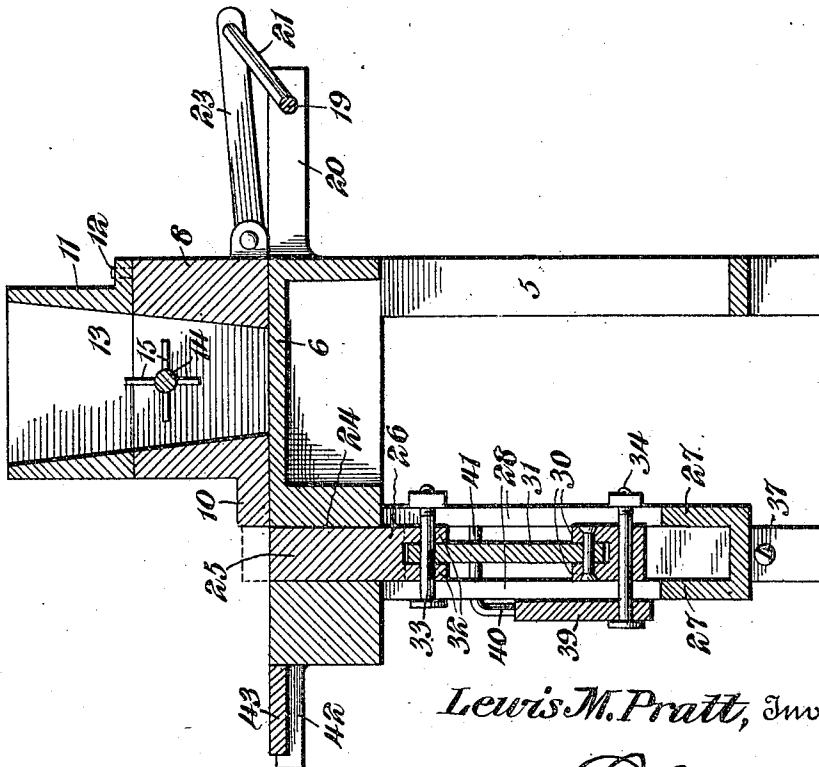


Fig. 3.



Lewis M. Pratt, Inventor,

By

E. J. Siggers.

Attorney

Witnesses
Howard D. Cor.
B. J. Foster.

UNITED STATES PATENT OFFICE.

LEWIS M. PRATT, OF BELLEVILLE, KANSAS.

MOLDING-MACHINE.

No. 839,419.

Specification of Letters Patent.

Patented Dec. 25, 1906.

Application filed March 27, 1906. Serial No. 308,265.

To all whom it may concern:

Be it known that I, LEWIS M. PRATT, a citizen 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.

This invention relates more particularly to means for molding bricks or blocks of concrete or cementitious material, but is clearly capable of advantageous use for other analogous purposes.

One of the principal objects is to provide in that class of machines having movable feed hoppers or receptacles coöperating with molding mechanism novel means of a very simple nature for operating such hoppers or receptacles and moving the agitators located therein.

A further and important object is to provide simple means of a novel nature for pressing the material in the molds and ejecting the molded articles therefrom.

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

Figure 1 is a perspective view of the molding-machine. Fig. 2 is an end elevation of the same. Fig. 3 is a vertical sectional view therethrough, and Fig. 4 is a vertical cross-sectional view therethrough.

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

In the embodiment illustrated a support is employed in the form of a table having legs 5 and a top 6. The top has its side margins projecting to form guide-flanges 7. A receptacle or hopper is slidably mounted on the table-top and comprises a body-section 8, having depending inturned guides 9, that engage over the flanges 7, said body-section being, furthermore, provided with an abutment portion 10. Detachably mounted on the body-section is a top section 11, held in place by pins 12, carried by the body-section, and engaging in openings in the top sections.

The hopper or receptacle above described is provided with a chamber 13, in which is a rotatable agitator, the same comprising a shaft 14, journaled in the end walls, and having fingers 15 located within the chamber. One end of the shaft 14 projects beyond the receptacle or hopper and has a crank-arm 16, to the free end of which is pivoted a link 17, said link being also pivoted to a lug 18, car-

ried by the table-top at one end. The receptacle or hopper reciprocates on the table-top, and for the purpose of moving the same a crank-shaft 19 is journaled in ears 20, projecting from one end of the top 6, said shaft having a crank 21 between the ears 20 and a handle-crank 22 at one end. A pitman 23 connects the crank 21 and the receptacle or hopper.

From the above it will be apparent that if the handle-crank 22 is turned in opposite directions the receptacle is caused to reciprocate, and as the link 17 prevents the movement of the lower end of the crank-arm 16 the agitator will be rotated in the chamber 13.

Arranged beneath the table are molds 24, two being shown in the present embodiment; but any number may be employed, as desired. The upper ends of the molds open through the table-top, and the lower ends are also open. Slidably mounted in said molds are plungers 25, connected to a common head 26, that is disposed between a pair of guide-standards 27, arranged beneath the table-top. These standards have longitudinal slots 28. An actuating-lever 29 has a pair of crank-arms or ears 30 at one end, which are connected to the plunger-head 26 by a link 31, the link 31 being pivoted to ears 32, depending from the plunger-head, the pivot 33, connecting the link and ears, passing therethrough and being slidably engaged in the slots 28. The lever 29 is provided with a fulcrum-pin 34, that also has its ends slidably mounted in the lower portions of the slots 28. Another fulcrum for the lever 29 is in the form of a roller 35, journaled on the frame of the machine and disposed in the path of movement of said lever.

The plungers are adapted to be raised by the lever 29 until their upper ends are substantially flush with the table-top, as shown in Fig. 3, and a lock is employed for securing the said plungers in their elevated position. This lock in the present embodiment consists of a spring 36, secured at its lower end and, as shown at 37, to the base of the supporting-frame, and has its upper free end 38 arranged to engage beneath one corner of the plunger-head 26, as illustrated particularly in Fig. 1. A tripping device for this lock is in the form of a swinging plate 39, pivoted to a projecting end of the fulcrum-pin 34 and having oppositely-extending arms 40, provided with offset terminals 41, that embrace the stand-

ards 27, one of said terminals being disposed inside of the locking-spring 36, the other being arranged in the path of movement of the lever. At one end of the table-top are supporting-brackets 42, comprising hooks on which are detachably mounted pallets 43, said pallets being supported with their upper faces flush with the upper surface of the table-top.

The operation of the machine may be briefly described as follows: The hopper or receptacle is moved to one end of the table-top and is filled while the plungers 25 are lowered, the lever being then in raised position, as illustrated in Fig. 2. The handle-crank is then turned so as to bring the hopper or receptacle over the upper ends of the molds, and this movement, as already described, will cause the operation of the agitator. As soon as the bottom of the chamber 13 aligns with the molds the material gravitates thereinto, and afterward the receptacle is moved backward until the abutment portion 10 closes the tops of the molds. The lever 29 is now swung downwardly and will turn upon its fulcrum 34, thus causing the elevation of the link 31 and the corresponding movement of the plunger 28. The result is that the material will be properly pressed to form the articles desired. As soon as this movement has been accomplished the receptacle or hopper is again moved until the abutment portion clears the upper ends of the molds, whereupon a further downward movement is given to the lever 29. The result is that said lever will now fulcrum upon the roller 35 and cause the fulcrum-pin 34 to slide upwardly in the slots 28. A further upward movement is thereby given to the plungers and the articles before pressed will be expelled. As soon as the plungers reach their uppermost position they are automatically locked by the spring 38 engaging beneath the lower adjacent corner of the plunger-head 26. The bricks or articles are consequently sustained level with the table-top, and a return movement of the receptacle or hopper will push the bricks or articles over the table-top and upon the pallet 43. To return the plungers to their lowermost positions in order to permit a new supply of material to enter the molds, the operator has only to raise the lever 29, which, striking the offset terminal 41 of the adjacent arm 40 of the trip, will cause said trip to swing, and consequently the offset terminal of the other arm will engage the spring 36 and force it from under the plunger-head, thereby releasing and permitting the same to drop.

It will be evident that this structure is an exceedingly simple one, but two levers being employed to effect the operations of the various mechanisms, the lever 29, moreover, acting successively on the different fulcrums in

order to successively press and eject the articles from the molds and also constituting the means for actuating the lock.

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 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 support, of a reciprocatory receptacle mounted on the support, an agitator rotatably mounted in the receptacle and having a crank, a link, having a movable connection with the crank, a connection between the link and support that prevents longitudinal movement of the former and permits its swinging movement, and means for reciprocating the receptacle.

2. In a machine of the character described, the combination with a support, of a reciprocatory receptacle mounted on the support, an agitator located in the receptacle and including a shaft having a crank-arm, a link, a pivot connecting the link and the crank-arm, a pivot connecting the link and the support to prevent longitudinal movement of the former, an actuating crank-shaft journaled on the support, and a pitman connecting the crank of the shaft and the receptacle.

3. In a machine of the character described, the combination with a mold, of a pressing and expelling plunger operating in the mold, an actuating device for the plunger, and a plurality of bearings against which the device successively acts to successively effect the pressing and expelling actions of the plunger.

4. In a machine of the character described, the combination with a mold, of a pressing and expelling plunger operating in the mold, an actuating-lever for the plunger, and a plurality of fulcrums against which the lever successively acts to successively effect the pressing and expelling operations of the plunger.

5. In a machine of the character described, the combination with a mold, of a pressing and expelling plunger operating in the mold, an actuating-lever for the plunger, a fulcrum for the lever having a sliding bearing, and another fulcrum for said lever detachably engaged thereby and causing the first-mentioned fulcrum to slide in its bearing.

6. In a machine of the character described, the combination with a support, of a mold therein, spaced standards disposed below the mold and having slots, a plunger operating in the mold, a lever having a crank-arm, a link connecting the crank-arm and plunger, a ful-

crum-pin for the lever slidably engaged in the slots of the standards, and a roller located in the path of movement of the lever and detachably engaged by the same.

5 7. In a machine of the character described, the combination with a mold, of a plunger operating therein, a lock for holding the plunger in a predetermined position, and a
10 common actuating device for moving the plunger and operating the lock to release said plunger.

8. In a machine of the character described, the combination with a support including a
15 table, of a mold located therein and opening through the top of the table, a plunger operating in the mold and movable to a position substantially level with the table-top, means
20 for thus moving the plunger, a lock that engages the plunger when it assumes said position to hold it therein, and means for raising the plunger, said means also constituting actuating means for releasing the lock.

9. In a machine of the character described, the combination with a table, of a mold lo-
25 cated therein and opening through the top of the table, a plunger operating in the mold and movable to a position substantially level with the table-top, a lock that engages the plunger when it assumes said position to
30 maintain it therein, a swinging lock-engaging device for releasing the same from the plunger, and a lever for raising the plunger.

10. In a machine of the character de-
35 scribed, the combination with a support including a table, of a mold located in the sup-

port and opening through the top of the ta-
ble, a reciprocatory plunger operating in the
mold and movable to a position substantially
level with the table-top, an actuating-lever
having a sliding fulcrum, a link connection 40
between the lever and the plunger, another
fulcrum disposed in the path of movement of
the lever and detachably engaged thereby, a
lock for holding the plunger in elevated posi-
tion, and a swinging lock-releasing device 45
pivoted on the sliding fulcrum, said releasing
device having an arm that engages the lock
and an arm that is located in the path of
movement of the lever.

11. In a machine of the character de- 50
scribed, the combination with a support in-
cluding a table-top, of a mold located in the
support and opening through the top of the
table, guide-standards arranged beneath the
top on opposite sides of the mold, a plunger 55
operating in the mold and between the guide-
standards, means for raising and lowering the
plunger, a locking device for holding the
plunger in its elevated position, and a trip for
the locking device pivoted at one side of the 60
standard and having arms provided with off-
set terminals that embrace the same, one of
the arms engaging the locking device.

In testimony that I claim the foregoing as
my own I have hereto affixed my signature in 65
the presence of two witnesses.

LEWIS M. PRATT.

Witnesses:

J. C. DALE,

H. B. SWANSON.