

No. 728,948.

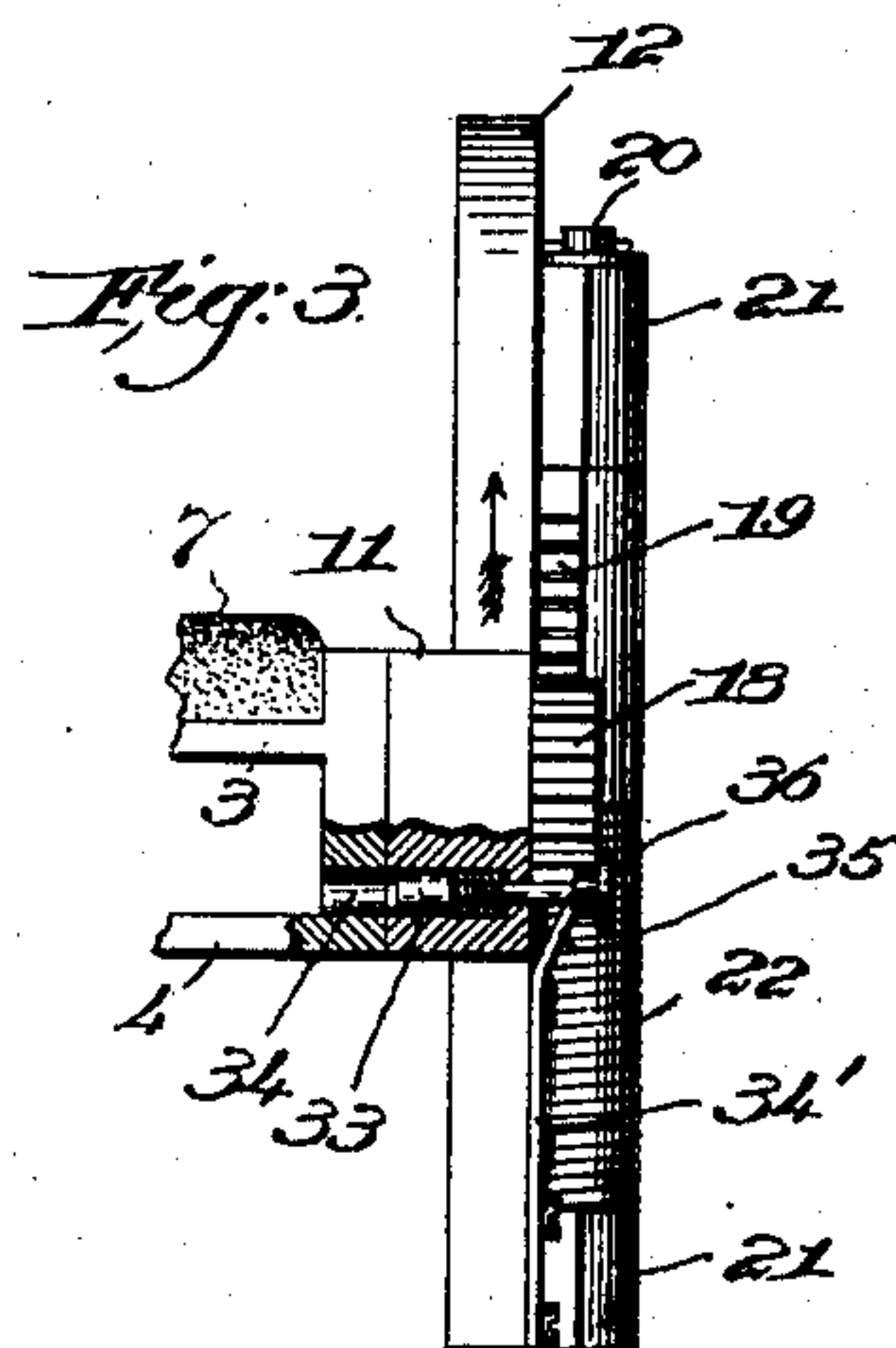
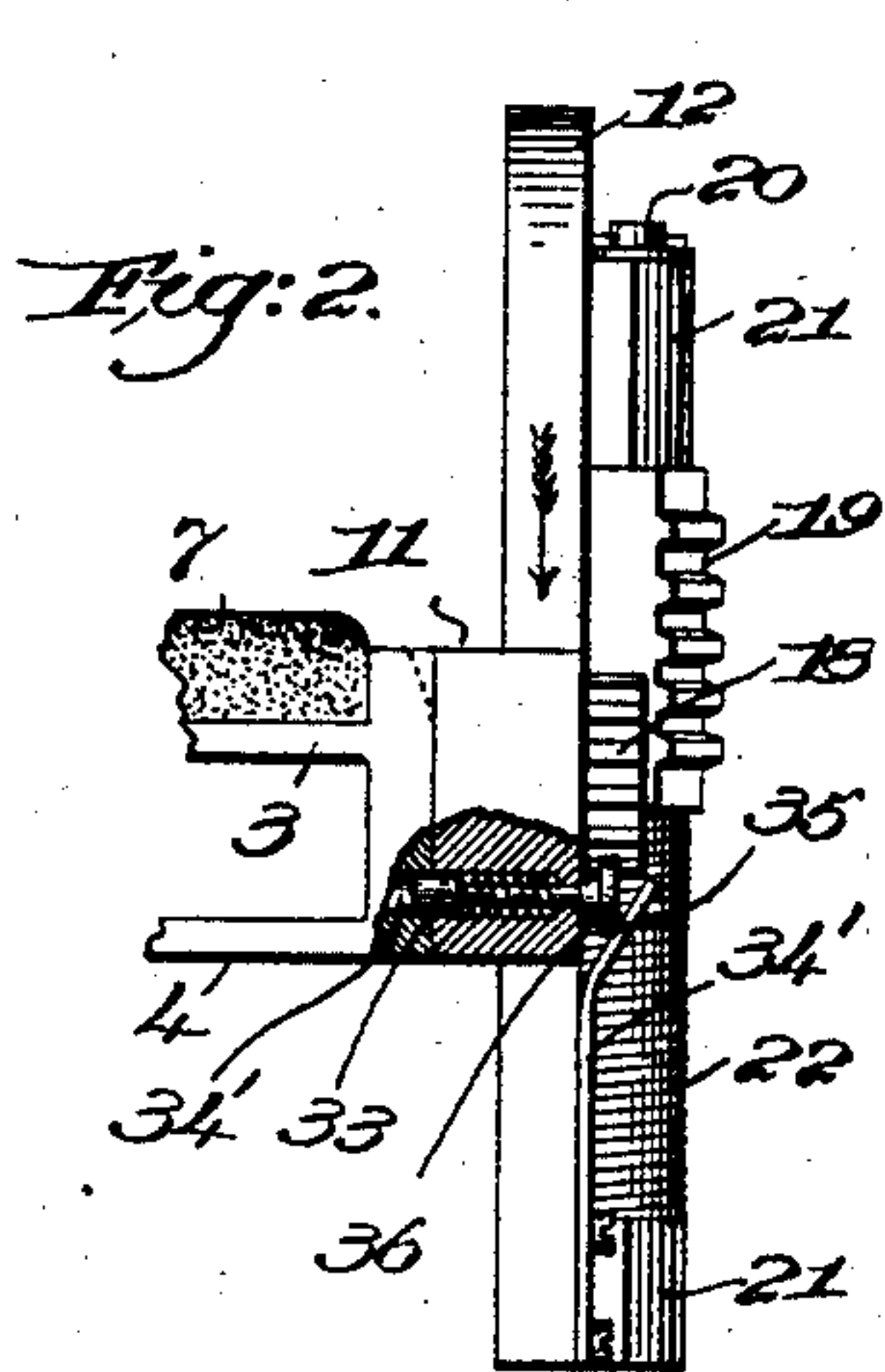
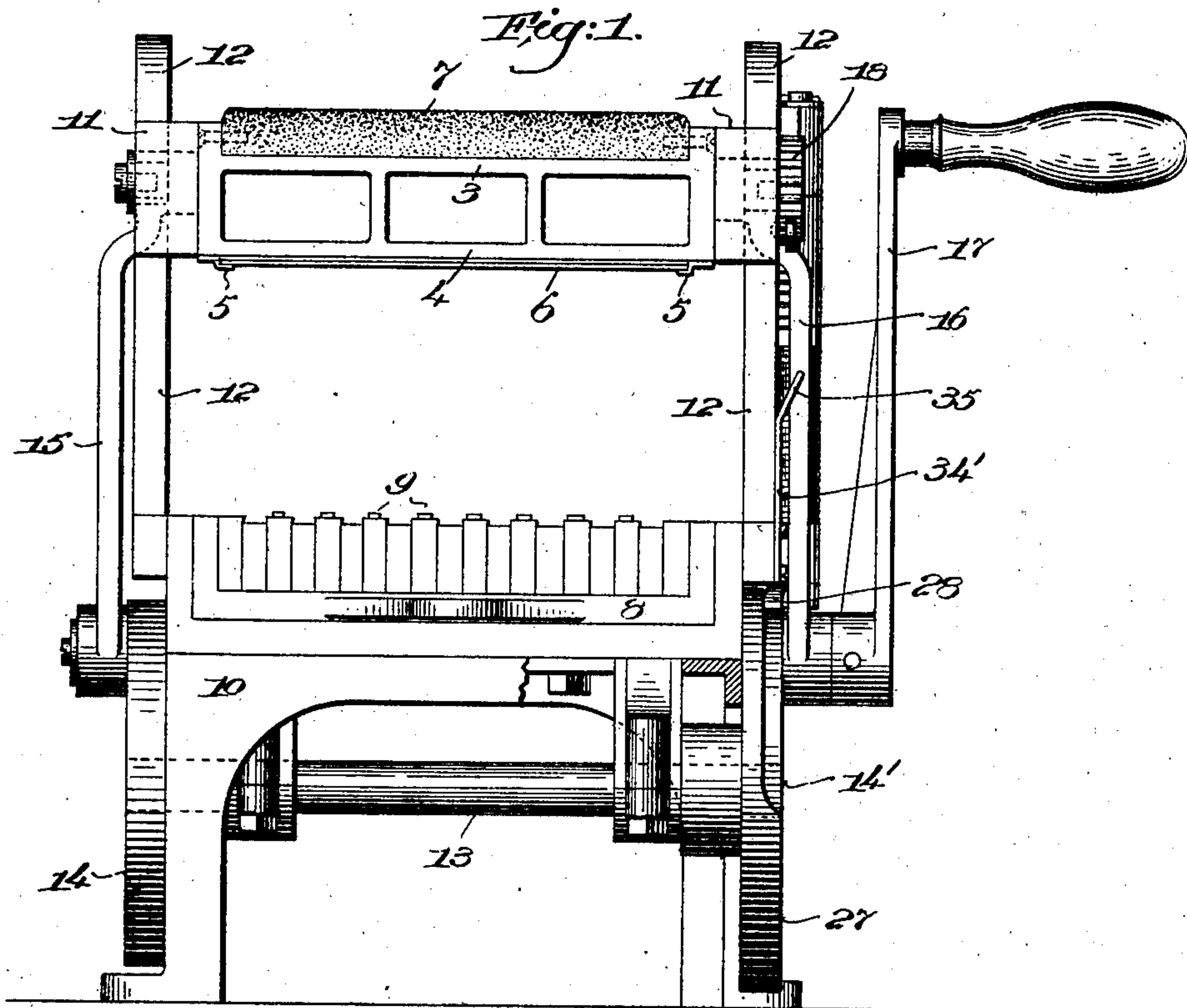
PATENTED MAY 26, 1903.

L. B. MARTIN.  
PRINTING PRESS.

APPLICATION FILED AUG. 25, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses,  
Edward H. Allen.  
Thomas J. Drummond.

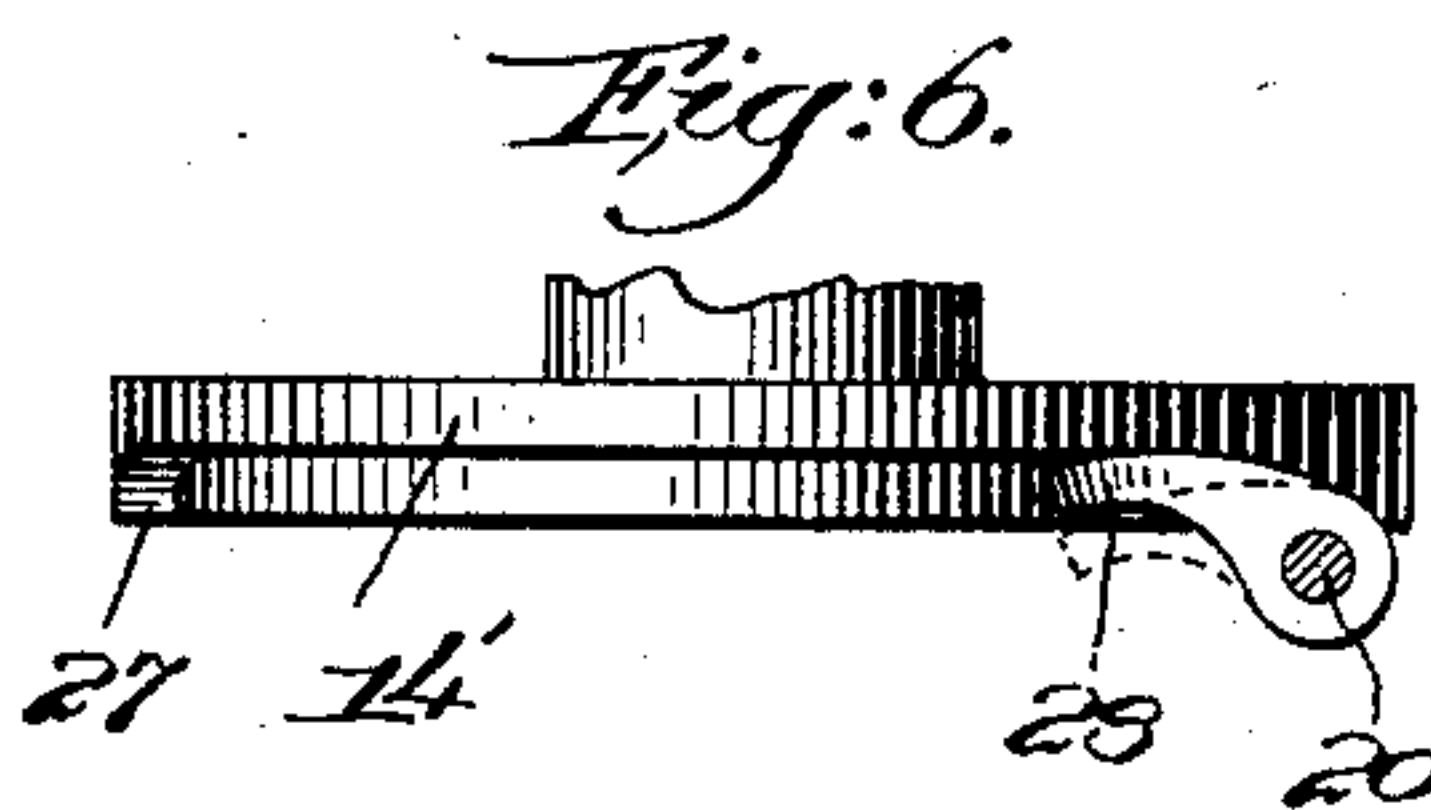
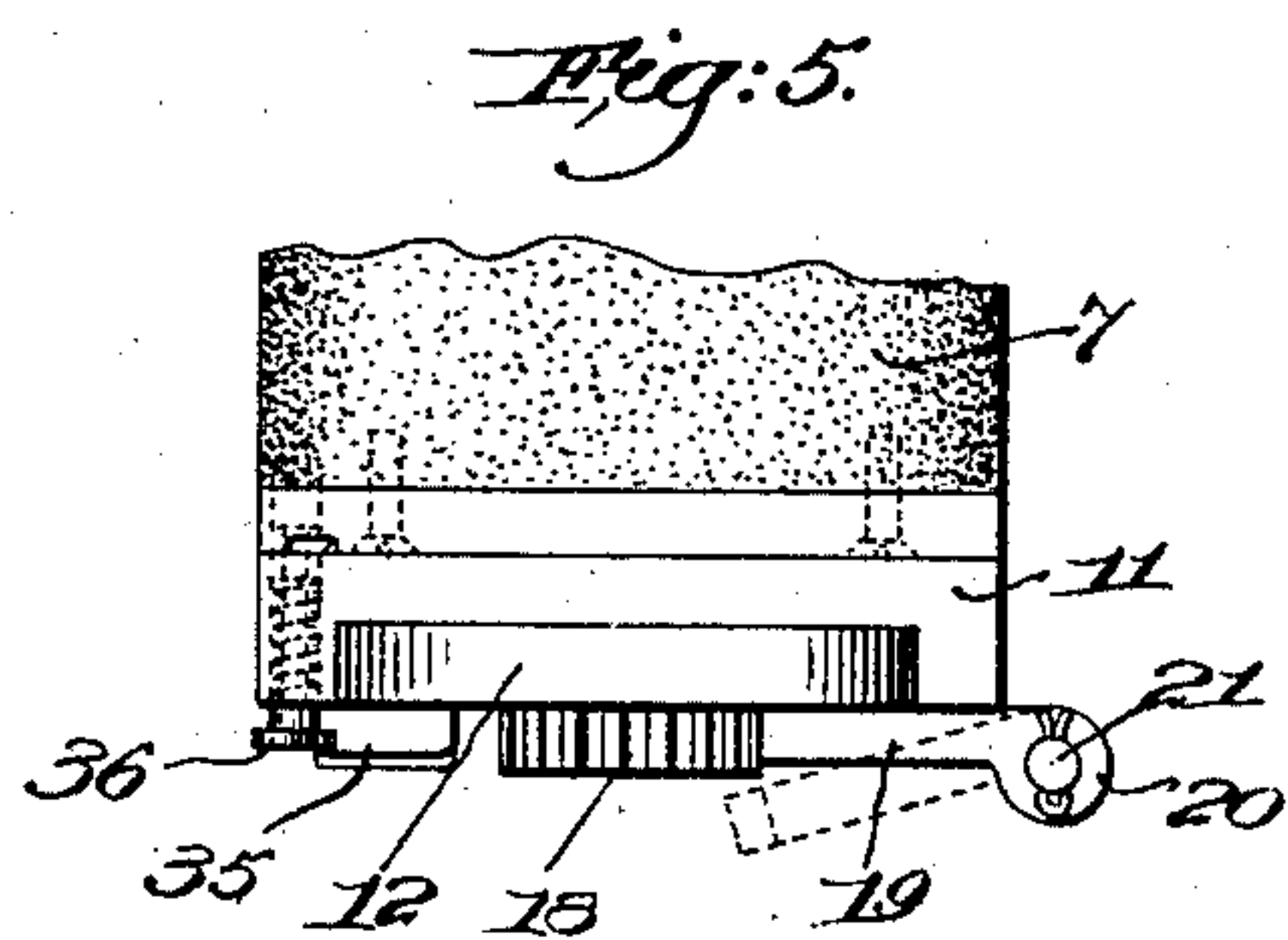
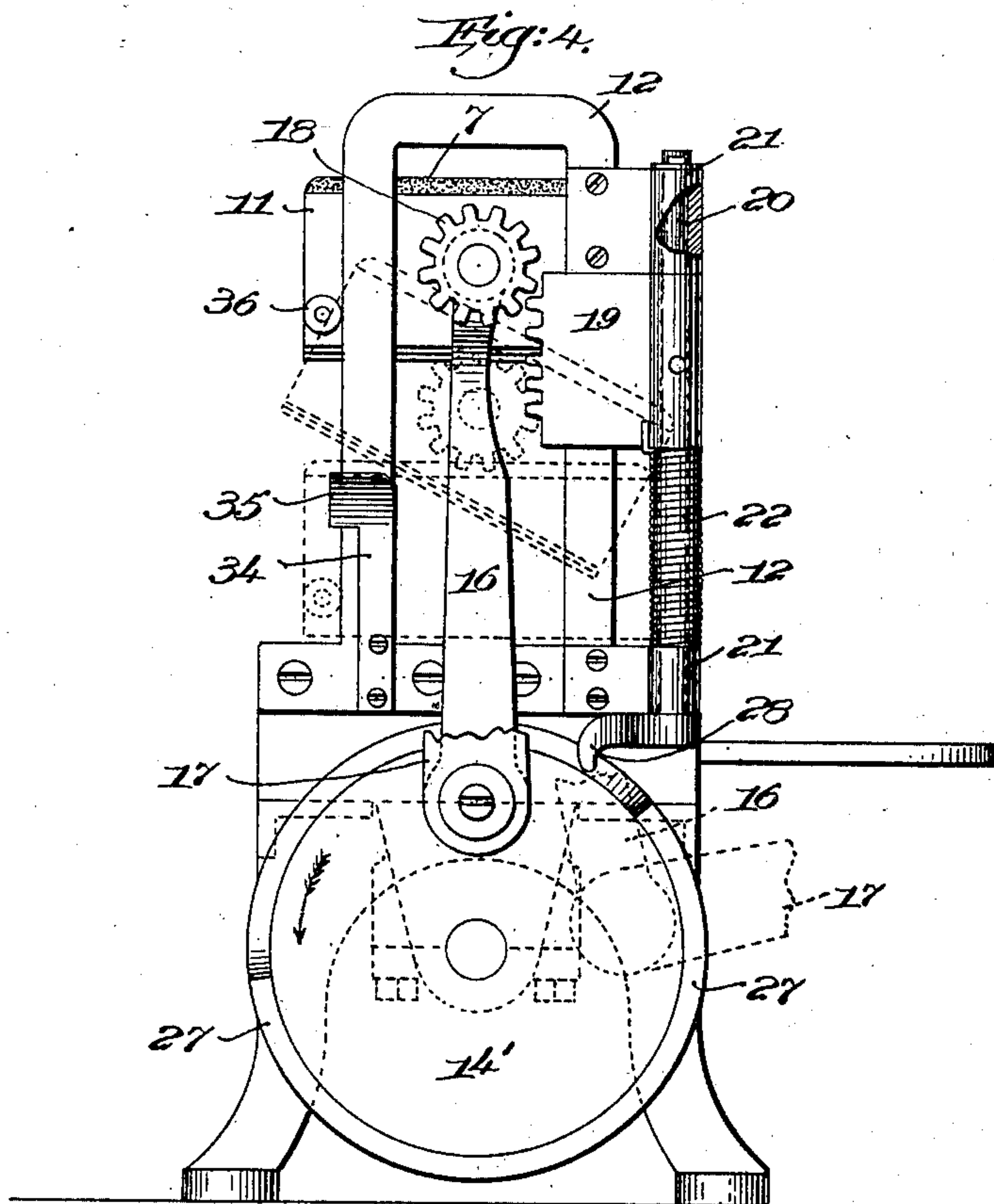
Inventor,  
Louis B. Martin,  
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2 SHEETS—SHEET 2.



Witnesses,  
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# UNITED STATES PATENT OFFICE.

LOUIS B. MARTIN, OF BOSTON, MASSACHUSETTS.

## PRINTING-PRESS.

SPECIFICATION forming part of Letters Patent No. 728,948, dated May 26, 1903.

Application filed August 25, 1902. Serial No. 120,868. (No model.)

*To all whom it may concern:*

Be it known that I, LOUIS B. MARTIN, a citizen of the United States, residing at Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Printing-Presses, of which the following description, in connection with the accompanying drawings, is a specification, like figures on the drawings representing like parts.

This invention relates to a printing-press which is especially designed for printing menu-cards and similar small sheets of paper or cards; and it comprises in its construction a type-bed and a rotary block one side of which constitutes a platen to support the card or paper to be printed and the other side of which has an inking device secured thereto. Suitable means are provided for moving the block and the type-bed toward and from each other relatively and for turning the block after each time that the latter and the type have been brought into engagement, so that the inking device and the platen are alternately brought against the type. In the operation of the device, therefore, it is merely necessary to place the piece of paper or card to be printed on the platen side of the block, when by operation of the machine the inking device is first brought into contact with the type and thereafter the block is turned to bring the card or paper to be printed into position to be impressed against the type. The continued operation of the machine again turns the block to bring the inking device into position to ink the type and at the same time brings the platen side of the block into such position that the printing card or paper may be readily removed therefrom and a fresh or unprinted card placed thereon.

Referring to the drawings, Figure 1 is a side elevation of my improved printing-press. Figs. 2 and 3 are details of the mechanism for turning the block. Fig. 4 is an end elevation of the device shown in Fig. 2. Figs. 5 and 6 are further details of the mechanism for turning the block.

The rotary block is designated by 3, and one side thereof, that designated 4, is constructed to constitute a platen and will preferably have suitable means, such as 5, to hold the paper or card 6 to be printed thereto. The other side of the block 3 supports some

suitable form of inking device, which I have chosen to herein illustrate as an inking-pad 7.

The type-bed is designated generally by 8, and it supports the usual type 9. The type-bed and the block 3 have a relative movement toward and from each other, and mechanism, to be hereinafter described, is provided to turn the block 3, so as to bring the platen 4 and the inking device 7 alternately against the type. In the structure herein illustrated, which is the preferred embodiment of my invention, the type-bed 8 is stationary and forms part of a suitable frame 10, while the block 3 reciprocates toward and from the bed. It will be understood, however, that if the block 3 were made non-reciprocatory, but simply had a rotary motion, then the type-bed would be made to reciprocate toward and from the block. As herein illustrated, the block is pivoted between suitable heads or guides 11, which are reciprocated by mechanism hereinafter described, and are guided in their reciprocation by ways 12, carried by the frame. To reciprocate the block, I have chosen to illustrate a shaft 13, supported in the frame and having at its ends crank-disks 14 14', which are connected by suitable links 15 and 16 with the heads or guides 11. A handle or crank 17, secured to one of the crank-disks, serves as a convenient means for rotating the shaft, and the rotation of the shaft obviously will carry the heads 11, and consequently the block 3, toward and from the type-bed. Any other suitable means for reciprocating the block, however, may be employed without in any way departing from my invention.

One of the trunnions of the rotary block 3 extends through one of the guides or heads 11 and has secured to its outer end a pinion 18, which is adapted at the proper time in the reciprocation of the block to engage the rack 19, and thereby turn the block. It is necessary, of course, that the pinion and rack should be brought into engagement during the reciprocation in one direction only, and I have therefore mounted the rack 19 in such a way that it can be thrown out of and into the path of the pinion, and suitable cam mechanism is employed to throw the rack out of the path of the pinion during the time that the block is moved toward the type-bed, the



said cam mechanism allowing the rack to be thrown into the path of the pinion by some suitable means, such as a spring, during the upward or receding movement of the block, whereby the block is turned to reverse the position of the platen and inking device. In the present embodiment of my invention the rack is mounted upon a shaft or pin 20, supported in suitable bearings 21 on the frame, and a spring 22 is employed to normally and yieldingly hold the rack in the path of the pinion, as seen in Fig. 4 and in Figs. 3 and 5. The cam mechanism for throwing the rack out of the path of the pinion, as shown in Fig. 2 and in the dotted-line position, Fig. 5, will preferably be formed on and constitute a part of the crank-disk 14', said disk having the cam portion 27 at its edge, which engages an arm 28, fast to the shaft 20. As the disk 14' is rotated the raised portion of the cam 27 engages the tail or arm 28 and throws the same into the dotted-line position, Fig. 6, thereby swinging the rack 19 into its inoperative position, as seen in Fig. 2 and dotted lines, Fig. 5. The direction of rotation of the disk is shown by the arrows in Fig. 4, from which it will be seen that the raised portion of the cam operates the arm 28 during the time that the block is descending, so that as it descends the rack is thrown out of alinement with the pinion 18. During the ascending motion of the block, however, the arm drops into the depressed portion of the cam and allows the spring to throw the rack into its operative position. I have provided means for locking the block in either of its two adjusted positions and for automatically releasing the lock when the time comes to turn the block. The locking device herein shown comprises a spring-pressed locking-pin 33, slidably mounted in the head 11 and adapted to engage a recess 34 in the block. The lock-releasing means comprises a member having an elastic shank portion 34, which is secured to the frame, and an inclined head 35, which is in the path of the head 36 of the locking-pin as the latter moves up and down. During the upward movement of the block, as shown in Fig. 3, the head of the pin engages the outside of the head 35 of the locking device and the pin is withdrawn from the notch 34. At the same time that this occurs the rack 19 is thrown into its operative position, as shown in Fig. 3 and as above described. Further upward movement of the block causes the pinion to move over the rack and reverses the position of the block 3, as will be obvious. After the position of the block has been reversed the locking-pin 33 is forced into a locking-notch 34, oppositely situated from that shown in Figs. 2 and 3. During the downward movement of the block the head of the pin engages the inside of the releasing device, but the elastic stem portion 34 allows the releasing device to yield to permit the passage of the pin.

The operation of the device will be appar-

ent from the foregoing, and is as follows: The parts are shown in Fig. 1 as they are after the type has been inked and the paper 6 has been applied to the platen. As the operator rotates the handle in the direction of the arrow, Fig. 4, the paper is brought into engagement with the type, as has been fully described, and an impression made thereon, this occurring during the first half of the revolution of the shaft. The second half of the revolution carries the block away from the type and at the same time reverses its position, so as to bring the platen at the upper side and the inking-pad into position to be brought against the type. The second revolution of the shaft inks the type, during which the printed card may be removed from the platen, which is now uppermost, and a blank or unprinted card inserted. During the last part of the second revolution the block is again reversed and brought into the position shown in Fig. 1, when the operation is repeated.

While I have herein shown one specific way in which my invention may be embodied, I do not wish to be limited to the precise construction illustrated, for since I believe that I am the first to provide a rotary block which is a combined platen and inking device and which alternately carries the paper against the type and inks the type I desire to claim the same broadly.

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

1. In a printing-press, a type-bed, a reciprocating block movable toward and from the type-bed, one side of said block constituting a platen, an inking device secured to another side of said block, and means to turn the block during its reciprocating movement to bring alternately the inking device and paper to be printed against the type, said means comprising a pinion fast on the block, a pivoted rack, and means to move the rack into the path of the pinion during the reciprocating movement of the block in one direction and out of the path of said pinion during the reciprocating movement of the block in the opposite direction.

2. In a printing-press, a type-bed, a rotary block one side of which constitutes a platen, an inking-pad carried by another side of said block, means to move the block toward and from the type-bed, and means to turn the block during its receding movement, said means comprising gear-teeth rigid with the block, a pivoted rack normally in the path of the gear-teeth, and means to move the rack out of the path of said gear-teeth during the movement of the block toward the type-bed.

3. In a printing-press, a stationary type-bed, a reciprocating block movable toward and from the type-bed, one side of said block constituting a platen, an inking device secured to the front side of said block, means to turn the block to bring alternately the ink-



ing device and the paper to be printed against the type, an automatic lock to engage the block after each turning movement thereof to hold it positively in the desired position, and means to engage the lock and release it from the block during the reciprocating movement of the latter.

4. In a printing-press, a type-bed, a rotary block, one side of which constitutes a platen, an inking device supported by said block, means to move the type-bed and block relatively to each other, automatic means to turn the block to bring the inking device and paper alternately in contact with the type, an automatic lock to positively hold the block from turning when in either of its adjusted positions, and means to automatically release the lock at the proper time to allow the block to be turned.

5. In a printing-press, a stationary type-bed, a rotary block one side of which constitutes a platen, an inking-pad secured to the other side of said block, means to move the block toward and from the type-bed, a pinion fast on the block, a pivoted rack, and means to move the rack into and out of the path of the pinion, whereby the platen and inking-pad are alternately brought against the type.

6. In a printing-press, a stationary type-bed, a rotary block one side of which constitutes a platen, an inking device secured to the other side of the block, means to move the block toward and from the type-bed, a pinion fast to the block and means adapted to engage said pinion only during the time that the block recedes from the type-bed, whereby the said block is turned.

7. In a printing-press, a type-bed, a rotary block, one side of which constitutes a platen, an inking-pad secured to the other side of

said block, means to move the block toward and from the type-bed, a pinion connected with the block, a shiftable rack normally in the path of the pinion and means to move the rack out of the path of the pinion as the block moves toward the type-bed. 45

8. In a printing-press, a type-bed, a rotary block, one side of which constitutes a platen, an inking-pad secured to the other side of said block, means to move the block toward and from the type-bed, a pinion connected with the block, a rack movable out of and into the line of movement of the pinion, means to place the rack in the path of the pinion as the block recedes from the type-bed, and means to move the rack from the path of the pinion as the block moves toward the type-bed, whereby the block is turned to bring the inking device and paper alternately against the type. 50 55 60

9. In a printing-press, a frame having a type-bed, a rotary block one side of which constitutes a platen, an inking-pad secured to the other side of said block, a shaft supported by the frame and having crank-disks, connections between the said disks and the block, whereby as the shaft is turned the block is moved toward and from the type-bed, a pinion secured to the block a shiftable rack normally in line with the pinion, and cam mechanism on one of the crank-disks to throw the rack into its inoperative position as the block moves toward the type-bed. 65 70 75

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LOUIS B. MARTIN.

Witnesses:

GEO. W. GREGORY,  
LOUIS C. SMITH.