No. 717,516. Patented Dec. 30, 1902.

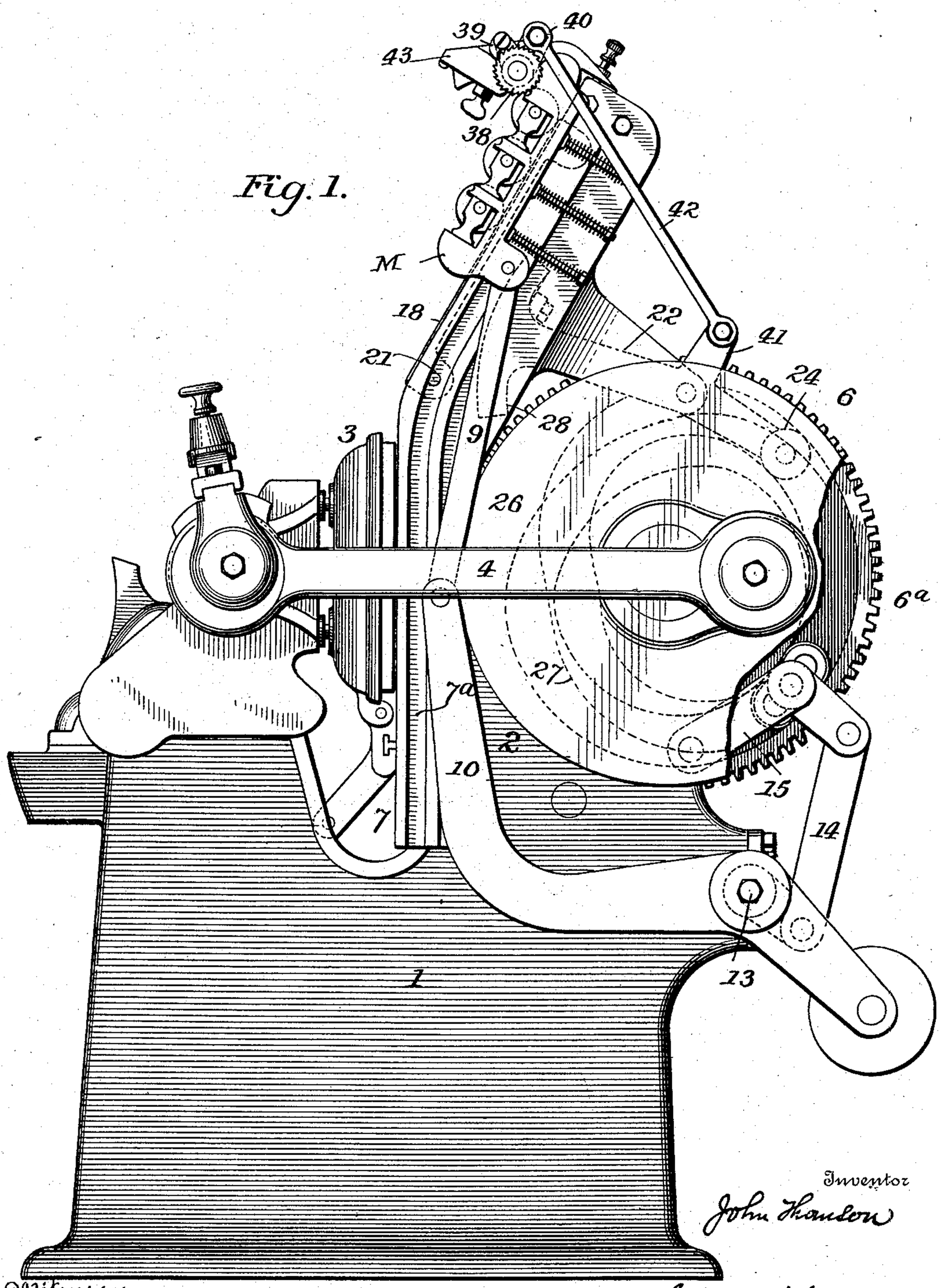
# J. THOMSON.

## INKING APPARATUS FOR PLATEN PRINTING PRESSES.

(Application filed Mar. 26, 1902.)

(No Model.) 3 Sheets—Sheet 1.

Fig. 1.

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(No Model.) 3 Sheets—Sheet 2.

Fig. 2.

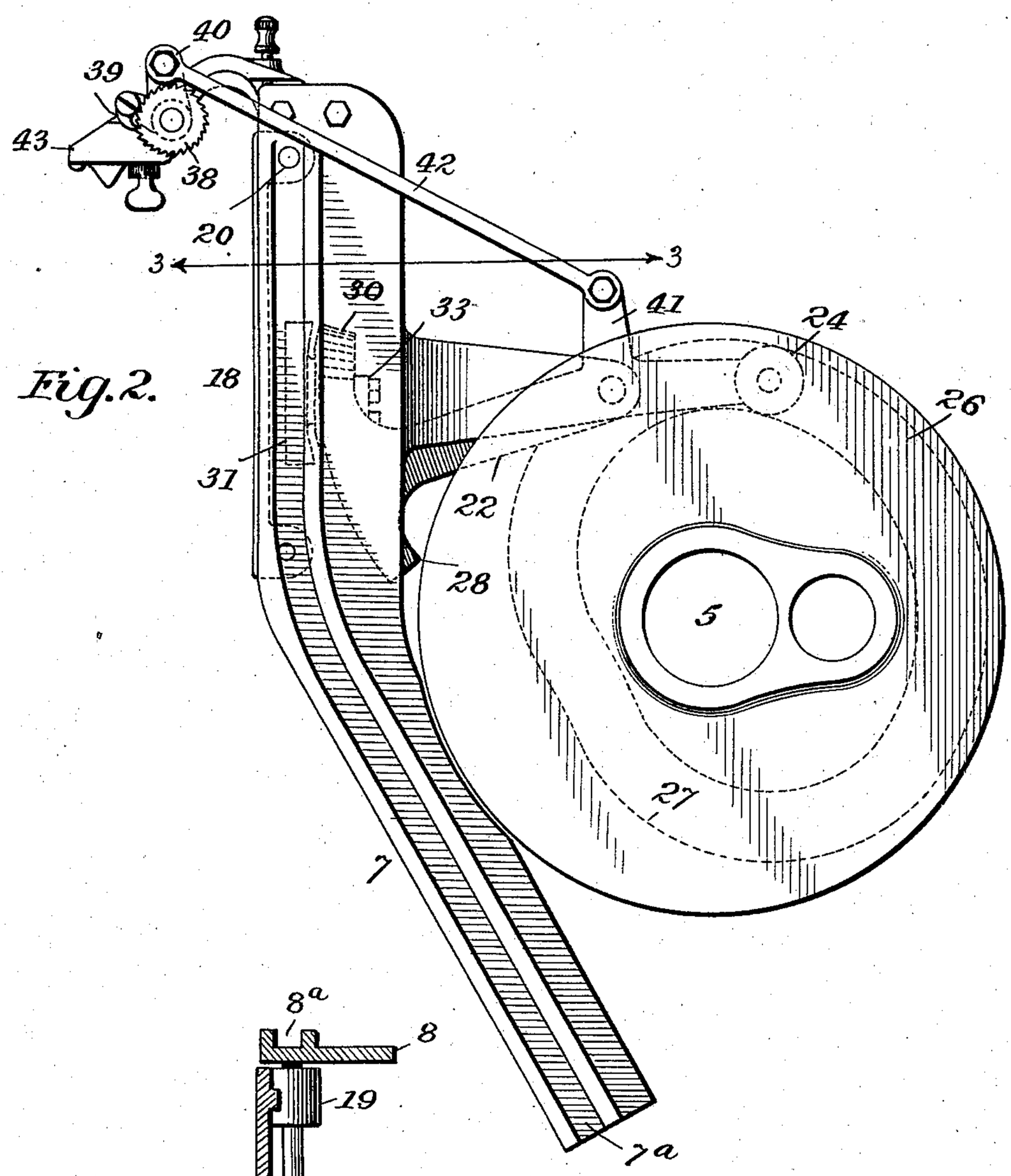
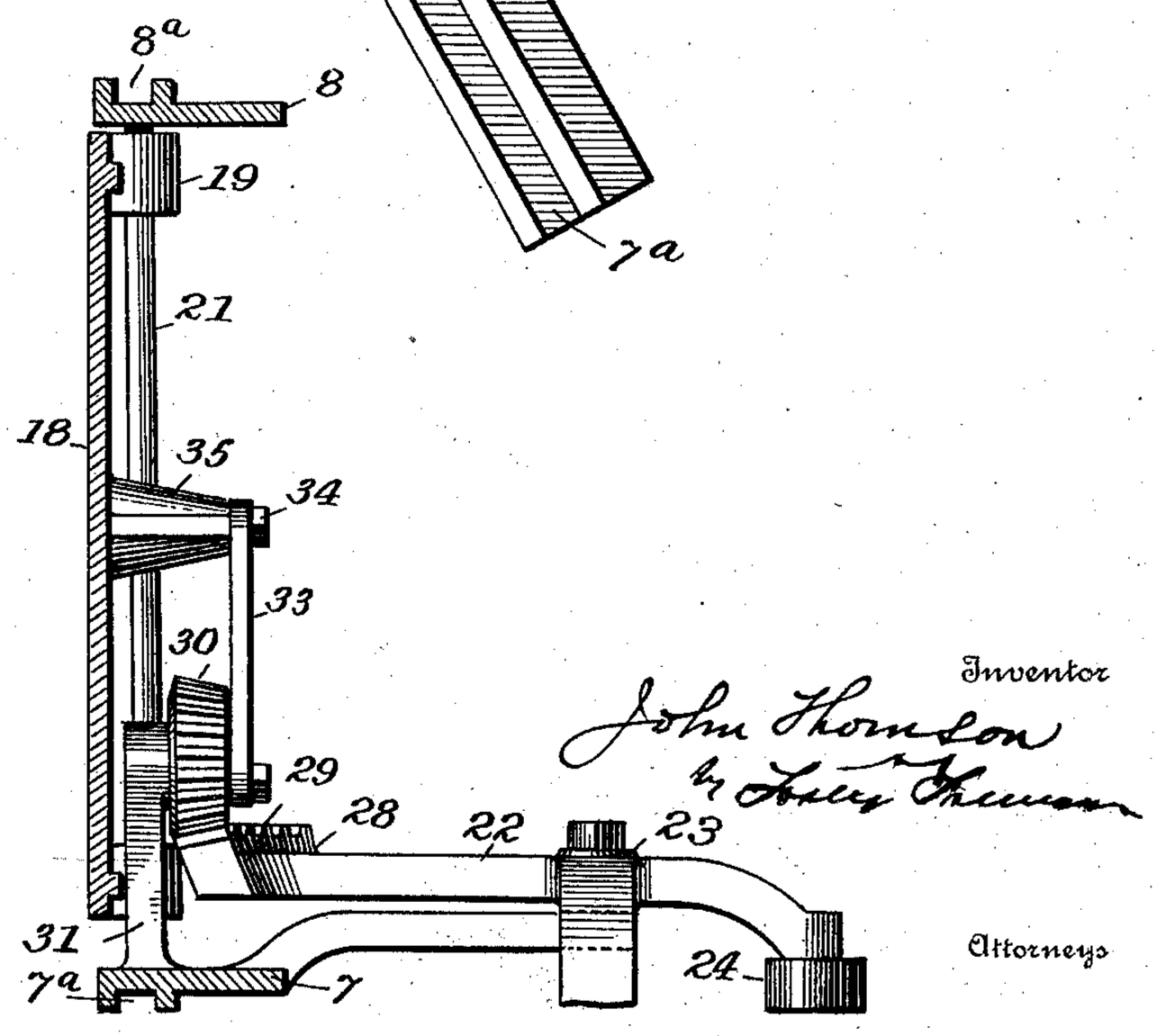



Fig. 3.

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INKING APPARATUS FOR PLATEN PRINTING PRESSES.

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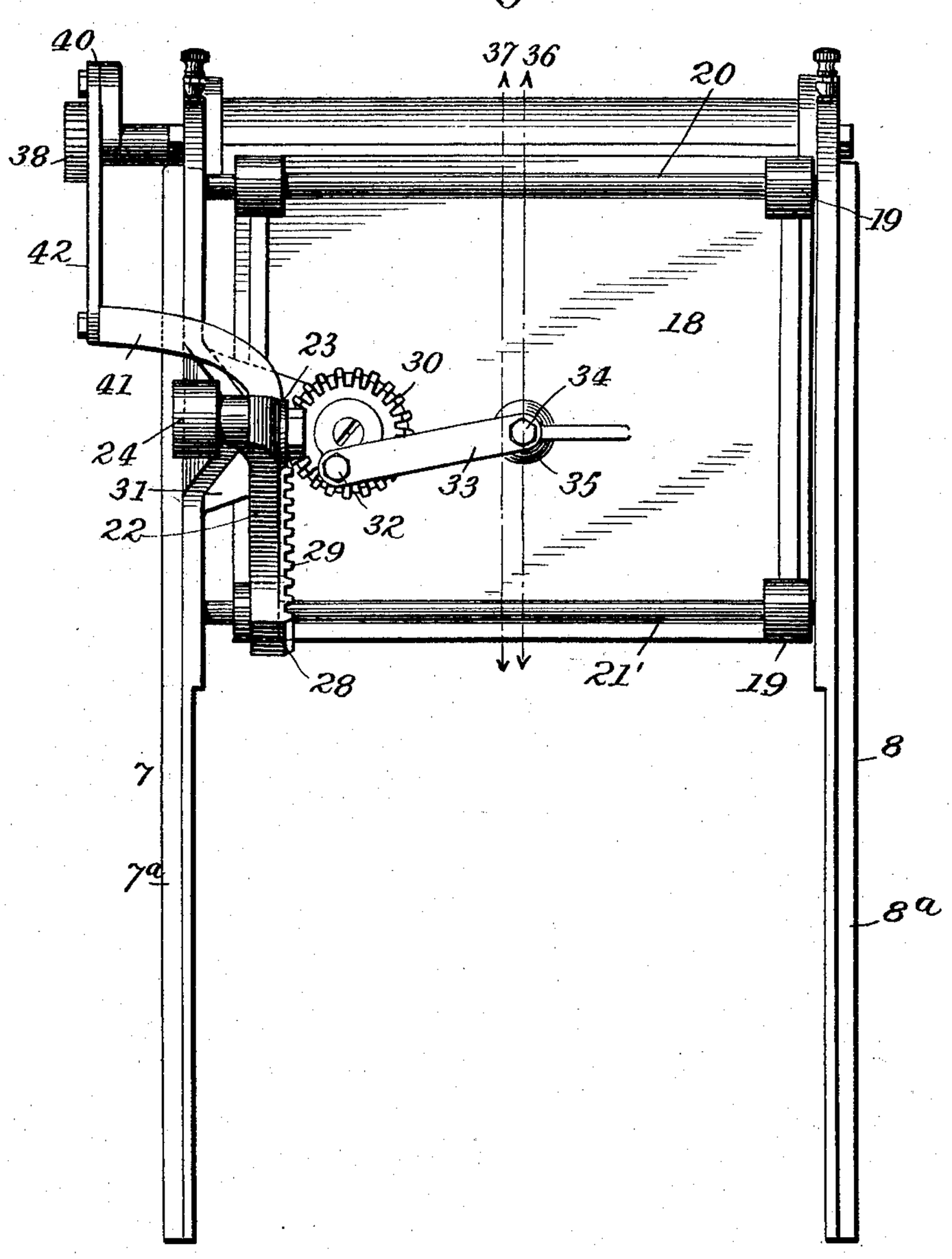
(No Model.) 3 Sheets—Sheet 3.

Fig. 4.

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# UNITED STATES PATENT OFFICE.

JOHN THOMSON, OF BROOKLYN, NEW YORK.

## INKING APPARATUS FOR PLATEN PRINTING-PRESSES.

SPECIFICATION forming part of Letters Patent No. 717,516, dated December 30, 1902.

Application filed March 26, 1902. Serial No. 100,091. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN THOMSON, a citizen of the United States, residing at Brooklyn, Kings county, State of New York, have invented certain new and useful Improvements in the Inking Apparatus of Platen Printing-Presses, of which the following is a specification.

My invention relates to platen printing-presses, and more particularly to what may be properly called a "vibrating" or "reciprocating" plate distribution press, and has for its object to provide improved means whereby the ink may be properly and thoroughly distributed; and to this end the invention consists in a press embodying the various features of construction and arrangement of parts having the general mode of operation substantially as herein specified.

Referring to the accompanying drawings, Figure 1 is a side elevation of a press embodying the invention. Fig. 2 is a side view, slightly enlarged, of a portion of the press. Fig. 3 is a horizontal section on the line 3 3, Fig. 2; and Fig. 4 is a rear detail view of the vibratory-plate-distribution plate and means for operating it.

While my invention may be applied to many and various styles and forms of presses, the parts being arranged and adapted to carry out the objects of the invention in connection with the various presses, I have chosen to illustrate it in connection with a press embodying the general features of what is known in the trade as "Colt's Armory Press," the general features of which are well understood by those skilled in the art, and I do not deem it necessary to specifically describe all these well-known parts. It is sufficient for purposes of the present invention to state that 1 represents a frame of a press, while 2 is a bed; 3, the vibratory reciprocating platen, which is adapted to be operated by the connecting-rods 4, operated through the medium of the crank-shaft 5, which is arranged to be driven in any suitable way through the medium of the driving-gear 6. Connected with the frame of the press are the carriage-ways 7 8, having the grooves $7^a$ $8^a$, in which travels the inking-carriage M, and this carriage is adapted to be operated by any suitable means to distribute the ink over the form on the bed, and in the present instance it is shown as connected by links 9 to the arms 10, attached to the rocker-shaft 13, which latter is arranged to be operated through the medium of the connecting-link 14 and the bell-crank cam-lever 15, engaging the cam-slot $6^a$ in the driving-wheel 6.

Mounted between the carriage-ways is the vibrating or reciprocating ink-distributing plate 18, and this is supported in any suitable way and, as shown, is mounted on the rods 20 21, through the medium of the bearings 19, so that it is made to reciprocate laterally between the carriage-ways. It will be noticed that the length of the plate 18 is less than the distance between the carriage-ways, and the plate may be reciprocated back and forth upon the rods 20 21 by any suitable connecting mechanism.

In the present instance the desired reciprocating movement of the plate 18 is obtained by means of a lever 22, which is pivotally mounted, as at 23, on the carriage-way or frame of the press, and one end of this lever carries a friction-roller 24, which engages and is adapted to be operated by the cam 26 on the face of the crank-wheel 27, mounted on the crank-shaft 5. The other end of the lever 22 in the present instance is provided with a segment 28, having beveled gear-teeth 29, which are adapted to mesh with corresponding teeth on the pinion 30, which pinion is mounted in any suitable way upon the carriage or frame of the press and is shown as supported by the arm 31. Connected to this pinion is a stud-bolt 32, to which is connected a pitman 33, pivotally connected to the carriage in any suitable way, as through the medium of the stud 34, which is mounted in a projection 35 on the rear of the reciprocating plate 18.

If desired, the lever 22 may be utilized to operate the ink-cylinder in the ink-fountain, and I have shown the lever 22 as provided with an extension 41, to which is connected a link 42, the other end of which is connected to the bell-crank lever 40, carrying a pawl 39, engaging the ratchet-wheel 38 on the end of the inking-cylinder in the ink-fountain 43. With this connection the ink-fountain roller will be intermittently operated in harmony with the operations of the laterally-reciprocating ink-distributing plate 18.

The parts being constructed and arranged

substantially as above described, the mode of operation will be readily understood by those skilled in the art, and it will be seen that when the movements of the press are properly timed the plate 18 will be reciprocated laterally back and forth between the carriage-ways while the carriage M is traveling up and down over the plate, and this will produce a cross-line action between the ink-rollers mounted in the carriage, thus rubbing and uniformly spreading and distributing the ink both upon the rollers and the plate. In the construction shown the form of the cam 26 is such that the lever 22 will vibrate upwardly and downwardly once at each rotation of the crank-wheel 27, and this action is timed so that it takes place while the carriage-rollers are in contact with the plate 18. By suitably shaping the cam or timing the movements of the parts any desired number of reciprocations of the distributing-plate 18 may be produced with relation to the movements of the carriage over the same. So, too, by proportioning the parts any desired amount of reciprocation may be produced. In the present instance the parts are shown arranged so that the stud-bolt 32 will cause the plate 18 to reciprocate back and forth between the lines 36 and 37.

The action produced by the means described is smooth, practically noiseless at any rate of speed, and effects a high degree of distribution, and at the same time the apparatus is inexpensive of construction and desirable in use.

What I claim is—

1. In a platen printing-press, the combination with the carriage-ways, of an ink-plate mounted to be moved back and forth between said carriage-ways, a pitman connected to the plate, a cam-actuating lever, and suitable connections between the lever and the pitman, whereby the plate is caused to reciprocate only when the carriage and its rollers are moving across the plate, substantially as described.

2. In a platen printing-press the combination with the carriage-ways, of an ink-plate mounted to move freely back and forth between the ways, a cam-actuated lever, a segment on said lever, a pinion engaging said segment and operated thereby, a stud-bolt mounted on said pinion, and a pitman connecting said stud-bolt with the ink-plate, substantially as described.

3. In a platen printing-press, the combination with the carriage-ways, carriage, ink-fountain and fountain ink-roller of a reciprocating ink-plate, means for reciprocating said plate, and connections between said means and the fountain ink-roller, substantially as described.

4. In a platen printing-press the combination with the carriage-ways, carriage, ink-fountain and fountain ink-roller, of a reciprocating ink-plate over which the carriage travels, a lever connected to the said ink-plate, a connection between the lever and fountain ink-roller, and means for operating said lever, substantially as described.

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

JOHN THOMSON.

Witnesses:
CHARLES E. FOSTER,
F. L. FREEMAN.