No. 881,134.

PATENTED MAR. 10, 1908.

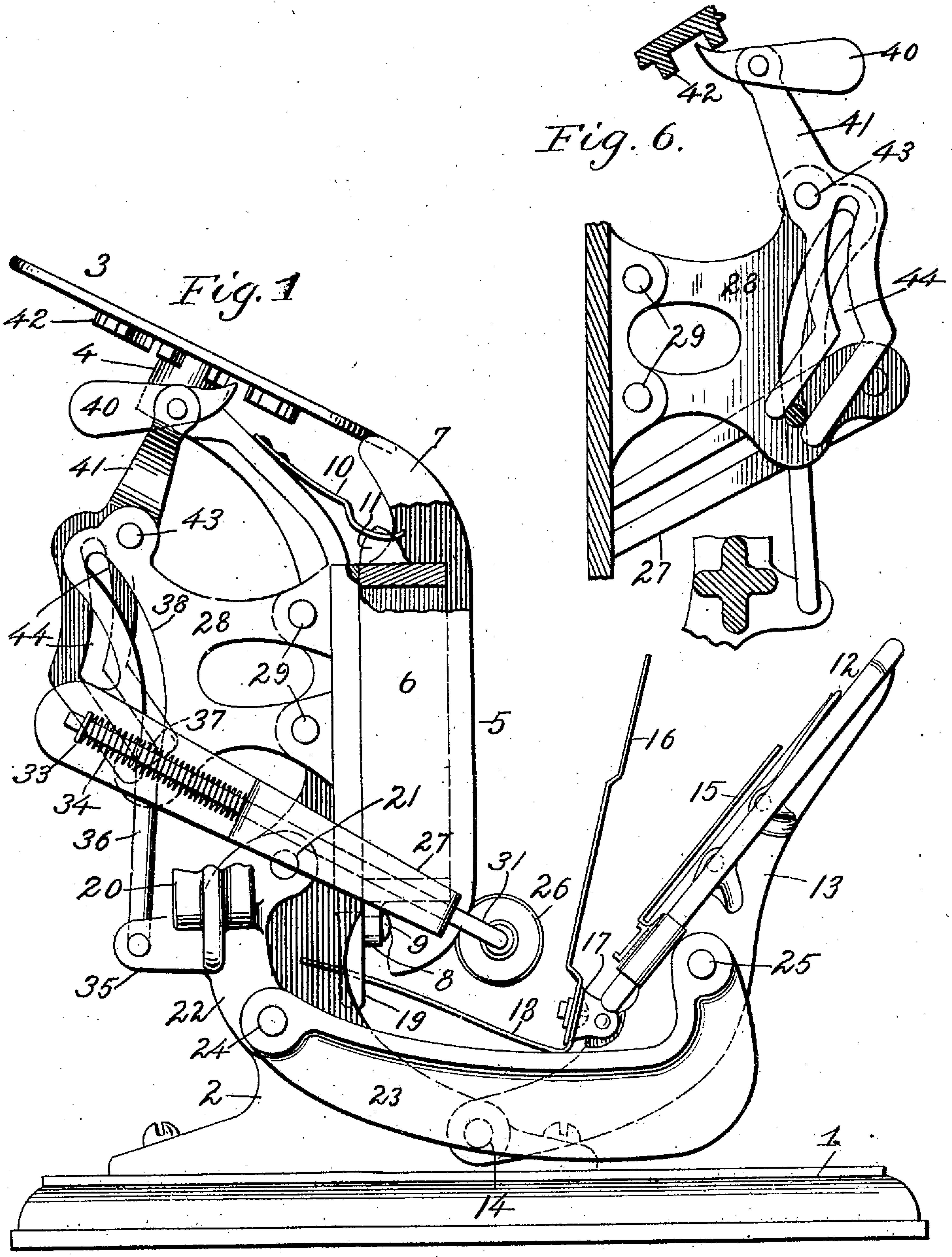
H. T. KINGSBURY.

PRINTING PRESS.

APPLICATION FILED MAR. 25, 1907.

3 SHEETS—SHEET 1.

Fig. 6.



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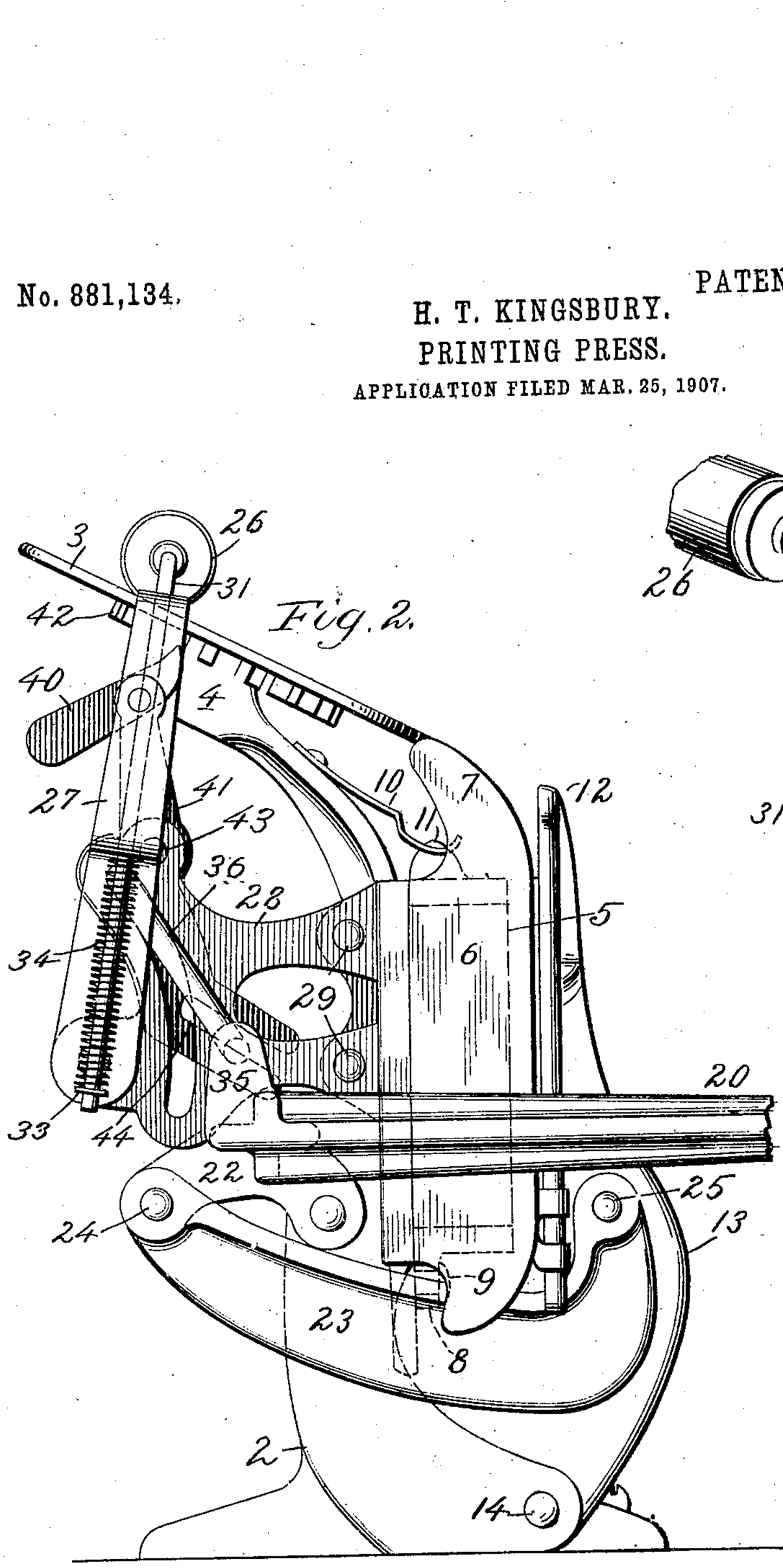
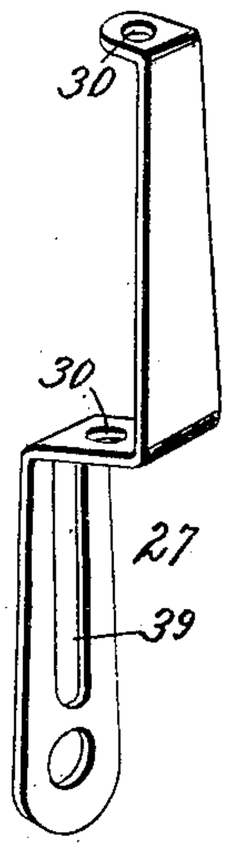


Fig. 2.

Fig. 5.



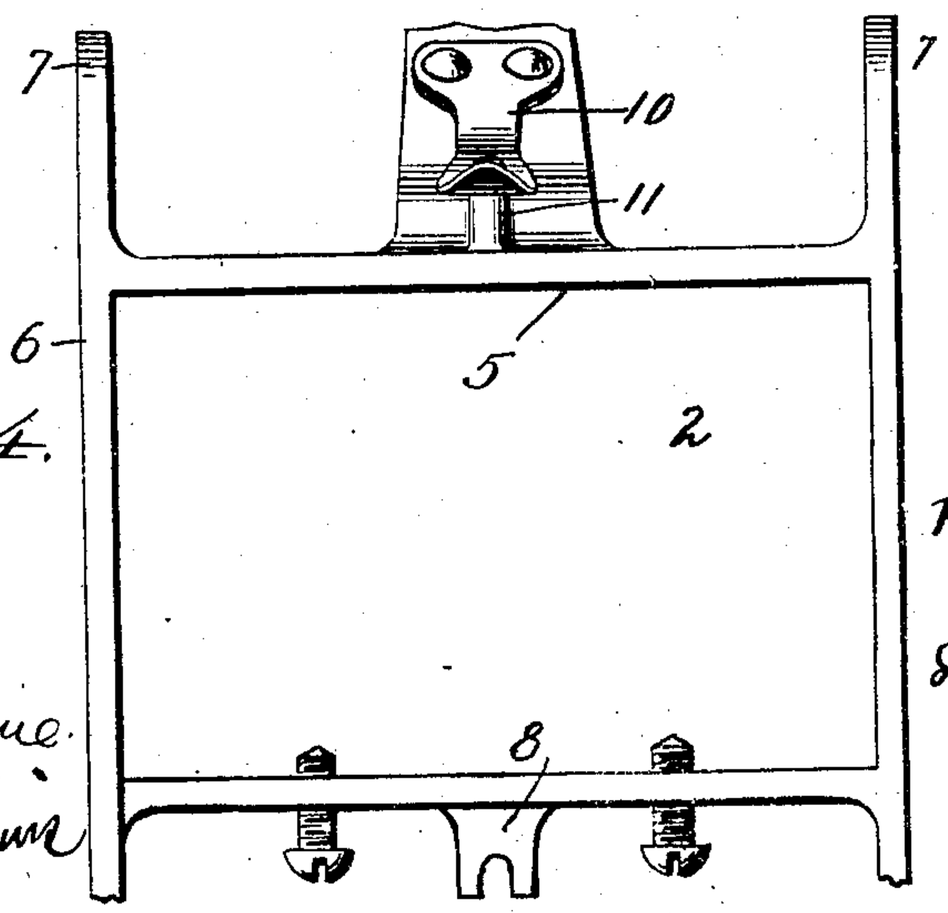


Fig 4.

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APPLICATION FILED MAR. 25, 1907. 3 SHEETS—SHEET 3.

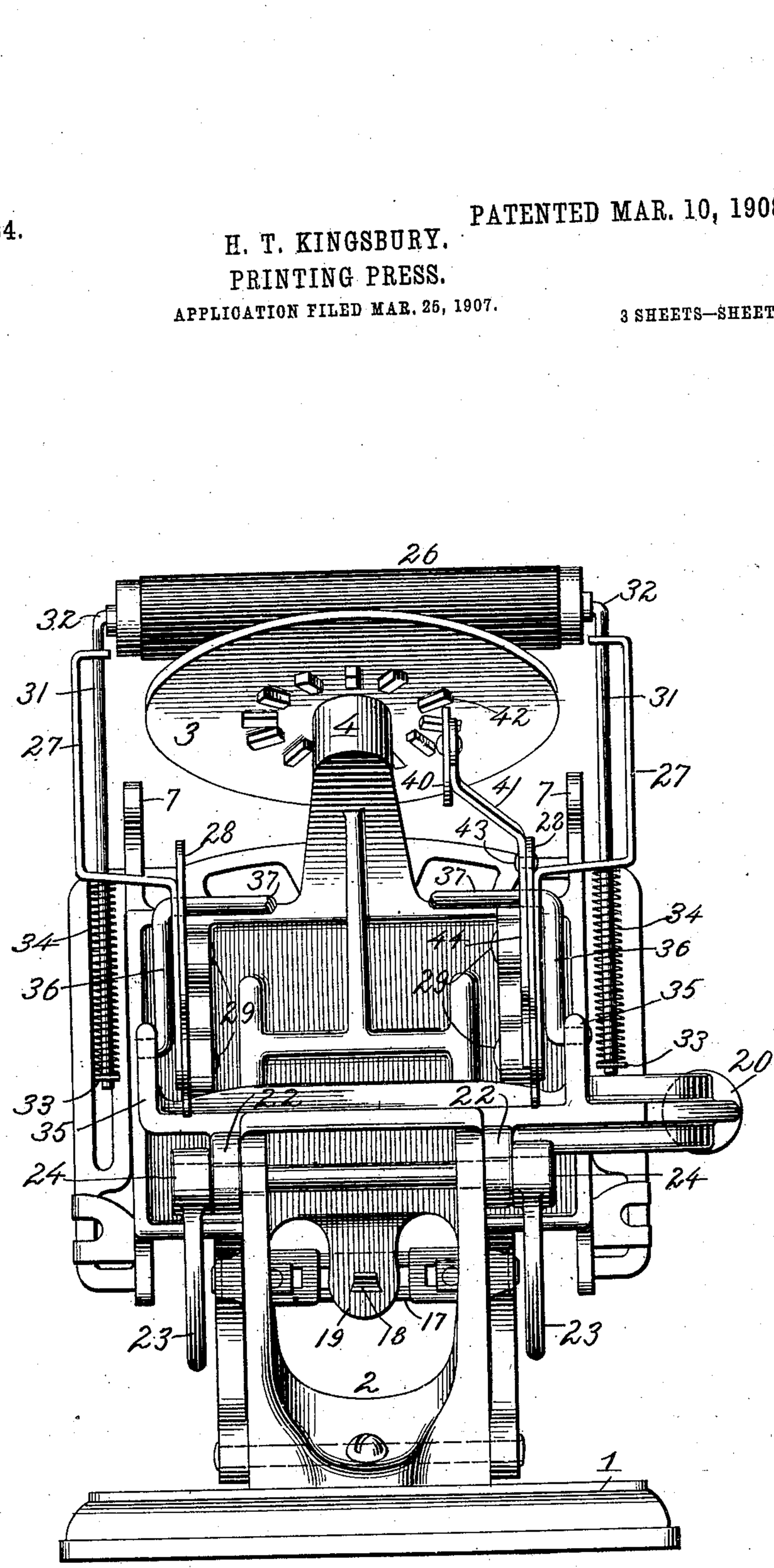

Fig. 3.

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UNITED STATES PATENT OFFICE.

HARRY T. KINGSBURY, OF KEENE, NEW HAMPSHIRE.

PRINTING-PRESS.

No. 881,134. Specification of Letters Patent. Patented March 10, 1908.

Application filed March 25, 1907. Serial No. 364,371.

To all whom it may concern:

Be it known that I, HARRY T. KINGSBURY, a citizen of the United States, residing at Keene, in the county of Cheshire, State of New Hampshire, have invented certain new and useful Improvements in Printing-Presses, of which the following is a description, reference being had to the accompanying drawing, and to the letters and figures of reference marked thereon.

My invention relates to new and useful improvements in printing presses, and particularly to that class of press provided with a platen mounted to rock toward and from a stationary bed over which an oscillating ink roller is moved.

The invention consists in certain improvements in the mechanism for rocking the platen and for simultaneously moving the ink roller.

The invention further consists in the manner of supporting the ink roller.

The invention still further consists in the particular means for supporting the chase on the bed of the press.

The invention still further consists in the improvements and arrangements of the parts hereinafter described.

In the accompanying drawings which show one embodiment of my invention, Figure 1 is a side elevation of a press embodying my improvements, showing the platen in its extreme outer position; Fig. 2 is a view similar to Fig. 1, showing the platen as closed upon the bed of the machine; Fig. 3 is a rear elevation of my improved press; Fig. 4 is a detail view showing the manner of securing the chase to the bed of the press; Fig. 5 is a detail perspective view, showing the manner of supporting the inking roller; and Fig. 6 is a detail view, showing partly in section the means for operating the ink-distributing plate.

The bed plate 1 of the press has rising therefrom a supporting frame 2, which carries at its upper end the ink-distributing plate 3. The supporting framework 2 has a bearing 4, in which a journal stud on the lower side of the ink-distributing plate rests and rotates.

The chase 5 is provided with side pieces 6, having curved outer ends 7, which serve as a means to guide the ink roller as it moves across the face of the type carried by the chase. The lower face of the chase is provided with a depending bifurcated lug 8, which engages a stud 9 carried by the bed of the press, as shown in Fig. 1. The chase is retained against the bed of the press by means of the spring 10, having an opening in its outer end, which engages the lug 11 extending from the upper face of the chase. When it is desired to remove the chase from the bed of the press, the spring 10 is lifted, and the upper end of the chase released, after which the same may be lifted from the supporting stud 9.

The platen 12 is carried by an arm 13, which is pivoted at 14 to the supporting framework of the press. The pivotal point 14 of the arm 13 is substantially in the same vertical plane as the face of the type, so that as the platen engages the type, the same is moving substantially at right angles to the face of the type. Said platen is provided with the usual gages 15, and retaining fingers 16. The retaining fingers 16 are mounted on a cross bar 17, which cross bar is oscillated by means of a swinging finger 18, engaging a depending projection 19, carried by the bed of the press.

As a means for oscillating the platen, I have provided a hand lever 20, which is pivoted at 21 to the framework 2 of the press. Said hand lever has a depending projection 22 to the outer end of which is pivoted a link 23, by means of a pivot bolt 24. The other end of the link 23 is bent upward and pivoted at 25 to the arm 13 of the platen.

It will be noted that as the hand lever is swung about the pivotal support 21, that the link 23 will cause the platen to be rocked about its pivotal support, and be brought into engagement with the type. The inking roller 26 is carried by the swinging arms 27. Each of said arms 27, as shown in Fig. 5, is pivoted to a bracket 28, which is carried by the bed of the press, as clearly shown in Fig. 6. Said bracket is secured to the bed by means of suitable lugs and rivets 29, 29.

The arm 27, as shown in Fig. 5, is bent outward, then upward, and backward upon itself, and is provided with suitable openings 30, to receive the rod 31, which directly supports the inking roller. This rod has its upper end 32, bent at right angles, and engages a bearing socket in the ink roller. The lower end of the rod is provided with a collar 33 (see Fig. 2).

Intermediate the collar 33 and the bent portion of the arm 27 is a spring 34, which normally holds the ink roller in contact with

the ink-distributing plate and the bed of the press.

As a means for swinging the inking roller carrying arms, I have provided the hand operated lever 20 with integral rocker arms 35 to which are pivotally connected the lower ends of the arms 36 of a yoke. The upper ends of the arms 36 are connected by a cross bar 37 arranged to travel in cam slots 38 formed in the brackets 28. Each arm 27 is provided with an elongated slot 39 extending in a radial line from the pivot point of the arm and through which the cross bar 37 of the yoke also extends. As the hand lever is operated the yoke is moved upward from the position shown in Fig. 1 to that shown in Fig. 2 and the cross bar 37 will follow the cam slots 38. This movement of the yoke, through the engagement of its bar 37 with the slots of arms 27, causes the arms 27 to swing about their pivotal connections with the brackets 28.

It will be noted from the shape of the cam slot 38, that the connection of the cross bar 37 with the arm 27, is moved toward and from the pivotal connection of the arm 27. When the parts are in the position shown in Fig. 1, the cross bar 37 is nearest the pivot of the arm 27, and, therefore, the movement of the inking roller will be very rapid; but as the inking roller leaves the chase and moves onto the distributing plate, the bar 37 has moved away from the pivot of the arm 27, and, consequently, the movement of the inking roller will be very slow.

As a means for turning the distributing plate, I have provided a pawl 40, which is pivoted to the upper end of an arm 41, and engages the ratchet teeth 42, formed on the under side of the distributing plate. Said arm 41 is pivoted at 43 to the bracket 28, and has a depending portion formed with a cam slot 44. A portion of the cam slot 44 is curved to correspond to the cam slot 38 in the bracket, while the remaining portion of the slot 44 extends at an angle thereto.

When the inking roller is moving down from the distributing plate, the cross bar 37 which also engages the slot 44, will convey no movement to the arm 41, until after the portion of the slot which coincides with cam slot 38, is passed. At this time, the inking roller has left the distributing plate, and a further movement of the cross bar causes the lever 41 to swing, and the ink-distributing plate to be rotated the distance of one ratchet tooth.

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

1. A printing press, comprising a supporting frame, a platen pivotally supported upon said frame, a bed carried by said frame, an inking roller, a swinging arm for carrying said inking roller, a rocker arm pivoted upon said supporting frame, a link for connecting said rocker arm to said platen, a yoke connecting said rocker arm to said swinging arm, and a bracket having a guiding slot for said yoke; substantially as described.

2. A printing press, comprising a supporting frame, a bed carried thereby, an inking roller, a swinging arm carrying said inking roller, a bracket to which said swinging arm is pivoted, a rocker arm pivoted to said supporting frame, a yoke pivoted to said rocker arm and connected to said swinging arm, said bracket having a slot for said yoke arranged eccentric to the pivot of the swinging arm; substantially as described.

3. A printing press, comprising a supporting frame, a bed carried thereby, an inking roller, a swinging arm having a radial slot, a bracket to which said swinging arm is pivoted, a rocker arm, a yoke pivoted to said rocker arm and having a connection with the slot in said swinging arm, said bracket having a slot coöperating with said yoke and arranged eccentric to the pivot of said arm.

4. A printing press comprising a supporting frame, a bed carried thereby, an inking roller, swinging arms carrying said inking roller, rods carried by said swinging arms and having the ends thereof bent at right angles to the body of the rod, said ink roller having recessed bearings to receive the ends of said rods; substantially as described.

5. In a printing press, a frame, a bed carried thereby, a chase supported on the bed, said chase having upper and lower horizontal walls, a bifurcated lug depending from the lower wall, a stud projecting from the bed and engaged by said lug, a lug projecting from the upper wall of the chase, and a spring retainer carried by the frame and provided with an opening for the reception of said upper lug.

6. A printing press comprising a supporting framework, a rocking platen, an inking roller, means for rocking said platen and operating said inking roller, including a rocker arm, a yoke pivoted to said rocker arm, radially slotted swinging arms supporting said inking roller, brackets supported by the framework to which said swinging arms are pivoted, said brackets having slots formed therein, said yoke coöperating with the radial slots in said arms, and the slots in said bracket, an ink-distributing plate carried by said support, a swinging arm pivoted to said bracket for operating said plate, and means whereby said yoke operates said swinging arm; substantially as described.

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

HARRY T. KINGSBURY.

Witnesses:
A. O. SPEARE,
W. C. BURDETT.