C. A. PINKHAM.

ADJUSTABLE PLATEN FOR PRINTING PRESSES.

APPLICATION FILED FEB. 26, 1907.

912,727.

Patented Feb. 16, 1909.

2 SHEETS—SHEET 1.

Fig. 2.

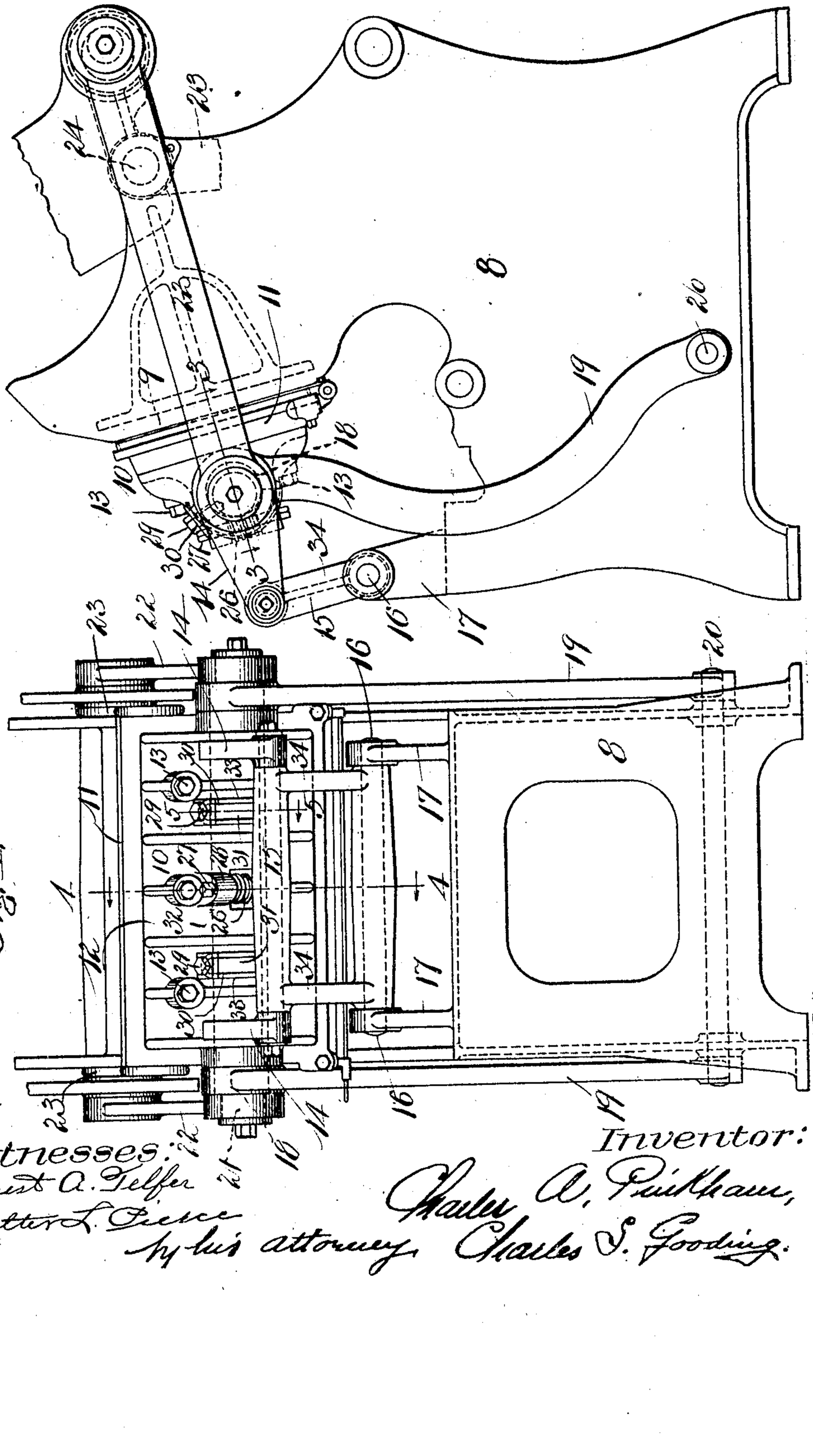

Fig. 1.

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Inventor:
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Fig. 3.

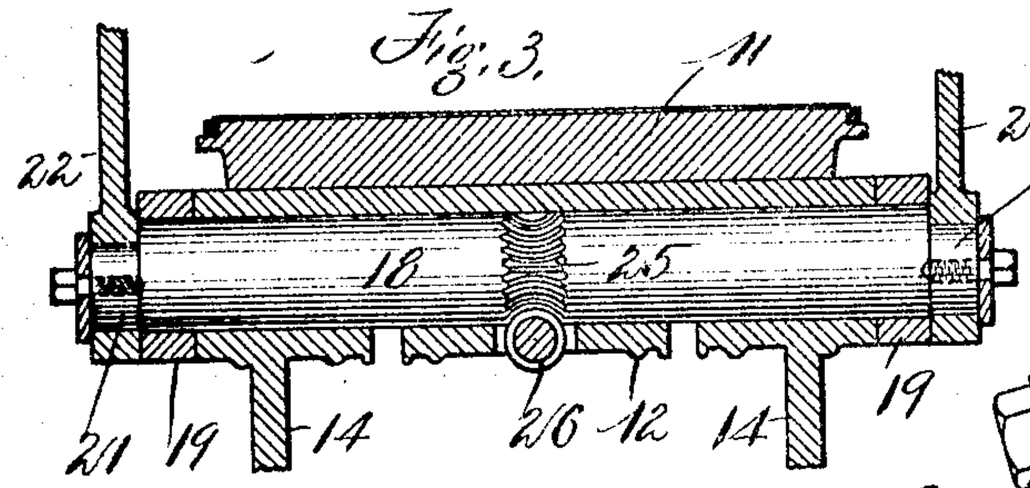


Fig. 4.

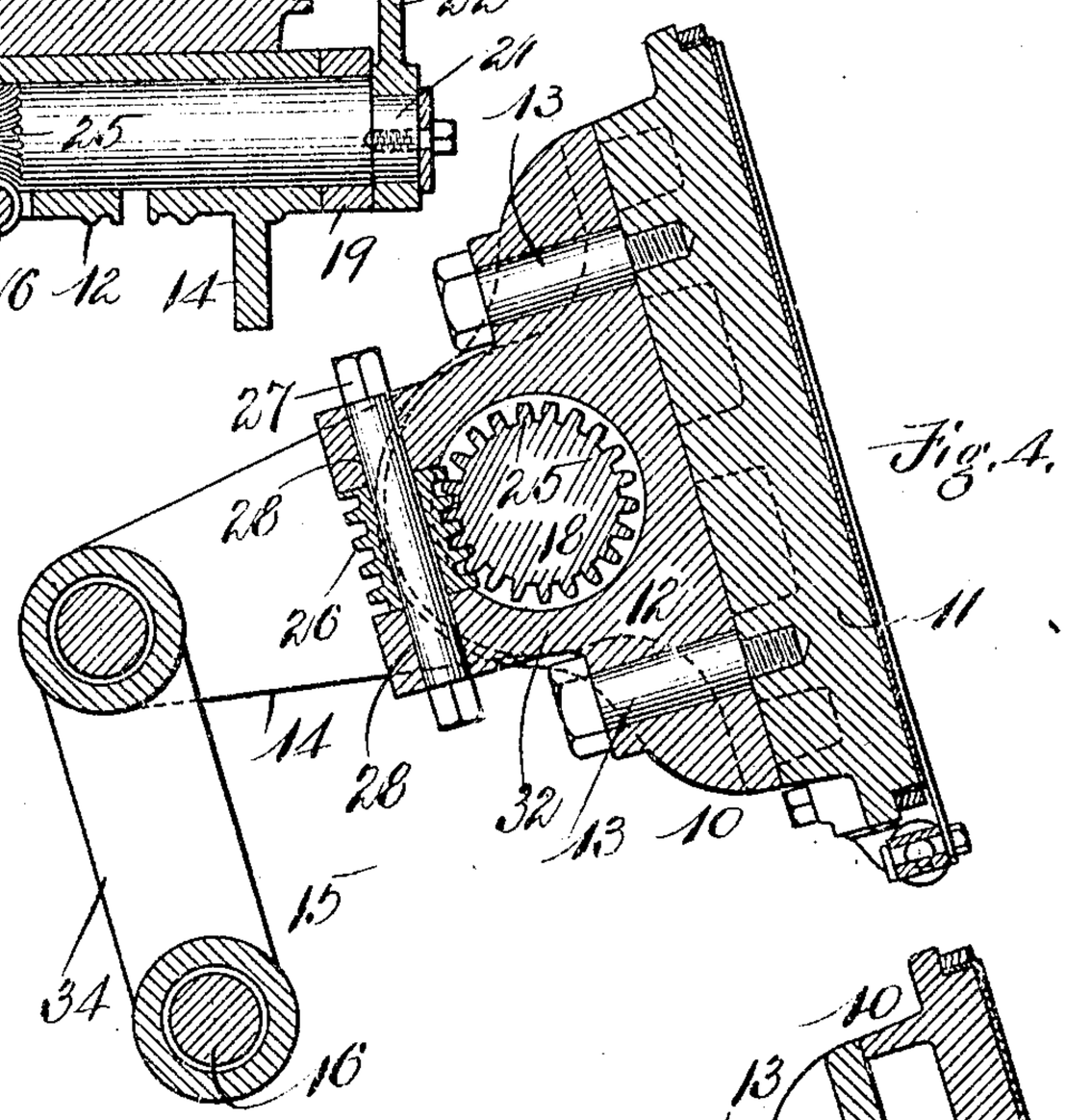


Fig. 6.

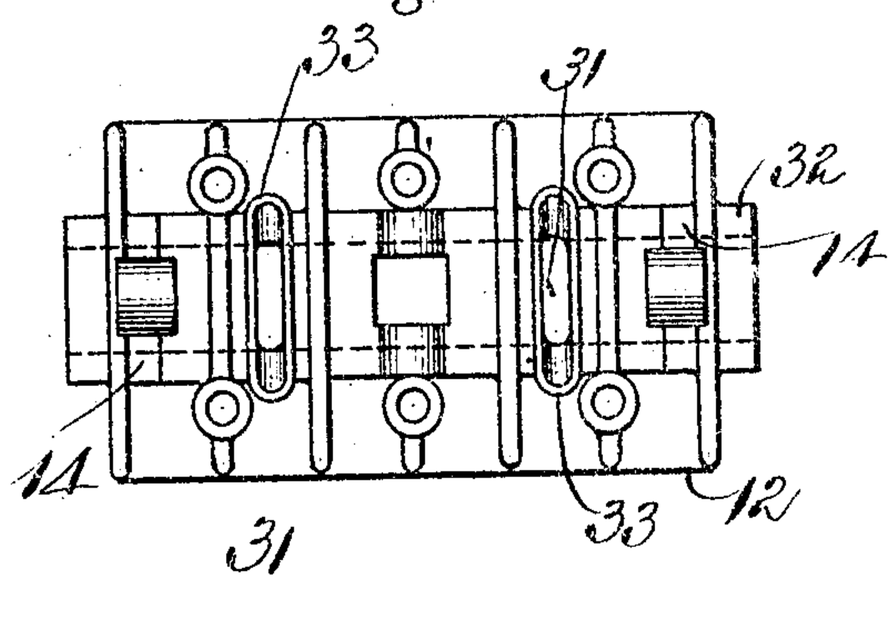
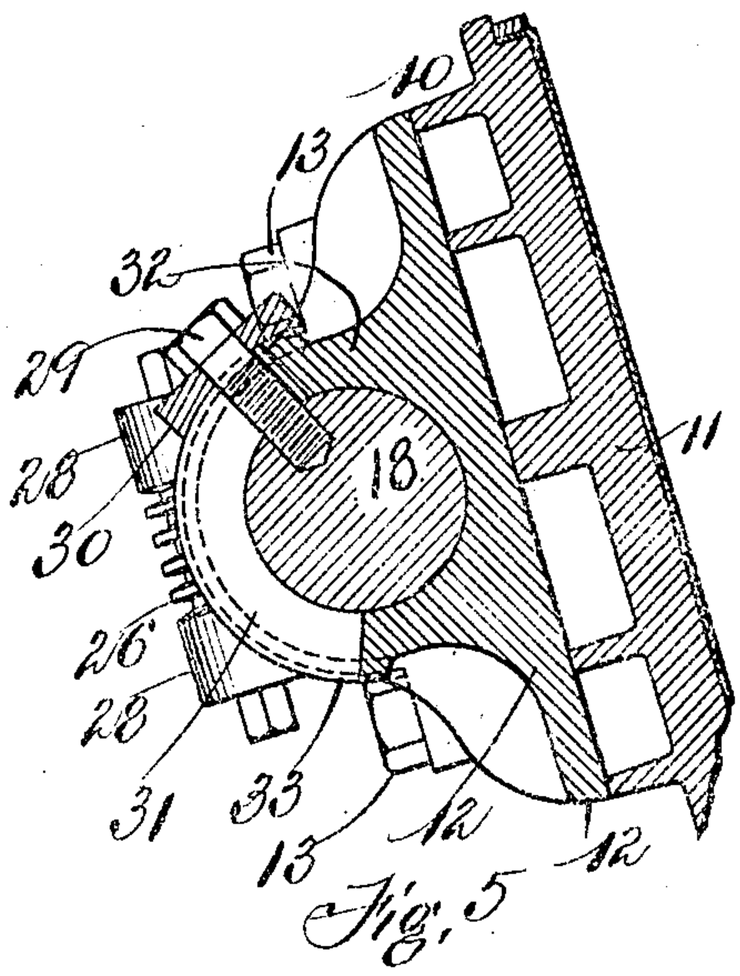


Fig. 5.



Witnesses:
Ernest A. Telfer
Walter L. Pierce

Inventor
Charles A. Pinkham.
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UNITED STATES PATENT OFFICE.

CHARLES A. PINKHAM, OF QUINCY, MASSACHUSETTS, ASSIGNOR TO THE IMPERIAL ART PRESS CO., A CORPORATION OF MAINE.

ADJUSTABLE PLATEN FOR PRINTING-PRESSES.

No. 912,727. Specification of Letters Patent. Patented Feb. 16, 1909.

Application filed February 26, 1907. Serial No. 359,407.

To all whom it may concern:

Be it known that I, CHARLES A. PINKHAM, a citizen of the United States, residing at Quincy, in the county of Norfolk and State of Massachusetts, have invented new and useful Improvements in Adjustable Platens for Printing-Presses, of which the following is a specification.

This invention relates to printing presses of the type known as platen presses, but for illustration I refer specifically to the one described and illustrated in Letters Patent of the United States No. 735,818, patented Aug. 11, 1903, ink distributing apparatus for printing presses, G. W. Prouty, the object of the invention being to provide means for adjusting the platen toward and away from the type-bed, so that the surface of the platen can be adjusted to a nicety to the required distance from the surface of the type. The operation of the machine is the same as in the machine of said patent and in the drawings only a portion of the printing press is illustrated, sufficient to indicate the relative position of the platen to the type-bed and the manner in which said platen is supported, adjusted and controlled.

The invention consists in the combination and arrangement of parts set forth in the following specification and particularly pointed out in the claims thereof.

Referring to the drawings: Figure 1 is a front elevation of a printing press with my improved adjustable platen attached thereto. Fig. 2 is a partial side elevation of the same, broken away to save space in the drawings. Fig. 3 is a sectional elevation taken on line 3—3 of Fig. 2 as viewed in the direction of the arrows on said line. Fig. 4 is a sectional elevation taken on line 4—4 of Fig. 1, looking toward the left in said figure. Fig. 5 is a sectional elevation taken on line 5—5 of Fig. 1 looking toward the left. Fig. 6 is a detail plan of the platen yoke.

Like numerals refer to like parts throughout the several views of the drawings.

In the drawings, 8 is the frame of the press and 9 a type-bed fast thereto. The platen 10 is made in two parts, viz. the platen bed 11 and the platen yoke 12. These two parts are rigidly fastened together by screw-bolts 13, 13. Arms 14, 14 project forwardly from the platen yoke 12 and are pivotally connected at their outer ends to a rocker-frame 15 which, in turn, is pivoted to a shaft 16 having bearings in ears 17 forming a portion of or attached to the frame 8. A shaft 18 extends through the platen 10—that is, through the yoke portion 12 of said platen and is supported at its opposite ends in the radius arms 19 which, in turn, are fastened at their lower ends to a shaft 20 having bearings in the frame 8 and adapted to rock therein. The opposite ends of the shaft 18 are turned down to form eccentric pins 21, 21 and these eccentric pins are connected by links 22, 22 to a rocking member 23. The rocking member 23 is fast to a shaft 24 journaled to rock in bearings in the frame 8. Said rocking member 23 is rocked, together with the shaft 24 to which it is fastened, by suitable mechanism, preferably like that illustrated and described in said patent. This mechanism forming no portion of this invention, it is not thought necessary to describe or illustrate the same in relation to the adjustable features of the platen, which I will now proceed to describe.

The shaft 18 has a worm-gear 25 cut in its periphery which meshes into a worm 26. The worm 26 is fastened to a rotary spindle 27 which has bearings 28, 28 in the platen yoke 12. The shaft 18 is rigidly clamped to the platen 10 and directly to the platen yoke 12 by clamp-screws 29 and clamp-plates 30, the clamp-screws 29 having screw-threaded engagement with the shaft 18 and projecting through slots 31 in the platen yoke 12. The clamp-plates 30 are interposed between the heads of the clamp-screws 39 and the outer surface of the hub 32 which forms a portion of said platen yoke. Ribs 33, 33 are provided upon said hub which contact directly with the under face of the clamp-plates 30 and form a finished surface against which said clamp-plates bear.

The arms 34, 34 of the rocker-frame 15 and the arms 19 constitute radius arms upon which the platen as a whole is supported and by which it is partly controlled in its movements toward and away from the type-bed, so that said radius arms form a movable support for the platen.

The links 22, while described as being connected to a rocker-frame may be connected at one end thereof to any movable mem-

ber which is actuated by the mechanism of the machine to impart a longitudinal movement to said links.

The operation of the device is as follows: The platen is moved toward and away from the type-bed in the printing operation by means of the links 22, 22, said links being actuated by the rocking member 23 which derives its movements from suitable mechanism. To adjust the platen as a whole toward or away from the type-bed, the operator loosens the clamp-screws 29, 29 and then rotates the spindles 27 in the proper direction, thus rotating the worm 26 and worm-gear 25 and consequently rotating the shaft 18. It will be seen that as said shaft 18 is rotated the eccentric pins or projections at the opposite ends thereof are held against movement toward and away from the type-bed by the links 22, and as these projections cannot move laterally thereof it follows that the main body of the shaft itself must move around the axial center of said eccentric pins or projections, thus causing the platen to be moved toward and away from the type-bed 9. After the platen has been adjusted to the desired location relatively to the type-bed, the operator tightens the clamp-screws 29, 29 and the platen is thus firmly fastened and clamped to the shaft 18. It will be seen that by the adjustment hereinbefore set forth the platen can be adjusted to a nicety with relation to the type-bed and after being so adjusted can be firmly locked so that there is no possibility of the same getting out of adjustment.

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

1. In a printing press, a platen, a movable support therefor, a type-bed, a shaft rotatably supported on said platen and terminating at its opposite ends in eccentric pins, an actuating member, links connecting said eccentric pins to said member, a worm gear fast to said shaft, a worm meshing into said worm gear, and bearings on said platen in which said worm is journaled, whereby said platen may be adjusted toward and away from said type-bed.

2. In a printing press, a platen, a movable support therefor, a type-bed, a shaft extending through said platen and terminating at its opposite ends in eccentric pins, an actuating member, links connecting said eccentric pins to said member, a worm-gear fast to said shaft, a worm meshing into said worm-gear, and bearings on said platen in which said worm is journaled, whereby said platen may be adjusted toward and away from said type-bed.

3. In a printing press, a platen, a movable support therefor, a type-bed, a shaft extending through said platen and terminating at its opposite ends in eccentric pins, an actuating member, links connecting said eccentric pins to said member, means to rotate said shaft on said platen, whereby said platen is adjusted toward and away from said type-bed, and a clamp-screw fast to said shaft and projecting through a slot provided in said platen, whereby said shaft and platen may be locked together.

4. In a printing press, a platen, a movable support therefor, a type-bed, a shaft rotatably supported on said platen and terminating at its opposite ends in eccentric pins, an actuating member, links connecting said eccentric pins to said member, a worm gear fast to said shaft, a worm meshing into said worm gear, bearings on said platen in which said worm is journaled, whereby said platen may be adjusted toward and away from said type-bed, and means to lock said shaft to said platen.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CHARLES A. PINKHAM.

Witnesses:
LOUIS C. JONES,
ANNIE J. DAILEY.