E. B. ROBINSON.

PRINTING PRESS.

APPLICATION FILED JUNE 3, 1909.

952,583.

Patented Mar. 22, 1910.

2 SHEETS—SHEET 1.

FIG. 1.

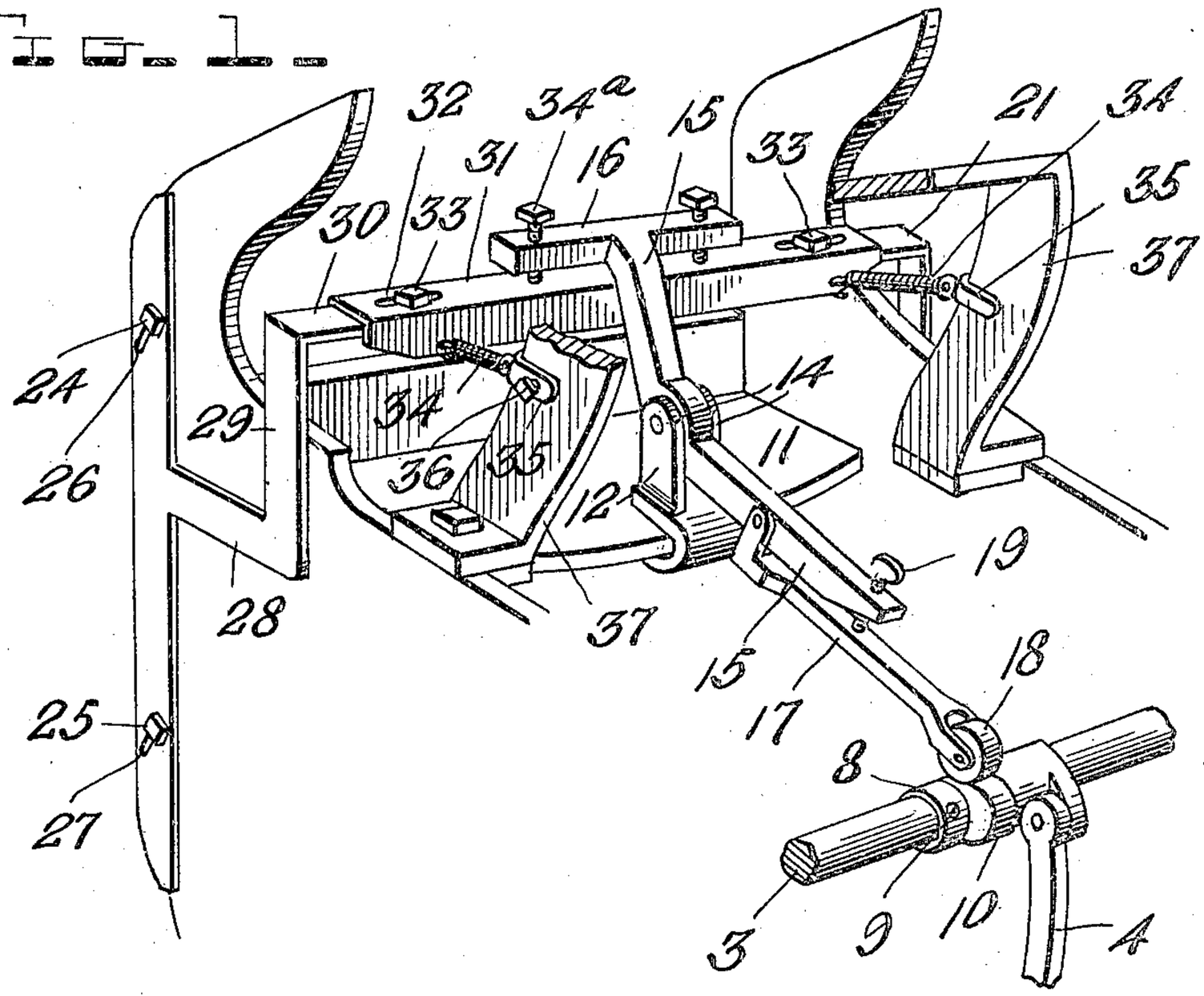
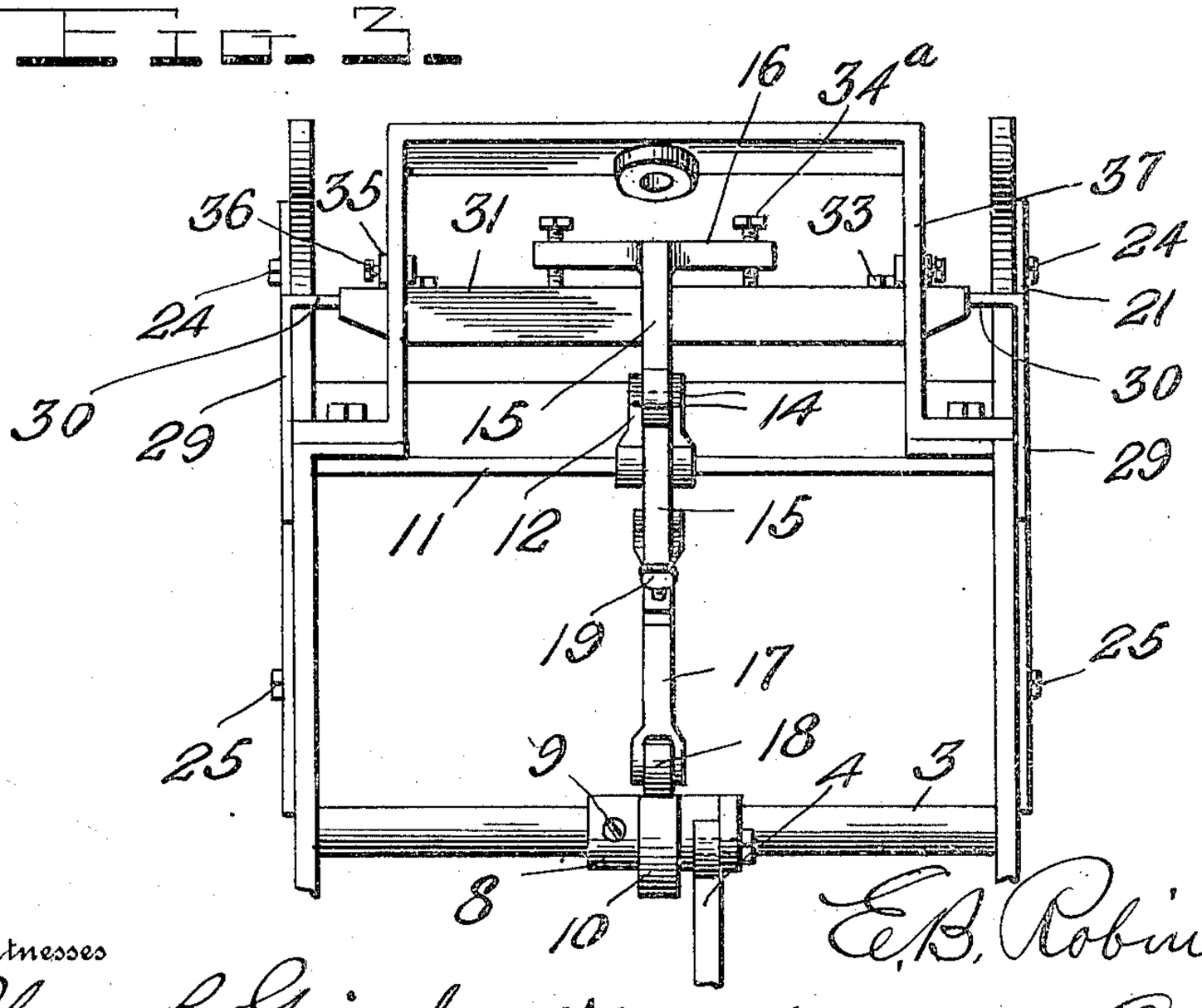


FIG. 2.



Witnesses

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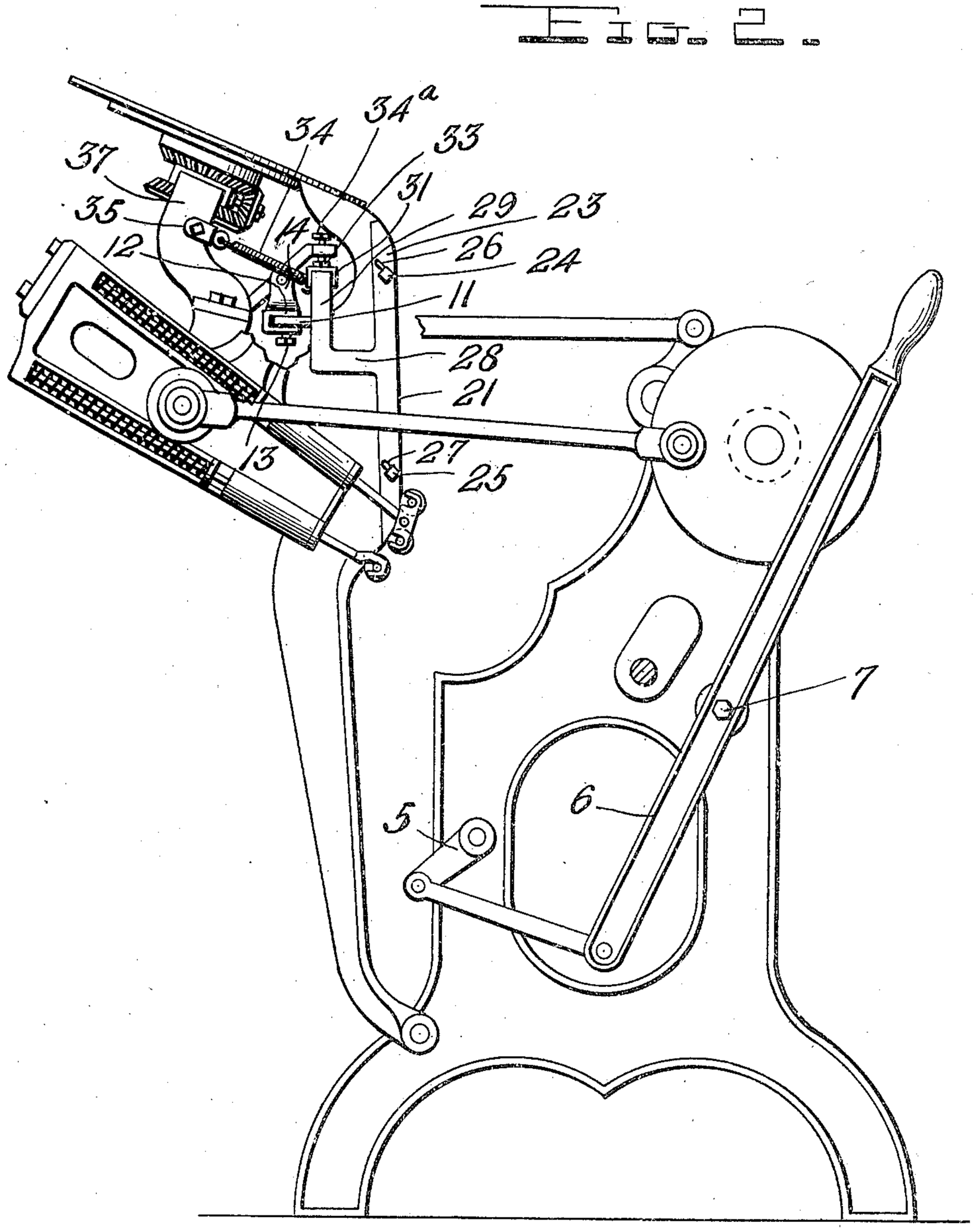
2 SHEETS—SHEET 2.

FIG. 2.



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UNITED STATES PATENT OFFICE.

EBEN B. ROBINSON, OF FLOODWOOD, MINNESOTA.

PRINTING-PRESS.

952,583. Specification of Letters Patent. Patented Mar. 22, 1910.

Application filed June 3, 1909. Serial No. 499,961.

To all whom it may concern:

Be it known that I, EBEN B. ROBINSON, a citizen of the United States, residing at Floodwood, in the county of St. Louis and State of Minnesota, have invented certain new and useful Improvements in Printing-Presses, of which the following is a specification, reference being had to the accompanying drawings.

My invention is in the nature of an attachment for printing presses and while I will describe it in connection with the well-known "Gordon" press it will be readily understood that it may be attached to other makes of presses with equal facility.

In printing presses without some attachment for the purposes for which my invention is intended, when the throw-off is applied, and contact of the form with the paper thus prevented, the inking rollers will continue to pass over the form and the inking disk, which is objectionable on account of the accumulation of ink upon the face of the type, the consequent waste of ink and the waste of paper due to the spoiling of the first few impressions after the throw-off is released. When the press is stopped and the throw-off applied, the inking rollers very often rest upon the face of the form. This is also objectionable and liable to damage the inking rollers.

It is the object of my invention to provide an attachment for printing presses, whereby, when the throw-off is applied, when the press is running, the inking rollers, in their reciprocation, will not contact with the type, and whereby, when the press is stopped, the inking rollers cannot become damaged by resting upon the form.

With this object in view, my invention consists in an attachment which may be secured to printing presses without alteration of the press itself except to make the roller trucks one-eighth of an inch wider on the face and without interference with the operation of any portion of the press except the inking rollers, the construction and operation of which attachment will be hereinafter fully described and afterward specifically claimed.

In the accompanying drawings which illustrate my attachment, and sufficient of the printing press to enable its construction and operation to be readily understood, Figure 1 is a perspective view, looking from the rear and to the right hand of the press, the parts of the press which coöperate with the attachment being shown, and all other parts omitted. Fig. 2 is a view in elevation of the left side of the attachment showing the parts illustrated in Fig. 1 and illustrating the throw-off lever and its attachments. Fig. 3 is a rear elevation showing parts of printing press to which my attachment is applied.

Like reference characters mark the same parts in all three figures.

Referring specifically to the drawings, 3 indicates the back shaft of the machine which, when the throw-off lever 6 is pressed backward to apply the throw-off in the usual manner, will be partially rotated, the throw-off being pivoted to the bed of the press at 7. On the class of presses hereinbefore referred to, plate 8 is secured to the back shaft 3 by means of a screw bolt 9. In my attachment I provide a cam or saddle 10 which is fitted over this plate 8, and secured to the back shaft 3 by means of the same screw bolt 9. To a cross bar 11 of the bed I attach a chair or bracket 12 by any suitable means such for instance, as a set screw 13. Rising from this chair or bracket 12 are plates or bearings 14 in which is pivotally mounted a rocker arm 15 which carries at its forward end a cross bar 16, and has pivoted to it in the rear of its own pivot, a roller carrying arm 17 which carries at its outer end a roller 18, in position to be operated upon by the cam or saddle 10 when the back shaft is rotated forward. The distance between the rocker arm 15 and its roller carrying arm 17 is adjustable by means of a set screw 19 threaded through the rocker arm and bearing against the roller carrying arm.

At 20 and 21 are indicated the roller guides of my attachment which are secured to those portions of the press which serve to guide the rollers in their reciprocation, during their ordinary operation, as by means of screws or bolts 24 and 25 threaded into the bed and fitting loosely in inclined slots 26 and 27 in the roller guides 20 and 21. The roller guides are each provided with a horizontal rearwardly projecting arm as at 28, from which springs a vertical arm 29, from which project inwardly a horizontal arm 30 and upon these two horizontal arms 30 a frame 31 is mounted having longitudinal slots 32 through which are passed set

screws or bolts 33 which engage said horizontal arms 30 whereby the distance apart of the roller guides 20 and 21 may be adjusted laterally. The cross bar 16 of the rocker arm is located above the frame 31 and set screws 34ª projecting through said cross arm, provide a bearing against the frame and regulate the distance of the cross arm therefrom. Springs 34 are attached to and extend rearwardly from the frame 31 and are secured by means of clevises or brackets 35 and set bolts 36 to the upright edges 37 of the bed. Said springs 34 retract the roller guides 20, 21 when the cam 10 moves from beneath the roller 18.

In the ordinary operation of the press, when it is desired to apply the throw-off in the usual manner, by the oscillation of the throw-off lever 6, the back shaft 3 is rotated in a direction to cause the cam or saddle to pass under the roller 15. This, through the medium of the roller carrying arm 17, will rock the rocker arm 15 and cause the bolts 36 of the cross bar 16 to press downward upon the frame 31, carrying that frame downward and with it the roller guides 20 and 21. As these guides move downward, owing to the inclination of the slots 26 and 27, they are also thrown forward and project slightly beyond the guides 22 and 23 of the press. The result of this is that whenever the throw-off is applied when the press is running, the inking rollers will pass over the roller guides 20 and 21 and move in a plane removed from the face of the form so that the rollers will not contact with the form. The rollers will be also prevented in the same manner from resting upon the face of the form when the throw-off is applied when the press is not running.

All of the disadvantages mentioned hereinbefore are avoided by the use of this attachment which always comes into use when the throw-off is applied, no matter whether the press is running or not.

If it is desired to properly spread the ink on the plate, the application of the throw-off will bring my attachment into use and the inking rollers will pass forward and backward over the ink plate and my roller guides without touching anything else.

It will be observed that the only manipulation of the press as ordinarily constructed, in order to receive my attachment, is to provide threaded holes to receive the bolts 24 and 25 to secure the roller guides to the side of the press and to widen the faces of the roller trucks. The clevises 35 might be secured to the upright edges 37 of the bed by any suitable clamping means, without the necessity of boring for the bolts 36, the set screws being threaded through one side only of the clevis and being on the uprights. The plate 8 and the screw bolt 9 which secures it to the back shaft 3 is utilized to secure my attachment also. The set screw 19 serves as a direct tension or adjustment for roller guides 20 and 21, whereby the pressure of the ink rollers on the form may be varied, whether the throw-off is applied or not.

The utility of this attachment will be obvious to those skilled in the art and it will be further obvious that changes and variations might be made in the construction of the several parts of the attachment, without departing from the spirit and scope of the invention.

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

1. The combination, in a printing press, stationary guide pins, roller guides having angular slots to receive said pins, a horizontal arm connecting said roller guides, a rocker arm to bear upon said horizontal arm, a cam for actuating the other end of said rocker arm, and a retracting spring for said roller guides.

2. The combination, in a printing press, slidably mounted roller guides, a horizontal arm connecting said guides, said arm being composed of longitudinally extensible sections, a rocker arm adapted to have one arm engage and actuate said horizontal arm, a cam for actuating the other end of the rocker arm, and a retracting spring for said guides.

3. The combination, in a printing press, slidably mounted roller guides, a horizontal arm connecting said guides, a rocker arm adapted to have one end engage and actuate said horizontal arm, a supplemental arm pivoted to the other end of the rocker arm, a set screw in the last mentioned end of the rocker arm and adapted to engage said supplemental arm, a cam for actuating said supplemental arm, and a retracting spring for said guides.

4. In a printing press, comprising inking rollers, means for guiding the rollers in contact with a form, and a throw-off mechanism comprising a back shaft which is rotated during the application of the throw-off, the combination therewith of slidably mounted, spring retracted supplementary roller guides, a rocker arm pivoted intermediate its ends and adapted to have one end actuate said guides, and a cam on the back shaft for actuating the other end of the rocker arm when the throw-off is applied.

5. In a printing press, comprising inking rollers, means for guiding the rollers in contact with a form, and a throw-off mechanism comprising a back shaft which is rotated during the application of the throw-off, the combination therewith of supplementary roller guides, one on each side of the press, a horizontal bar connecting said guides and adapted to be raised or depressed, a rocker arm for actuating said horizontal connecting bar, and a cam on the back shaft for

actuating the rocker arm during the application of the throw-off.

6. An attachment for printing presses, comprising a horizontal arm, a supplementary roller guide carried at each end of said arm, a rocker arm adapted to be pivoted to the bed of the press and to bear upon the horizontal arm, and a roller carried by the rocker arm and adapted to contact with a shaft of the press.

7. An attachment for printing presses, comprising a horizontal arm, a supplementary roller guide carried at each end of said arm and adjustable longitudinally of the arm, a rocker arm adapted to be pivoted to the bed of the press and to bear upon the horizontal arm, a supplementary arm pivoted to the rocker arm, means for adjusting the distance apart of the rocker arm and the supplementary arm, and a roller carried by the supplementary arm and adapted to contact with a shaft of the press.

8. In combination with the bed of a press, comprising a horizontal bar, vertical edges, roller guides, and a back shaft, of supplementary roller guides slidably secured to the roller guides of the bed, a cross bar connecting said supplementary guides, springs connecting said cross bar with the vertical edges of the bed, a rocker arm pivoted on the horizontal bar of the bed and adapted to contact with the roller guide supporting bar, a cam on the back shaft, and a roller on the rocker arm bearing on said cam.

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

EBEN B. ROBINSON.

Witnesses:

H. E. Butler,

M. N. Triplett.