

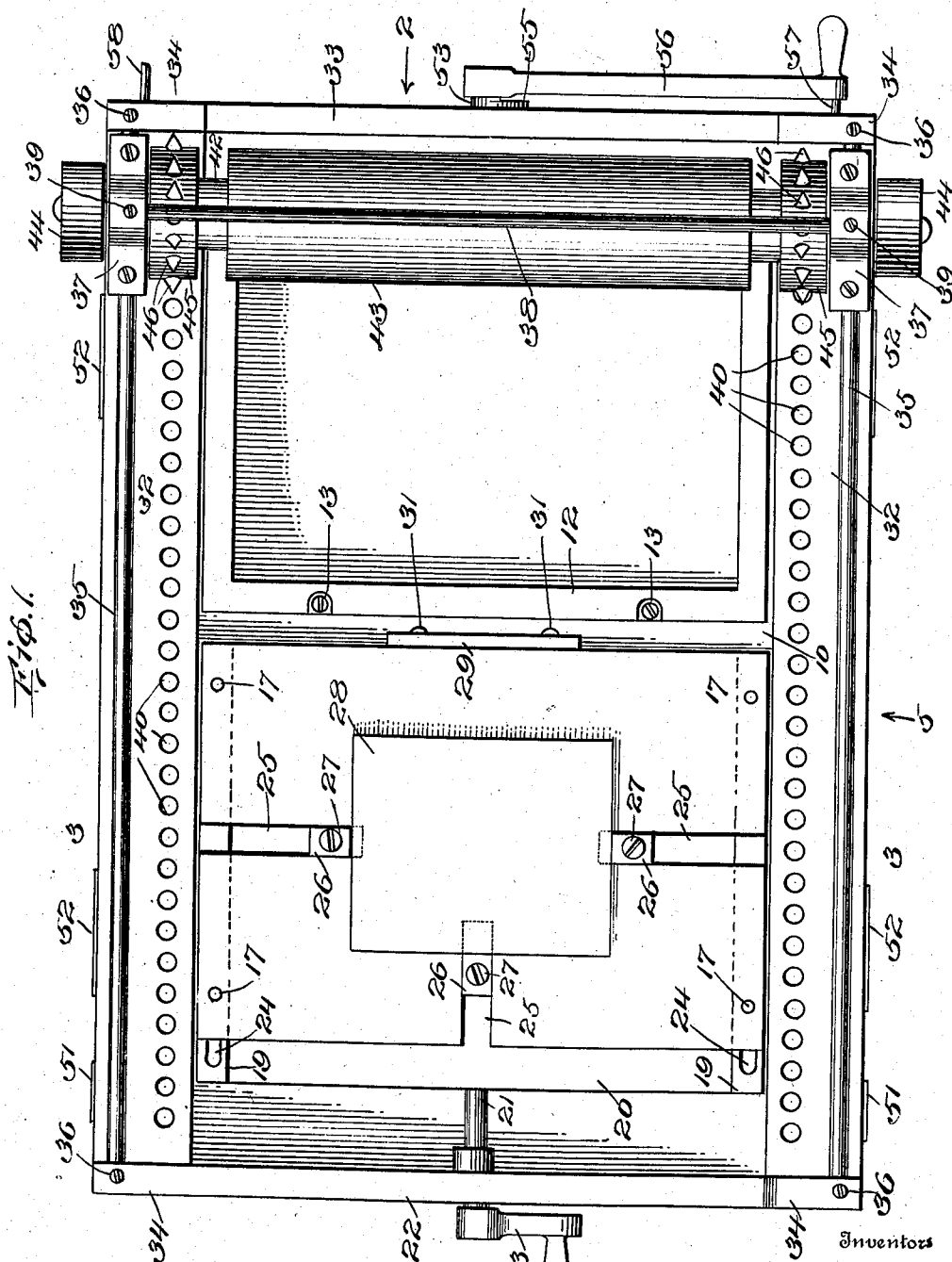
W. L. SLOANE & J. S. OWSLEY.
TRANSFER PRESS.

APPLICATION FILED JAN. 20, 1909.

Patented Oct. 12, 1909.

4 SHEETS—SHEET 1.

936,954.



Witnesses
J. M. Fowler
H. Strass

Inventors
William Louis Sloane
and
James Speed Owsley,
By *Mason Smith Lawrence,*
Attorneys

W. L. SLOANE & J. S. OWSLEY.

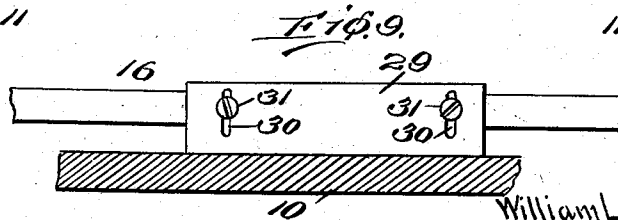
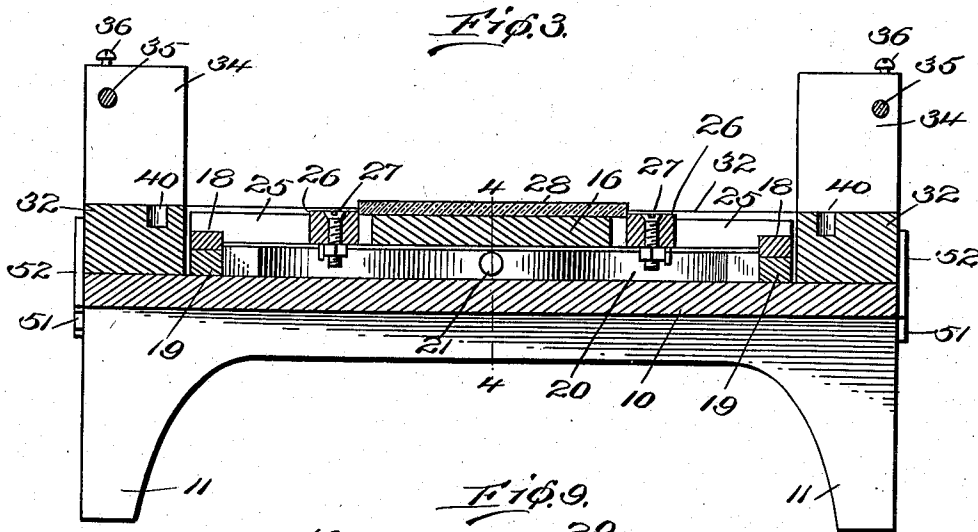
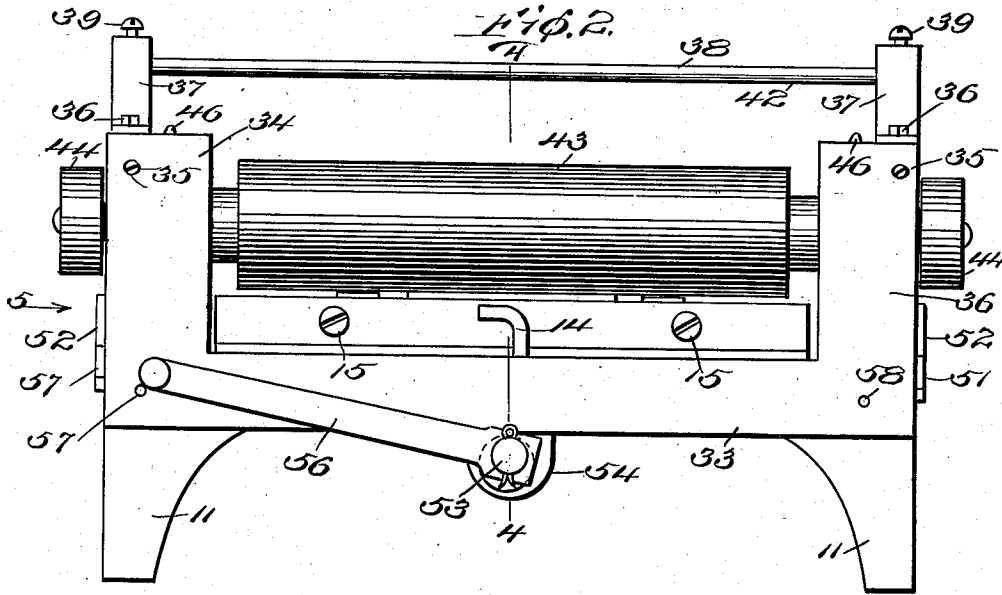
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Inventors

Witnesses

M. Fowler
H. Strauss

William Louis Sloane
and James Speed Owsley,
By *Mason Smith Lawrence*,
Attorneys

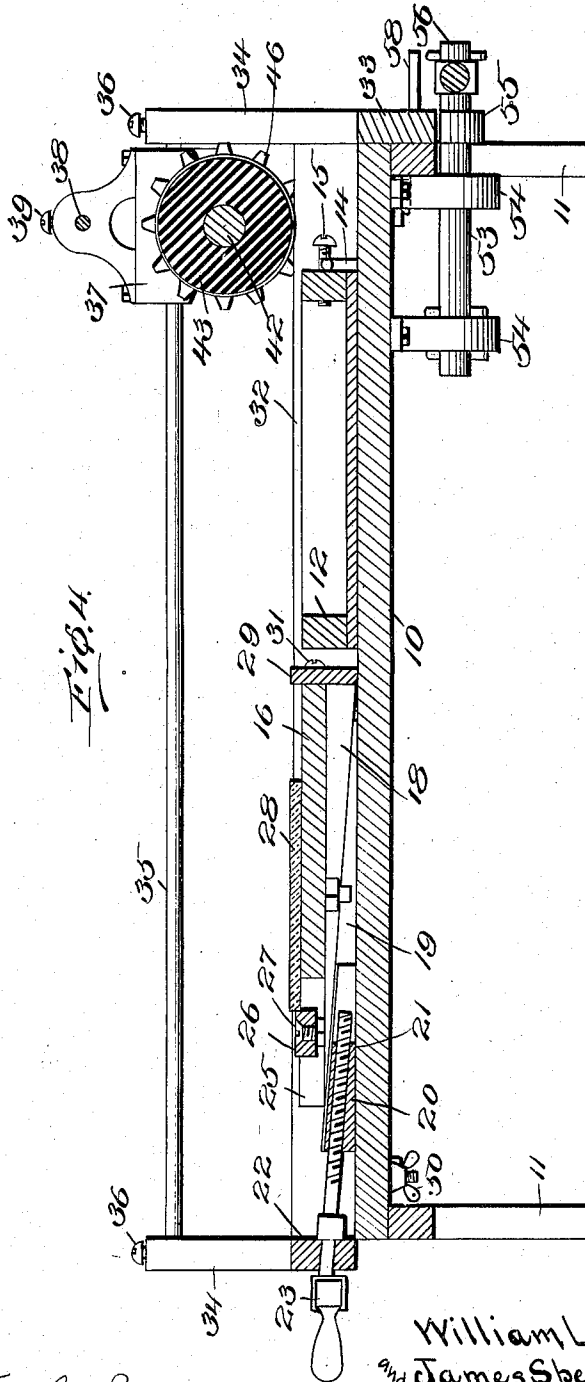
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4 SHEETS—SHEET 3.



Witnesses
J. M. Fowler Jr.
A. Strauss

Inventors
William Louis Sloane,
and James Speed Owsley,
By *Nelson Finnick Lawrence,*
Attorneys

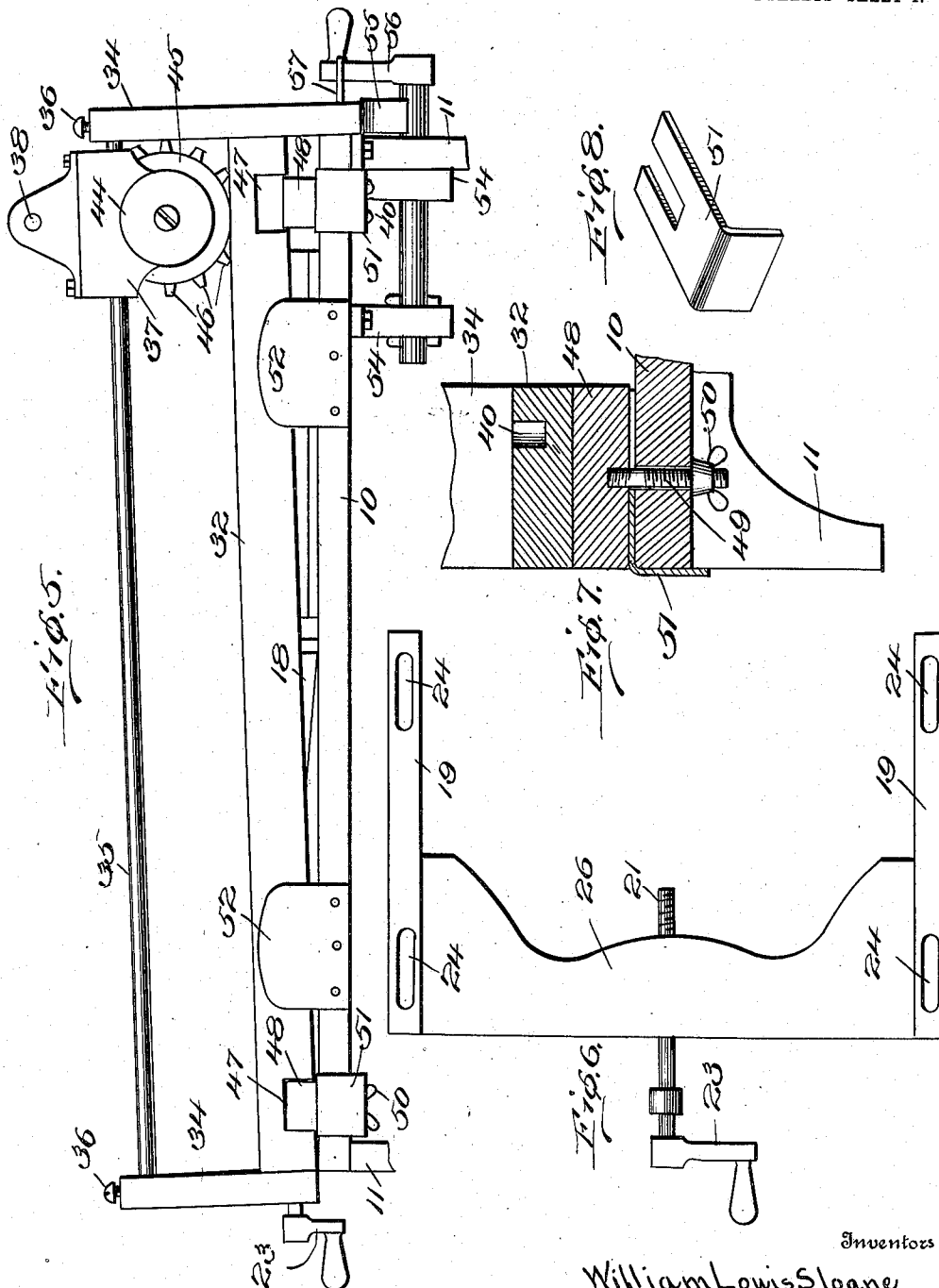
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4 SHEETS—SHEET 4.

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Witnesses
J. M. Fowler
H. Strauss

Inventors
William Louis Sloane
and James Speed Owsley,
by *Mason Smith Lawrence*,
Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM L. SLOANE AND JAMES S. OWSLEY, OF OWENSBORO, KENTUCKY.

TRANSFER-PRESS.

936,954.

Specification of Letters Patent.

Patented Oct. 12, 1909.

Application filed January 20, 1909. Serial No. 473,309.

To all whom it may concern:

Be it known that we, WILLIAM L. SLOANE and JAMES S. OWSLEY, citizens of the United States, residing at Owensboro, in the county of Daviess and State of Kentucky, have invented certain new and useful Improvements in Transfer-Presses; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to printing presses and especially to that class of printing presses adapted for transfer work, and has for an object to provide a press of the class embodying new and improved features of economy, convenience and reliability.

A further object of the invention is to provide in a transfer press a roller adapted to take up from the ink surface the impression thereon and transfer it to the surface to be printed, and with improved bearers adapted to carry the roller and raise it out of operative position.

A further object of the invention is to provide in a press of the class ordinarily employed in printing upon material varying in thickness improved means for raising and lowering the platen upon which the article to be printed is supported.

A further object of the present invention is to provide in a device of the class improved means for controlling the movement and operation of the transfer roller.

A further object of the invention is to provide improved means for raising and lowering the type bed and platen to compensate for variations by shrinkage or otherwise in the transfer roller.

A further object of the invention is to provide a platen having improved means for positioning and holding the article to be printed upon.

A further object of the invention is to provide improved means for determining the necessary height of the platen for bringing the surface of the article to be printed into proper operative relation with the transfer cylinder.

With these and other objects in view, the invention comprises certain novel constructions, combinations and arrangements of parts, as will be hereinafter fully described and claimed.

In the drawings:—Figure 1 is a view of

the improved transfer press in top plan. Fig. 2 is a view of the improved press in end elevation as from the end indicated by arrow 2 in Fig. 1. Fig. 3 is a vertical, transverse section as on line 3—3 of Fig. 1. Fig. 4 is a longitudinal vertical section as on line 4—4 of Figs. 2 and 3. Fig. 5 is a view of the device in side elevation from the side indicated by arrow 5 in Figs. 1 and 2. Fig. 6 is a detail top plan view of the platen adjusting means. Fig. 7 is a detail fragmentary sectional view showing the means for adjusting the bed and platen to compensate for variation of thickness in the transfer roller. Fig. 8 is a perspective view of a piece of metal employed for varying the position of the bed and platen. Fig. 9 is a detail view of the means for determining the proper elevation of the platen.

Like characters of reference designate corresponding parts throughout the several views.

The transfer press forming the subject-matter of this application comprises a bed 10 supported in any approved manner as upon the legs 11 and adapted to support a chase or pan 12 positioned by any approved means as the screws or pins 13 rigidly secured to the bed and adapted to engage over the edge of the chase and by any adjusting or locking device as shown at 14. The chase may be provided with locking screws 15 or, of course, may be employed with the usual quoins.

Adjacent the position for the chase 12 a platen 16 is positioned held against horizontal movement by means of dowels 17 rigid with the bed 10 and upon which the platen 16 is vertically adjustable. The platen 16 is provided along its opposite edges and upon the under side with wedge-shaped lugs 18. Beneath the platen 16 a pair of reversely inclined wedges 19 connected by a cross head 20 shown in plan at Fig. 6 are movable slidable upon the bed so that the platen 16 is raised or lowered as the edges 19 are moved longitudinally of such bed. To provide for such longitudinal movement a screw 21 is threaded into the cross head 20 and extending outwardly through the frame piece 22 is provided at the extremity with any approved means for turning such screw as the crank arm 23. It will be apparent that as the crank arm 23 is rotated the screw 21 threaded within the cross head 20 causes

a movement of such cross head 20 longitudinally of and upon the bed 10 whereby the wedges 19 are forced to travel beneath the wedge-shaped blocks 18 carried by the platen. The wedges 19 are provided with slots 24 through which the dowels 17 extend and which will prevent the wedges from being displaced.

The platen 16 is provided with slots 25 positioned as may be found desirable, here shown as extending from the opposite ends and one side of the platen at right angles and in such slots, gages 26 are slidably mounted held in position as may be required in any approved manner as by the screws 27. The press here shown is intended for printing upon glass plates, and such a plate 28 is shown held in position by the gages 26.

It is necessary to position the upper plain surface of the glass plate accurately with reference to the height of the type contained in the chase 12, and as the thickness of glass plates in ordinary commercial use varies, it is found necessary to vary the height of the platen 16 to compensate for such variation in thickness of the glass plates. To afford a ready means for determining the exact height of the platen 16 to properly position the upper surface of the glass plate, a guide 29 is provided having slots 30 through which screws or rivets 31 extend holding the guide 29 loosely against the edge of the platen 16 and resting upon the bed 10. The guide 29 is exactly type high, considering the type as within the chase or pan 12, that is, if the chase employed is an open chase then the guide 29 is type high, but if a pan is employed then the guide 29 is type high plus the thickness of the back of the pan. A sheet of glass laid upon the platen 16 adjacent the guide 29, the position of the platen is determined by reference to the upper edge of the guide 29, and when the platen has been adjusted so that the upper surface of the glass plate 28 is level with the upper edge of the guide 29, the upper surface of such plate is in position to receive a transfer impression from the roller.

Upon the bed are mounted bearers 32 extending longitudinally along the sides of the bed properly spaced and positioned at one end by the cross frame-piece 22 above described and at the opposite end by a cross-frame piece 33. The cross pieces 22 and 33 carry integral or rigid therewith uprights 34 positioned at the four corners of the bed and rigidly connected with the bearers. Longitudinally above the bearers are rods 35 held rigidly in position by any approved means as the tension screws 36, by loosening which the rods 35 may be removed from the bearers. Upon the rods 36 bearing blocks 37 are mounted to reciprocate, such blocks being spaced apart and rigidly positioned relative to each other by a cross rod

38 extending through such blocks and rigidly connected thereto by means of tension screws 39 which may be loosened to remove such rod.

The bearers 32 are provided throughout their longitudinal extent with a plurality of equally spaced holes 40. In the blocks 37 a shaft 42 is journaled extending transversely across above the bed carrying a roller 43, the sectional shading of Fig. 4 intending to represent such roller as composed of the usual and ordinary composition of printers' rollers. Upon the ends of the shaft 42, extending outwardly through the blocks 37, hand wheels 44 are journaled by which the roller may be moved longitudinally of the bed with the blocks upon the rods 35. The shaft 42 also carries rollers 45 rigid therewith provided about their peripheries with spurs 46 positioned to engage with the openings 40 of the bearers 32 so that both of such rollers 45 being carried rigidly by the shaft 42 cause both ends of such shaft 42 to move in unison.

The bearers 32 are provided adjacent their opposite ends with recesses 47 fitting upon blocks 48 carried upon the bed 10. The blocks 48 are held in position by means of screws or bolts 49 extending through the bed and with winged heads or nuts 50 by which tension is exerted upon such bolts or nuts to clamp the blocks 48 rigidly upon the bed. The depth of the recesses 47 is such that when the bearers 32 are in lowered position they bear upon the upper surfaces of such blocks 48. Means to vary the height of such blocks 48 is provided in a sheet or shim of thin metal shown at 51, in perspective at Fig. 8, which may be slipped under the blocks 48 when the screws 49 are loosened, which will thereby raise the blocks 48 and the bearers 32. To prevent lateral displacement of the bearers keepers 52 are secured to the sides of the bed and extend upwardly beside the bearers 32.

As the roller 43 is moved longitudinally of the bearers it is obvious that it will pass over the type contained in the chase 12 and taking up the impression therefrom carry it and deposit it upon the plate 48. In the return movement, it is desirable that the roller does not contact with either the plate or the type and for such purpose a shaft 53 is journaled beneath the bed in any approved bearing block 54 and is provided with an eccentric 55 bearing against the lower surface of the cross piece 33. The shaft 53 is provided with any approved means for producing rotary movement as the crank arm 56 and pins 57, and 58 are provided for supporting such crank arm and limiting the movement thereof.

With the crank arm and shaft in the position shown at Fig. 2, the bearers 32 are resting upon the blocks 48 as shown at Fig. 4

so that the roller in movement will pass over and upon the type in the chase 12 and upon the plate 28 carried upon the platen. Before the return movement of the roller is started the lever 56 is reversed; however, bringing the eccentric into position to raise the end of the bearers to the position shown at Fig. 5, so that the roller will be returned without engagement or contact with the printed surface or the type contained in the chase.

What I claim is:—

1. In a printing press, a bed, a platen carried by the bed and provided with slots, positioning members carried by the slots, a guide member carried loosely by the platen and bearing upon the bed, and means to vary the upper surface of the platen relative to the upper edge of the guide member.

2. In a printing press, a bed, a platen carried by the bed and provided with slots, positioning means disposed and adjustably movable within the slots, a slotted guide member loosely carried by one side of the platen, and bearing a definite relation to the bed, and means to vary the position of the upper surface of the platen relative to the upper edge of the guide member.

3. In a printing press, a bed, bearers extending along the sides of the bed, means to raise and lower one end of the bearers, and positioning blocks adapted to prevent displacement of the bearers from the bed and

providing means for varying the lowered position of the bearers.

4. In a printing press, a bed, a platen carried by the bed and provided with slots, positioning members carried by the slots, a guide member carried by the platen and bearing upon the bed, and means to vary the upper surface of the platen relative to the upper edge of the guide member.

5. In a printing press, a bed, a platen carried by the bed and provided with slots, positioning members disposed and adjustably movable within the slots, a guide member carried by one side of the platen and bearing a definite relation to the bed, and means to vary the position of the upper surface of the platen relative to the upper edge of the guide member.

6. In a printing press, a bed, bearers arranged contiguous to the bed, means to raise and lower one end of the bearers, and positioning blocks arranged to prevent displacement of the bearers from the bed, and presenting means for varying the lowered position of the bearers.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLIAM L. SLOANE.
JAMES S. OWSLEY.

Witnesses:

W. W. HATCHETT,
J. W. MOBBERLY.