

M. A. DROITCOUR.
 INKING MECHANISM FOR PRINTING PRESSES.
 APPLICATION FILED JULY 1, 1909.

960,004.

Patented May 31, 1910.

Fig. 1

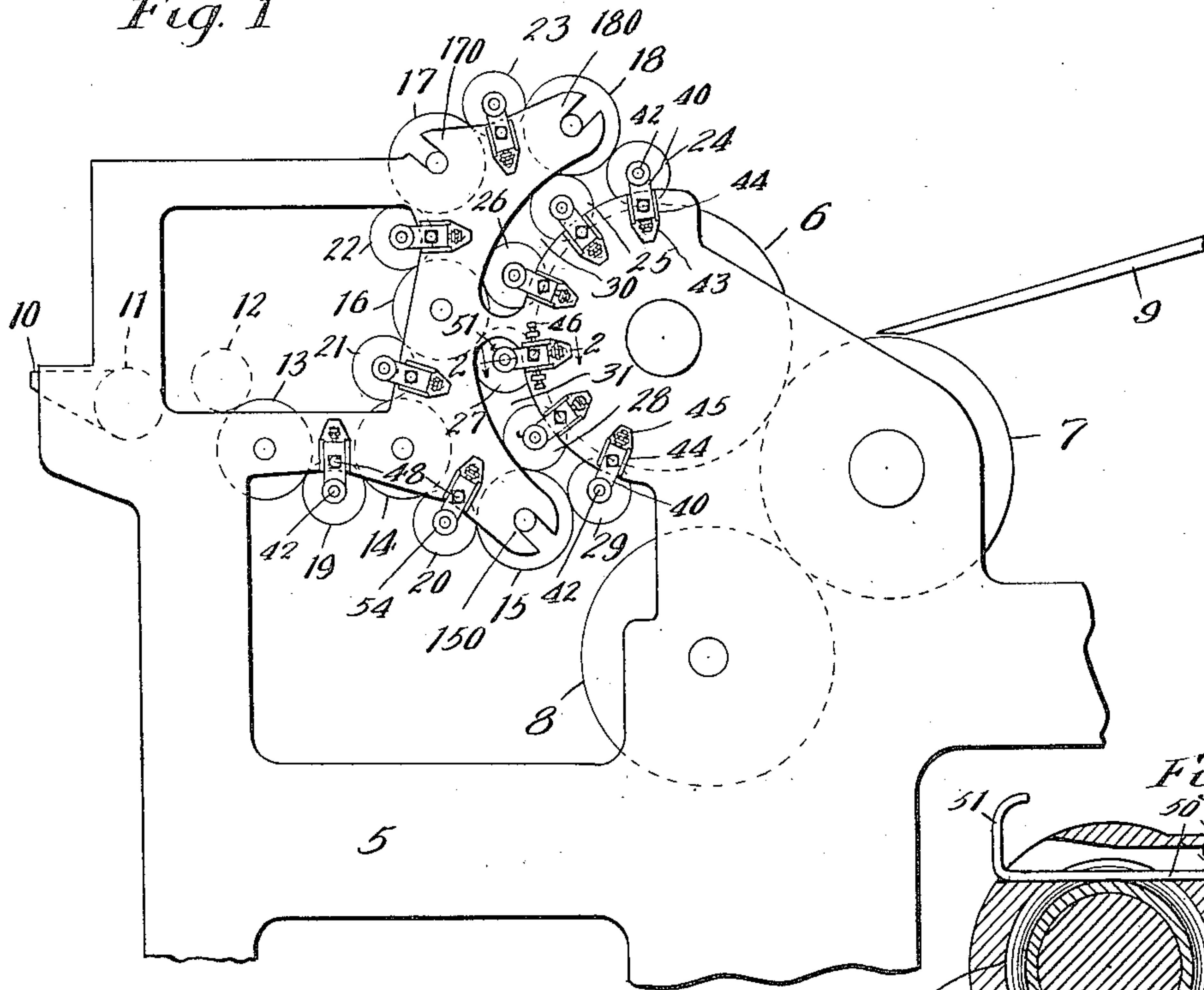


Fig. 5

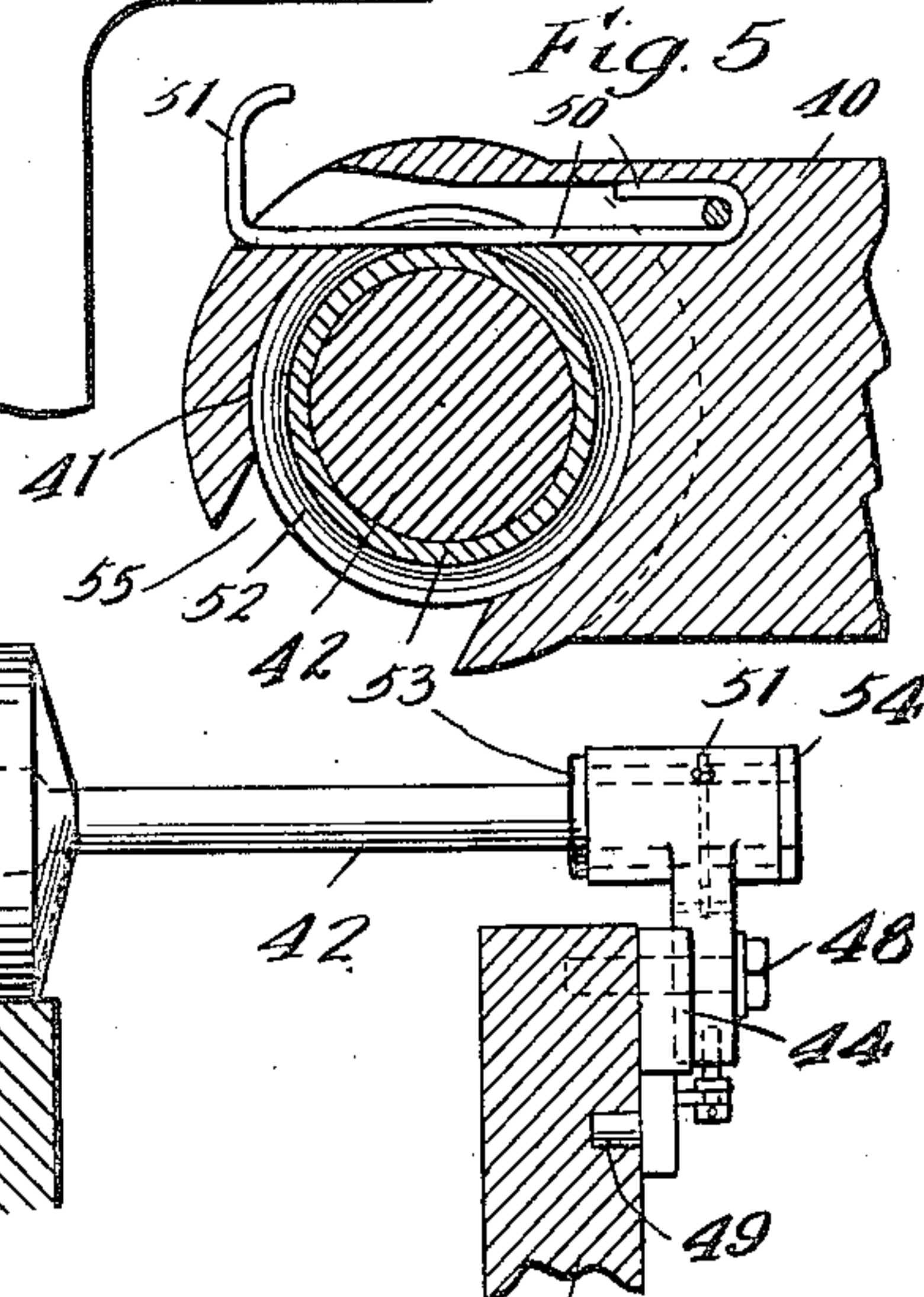


Fig. 2

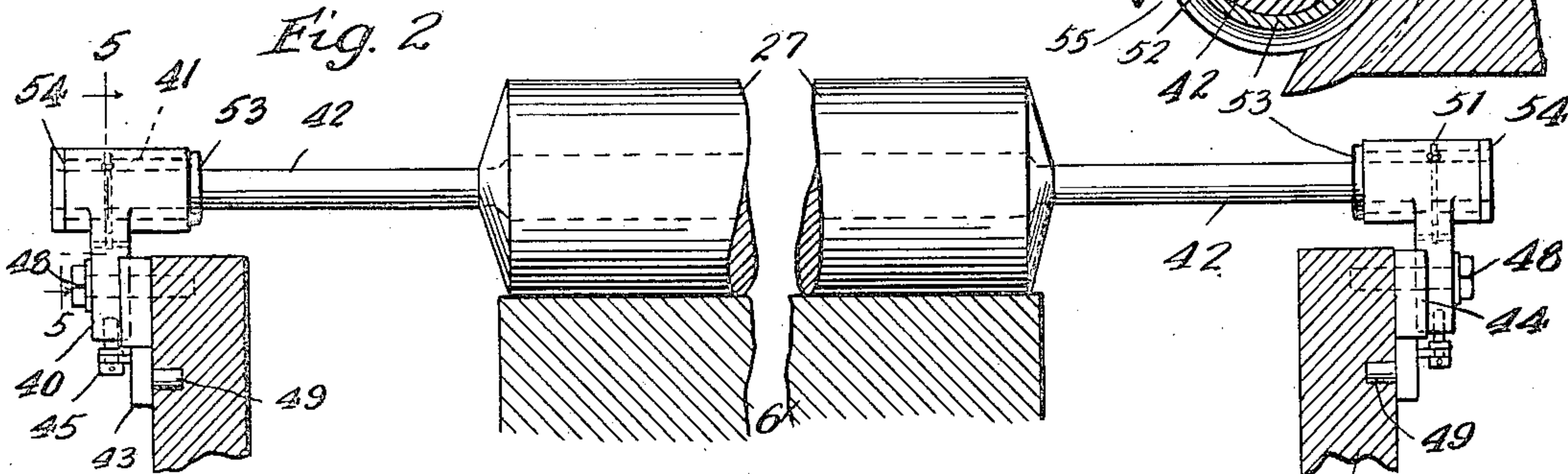


Fig. 3

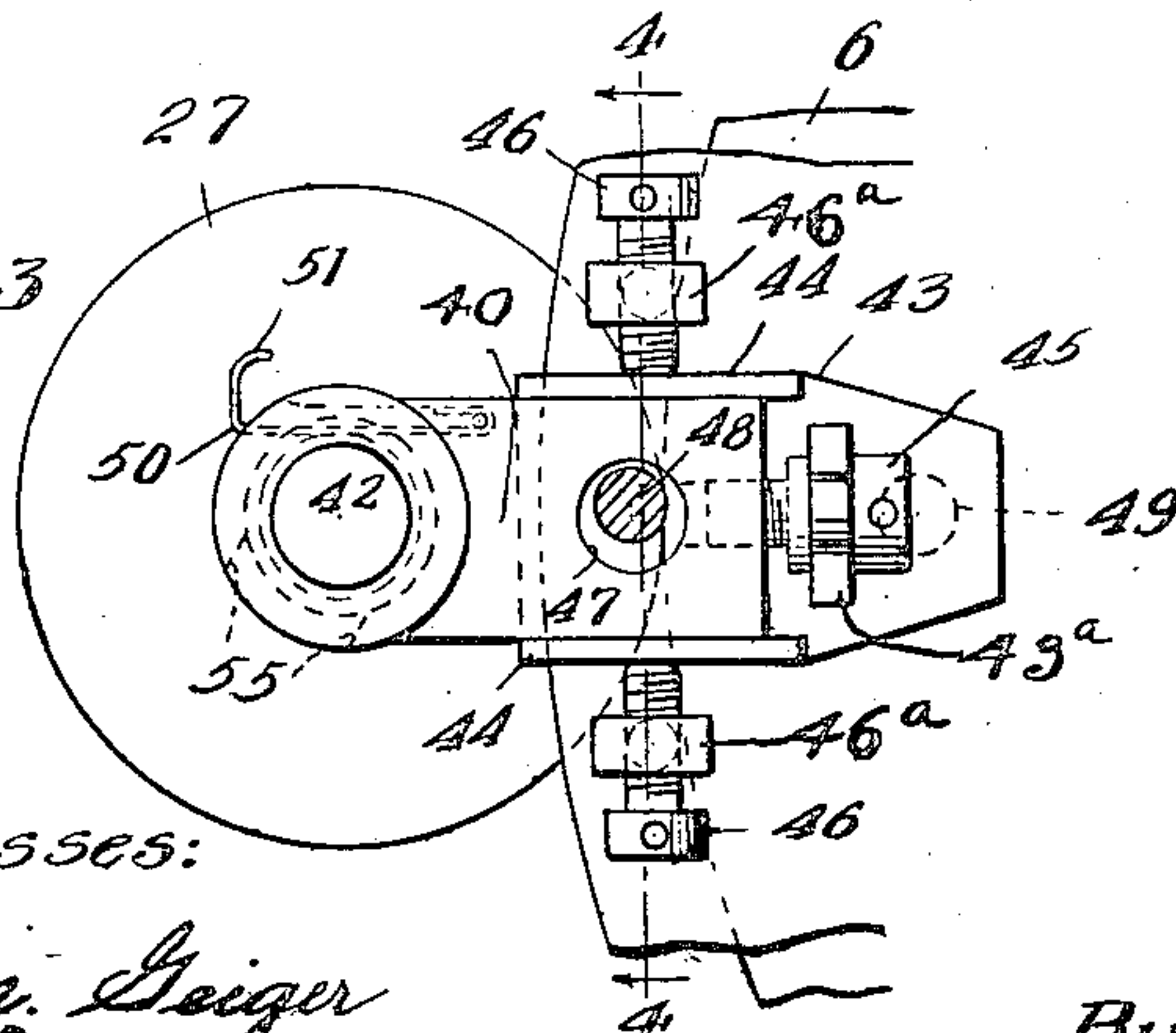
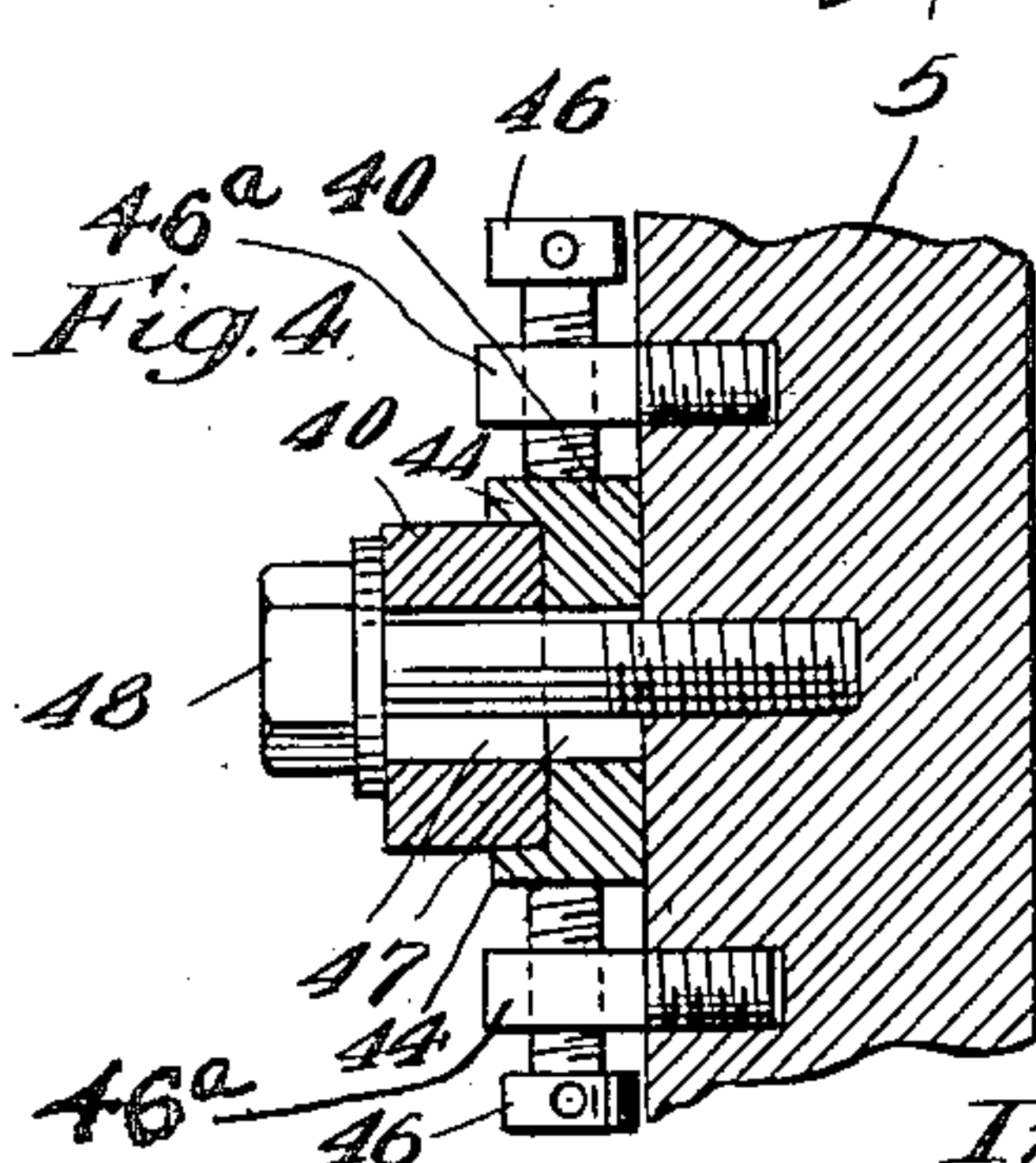


Fig. 4



Witnesses:

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UNITED STATES PATENT OFFICE.

MICHAEL A. DROITCOUR, OF CHICAGO, ILLINOIS, ASSIGNOR TO MIEHLE PRINTING PRESS & MANUFACTURING COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

INKING MECHANISM FOR PRINTING-PRESSES.

960,004.

Specification of Letters Patent.

Patented May 31, 1910.

Application filed July 1, 1909. Serial No. 505,335.

To all whom it may concern:

Be it known that I, MICHAEL A. DROITCOUR, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Inking Mechanism for Printing-Presses, of which the following is a specification.

This invention relates to the inking mechanism of printing presses.

My object in it has been to so construct such mechanism as to render it possible to remove any one or more of the rolls whenever that is desirable or necessary, either for the repair or cleaning of the rolls themselves, or to uncover the type cylinder surface so as to permit changes in the forms. To this end, I provide two arc openings in the frame of the press, and locate the bearings of a portion say a group of three of the composition rolls in each of such openings, and I also arrange some of the metal rolls of the inking series in open bearings so located with reference to the said groups of composition rolls that they act as keys to confine the groups in the arc slots of the frame. The composition rolls are all readily detachable from their bearings, so that whenever access to the type cylinder is desired, it is quickly obtained by first removing the key rolls, and then the composition rolls confined by the key rolls. The construction is such also as to permit the quick replacing of the rolls after they have been removed, the invention being intended to save time in the making of changes and repairs.

The nature of my improvements is fully set forth below, and will be understood from the description thereof and from the accompanying drawing, in which latter—

Figure 1 is a partial side elevation of a press embodying my present improvements; Fig. 2 is a section on the line 2—2 of Fig. 1; Fig. 3 is an enlarged section of one of the composition roll bearings and Fig. 4 is a section on the line 4—4 of Fig. 3. Fig. 5 is a section on the line 5—5 of Fig. 2.

In said drawing 5 represents the side frame of a printing press, and 6 is the type or printing cylinder, 7 the impression cylinder, 8 the delivery cylinder, and 9 the feed table feeding the sheets to the crown of the

impression cylinder. After printing the sheets may be delivered by the impression and delivery cylinders in the usual manner. The ink well is shown at 10, and it feeds the ink by means of the roll 11 to the ductor roll 12 which, by means not shown, is moved at intervals into contact with roll 11 and is thereby charged with ink. The ink so received is distributed by metal rolls 13, 14, 15, 16, 17 and 18 and the intermediate composition rolls 19, 20, 21, 22, 23, and is supplied to the printing cylinder by form inking rolls 24 to 29 inclusive which are in contact with the distributing rolls 15, 16, and 18. Said rolls 15, and 18 are supported in open bearings 150, and 180, and so also roll 17 has similar bearings 170, and the inking rolls 24, 25 and 26 have their bearings located opposite an arc shaped opening in the side frame of the press, while rolls 27, 28 and 29 have their bearings opposite a second arc shaped opening in the said frame. As shown distributing roll 18 rotates in contact with composition rolls 24 and 25, distributing roll 16 with composition rolls 26 and 27, and distributing roll 15 in contact with composition rolls 28 and 29. With this construction, it will be seen that by removing roll 18, the composition rolls 24, 25 and 26 are all rendered readily accessible and removable, and that by removing roll 15, the inking rolls 27, 28 and 29 are rendered accessible and removable.

It is desirable that the inking rolls be quickly detachable from their bearings and hence I have used the construction now to be detailed.

Each bearing comprises a plate 40 having an opening 41 in which the journal 42 of the roll is inserted. The roll journal is inclosed in an annular bushing 53 which is slipped over the journal and inserted into the opening in the plate 40 after the roll journal is inserted in the opening 41. The bushing 53 can be detachably secured in position by a spring 50 attached at one end to the plate 40, and having its other end bent up as at 51 to form a convenient means for manipulating it, and said spring is adapted to enter an annular groove 52 in the bushing 53 when the latter is slipped into the opening in plate 40, the bushing being retained by collar 54 and spring 51. To permit the

ready removal of the roll, I make a slot 55 in the plate 40 beside opening 41, and such slot being normally closed by the bushing, but when the bushing is removed the slot is uncovered, so that the roll journal may then be passed laterally in and out through the slot 55. To remove a roll having such spring locked bushing, it is only necessary to lift the spring from the bushing, and slide the bushing endwise on the journal and thus uncover the slot. The plate 40 is supported by a base plate 43 and is adjustable on the latter, which has side guards 44 between which plate 40 may slide in obedience to a screw 45 which is rotatably engaged with a lug 43^a on the base plate. The plates 40 and 43 both have enlarged registering openings 47 through which passes the attaching screw 48 whereby the bearing is attached to the frame of the press and locked when adjusted, the enlarged openings allowing considerable latitude in adjusting the bearing upon the press. The base plate also has a fixed pivot 49, entering a suitable hole in the press frame, on which it may be rocked in effecting adjustments. The bearing may be adjusted laterally by means of screws 46 tapped through lugs 46^a on the side frames of the press (see Figs. 3 and 4). By removing the screw 48, the entire bearing may be detached from the press, as will be readily understood.

With the construction described, it will be seen that complete access to the upper half of the printing cylinder will be gained by removing rolls 18, 24, 25 and 26, and as already explained, such removal may be very quickly effected, and the rolls can be quickly replaced, so that the loss of time in the use of the press is reduced to a minimum.

It will be noticed that the form rolls 24 to 29 are uniform in size, and that the intermediate rolls 19 to 23 inclusive are also uniform in size and of the same size as said form rolls. Also that all said rolls are provided with the readily removable bearings described and uniform in construction. These features render all said rolls interchangeable, so that when any one of the form rolls for instance becomes defective, one of the intermediate rolls can be substituted for it, and the amount of service ob-

tained from the rolls be greatly increased thereby.

I do not herein claim the construction of the journal bearings and their adjustable supports, which form the subject matter of a divisional application filed October 28th, 1909, Serial No. 525,091.

I claim:—

1. In an inking mechanism for printing presses, the combination of a frame having arc-shaped slots in its sides adjacent the cylinder, said slots being open at one end; and a cylinder; with a group of form inking roll bearings attached to the frame beside said slots, inking rolls journaled in said bearings the journals of the rolls extending through said slots, a removable distributing roll located adjacent the open ends of said slots, said distributing roll confining the form inking rolls in said slots and said form inking rolls being removable when the distributing roll is removed.

2. In an inking mechanism for printing presses, the combination of a press frame having pairs of upper and lower arc-shaped slots formed in its sides adjacent the plate cylinder, each slot being open at one end; and a plate cylinder journaled in the frame beside said slots; upper and lower sets of parallel form inking rolls having their journals extending through said slots, removable bearings for the journals of said rolls attached to the main frame beside the slots, and distributing rolls located at the open ends of the slots and confining the form inking rolls therein, substantially as described.

3. In an inking mechanism for printing presses, the combination of a press frame having an arc-shaped slot adjacent the plate cylinder, and a plate cylinder journaled in the frame beside said slot; with a plurality of adjustable inking roll bearings opposite and projecting over said slots, form inking rolls having their journals in said bearings, removable bushings in the bearings for the journals of said rolls, and distributing rolls for supplying ink to said form inking rolls, substantially as described.

MICHAEL A. DROITCOUR.

Witnesses:

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