

M. A. DROITCOUR.
 INKING MECHANISM FOR PRINTING PRESSES.
 APPLICATION FILED DEC. 23, 1908.

955,833.

Patented Apr. 19, 1910.

Fig. 1

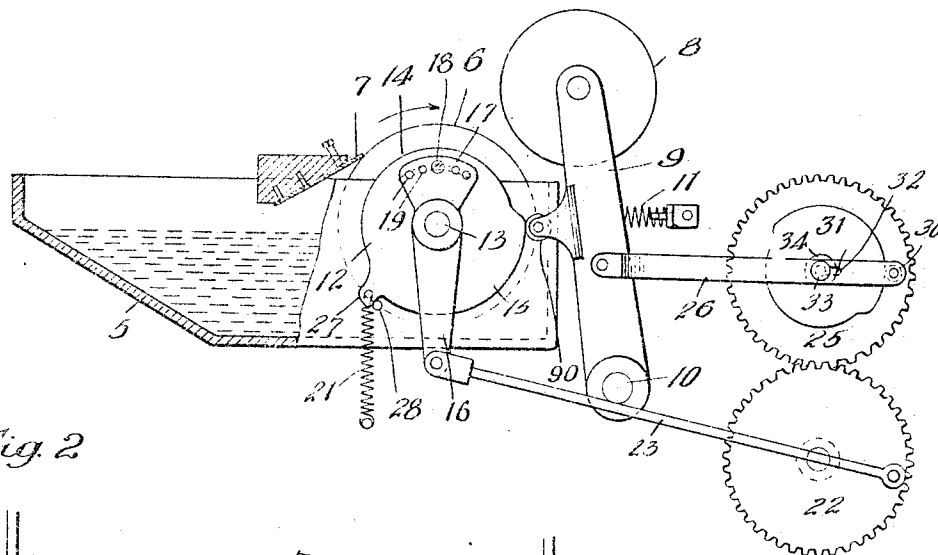


Fig. 2

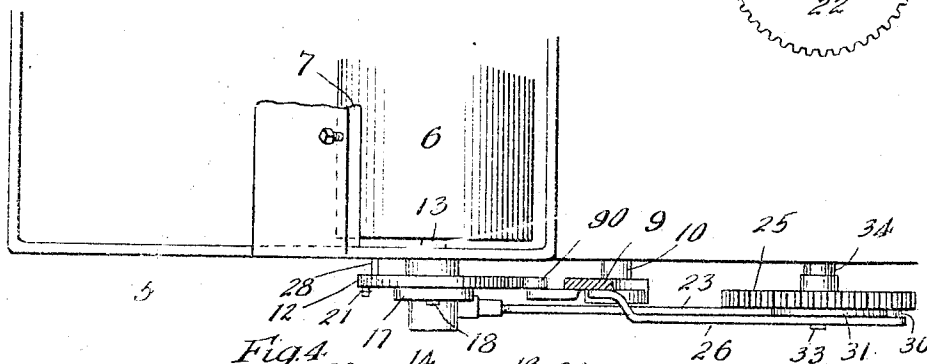


Fig. 4

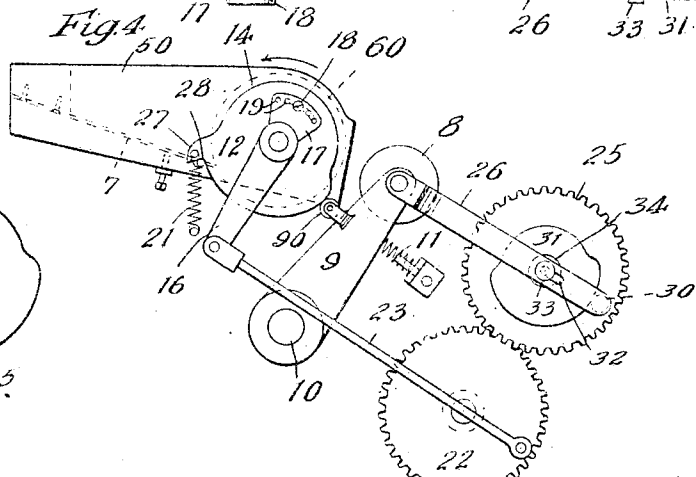
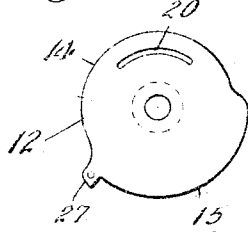


Fig. 3



Witnesses:

Wm. Griger
 A. W. Munday.

Inventor:

Michael A. Droitcour

By Munday, Evans, Adcock & Clarke.

Attorneys

UNITED STATES PATENT OFFICE.

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

INKING MECHANISM FOR PRINTING-PRESSES.

955,833.

Specification of Letters Patent. Patented Apr. 19, 1910.

Application filed December 23, 1908. Serial No. 468,937.

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 Mechanisms for Printing-Presses, of which the following is a specification.

This invention is designed to control the amount of ink supplied to the ductor roll of printing presses, and to that end I combine with the ductor roll a mechanism whereby the periods during which that roll is in contact with the supply roll may be regulated and made short or long according as the work being done requires much or little ink.

The invention is fully set forth in the description below, and will be understood from such description in connection with the accompanying drawing, in which latter—

Figure 1 is a side elevation partly in section, of that part of a printing press to which my invention relates. Fig. 2 is a horizontal section of the same. Fig. 3 is an elevation of the cam whereby the ductor roll is held out of action. Fig. 4 is an elevation of a modified construction.

In said drawing, 5 represents the ink reservoir of a printing press, and 6 is the feed roll located in the reservoir, and driven in any suitable way.

7 is the blade for removing the excess ink from the feed roll, and 8 is the ductor roll, supported upon arms 9 and pivoted at 10 and adapted to swing first into contact with the feed roll and then to swing back and carry the ink received from the feed roll to the distributing rolls, the latter not being shown. The arms 9 are constantly pressed toward the feed roll by a spring or springs 11, but the ductor roll is kept from contact with the feed roll except at the desired times and for desired periods by a cam 12 mounted loosely on the shaft 13 of the feed roll. One portion 14 of the periphery of this cam is depressed, and the remainder 15 is raised, and one of the arms 9 has a roller 90 mounted on it and riding on the periphery of the cam as plainly shown. The raised portion of the cam keeps the ductor away from the feed roll and the depressed portion allows it to move into contact and take on ink. The cam has an oscillatory motion on the shaft 13 and the oscillation is given it by a spring

21 and by the arm 16 which is rigid with a quadrant 17 also mounted on shaft 13 but loose thereon.

The quadrant carries a pin 18 passing through one of the holes 19 in the quadrant and entering the curved slot 20 in the cam in which slot the pin is free to slide lengthwise of the slot. The arm as well as the quadrant is also loose on shaft 13, and consequently neither the arm, the cam or the quadrant turn with said shaft, but the cam must turn with the quadrant whenever the pin 18 reaches the forward end of the slot 20. The arm 16 is swung by a crank wheel 22 which is connected to the arm by the rod 23. The wheel 22 is toothed and meshes with a second toothed wheel 25, and power may be applied to either of them as preferred. The wheel 25 is also a crank wheel and is connected to one of the arms 9 by a rod 26 having an elongated opening 32 for the pin 33 which supports it on the wheel shaft. This wheel and its connecting rod serve to carry the ductor roll over against the distributing rolls at proper times, and the movements caused by it are of course properly timed with reference to the movements of the ductor to the feed roll, and this is easily done by means of the two crank wheels meshing together as shown.

The cam 12 has a projection 27 to which the spring 21 may be attached, and this projection coacts with a stationarily located stop 28 in arresting the cam when the ductor roll has been lifted to the position of Fig. 1 by cam 31 and the spring 21 has acted to return the cam 12 to the position shown in Fig. 1.

With the construction described, it will be noticed that the length of time of the contact of the ductor roll with the feed roll is determined by pin 18 on quadrant 17. By shifting such pin on the quadrant the length of time of contact can be varied. Thus when the pin 18 is in the position illustrated in Fig. 1 the quadrant will not actuate the cam 12 until the pin 18 has moved to the forward end of the slot 20. When that occurs the pin 18 will move the cam and bring its lower portion into active relation to the ductor and permit the ductor roll to contact with the feed roll until the ductor is moved away by cam 31, and spring 21 returns cam 12 to normal position as indicated in Fig. 1. In other positions of the pin 18 on the quad-

rant, the contact will be longer or shorter, and the time of contact correspondingly lengthened or shortened. The gear 25 causes the cam 31 to move the ductor over against the distributary roll at proper intervals and the spring 11 returns it as will be understood.—

In the construction illustrated in the main figures and above described, the invention is shown as employing an overshot feed roll, and the modification shown at Fig. 4 is intended to illustrate it in connection with an undershot feed roll. The mechanism in the modification differs from that of the Figs. 1 and 2 mainly in the substitution of an undershot feed roll 60 for the roll 6, and an ink reservoir 50 adapted to be used with such a roll instead of reservoir 5.

I claim:—

1. The combination with the ink supply roll of a printing press, of a ductor roll movable into and out of contact with said supply roll, and mechanism for controlling the length of time occupied in such contacts, such mechanism consisting of a spring forcing the ductor roll against the supply roll, an oscillating cam forcing the ductor away from the supply roll, a quadrant mounted on the same axis with the cam and having a pin insertible in a curved slot of the cam, and means for actuating the quadrant.

2. In combination with an ink supply roll of a printing press, a ductor roll, and means for moving said roll to and from said supply roll; of means for regulating the time of contact between said ductor and supply roll, comprising a movable slotted member, a quadrant beside said member, a pin adjustably attached to said quadrant and engaging the slot in said member, and means for oscillating said quadrant once for each vibration of the ductor.

3. In an inking mechanism for printing presses the combination of an ink supply roll, a ductor roll and means for moving said roll to and from the supply roll; with an oscillating cam adapted to regulate the time of contact between the ductor and sup-

ply roll, an oscillating quadrant beside said cam, means for oscillating said quadrant once for each vibration of the ductor, and adjustable means for variably locking the quadrant to said cam so as to cause the latter to permit contact between the ductor and supply roll.

4. In combination an ink supply roll, a ductor roll and means for moving said ductor roll to and from said supply roll; with a slotted cam adapted to prevent contact of the ductor and supply roll, an oscillating quadrant beside said cam, a pin adjustably attached to said quadrant and engaging the slot in said cam, and means for oscillating said quadrant once for each vibration of the ductor.

5. In an inking mechanism the combination of a supply roll, a ductor, a rotatable cam and connecting rod for operating the ductor, said cam positively moving the ductor from the supply roll but permitting it to move yieldingly toward the supply roll; with a quadrant, means for oscillating said quadrant, a cam operable by said quadrant, adjustable pin and slot connections between the quadrant and said slotted cam whereby the cam is operable to permit the ductor roll to contact with the supply roll for any desired interval.

6. In an inking mechanism for printing presses the combination of an ink supply roll, a ductor roll and means for moving said roll to and from the supply roll; a slotted oscillating cam adapted in normal position to prevent contact between the ductor and supply roll, a spring for holding said cam in normal position, a quadrant beside said cam, means for oscillating said quadrant once for each vibration of the ductor, and an adjustable pin on the quadrant engaging the slot in said cam and adapted to actuate the latter to permit contact between the ductor and supply roll.

MICHAEL A. DROITCOUR.

Witnesses:

H. M. MUNDAY,
EDW. S. EVARTS.