Feb. 3, 1925. 1,524,816

W. E. DALBY

TRIPPING MECHANISM FOR THE INKING OR DAMPING ROLLERS OF ROTARY PRINTING PRESSES

Filed June 24, 1924 2 Sheets-Sheet 1

Fig. 2.

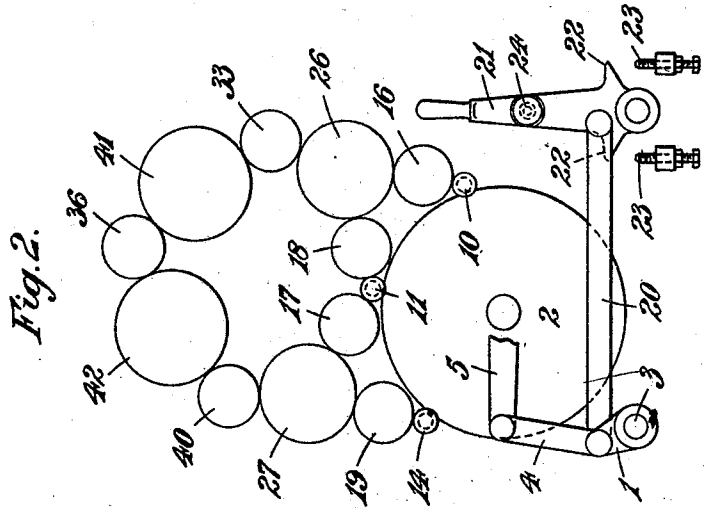
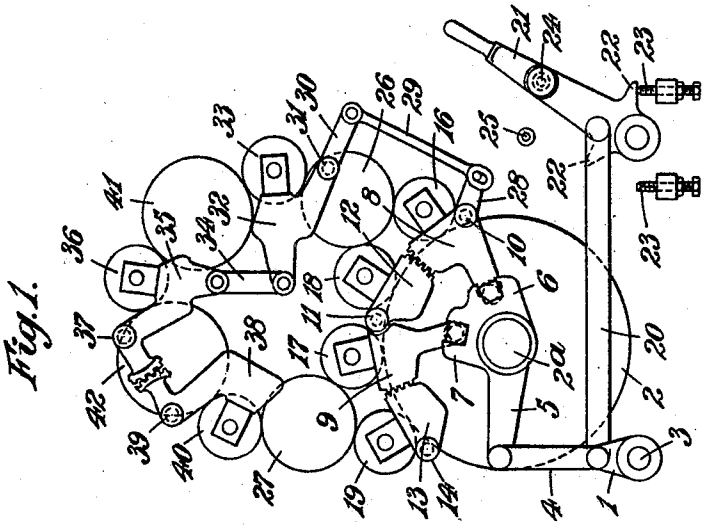


Fig. 1.



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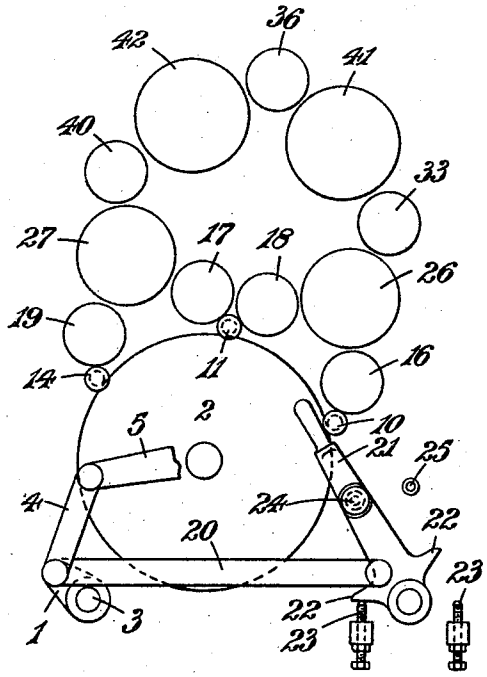
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Fig. 3.



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Patented Feb. 3, 1925. 1,524,816

UNITED STATES PATENT OFFICE.

WALTER ERNEST DALBY, OF ALTRINCHAM, ENGLAND, ASSIGNOR TO LINOTYPE AND MACHINERY LIMITED, OF LONDON, ENGLAND, A COMPANY DULY REGISTERED UNDER THE LIMITED LIABILITY COMPANY'S ACTS (1862–1900).

TRIPPING MECHANISM FOR THE INKING OR DAMPING ROLLERS OF ROTARY PRINTING PRESSES.

Application filed June 24, 1924. Serial No. 721,993.

To all whom it may concern:

Be it known that I, WALTER ERNEST DALBY, a British subject, and resident of Linotype and Machinery Works, Altrincham, in the county of Chester, England, have invented new and useful Improvements in or Relating to Tripping Mechanism for the Inking or Damping Rollers of Rotary Printing Presses, of which the following is a specification.

This invention relates to tripping mechanism for the inking or damping rollers of rotary printing presses, and is directed to the provision of means whereby the ink or water form rollers, in addition to being tripped out of contact with the plate on the plate cylinders as ordinarily, may also, when desired, be moved clear of both plate cylinder and ink or water distributor drums. The invention also includes means for moving the transfer or distributor rollers of the inking or damping mechanism out of contact with the distributor drums, such means preferably being associated with the means for moving the form rollers out of contact with the said drums.

Tripping mechanism according to the present invention comprises a lever controlling the tripping of a plurality of form rollers, said lever being adapted to occupy three different operative positions, viz:—one in which the form rollers, for normal working, are in contact with the plate cylinder and the distributor drums, a second in which the said rollers, for "running up" prior to inking the plate, are tripped away from the plate cylinder, but remain in contact with the respective distributor drums, and a third in which the form rollers are held out of contact with said drums as well as out of contact with the plate cylinder. It further comprises a connection between the form-roller tripping mechanism and the mechanism for tripping the transfer or distributor rollers which, on the movement of the above-mentioned lever from the second to the third position, operates the last-mentioned mechanism to trip such transfer or distributor rollers away from the respective distributor drums.

In the accompanying drawings the invention is diagrammatically shown as an example, as applied to the tripping of a plurality of form rollers relatively to the plate cylinder and distributor drums.

In said drawings:—

Figure 1 is an elevation showing all the rollers in printing position;

Figure 2 is an elevation showing the form rollers tripped from the plate cylinder, and

Figure 3 is an elevation showing all the rollers out of contact.

In the constructional form illustrated, there are two trip lever arms 1 at respectively opposite ends of the plate cylinder 2, fast to a shaft 3 parallel with the axis of that cylinder; of these two arms 1 only that which is nearest the observer is represented, as the one at the distant end of the cylinder 2 is directly aligned with, and, in the view given, obscured by the arm which is shown.

Each of the arms 1, has pivoted to it the lower end of a link 4 whose upper end is pivoted to one arm 5 of a three-armed lever adapted to rock about the axis of the plate cylinder shaft 2^a Figure 1. The two other arms 6, 7, of the last-named lever, are in pivotal and sliding connection with two plates 8, 9 respectively, adapted to rock about a fixed pivot 10 or 11, and each of these plates is in geared connection with another plate 12, 13 respectively, the latter adapted to rock about a fixed pivot 14, and the former about the before-mentioned pivot 11.

Each of the plates 8, 9, 12, 13 is provided with a bearing for rotably supporting a form roller 16, 17, 18 or 19.

One of the arms 1 is connected by a link 20 to the operating lever 21, outstanding spurs 22 on which latter bear against one or other of two adjustable stops 23 when this lever is in the two terminal positions which correspond with the first and third positions of the trip arms 1, as shown respectively in Figures 1 and 3. The operating lever 21 is provided with a spring-pressed locking bolt 24 axially movable therein so that it can engage with a stationary socket 25 to secure the said lever in the intermediate position which corresponds with the above-named second position of the arms 1, as shown in Figure 2.

With the foregoing arrangement, the actuation of the arms 1 effects the simultaneous tripping of the four form rollers 16,

17, 18, 19, the pivots 10, 11 and 14 being so located that the initial movement of said rollers, resulting from the movement of the operating lever 21, from the normal position represented in Figure 1, to the intermediate position represented in Figure 2, carries them out of contact with only the plate cylinder 2, as shown in the last-named figure, and the continued movement of the plates 8, 9, 12, 13 resulting from the movement of the operating lever 21, from its intermediate position to the third position indicated in Figure 3, carries the form rollers out of contact with the distributor drums 26, 27.

Each of the plates 8 at the respectively opposite ends of the plate cylinder 2, has secured to, or integral with, it, an arm 28 Figure 1, which is in pin-and-slot connection with the lower end of a link 29 whose upper end is pivoted to an arm 30 free to rock about the axis of a fixed pivot 31. This arm 30 is fast to, or integral with, a plate 32 having a bearing for a transfer or distributor roller 33, and this plate, through a link 34, is connected with another plate 35 rotatably supporting one end of the shaft of a second transfer or distributor roller 36, and free to rock upon a stationary pivot 37, while this plate 35 is itself in geared connection with a further plate 38 which is free to rock upon a stationary pivot 39 and rotatably supports one end of the shaft of a third transfer or distributor roller 40. This arrangement, as will be clearly understood from a comparison of Figures 2 and 3, ensures the tripping of the rollers 33, 36 and 40 away from the distributing drums 26, 27, 41 and 42 simultaneously with the final portion of the movement of the form rollers 16, 17, 18 and 19, as shown in Figure 3, while the initial portion of that movement, by reason of the aforesaid pin-and-slot connection, leaves the transfer or distributor rollers 33, 36 and 40 in undisturbed contact with the distributor drums as shown in Figure 2.

The use of the before described invention enables the tripping of the form rollers 16, 17, 18, 19 for running up, or for stopping the inking of the printing plate while the press is running, to be conveniently effected, and also enables all the rollers to be held out of contact, as shown in Figure 3, to prevent the formation of flats thereon when the machine is stopped for any appreciable length of time.

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

1. In a rotary printing press, the combination with a plate cylinder and inking or damping mechanism comprising a distributor drum and form rollers normally in contact with both the plate cylinder and distributor drum, of mechanism adapted to trip the form rollers out of contact with either the plate cylinder only or both the plate cylinder and the distributor drum.

2. In a rotary printing press, the combination with a plate cylinder and inking or damping mechanism comprising a plurality of form rollers and distributor drums, and distributor rollers normally in contact with said drums, of mechanism adapted to trip the form rollers out of contact with either the plate cylinder only or both the plate cylinder and the distributor drums and mechanism adapted to trip the distributor rollers out of contact with the distributor drums simultaneously with the moving of the form rollers out of contact with both the plate cylinder and the distributor drums.

3. In a rotary printing press, the combination with a plate cylinder and inking or damping mechanism comprising a plurality of form rollers and distributor drums, and distributor rollers normally in contact with said drums, of mechanism adapted to move the form rollers away from the plate cylinder through a given zone at one part of which said form rollers move while the distributor rollers remain in contact with the distributor drums and at another part of which the form rollers move and at the same time the distributor rollers move out of contact with the distributor drums.

In testimony whereof I have affixed my signature hereto.

WALTER ERNEST DALBY.