April 16, 1957 C. A. FRENCH 2,788,742

INK TRIP FOR OFFSET PRESSES

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Fig. 1.

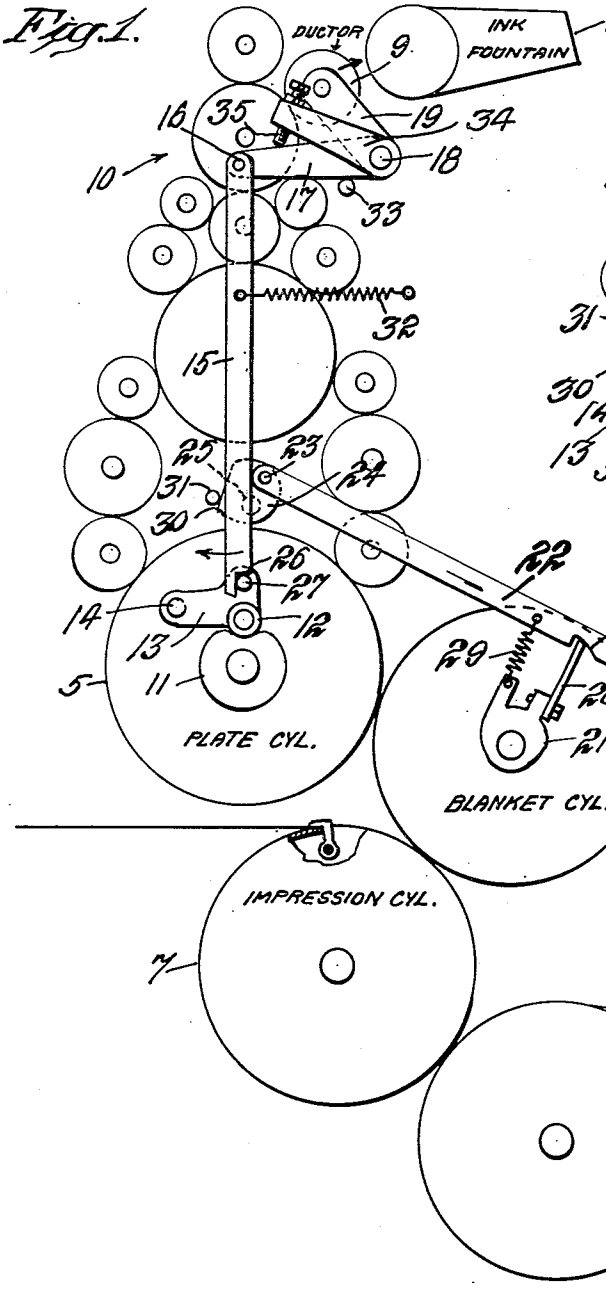
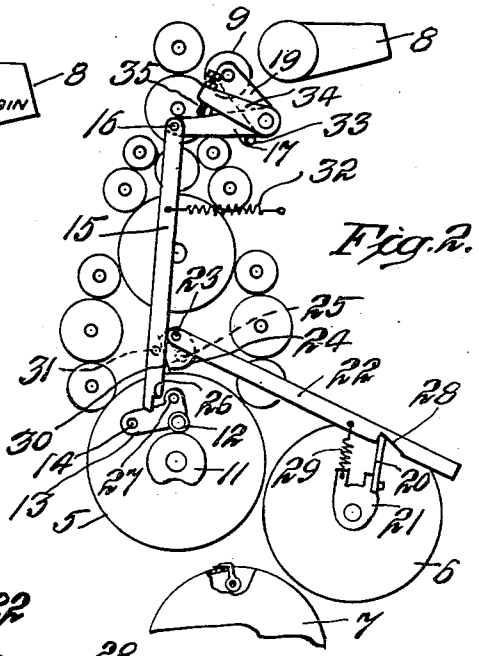


Fig. 2.



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INK TRIP FOR OFFSET PRESSES

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3 Claims. (Cl. 101—351)

The invention herein disclosed relates to the ink systems of offset printing presses, and the general objects of the invention are to provide simple and practical means for automatically stopping the supply of ink to the plate cylinder when the press is tripped to stop printing and thus to prevent over supply of ink to the plate cylinder which might result in too heavy printing and smearing on return of the press to printing operations.

Special objects of the invention are to provide mechanism for the purpose which may be readily applied to existing printing presses at relatively low cost and without affecting other normal printing operations.

Other desirable objects and the novel features of construction, combinations and relations of parts through which the purposes of the invention are attained are set forth and will appear in the course of the following specification.

The drawing accompanying and forming part of the specification is illustrative of a present commercial embodiment of the invention, but structure may be modified and changed as regards the immediate illustration, all within the true intent and scope of the invention as hereinafter defined and claimed.

Fig. 1 in the drawing is an end elevation and diagrammatic view illustrating application of the invention to an offset printing press of conventional design showing the inking system in the normal operating position of parts;

Fig. 2 is a broken diagrammatic view showing the inking system tripped to stop the supply of ink when the press is tripped.

In the illustration the plate, blanket and impression cylinders are indicated at 5, 6 and 7 and the ink system is shown as comprising an ink fountain 8, ductor roll 9 and distributing rolls generally indicated at 10 and grouped to supply ink to the plate cylinder.

In machines of current design the ductor roll is vibrated by a cam 11 on the shaft of the plate cylinder operating through a cam follower 12, a lift lever 13 pivoted at 14 and pivotally connected to the lower end of a link 15 which is pivoted at the top at 16 to an arm 17 on shaft 18 carrying the arms 19 bearing the ductor roll.

In such machines, therefore, the ductor roll vibrates back and forth between the ink fountain and distributor rolls so long as the press is turning over, regardless of whether the press is printing or is tripped.

To avoid the over supply of ink on the plate cylinder which usually results when such a press is tripped, the present invention provides means for automatically disconnecting the link 15 from the lift lever 13 when the press is tripped.

The means for such purpose comprises in the illustration, a projecting blade 20 on the eccentric bearing 21 of the blanket cylinder arranged to engage a push bar or link 22 pivoted at 23 to a disc 24 pivoted at 25 and which locates the upper end of this bar against the lower end of the lift link 15, in position to push the shoulder 26 on that link off supported position on pin 27 on lift lever 13.

The push bar 22 is shown as having an inclined notch 28 in its lower edge for engagement by blade 20, and a spring 29 is shown holding the free end of the bar engaged over the end of the blade.

Spring 29 also serves to hold the push bar 22 retracted toward the right, movement in this direction being limited by engagement of the flat side 30 of pivoted disc 24 with a stop pin 31.

A spring 32 serves to swing the dependent link 15 toward the right against the end of push rod 22 and in supported position over the rocker pin 27.

The lowering or drop movement of link 15 is limited by a stop pin 33 placed to be engaged by the ductor lever or arm 17.

For accurate adjustment of the ductor roll the shaft 18 carrying this roll is shown as having a fixed arm 34 carrying a set-screw 35 bearing on lever arm 17.

It will be seen that with the parts positioned as in Fig. 1, with the press running and paper being fed, the ductor roll will be vibrated to take ink from the fountain and carry it to the distributor rolls with each revolution of the plate cylinder.

When, however, a sheet is missed or for any other reason the press is tripped by left-handed rotation of the eccentric bearings of the blanket cylinder, the blade 20 carried by bearing 21 will shift push rod 22 to the left as in Fig. 2, thus to push the lower end of suspended link 15 off supported position over the rocker pin 27 to stop lifting movement or travel of the ductor roll back to the supply fountain. In such case the ductor or transfer roll will remain supported by stop pin 33, clear of the ink fountain, so long as the press remains in tripped condition.

When printing is again started the parts will return to the Fig. 1 position, the supply of ink to the plate cylinder automatically starting with resumption of printing.

The supply of ink is directly controlled from the mechanism, in this case the rocking eccentric bearing, which trips the blanket cylinder and hence the action of stopping and starting the ink supply is immediate and actually a part of the stopping and restarting of printing operations.

The mechanism required is simple and consists of few parts which can be readily applied to existing machines, the small space required for the same being available on present presses. While means for supplying the inking rollers has been shown as a ductor roll, it will be appreciated that a ductor blade or other such means may be used for the purpose and, further, that other such changes may be made, all within the contemplation of the invention disclosed.

What is claimed is:

1. Automatic ink trip for an offset press having a blanket cylinder mounted in eccentric bearings which can be rotated to trip the press and ductor means mounted to vibrate between an ink fountain and distributing rolls, including a link pivotally suspended from said ductor means free to swing in opposite directions, a disc rotatably mounted on the press in back of said link, a vibrating lever having a shoulder for lifting said link and said link having a companion shoulder engageable with and disengageable from said lifting shoulder by swinging movement of the link in opposite directions, a push rod connected to effect rotative movement of said disc, a leverage extension on one of the eccentric bearings of the blanket cylinder connected to impart movement to said push rod on rotation of the eccentric bearings for tripping the press and a shoulder on said disc engageable with said link to swing the link in the direction to shift the shoulder thereon out of position for engagement by the lifting shoulder on said vibrating lever, whereby upon tripping the press to automatically interrupt transfer of ink from the ink fountain.

2. The invention according to claim 1 with spring

means normally yieldingly holding the push rod, disc and link with the link positioned with the shoulder thereon in line with the lifting shoulder on the vibrating lever.

3. The invention according to claim 1 in which said shoulder on the disc is carried by the push rod connected with the disc and in which stop means are provided limiting rotation of the disc to a position with the shoulder on said push rod locating the link with the shoulder thereon in line with the lifting shoulder on the vibrating lever.

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