April 27, 1937. R. A. KRAHMER 2,078,635

INK ROLLER CLEANING DEVICE

Filed Oct. 26, 1934 2 Sheets-Sheet 1

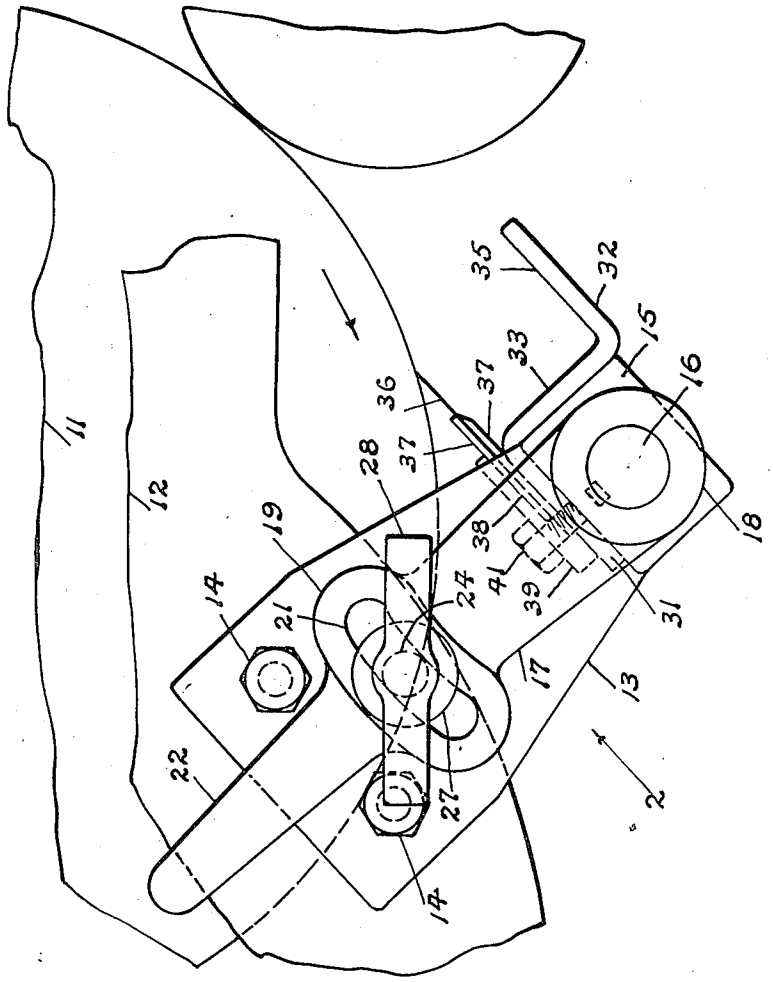


Fig. 1.

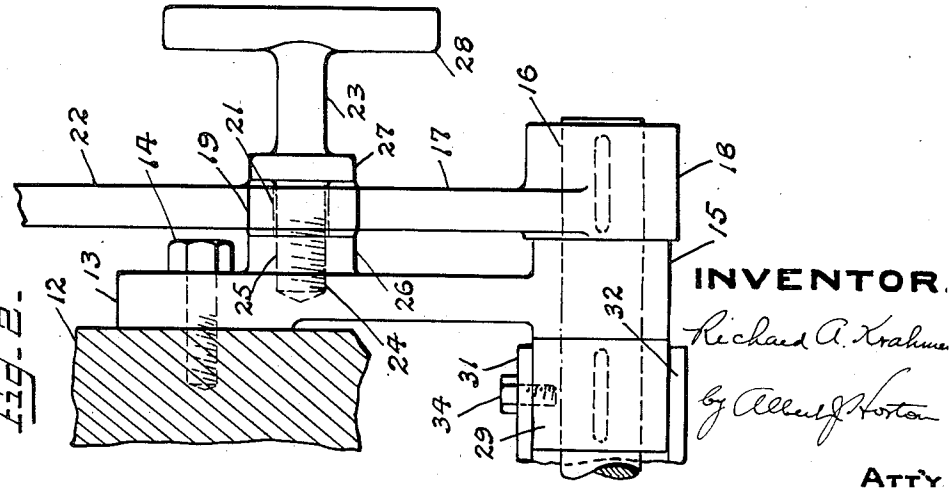


Fig. 2.

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Fig. 3.

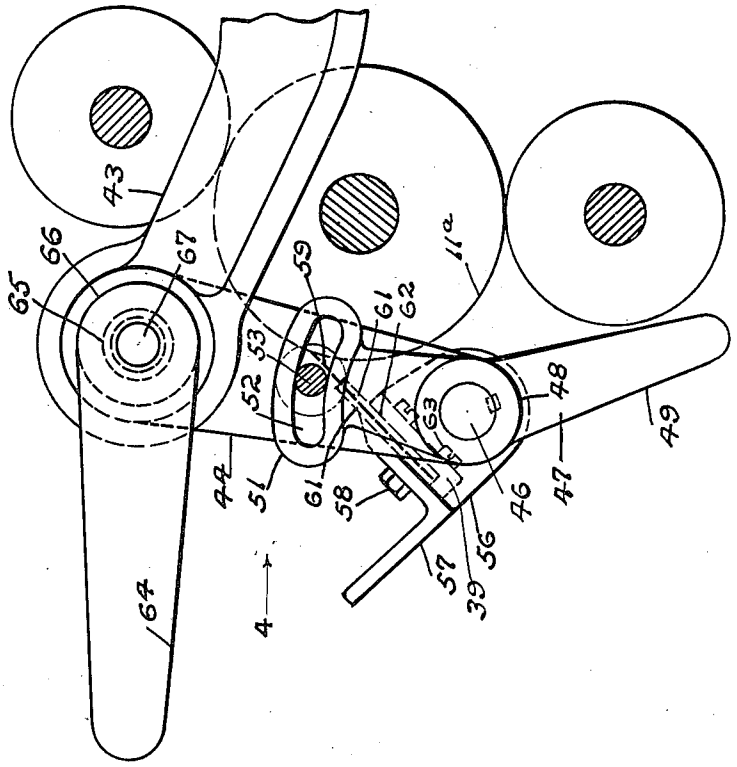
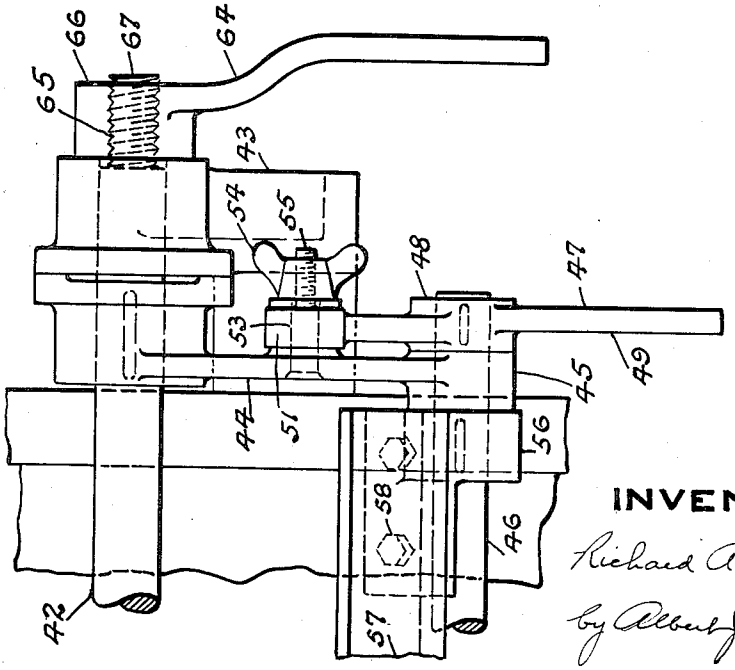


Fig. 4.



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INK ROLLER CLEANING DEVICE

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Application October 26, 1934, Serial No. 750,223

3 Claims. (Cl. 101—425)

This invention relates to a mechanism for use in cleaning the inked surface of ink rollers in a printing machine of the rotary type, and more particularly to a cleaning mechanism which is secured to the machine and is adapted to be moved into an operative position or out of an operative position as desired, and is adapted to be clamped in either of said positions.

With the device fitted to engage one of the rollers of an inking mechanism, all of the coacting rollers may be cleaned of ink after a run of printing is finished by applying a suitable ink solvent to one of the rollers, then running the press for a short while to soften the ink, and then adjusting the blade of the cleaner to engage the roller, when continued operation of the press will effect removal of ink from all of the coacting rollers.

One object of the invention is to provide a roll cleaning mechanism which can be quickly shifted from an inoperative to an operative cleaning position by means of a hand lever, and providing further means to clamp said lever in a locked position after shifting same.

Another object is to provide a roll cleaning mechanism of generally improved construction, whereby the device will be simple, durable and inexpensive in construction, as well as convenient, serviceable and efficient in its use.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts, and in the details of construction hereinafter described.

The preferred embodiment of the invention is illustrated in the accompanying drawings, wherein:

Figure 1 is a view looking toward one end of an ink roller and showing a front elevation of a support and lever, with a roll engaging blade and an ink receiving trough shown in an operative position;

Figure 2 is a side elevational view of the support and lever taken in the direction of the arrow 2 of Figure 1 and includes a fragmentary portion of one end of the trough and its supporting shaft;

Figure 3 is a view similar to Figure 1, showing a modified arrangement wherein the supports are suspended from a tie-rod and in which the construction and position of the roll engaging blade and trough are also modified; and

Figure 4 is a side view of Figure 3 looking in the direction of the arrow 4.

Referring to Figures 1 and 2, a fragment of an ink distributing roller is shown at 11 and a fragment of the printing machine frame is shown at 12. A support member or bracket 13 has one end bolted to the machine frame as by means of bolts 14 and has a bearing 15 formed at the opposite end thereof. Another support is mounted on the frame on the opposite side of the machine, but since it is identical to the support 13 it has not been shown. A shaft 16 is rotatably mounted in the bearings 15 of both supports and has one end extending beyond the bearing shown in Figure 2. A lever 17 has a hub portion 18 splined to the extended end of the shaft and an elongated boss 19 extending beyond each side edge thereof, within which an arcuate slot 21 is provided. Above said boss, a hand grip extension 22 is provided to manually rock said lever, and a clamping member 23 is also provided to clamp the lever in any desired position. Said clamping member comprises a screw 24, which is adapted to screw into a screw threaded opening 25 in a boss 26 on the support 13, and has a flange 27 thereon, which is adapted to clamp against the outer surface of the boss 19 on the lever 17, when the screw is rotated inward by means of the T shaped handle 28, which forms an integral part of said clamping member.

A bracket or block 29 is splined to the shaft 16 at the inner sides of the bearings 15 of each end support 13 and has one flange 31 of a Z bar 32 bridged across one flat upper surface on each bracket and is secured thereto by means of bolts 34. An intermediate web 33 rests against one flat side surface of the bracket 29, which combined with another flange 35 of said bar provides a suitable trough when arranged in the manner shown in Figure 1. Combined with said Z bar 32 is an ink removing blade 36, which is clamped between strips 37—37 and the whole is clamped within a cavity 38 in a clamping plate 39, the latter being secured to the Z bar 32 by means of bolts 41.

From the foregoing description and drawings, it will be seen that a simple structure has been provided and that the arrangement provides for a quick adjustment of the ink removing blade and trough from an operative to an inoperative position on the reverse, by backing off the clamp member 23 and swinging the lever 17 about its axis to the desired position, then tightening the clamping member. When the lever is in the position shown in Figure 1, the blade 36 is in wiping engagement with the roller 11 and the Z bar is placed in a position which causes a V shaped

trough to be formed by the web **33** and flange **35** directly beneath the said wiping blade.

In the modified arrangement shown in Figures 3 and 4, the supporting structure is shown suspended from a tie-rod **42**, which is joined to wings extending from the machine frame, one of which wings is shown at **43**. Said structure includes end supporting arms **44**, splined to each end of the tie-rod **42**, there being only one arm shown in the drawings since the other is similarly arranged, which arms are provided with bearing portions **45** at their lower ends. A shaft **46** is rotatably mounted in said bearings and has one end extending beyond the bearing shown in Figure 4. A lever **47** has a hub portion **48** intermediate its ends, which is splined to the shaft **46**, the lower member of said ends being formed to provide a hand grip **49** while the upper end has an elongated boss **51** formed thereon and an arcuate slot **52** within said boss. Clamping means is also provided to clamp the lever **47** in any desired position, which means comprises a stud **53**, secured within the arm **44** and projecting through the slot **52** in the lever **47**. A wing nut **54** is adapted to be screwed on a threaded extension **55** of said stud, and when tightened thereon will clamp the elongated boss **51** of the lever against the arm **44**.

Brackets **56** are splined to the shaft **46**, at the inner sides of the bearings **45** of each support arm **44**, and have one flange of an angle bar **57** bridged across same and secured thereto by means of bolts **58**. Combined with said angle bar is an ink removing blade **59** which is clamped between strips **61—61** and the whole is clamped within a cavity **62** in a clamping plate **39**, the latter being secured to the under surface of the bridging flange of the angle bar **57** by means of screws **63**. The angle bar **57** is so arranged, that when the blade **59** is in an ink removing position against the roller **11***a*, it forms a V shaped trough to receive the ink which is removed from the said roller.

In general, the modified supporting structure shown in Figures 3 and 4 is similar to the structure shown in Figures 1 and 2 and has a quick acting clamping arrangement which is operated in a manner similar to the clamping arrangement provided for the structure of Figures 1 and 2. There is one additional feature provided in the modified structure however, which includes a clamping lever **64** provided at the end of the tie-rod **42**. Said lever has a screw threaded opening **65** in a boss portion **66**, which is adapted to be engaged by a threaded end **67** of the tie-rod. By means of said clamping lever, the rod is adapted to be drawn up to clamp the support arm **44** against the boss at the end of wing **43**, and when said clamping lever is backed off, the tie-rod will be free to rotate, thus permitting the arms **44** to be moved about the axis of the tie-rod to a point a greater distance from the ink roller **11***a* than the distance provided by the movement of the lever **47**.

It will be understood that the invention may be embodied in other specific forms without departing from the spirit or essential attributes thereof and it is therefore desired that the present embodiment be considered in all respects as illustrative and not restrictive, reference being had to the claims rather than to the foregoing description to indicate the scope of the invention.

What I claim is:

1. In a mechanism for cleaning or removing ink from the lower side of an ink cylinder of a printing machine, an ink receptacle comprising a Z bar and an ink blade connected thereto to form an open ended member having a substantially U-shaped cross section, supporting brackets secured to the frame of the machine arranged for pivotally supporting the member beneath the cylinder, and means to swing the member in one direction to bring the blade into contact with the cylinder to remove ink therefrom and conduct it to the receptacle, and to swing the member in another direction to disengage the blade from the cylinder.

2. In a mechanism for cleaning ink rollers on a printing machine, end supports, a shaft rotatably mounted in said supports, brackets secured to said shaft, a Z bar and a roll engaging blade secured to said brackets and arranged so that the Z bar will provide a trough beneath the blade when in an operative position, a lever secured to said shaft and adapted to rock same and move the blade and trough to an operative or inoperative position, and a clamping member adapted to lock said lever in any desired position.

3. In a mechanism for cleaning ink rollers in a printing machine, end supports, each having one end secured to the machine and a bearing at another end thereof, a shaft rotatably mounted in said bearings, brackets secured to said shaft, a Z bar and a roll engaging blade secured to said brackets and arranged so that the Z bar will provide a trough beneath the blade when in an operative position, a lever secured to said shaft and adapted to rock same and move the blade to an operative or an inoperative position, and a clamping member adapted to lock said lever in any desired position.

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