Jan. 28, 1930. W. K. MICK 1,744,913

PRESS CYLINDER CLEANER

Filed Dec. 17, 1927

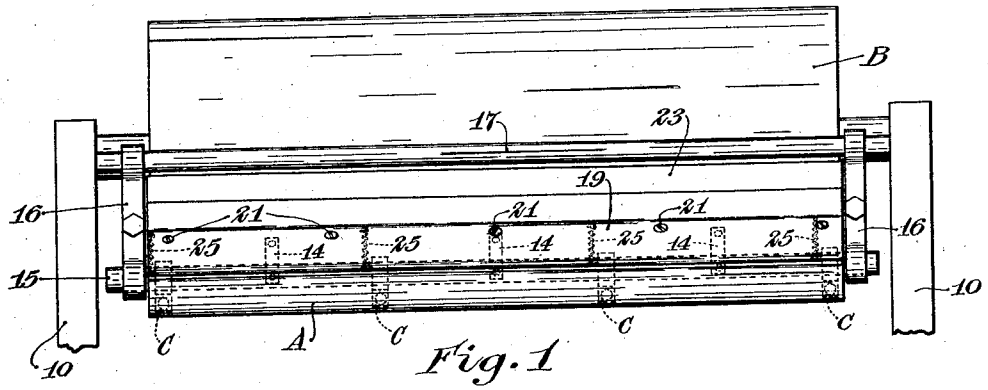


Fig. 1

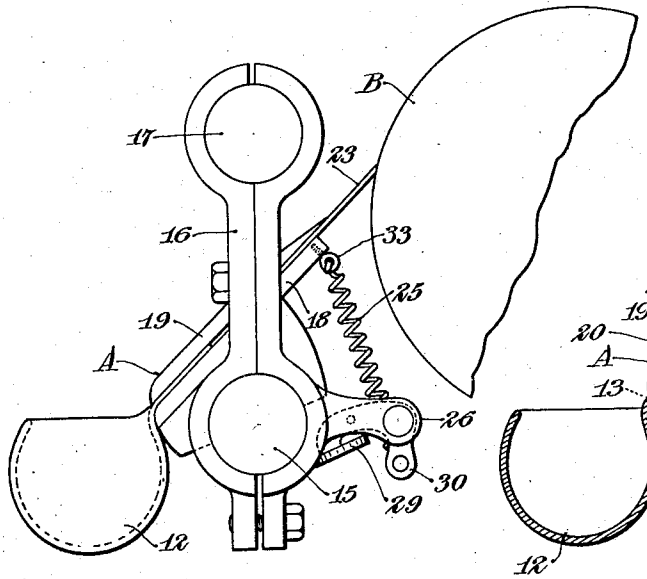


Fig. 2

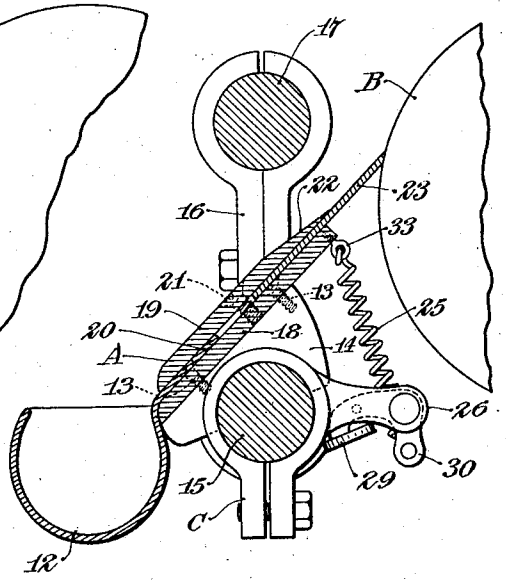


Fig. 3

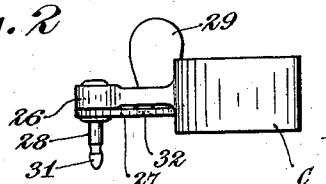


Fig. 4

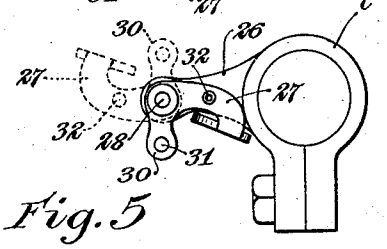


Fig. 5

Inventor

Walter K. Mick

By Howard Fisch

Attorney

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1,744,913

UNITED STATES PATENT OFFICE

WALTER K. MICK, OF ST. PAUL, MINNESOTA, ASSIGNOR TO BROWN & BIGELOW, OF ST. PAUL, MINNESOTA, A CORPORATION OF MINNESOTA

PRESS-CYLINDER CLEANER

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My invention relates to press cylinder cleaners which are particularly adapted to presses where printing is done and it is designed to wash the ink from the press rollers with gasoline. A primary feature of the invention resides in a cleaner which is associated with the press roll in a manner so that the gasoline and ink may run down into a closed trough without danger of the cleaning fluid dropping or coming in contact with the press rollers below the cleaning trough.

Heretofore cleaners for press cylinders have been made for cleaning the cylinders of a press, but they have had objectionable features, one of which is that these remain permanently on the press and are not removable. Another of the objectionable features of such cleaners is that they are not provided with a trough, having a plate associated therewith, which is inclined at a steep angle so as to permit the cleaning fluid to run into the cleaner, in fact some of these cleaners which have been used heretofore are crudely made and the gasoline or cleaning fluid running or dripping from the press roll being cleaned, often leaks through to the next printing roll, making a very objectionable feature and mussing other rolls of the press in a very undesirable manner. These objectionable features make it hard for the pressman to keep the press clean.

My cleaner for press rolls entirely overcomes these features as I provide an easily removable cleaning blade and trough, the blade being associated with the trough so that the cleaning fluid or gasoline runs quickly and readily into the collecting trough of the cleaner, and after the press roll is thoroughly cleaned, the cleaner is removed in its entirety from the press, thereby providing a very desirable form of cleaning means and device for press cylinders.

It is also a feature of my cleaner to provide means for causing the cleaning blade to bear against the press roll under spring tension so that the cleaning blade will readily scrape off the cleaning fluid, and by positioning the cleaning trough at a steep angle with the cleaning blade, I provide means of causing the surplus cleaning fluid to be collected quickly by the trough. I also provide a connection between the trough and the blade, which is in the form of a virtually fluid-tight joint so that the cleaning fluid will not leak through the cleaning device.

My cleaner is provided with a removable and replaceable cleaning blade which permits the blade to be renewed or changed when it has become worn or undesirable.

These objects, together with other details of the invention will be more fully and clearly set forth in the specification and claims.

In the drawings forming a part of the specification:

Figure 1 illustrates diagrammatically a portion of the press showing my cleaner in a front view in operative position with the same.

Figure 2 is a diagrammatic end view of my cleaner and a portion of the press roll to show the working position of the same.

Figure 3 is a similar view to Figure 2 showing the parts in cross section.

Figure 4 is a plan view of one of the spring latches.

Figure 5 is a side view of the latch showing in dotted outline the different positions of the same.

In the drawings my cleaner A is adapted to be attached to a press, only a portion of which is illustrated diagrammatically in the drawings, and which is provided with a press roller B and side frame members 10.

The cleaner A is formed with a longitudinal trough member 12 which is held by the screws 13 attached to the bracket members 14. The bracket members are adapted to be supported to the transverse shaft 15, which is supported adjacent the press roll B by the end bracket members 16, which connect on their upper end to the transverse shaft 17 of the press. The shaft 17 extends between its frame members 10, and is an ordinarily well known construction to which my cleaner is adapted, so that the bracket members 16 are adapted to hold the transverse shaft 15 directly below the shaft 17.

The cleaner A is provided with a series of brackets 14 and each of these bracket members 14 is formed with a recess in the bottom

of the same of a similar diameter to the diameter of the shaft 15 so the bracket members 14 rest upon the shaft 15. This permits the bracket members to rotate on the shaft 15, the process of which will be hereinafter described.

The cleaner A is provided with a transverse lower plate member 18 to which the bracket members 14 are attached, and the trough 12 is connected to the plate 18, and the bracket members 14 by means of the screws 13, and a top plate 19 which engages against the longitudinally extending flange 20 formed on one side of the trough 12 as illustrated in Figure 3, thus when the screws 13 have been set in position and the plate 19 has been adjusted over the flange 20 and held by the screws 21 to the under-plate 18, the trough 12 is connected to the plates 18 and 19 by a fluid-tight joint.

I provide a cleaning scraping blade 23 which is adapted to be connected between the plates 18 and 19 at the opposite side to the connections of the flange 20, and which is adapted to be pinched between plates 18 and 19 to form a fluid-tight joint therebetween. The top plate 19 is beveled at 22 with a long, inclined surface so as to meet on a gradual slope with the scraping blade 23. This provides a smooth inclined surface from the blade 23, over the plate 19, and into the trough 12.

The cleaner A is adapted to have its blade 23 held under spring tension against the roller B of the press by means of the coil springs 25. I accomplish this by providing a series of bracket members C which engage about the shaft 15 and which are provided with a rigid bracket 26 on one side. The rigid bracket 26 is formed with a releasing latch 27 which is pivoted at 28 to the outer end of the bracket 26. The latch 27 is of a bell crank nature and is formed with a thumb engaging lip 29 which extends virtually at right angles to the body of the bell crank portion of the latch 27 on the opposite end to the portion 30 of the bell crank of the latch 27. This portion 30 carries a pin 31 which is adapted to form a stud for engaging one end of the springs 25.

The bell crank of the latch 27 is formed with a detent 32 which engages in a notch or opening formed in the bracket 26 to lock the latch of this bell crank as illustrated in full lines in Figure 5. This is a similar position to that illustrated in Figure 3, however Figure 3 shows the bracket C from the opposite side to that shown in Figure 5.

When the latch 27 is held in operative position as in Figures 3 and 5, one end of the springs 25 is held taut to pull the plate 23 under spring tension against the press roll B. The springs 25 are connected at 33 to the under-side of the plate 18. Thus the cleaner A is adapted to be rotatively held on the shaft 15 and by means of the springs 25 the plate 23 is held under spring tension against the roller B which is being cleaned by gasoline or other cleaning fluid.

The latch 27 carries the attaching of the spring with the pin 31 over the center of the pivot 28, holding the springs in locked position, and the dent 32 also assists in holding the latch 27 in locked position as illustrated in Figure 3. The dotted outline of the latch 27 is illustrated in Figure 5.

The bracket arms 16 remain on the press adjacent the press roller B. The cleaner A is easily removed therefrom by releasing the springs 25 and lifting the trough 12 with the blade 23 away from the press roller B. When the cleaner A is resting upon the shaft 15, it is free to rock slightly as urged by the springs 25, and the pressman may easily clean the cylinder B with gasoline or other cleaning fluid, the surplus of which runs into the trough 12 so that it is collected without dripping on to the rest of the parts of the press. After the press roll B is cleaned, the cleaner A can be lifted away and the trough 12 emptied of any surplus cleaning fluid. This easily removable cleaner A also permits the pressman to keep the cleaner A clean of any fluid or old ink washed from the press. I have found that my cleaner is much to be preferred over any other cleaning device that has been associated and adapted to presses heretofore, in so far as I know.

Another advantage of my cleaner resides in the replaceable cleaning blade 23 which is held between the plates 18 and 19 and the removable trough 12, together with the tight joint between the blade 23, the plates 18 and 19 and the trough 12, this trough 12 having a closed end.

The integral flange 20 on the trough 12 assists in making this connection.

These features describe my invention in accordance with the patent statutes in a particular manner, however, I desire to have it understood that obvious changes may be made within the scope of the following claims, without departing from the spirit of my invention.

I claim:

1. A press cleaner comprising a collecting trough, a press roll bearing blade and means for connecting said bearing blade with said trough including two clamping plates engaging said blade and trough to form a smooth liquid-tight joint between the same.

2. A removable press cleaner including a trough, means for supporting said trough in a manner to permit the same to oscillate in operation and a cleaning blade associated with said trough in a manner to cause surplus cleaning fluid to run into said trough.

3. A collector for cleaning fluid for press rolls including a trough, a cleaning blade, a spring means for holding said blade, means for supporting said blade and trough oscillatable in operative position and under spring

tension against the press roll, permitting said trough and blade to oscillate together as a unit.

4. A collector for cleaning fluid on a printing press including means for detachably supporting said collector, a collecting trough, a cleaning blade and means for holding said blade and trough in a manner to rotate to hold the blade in compensating relation with the press roll of the printing press during the operation of the same.

5. A collector for cleaning fluid for printing presses comprising a transverse shaft fixedly secured to the press, a collecting trough, a cleaning blade associated with said trough and means for supporting said blade and trough in a manner to rotate as a unit on said transverse shaft in the operation of said collector.

6. A press cleaner comprising a cleaning blade adapted to rest on the press roll, a collecting trough associated with said blade, means for detachably connecting said blade and trough together, means for supporting said blade and trough to cause the blade to bear with spring tension against the press roll, and means for releasing the tension to permit the trough and blade to be removed from the press.

7. A press cleaner including a pair of plate members, sockets carried by one of said plate members, a shaft on which said sockets are adapted to rest, the other of said plate members being adapted to engage a trough on one side, and a cleaning blade on the other side, and means for attaching said plate members with said cleaning blade and trough in a manner to cause said cleaning blade to engage a press roll under spring tension.

8. A cleaning fluid collector, having a cleaning blade and collector trough connected as a unit, means for supporting said collector unit to a printing press, said supporting means including an oscillating support for the collector to compensate for the surface of the printing roll which is being cleaned.

WALTER K. MICK.