April 5, 1927. 1,623,723

W. GEGENHEIMER ET AL

APPARATUS FOR CLEANING CYLINDERS OF OFFSET AND OTHER PRESSES

Filed Jan. 20, 1926

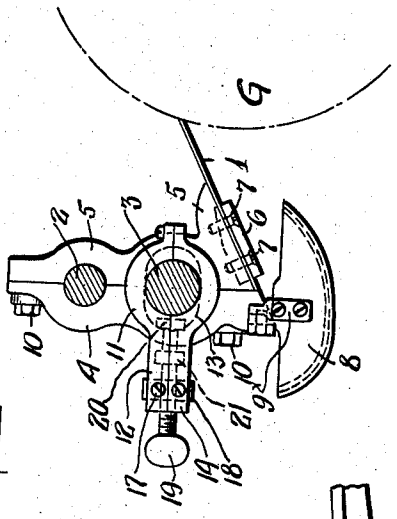


FIG. 2

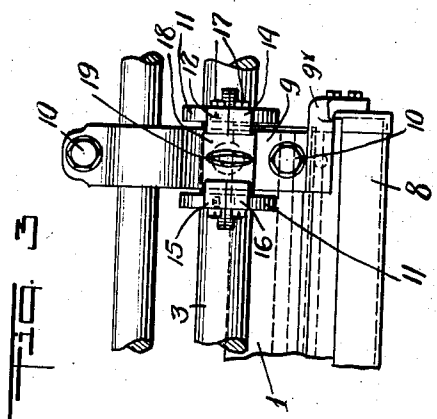


FIG. 3

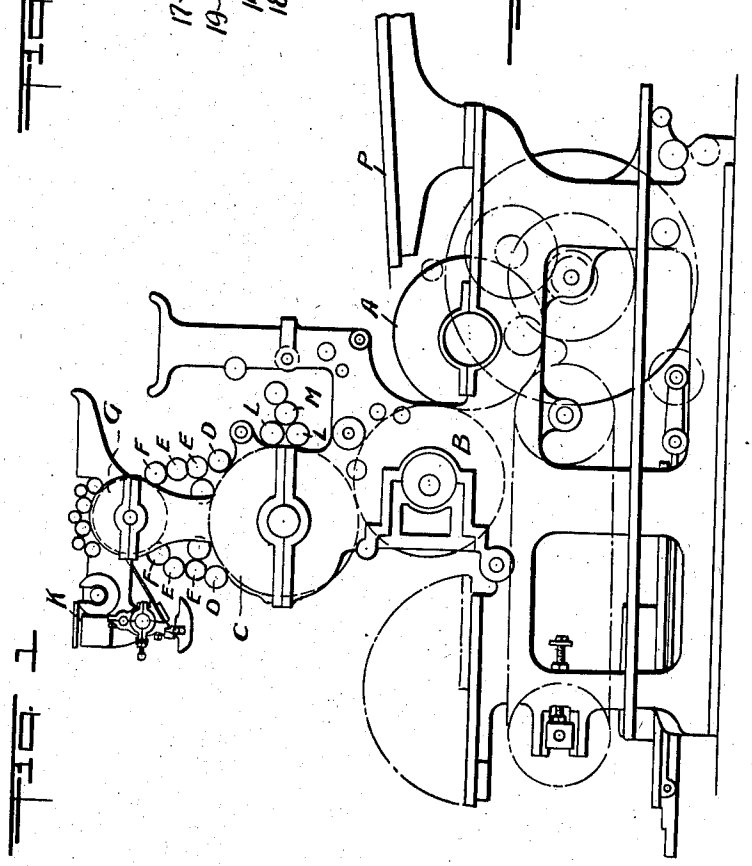


FIG. 1

INVENTORS

William Gegenheimer

and Ernest E. Barney

BY

ATTORNEY

Patented Apr. 5, 1927. 1,623,723

UNITED STATES PATENT OFFICE.

WILLIAM GEGENHEIMER, OF BALDWIN, AND ERNEST E. BARNEY, OF PORT WASHINGTON, NEW YORK.

APPARATUS FOR CLEANING CYLINDERS OF OFFSET AND OTHER PRESSES.

Application filed January 20, 1926. Serial No. 82,427.

The principle of operation of the invention is the employment of the suctional effect of one inking roller upon the other in transferring the ink. In our method we soften the ink upon the rollers by means of a detergent or solvent, and apply to one of the inking rollers, or to an independent roller in contact with one of the inking rollers, an ink removing member which will serve to mechanically remove the ink from the roller with which it contacts, whilst the machine is in operation, so that as the ink is removed from said last named roller, the remaining rollers serve to carry their ink to it, the ink removing operation being continued until substantially all of the ink is removed from the rollers by the suctional action of one upon the other in transferring the ink to the final roller which is on contact with the ink removing device.

In conjunction with this specification we have illustrated diagrammatically a typical rotary offset press, and reference will be made thereto.

In the drawings—

Figure 1 represents in side elevation, and diagrammatically, a rotary offset press equipped with apparatus in accordance with the invention;

Figure 2 is an end elevation, of said apparatus, and

Figure 3 is a sectional front elevation of the apparatus.

In the drawings A represents the impression or feed cylinder, B the blanket cylinder and C the plate cylinder. D represents inking rollers connected by the wipers E and intermediate rollers F with the distributing drum G for the ink.

K represents the ink duct, M the water distributor and L the damping rollers. The feed-board is indicated at P.

The ink removing member comprises a blade 1 which is adapted to come into contact with the metal distributing drum G, in the present embodiment, although in practice it may contact with a roller such as D, E or F, but preferably a metal roller to which ink is led by one of said ink distributing rollers. Blade 1 is supported by two hangers, one only being illustrated in the drawing inasmuch as both are identical in construction. Each hanger supports one end of the blade. The hanger is pivotally movable upon a shaft such as shaft 2, and is provided with means for acting against a second shaft, such as 3, in order to swing the hanger on its pivotal shaft thereby bringing blade 1 into or out of contact with drum G.

The hanger is formed of opposed units, each unit comprising two vertical members. The left hand unit 4 is suitably bolted to the right hand unit 5 and said member is formed with a seat for receiving one end of blade 1, the blade being held in position by a block 6 which is apertured to receive threaded studs 7 which pass through the blade and into member 5.

The left hand unit carries a receiving pan at one end thereof, the receiving pan being indicated at 8, being connected to member 4 by means of a bracket 9. The ink removing blade 1 is supported above pan 8, and in upwardly inclined position so that the ink removed by the blade passes downwardly and into the pan.

The left hand unit 4 is suitably connected to member 5 as by bolts 10.

At each side of the hanger is one member of a carrier for an adjusting screw which serves to swing the hanger on shaft 2 so as to advance or retract the blade relatively to drum G.

The right hand carrier member comprises an upper segmental boss 11 merging into a projecting arm 12, a lower segmental boss 13 merging into a projecting arm 14. The said upper and lower elements are bolted together in any suitable manner so that bosses 11 and 13 are clamped upon shaft 3 thus holding 12 and 14 in rigid horizontal position.

The left hand member of the carrier is constructed identically with the right hand member and, therefore, does not require detail description. Its horizontal projecting arms are indicated in Figures 3 at 15, 16. The two members of the carrier for the adjusting means are secured by screws 17 to a block 18 in which is threaded an adjusting screw 19, which screw passes through an aperture formed in member 4 of the blade hanger and has secured at its end fixed nut 20, which nut is located within a space formed by cutting away that part of the hanger which lies adjacent the shaft 3. The member 5 of the hanger likewise is cut away at its face opposite shaft 3, and, therefore, the hanger can swing on shaft 2 for a lim-

ited movement without interference by shaft 3.

Adjusting screw 19 has fixed thereon exterior of but adjacent to member 4 of the hanger a nut or other form of contact 21. When the screw is moved inwardly contact 21 engages member 4 of the hanger, and the hanger is swung in such position as to move blade 1 toward drum G. A reverse movement of the screw will cause nut 20 to carry the hanger and blade away from drum G.

In the operation of our apparatus we apply a detergent or other ink softening agent or solvent to those rollers upon which ink has been deposited, and it will be understood that the ink fount will be emptied or otherwise arranged so as to stop the further flow of ink from the fount to the rollers. The press will now be operated so as to rotate the rollers; and an ink removing blade, that described above being suitable, will be moved into contact with one of the rollers, preferably a metal roller. As ink is removed from the last named roller by means of the blade, ink will be redeposited upon said roller by the suctional effect on the contacting roller, and the same effect of latter roller upon another roller and so on with respect to all the rollers. In the continued operation of the machine substantially all of the ink will be moved from the rollers. A final light wiping of the rollers with cloth may be employed although this is not necessary, even when a light color succeeds a much darker color, or black, if the following step is taken. That step is to place the succeeding and different color on the riders and permit the same to be carried over the surfaces of the rollers until the ink is carried to and upon the surface of the roller engaged by the ink removing blade. After a few rotations of the rollers it will be found that all of the remaining old ink has been carried by the fresh ink to the ink removing device, as is shown by the fact that the fresh ink at the final roller is of the same shade as the fresh ink in the fount, or on the riders.

Having described our invention what we claim and desire to secure by Letters Patent is as follows, it being understood that by "inking roller" we mean any of the rollers employed to carry ink in the printing operation or a separate roller used in the ink removing process and contacting with an ink carrying roller and also with the ink removing blade. It will also be understood that in the specification and in the claims "printing presses" is intended to include all types of presses capable of performing a printing operation as for example lithographing, offset, and typographical presses.

We claim:

1. As a new article of manufacture, a device for cleaning the ink rollers in printing presses which comprises opposed hangers, each hanger comprising a left hand unit and a right hand unit adapted to be clamped together upon a supporting rod, a blade mounted in inclined position upon one of the units, a receptacle carried by the second unit and means for swinging the hangers in unison to advance and retract the blade.

2. As a new article of manufacture, a device for cleaning the ink rollers and printing presses which comprises opposed hangers, each hanger comprising a right hand and a left hand unit, means for clamping the same together upon a supporting rod, a trough extending from one hanger to the opposite hanger and secured thereto, a blade connecting the two hangers and held in inclined relation thereto, an arm adapted to be held upon a supporting member and an adjusting screw supported by said arm and operatively engaging a hanger whereby the two hangers may be swung in unison to advance or retract the blade.

3. As a new article of manufacture, a device for cleaning the ink rollers in printing presses, which comprises opposed hangers, the hangers being connected at their base by a trough-like receptacle and by an angularly held blade, each hanger comprising two units adapted to be held together upon a support in such manner as to swing on said support, an adjusting screw for a hanger, the screw being mounted upon a member adapted to be secured upon a stationary support.

In testimony whereof, we have signed our names to this specification.

WILLIAM GEGENHEIMER.
ERNEST E. BARNEY.