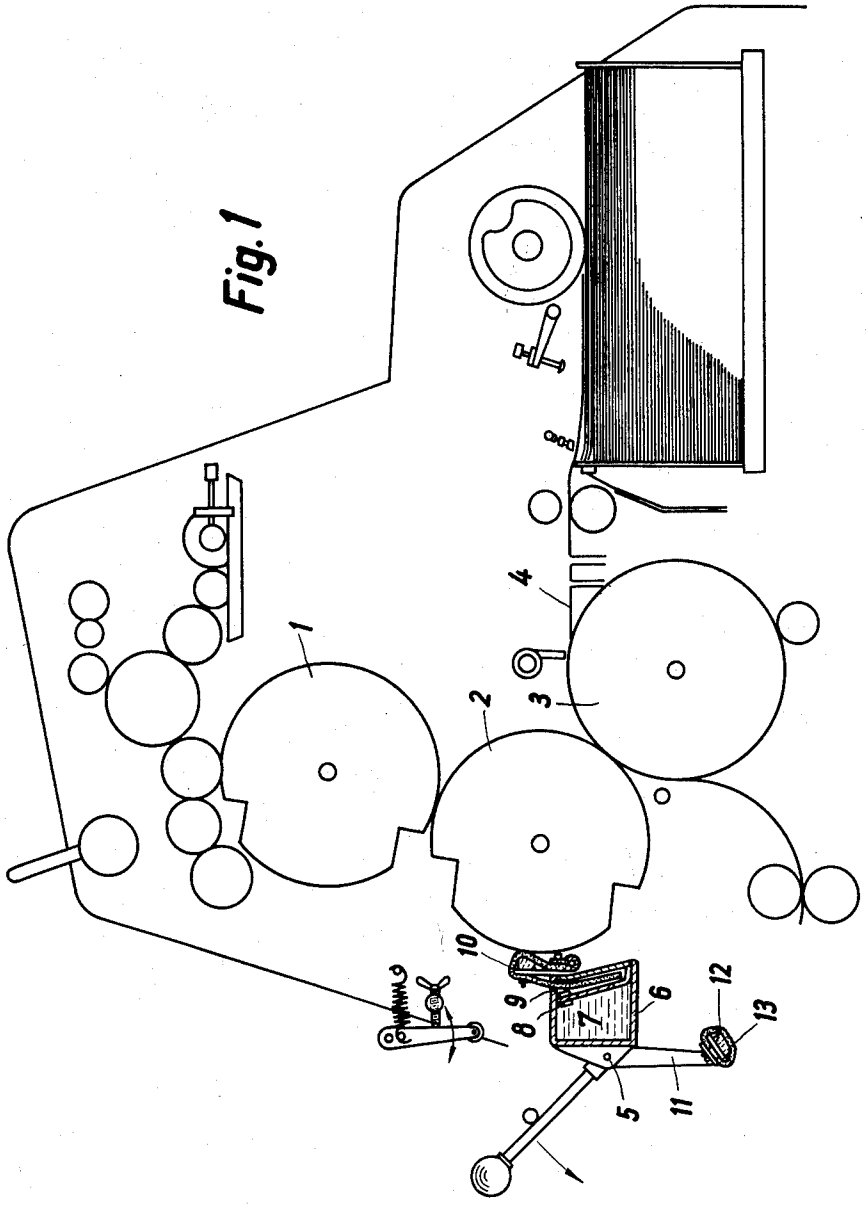
June 18, 1963 E. GERICKE 3,094,068

ARRANGEMENT FOR CLEANING PRINTING INK, DIRT OR THE LIKE FROM CYLINDRICAL SURFACES IN A PRINTING PRESS

Filed Feb. 27, 1961 4 Sheets-Sheet 1

Fig. 1




Inventor:
ERICH GERICKE

By Menderoth, Lind & Ponack

ATTORNEYS

June 18, 1963 E. GERICKE 3,094,068

ARRANGEMENT FOR CLEANING PRINTING INK, DIRT OR THE LIKE FROM CYLINDRICAL SURFACES IN A PRINTING PRESS

Filed Feb. 27, 1961 4 Sheets-Sheet 2

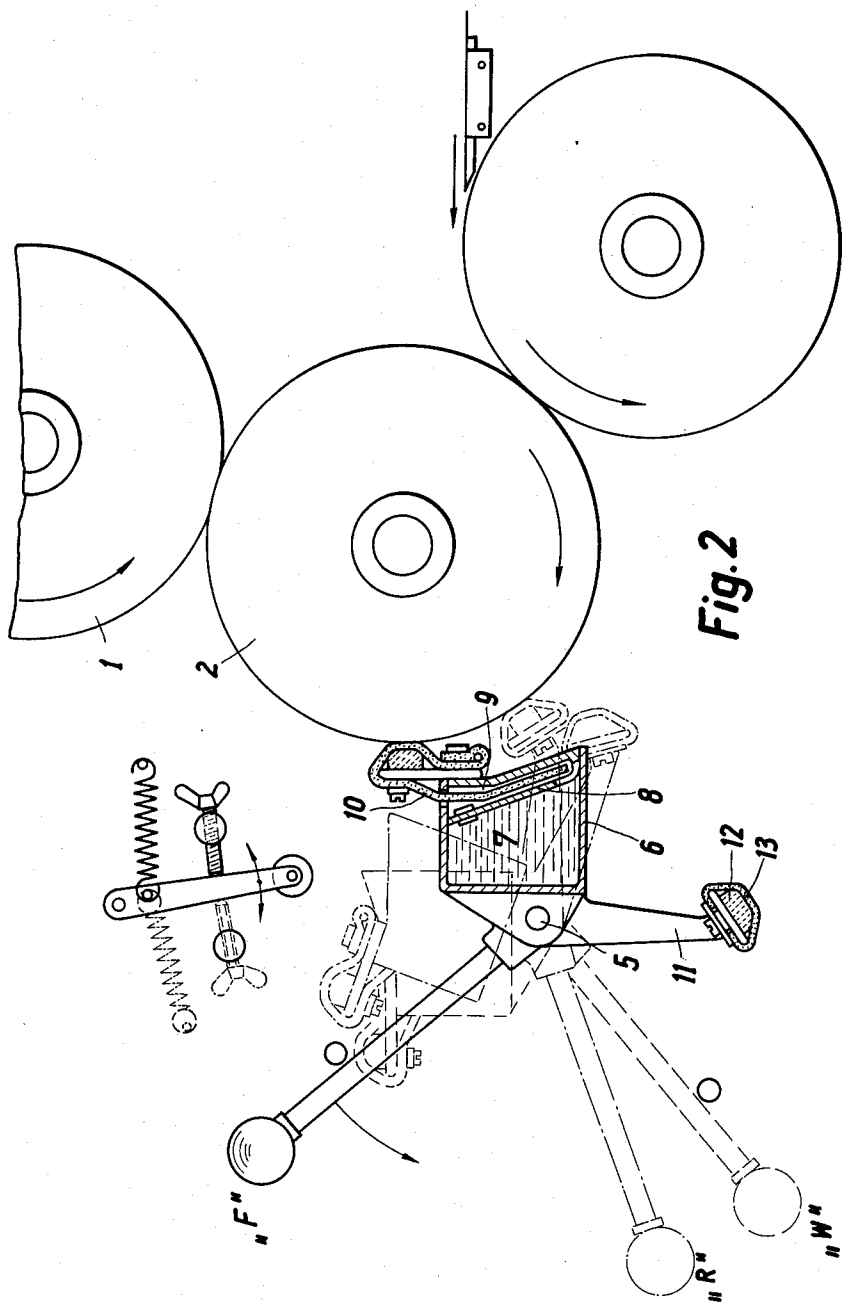



Fig. 2

Inventor:
ERICH GERICKE

By Wenderoth, Lind & Ponack
ATTORNEYS

June 18, 1963 E. GERICKE 3,094,068

ARRANGEMENT FOR CLEANING PRINTING INK, DIRT OR THE LIKE FROM CYLINDRICAL SURFACES IN A PRINTING PRESS

Filed Feb. 27, 1961 4 Sheets-Sheet 3

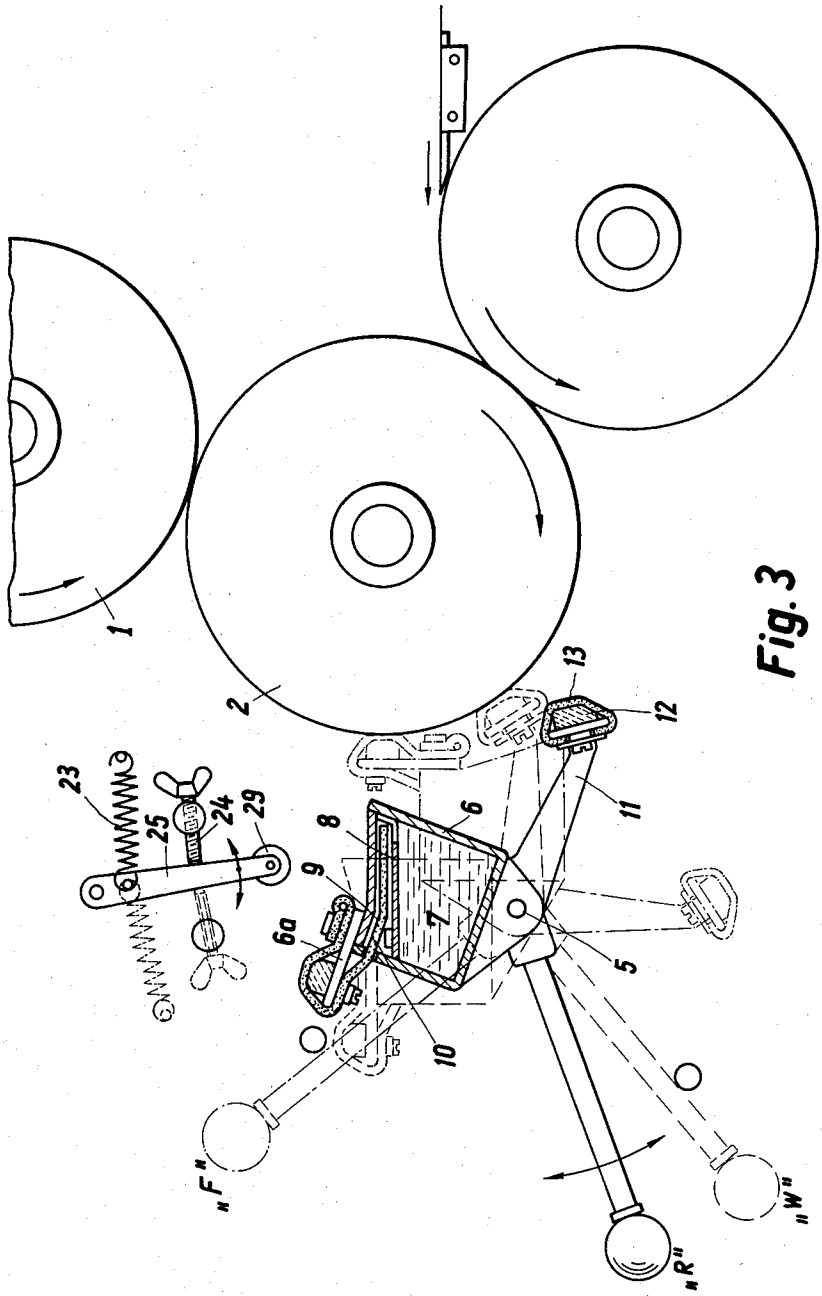



Fig. 3

Inventor:
ERICH GERICKE

By Wenderoth, Lind & Ponack

ATTORNEYS

June 18, 1963 E. GERICKE 3,094,068

ARRANGEMENT FOR CLEANING PRINTING INK, DIRT OR THE LIKE FROM CYLINDRICAL SURFACES IN A PRINTING PRESS

Filed Feb. 27, 1961 4 Sheets-Sheet 4

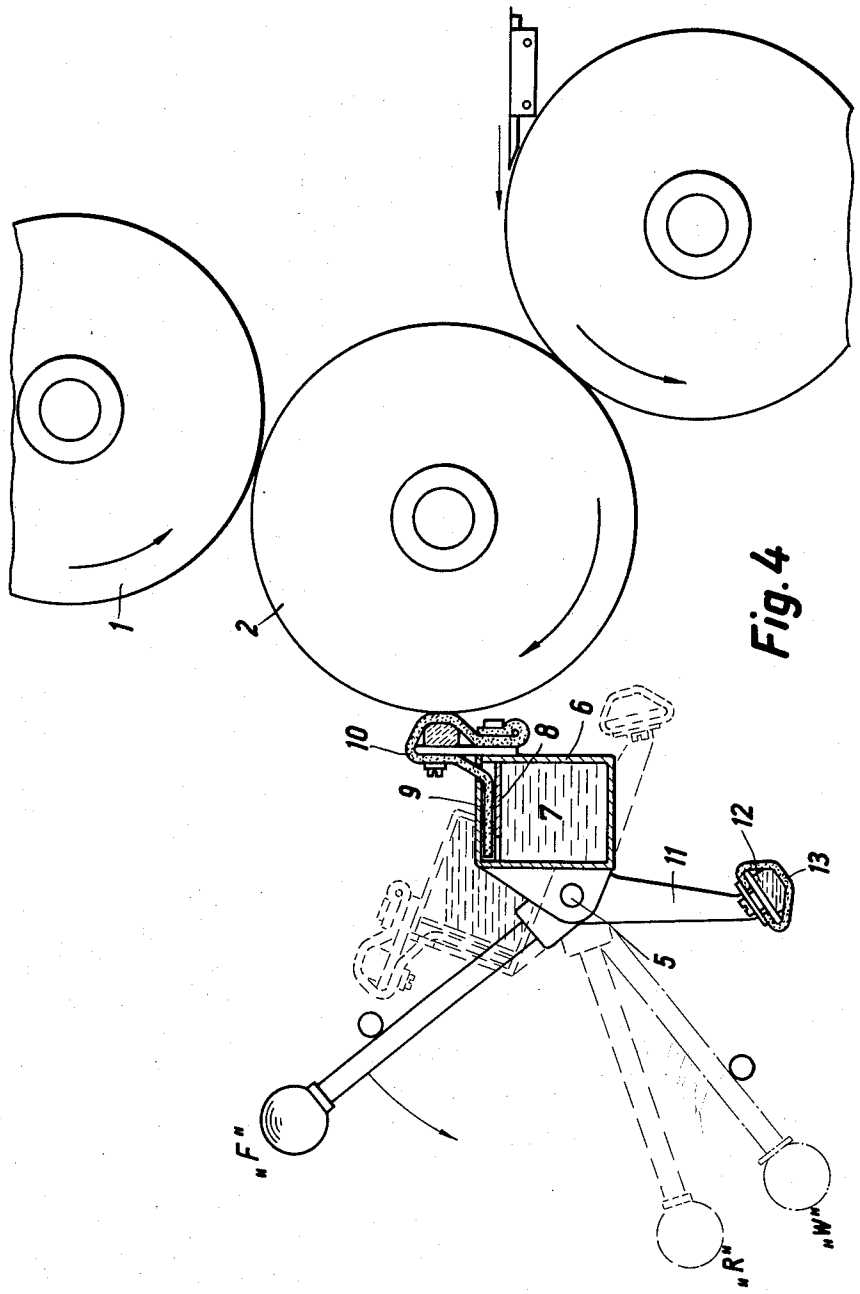



Fig. 4

Inventor:
ERICH GERICKE

By Wenderoth, Lind & Ponack

ATTORNEYS

United States Patent Office

3,094,068

Patented June 18, 1963



3,094,068

# ARRANGEMENT FOR CLEANING PRINTING INK, DIRT OR THE LIKE FROM CYLINDRICAL SURFACES IN A PRINTING PRESS

Erich Gericke, 14 Flemmingstrasse, Berlin-Steglitz, Germany

Filed Feb. 27, 1961, Ser. No. 91,861
Claims priority, application Germany Mar. 3, 1960
2 Claims. (Cl. 101—425)

The invention relates to an arrangement for cleaning printing ink, dirt or the like from cylindrical surfaces in a printing press.

The arrangement comprises a tank which contains a cleaning liquid from which the cleaning liquid is drawn by means of a wick and is fed to a pivotal cleaning wiper, which absorbs a certain limited quantity of liquid and passes it to the cylinder surface until the cleaning liquid on the wiper has been used up.

Cleaning systems are already known for the cylinders of offset printing presses comprising a wiper, a moistening device and a liquid tank, but such systems have the disadvantage that they do not work uniformly when operated rapidly or slowly, since they either dry out or become oversaturated with liquid. The consequence of this is that the cylinders are never correctly cleaned or else are excessively wetted and do not dry sufficiently quickly to enable uninterrupted operation to be maintained.

The object of the invention is to provide an arrangement which, for any working rhythm, provides a certain quantity of moisture for cleaning the cylinders.

To this end, according to the present invention, the liquid tank, together with the wick which extends into the tank and which at the same time operates as a cleaning and damping wiper, forms a pivoting unit. When the unit is in one position the wick dips into the liquid and when the unit is in another position it is lifted above the level of liquid in the tank. The result of this is that there is always a certain limited quantity of liquid available for the wiping process, the said quantity being as much as the wick can absorb. Since the tank is also pivotal and the wick periodically dips into the liquid, this ensures that directly after the completion of the wiping process and the swinging down of the pivoting unit for the next damping process a certain limited quantity of liquid is absorbed by the wick and is available.

The present invention also has the effect that the cleaning liquid is fed from the tank by way of the wick directly to the region to be cleaned and damped and no further intermediate elements are provided between the wick and the cylindrical surface to be cleaned. In addition, a very simple cleaning system is created which can be used more particularly for offset printing presses.

The invention will now be described with reference to the accompanying drawings which illustrate by way of example preferred embodiments thereof and in which:

FIGURE 1 is a diagrammatic view of one embodiment applied to an offset printing press, the figure showing the three cylinders of an offset printing press, namely, the forme cylinder **1**, the offset cylinder **2** and the impression cylinder **3** and the paper feed **4**, the invention being shown applied to the offset cylinder.

FIGURE 2 is a cross-section of the embodiment shown in FIGURE 1, and shows various operative positions, the



solid lines denoting the damping position "F," the broken lines showing the wiping position "W" and the chain-dotted lines the position of rest "R."

FIGURE 3 shows the same construction, the solid lines denoting the position of rest "R," the broken lines the wiping position "W," and the chain-dotted lines the damping position "F," and

FIGURE 4 shows another construction, in which the solid lines denote the damping position "F," and the broken lines the position of rest "R."

As shown on the drawings, a shaft **5** is mounted rotatably in parallel relationship to the cylinder to be cleaned (the offset cylinder **2** in the example). Said shaft carries a liquid tank **6** containing a cleaning or damping liquid **7**. A space **9** for a wick **10** is separated by a wall **8** from the space containing the liquid. The shaft **5** also carries a wiper **11** having a resilient base **12** and a readily interchangeable cloth overlay **13** which wipes dry the part that is to be cleaned.

In the construction shown in FIGURE 3, the wick is in the position of rest "R" outside the liquid **7**. In the construction shown in FIGURE 4, the wick **10** is in the damping position "F" outside the liquid **7**.

The mode of operation is such that in the position "R," that is to say the position of rest as shown in FIGURE 3, the wick **10** is situated above the liquid, i.e. does not dip into the latter and hence does not absorb any moisture. In the position "F," i.e. the damping position (FIGURE 2), the level of liquid **7** has shifted in relation to the wick **10** so that the wick dips into the liquid and draws up the liquid so that it reaches the point of contact between the damping device and the cylinder **2**, and damps the latter uniformly in consequence of the rotation of the cylinder. In the position "W," the wiping position, the tank is swung back to such an extent that as in the position "R," the wick once again no longer dips into the liquid, but the wiper **13** touches the cylinder **2** and wipes the latter dry as a result of the rotation thereof. After this has taken place, the lever is returned to the position "R" and periodic operation can be repeated.

The mode of operation according to FIGURE 4 is such that the wick **10** in the position "R," i.e. the position of rest, dips into the liquid and fully absorbs it. In the position "F," the damping position, the wick **10** does not dip into the liquid **7**, and hence does not absorb any liquid, and the cylinder **2** is damped by the moisture absorbed in the position "R." In the position "W," the wiping position, the wick **10** is in the liquid and the wiper **11**, **12**, **13** touches the cylinder **2** and wipes it dry as a result of its rotation.

According to the invention, a squeezer device is also provided, and consists of a squeezer roller **29** mounted on a lever **25**.

The squeezer roller **29** as shown in FIGURES 2 to 3 mounted on the lever **25** is in turn drawn by a spring **23** against an adjustable stop **24**. The position of the squeezer roller is such that it can be adjusted by means of the adjustable stop so as to come into the range of the passing damper to a greater or lesser extent.

As the damping device passes the squeezer roller in the clockwise direction the wick **10** is taken past the squeezer roller **29** and in these circumstances is compressed and excess moisture or dirt are squeezed out.

I claim:

1. A device for cleaning printing ink, dirt or the like from a cylinder of printing presses comprising a shaft adjacent said cylinder extending parallel to the axis of said cylinder, a pivotally mounted tank on said shaft for a cleaning liquid, said tank being pivotal between an applying position and a rest position, a pivotally mounted wiper on said shaft angularly spaced from said tank and movable therewith and, in addition, pivotal from said rest position to contact said cylinder for wiping, and a wick mounted on said tank for drawing cleaning liquid from said tank, said wick having a portion extending outside of said tank serving as means to contact said cylinder for applying cleaning liquid to said cylinder and a portion extending inside of said tank along the top thereof when said tank is pivoted to applying position and said wiper is spaced from said cylinder so that when pivoted to applying position the wick is removed from the liquid in said tank and when pivoted away from said cylinder said wick dips into said liquid in said tank to receive a limited quantity of liquid to be applied to a cylinder surface.



2. A device according to claim 1, wherein said tank is provided with a partition open at the bottom forming a chamber for said wick.

**References Cited** in the file of this patent

UNITED STATES PATENTS

| | | |
|---|---|---|
| 567,598 | Kilmer et al. | Sept. 15, 1896 |
| 635,326 | Kopp | Oct. 24, 1899 |
| 1,889,375 | Renck | Nov. 29, 1932 |
| 2,126,768 | Goedike | Aug. 16, 1938 |
| 2,612,105 | Skinner | Sept. 30, 1952 |
| 2,957,191 | Harris | Oct. 25, 1960 |
| 2,994,901 | Ely | Aug. 8, 1961 |

FOREIGN PATENTS

| | | |
|---|---|---|
| 633,990 | Great Britain | Dec. 30, 1949 |