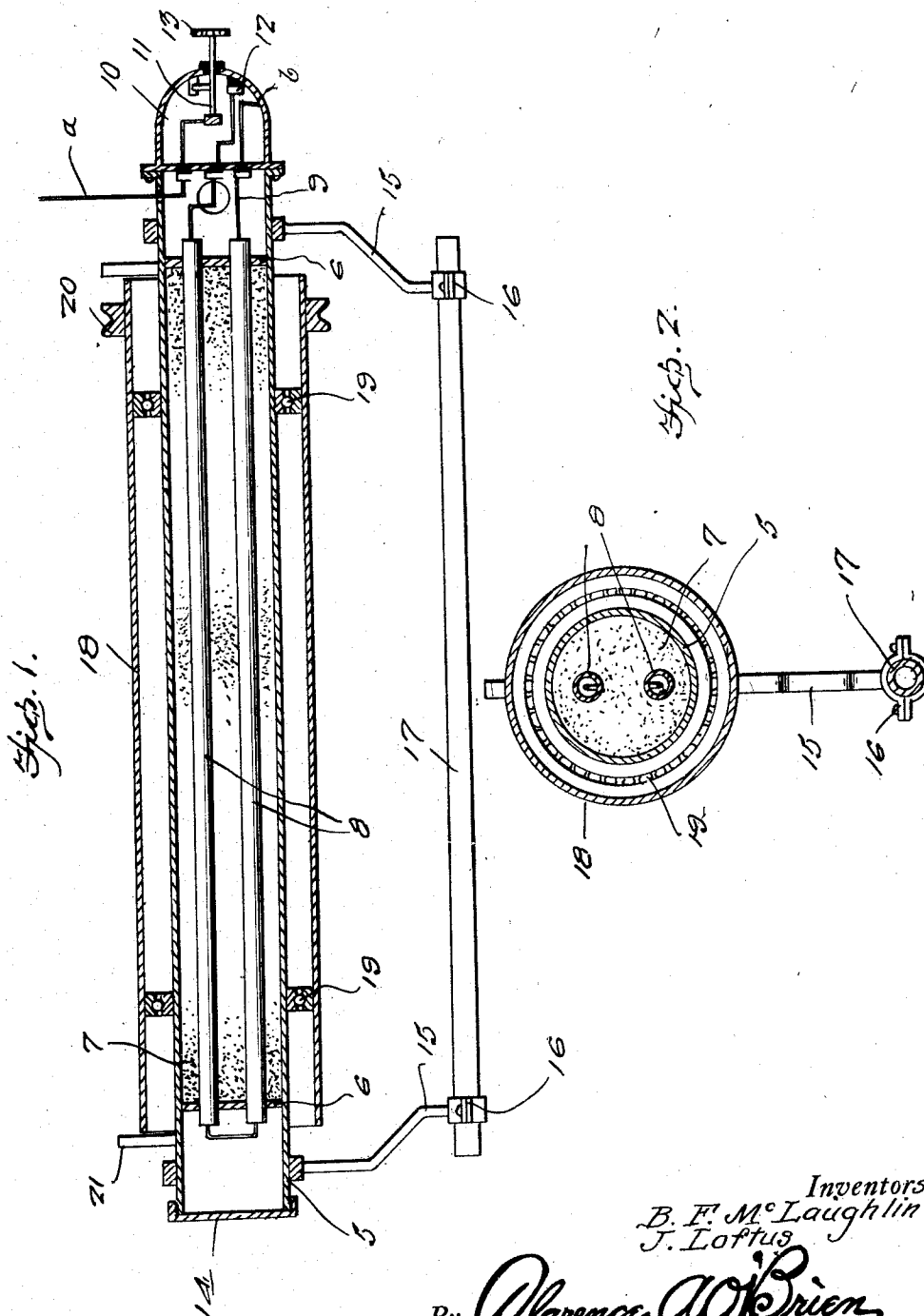


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HEATING ROLL FOR PRINTING PRESSES

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HEATING ROLL FOR PRINTING PRESSES.

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This invention relates generally to the art of printing and has more particular reference to a heating roll, that is adapted to be associated with the delivery end of a printing press, in order that the printing may be heated for drying the ink thereon to prevent smearing of the ink, the heating of the ink also eliminating the electricity therein for preventing offsetting of the same during the stacking operation.

The primary object of the invention is to provide a heating roll of this character that may be readily associated with practically all types of printing presses in order that the printing may be properly heated and dried before stacking.

Other objects will become apparent as the nature of the invention is better understood, the same comprising the novel form, combination and arrangement of parts hereinafter more fully described and shown in the accompanying drawing and claimed:—

In the drawing wherein like reference characters indicate corresponding parts throughout both of the views:—

Figure 1 is a detail longitudinal section of a heating roll constructed in accordance with this invention, and

Fig. 2 is a detail vertical section thereof. Now having particular reference to the drawing, my novel device constitutes the provision of a cylindrical tube 5 open at its opposite ends and being of a length greater than the width of the sheet that is being printed upon through the medium of the press with which the invention is associated, the same not being shown or described, as it is not necessary for a proper disclosure of the invention.

Stationarily arranged within the tube 5 in predetermined spaced relation with the opposite open ends thereof are disks of insulated material 6—6 for providing a chamber within the tube for receiving a mass of soapstone and copper 7 or other suitable heat retaining material.

Extending through openings in said disks 6—6 are the opposite ends of spaced parallel tubes 8—8 in the center of the mass of soapstone and copper, as is clearly shown in Fig. 2. Arranged through these tubes is an un-insulated electric wire 9, the ends of which terminate within a dome-shaped head 10 upon one end of the cylindrical tube 5, Fig. 1.

Arranged within this head 10 is a suitably electric switch 11, one contact of which is electrically connected with a wire *a* from a source of electric supply the other contact of the switch adapted for engagement with a contact 12 upon one end of the heating wire 9, the other end of which is connected through the dome-shaped head 10 which is of metal and is grounded as at *b*. The switch 11 is provided with a suitable actuating knob 13 externally of the head 10 as clearly shown in Fig. 1.

The opposite open end of the cylindrical tube 5 is provided with a closure cap 14 that may be removed when access is desired to the interior of the tube. The device is supported at the delivery end of a printing press and forwardly of the sheet receiving platform in any manner desirable, the same preferably consisting of arms 15—15 that carry sectional clamps 16 at their lower ends for association with a cross member 17 that is found at the delivery end of conventional types of printing presses.

Surrounding the cylindrical tube 5 intermediate the ends thereof is a hollow roll 18 the interior of which is in spaced relation with the interior of said tube and adapted to freely rotate thereon through the medium of suitable bearings 19 adjacent the opposite ends of said roll, Fig. 1. The roll 18 is provided adjacent one end with a belt pulley 20 in order that the same may be rotated by any power means and preferably that operating the printing press with which my device is associated.

At the opposite ends of the roll 18 the tube 5 may be and preferably is provided with vertical pins 21 that will be abutted by the ends of the rolls for preventing any accidental displacement of the same in its position upon the cylinder. When the switch 11 is turned on, the current will flow through the wire 9 and the same becoming heated will in turn heat the tubes 8 and then the soapstone and copper dust 7 and be retained by said soapstone and said copper dust for a relatively great length of time and the heat radiating from the tube 5 will eventually heat the roll 18 whereby when the paper passes thereover the ink thereon will be quickly dried, the static removed from the sheets by the action of the heat for consequently preventing offsetting of the sheets during their stacking operation.

It will thus be seen that we have provided a highly novel, simple and efficient form of heating roll for printing presses that is well adapted for all of the purposes designated, and even though we have herein shown and described the most preferred embodiment of the invention, with which we are at this time familiar, it is nevertheless to be understood that minor changes may be made therein without departing from the spirit and scope of the appended claims.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is:—

1. In a heating means for printing presses, a stationary tube adapted to be supported at the delivery end of the press, means within the tube for generating heat, a hollow roll mounted for rotation upon the tube and over which the printed sheets are

adapted to pass, and means associated with the stationary tube and adapted for cooperation with the respective ends of the rotatable roll for preventing the longitudinal movement of the roll on the tube.

2. In a heating means for printing presses, a stationary tube adapted to be supported at the delivery end of the press, means within the tube for generating heat, a hollow roll, roller bearings between the tube and the roll whereby the latter is mounted for rotation upon the tube and over which the printed sheets are adapted to pass, and means carried by said roll for facilitating the rotation thereof.

In testimony whereof we affix our signatures.

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