M. J. CARL.

ELECTRICALLY HEATED DRYING ROLL FOR PRINTING PRESSES.

APPLICATION FILED JUNE 14, 1921.

1,433,674.

Patented Oct. 31, 1922.

2 SHEETS—SHEET 1.

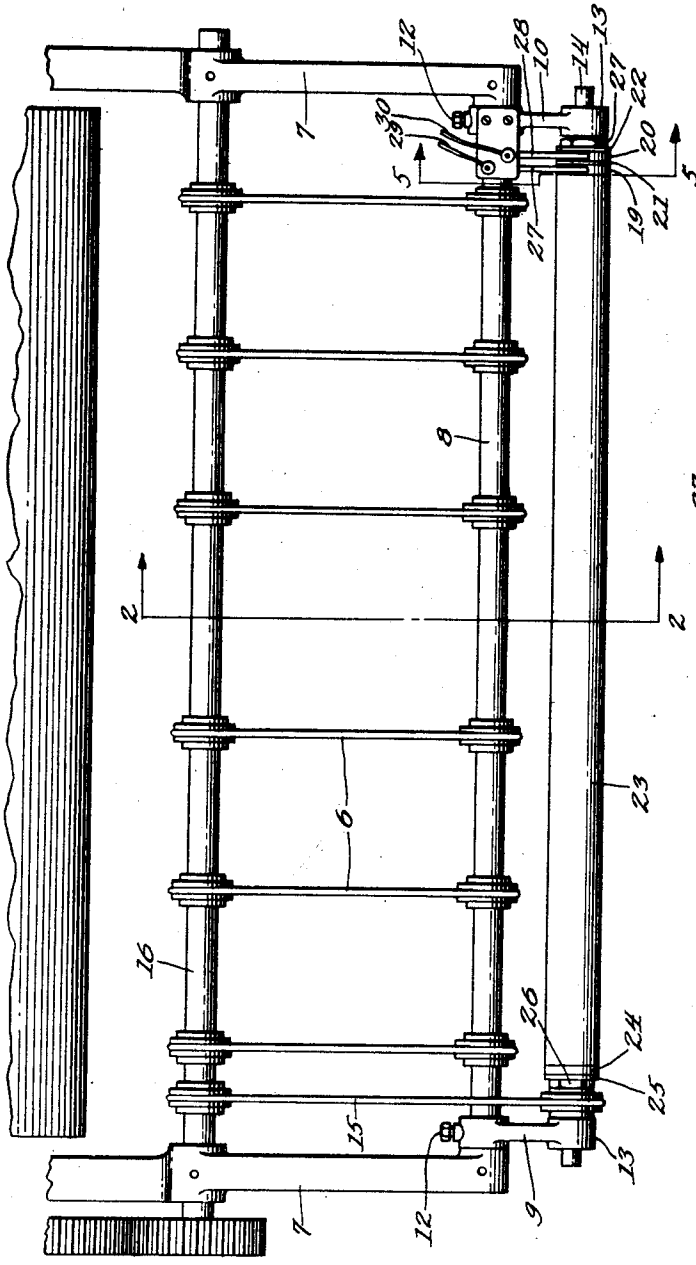


Fig. 1

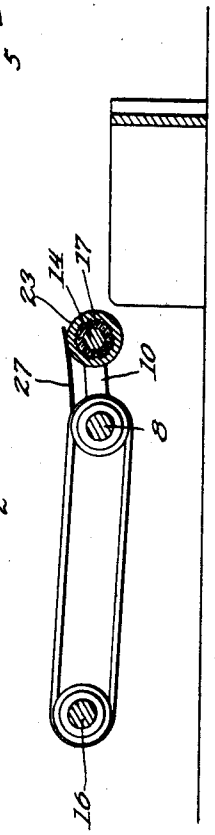


Fig. 2

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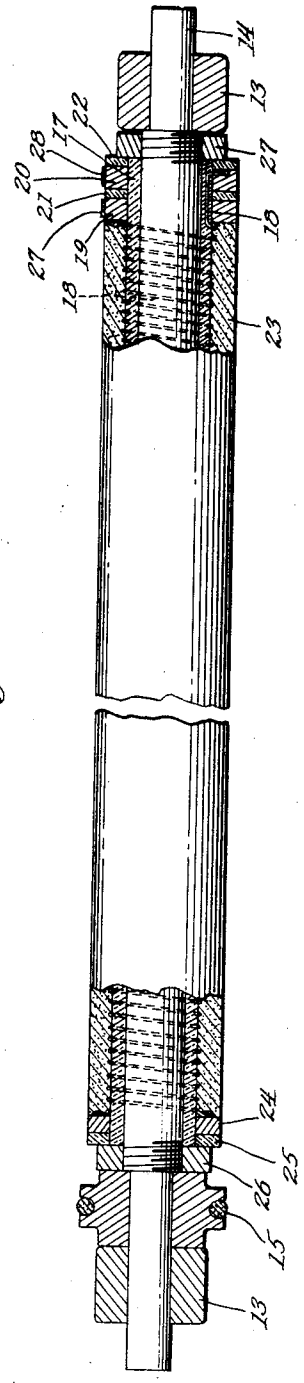


Fig. 4

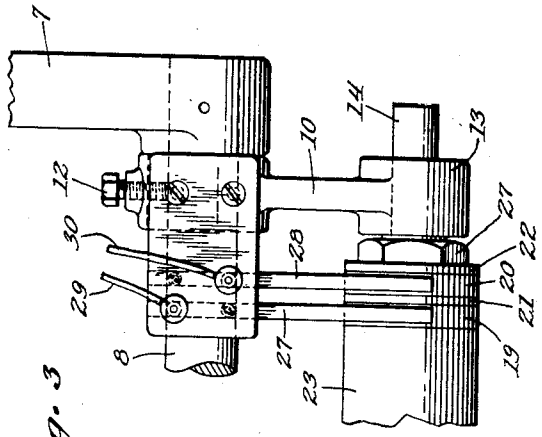


Fig. 3

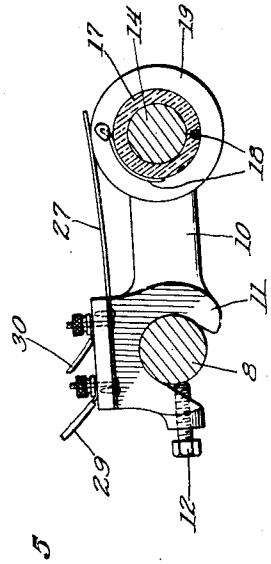


Fig. 5

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UNITED STATES PATENT OFFICE.

MAX J. CARL, OF CLEVELAND, OHIO.

ELECTRICALLY-HEATED DRYING ROLL FOR PRINTING PRESSES.

Application filed June 14, 1921. Serial No. 477,449.

To all whom it may concern:

Be it known that I, MAX J. CARL, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Electrically-Heated Drying Rolls for Printing Presses, of which the following is a specification.

This invention is an electrically heated drying roll for printing presses, having for its object to provide improved means for drying ink, to prevent offset. The device comprises a heated roll which extends across the delivery end of a printing press in such manner that the sheets delivered pass over the roll before delivery, so that the ink is dried and offset is prevented.

The device includes an improved construction of the roll with respect to the heating element and the means for supporting the same and for conducting electric current thereto.

The invention is illustrated in the accompanying drawings in which Fig. 1 is a plan view of the device, showing also part of the delivery mechanism of a printing press. Fig. 2 is a section on the line 2—2 of Fig. 1. Fig. 3 is an enlarged detail in plan. Fig. 4 is a partial section of the roll. Fig. 5 is a section on the line 5—5 of Fig. 1.

Referring specifically to the drawings, 6 indicates the delivery tapes of a printing press the frame of which is shown at 7, said frame including a cross rod 8 at the delivery end. The drying roll is mounted or supported on this rod by means of a pair of brackets 9 and 10, each of these brackets having a jaw 11 which fits over the rod and a set screw 12 to fasten same to the rod; and the set screw permits the bracket to be removed when desired or to be set at various angles or positions so that the sheets delivered by the tapes will pass over the roll prior to deposit in the collecting box. Each bracket has a bearing 13 at its outer end to receive the end of a shaft 14 which is driven by a belt 15 from a shaft 16 of the press.

On the shaft 14 is mounted a sleeve 17 of mica or other insulating material, and around this sleeve is coiled a wire 18 the ends of which are respectively connected to conducting rings 19 and 20 fitting around one end of the sleeve 17 and separated from the metal parts by mica or other insulating washers 21 and 22. 23 is an outer cement coating or sleeve which covers the wire 18 and forms the surface of the heating roll. 24 is a washer at the end of the roll and 25 is another washer of mica or other insulation, and the parts are all held in place by nuts 26 and 27 at opposite ends of the sleeves.

Current is delivered through the respective rings 19 and 20 to the heating element 18 by means of a pair of brushes 27 and 28 connected to the leads 29 and 30 from any source of electricity, the brushes being mounted on the bracket 10 in such manner as to make contact with the conducting rings.

By the means described the roller will become heated by the current supplied to the heating element, and as the sheets are delivered from the tapes 6 they will pass over the roll and the ink thereon will be dried, thus preventing offset and smut. The device is capable of application to various types of presses, and no limitation is applied with respect to its special construction or its particular manner of use.

I claim:

1. The combination with a printing press delivery mechanism, of an electrically heated drying roll, and a driving device between the said mechanism and the roll.

2. An electrically heated drying roll comprising a shaft, a sleeve of insulation around the same, a wire coil wound around said sleeve, an outer covering upon the coil, and means to supply an electric current to said coil, comprising a pair of rings connected to the ends of the coil and brushes contacting with said rings.

3. The combination with a printing press delivery mechanism including a cross rod, of a pair of brackets mounted upon said rod, and an electrically heated roll supported by said brackets and means driven by said mechanism to rotate the roll.

4. The combination with a printing press delivery mechanism including a cross rod, of a pair of brackets mounted upon said rod, and an electrically heated roll supported by

said brackets, said brackets including jaws fitting over the rod and provided with a clamping device.

5. An electrically heated drying roll comprising a shaft, a sleeve of insulating material thereon, a heating coil around said sleeve and having conducting rings at its ends, and a covering of cement upon said coil, forming the outer surface of the roll.

In testimony whereof, I do affix my signature in presence of two witnesses.

MAX J. CARL.

Witnesses:
JOHN A. BOMMHARDT,
G. W. ROSENBERG.