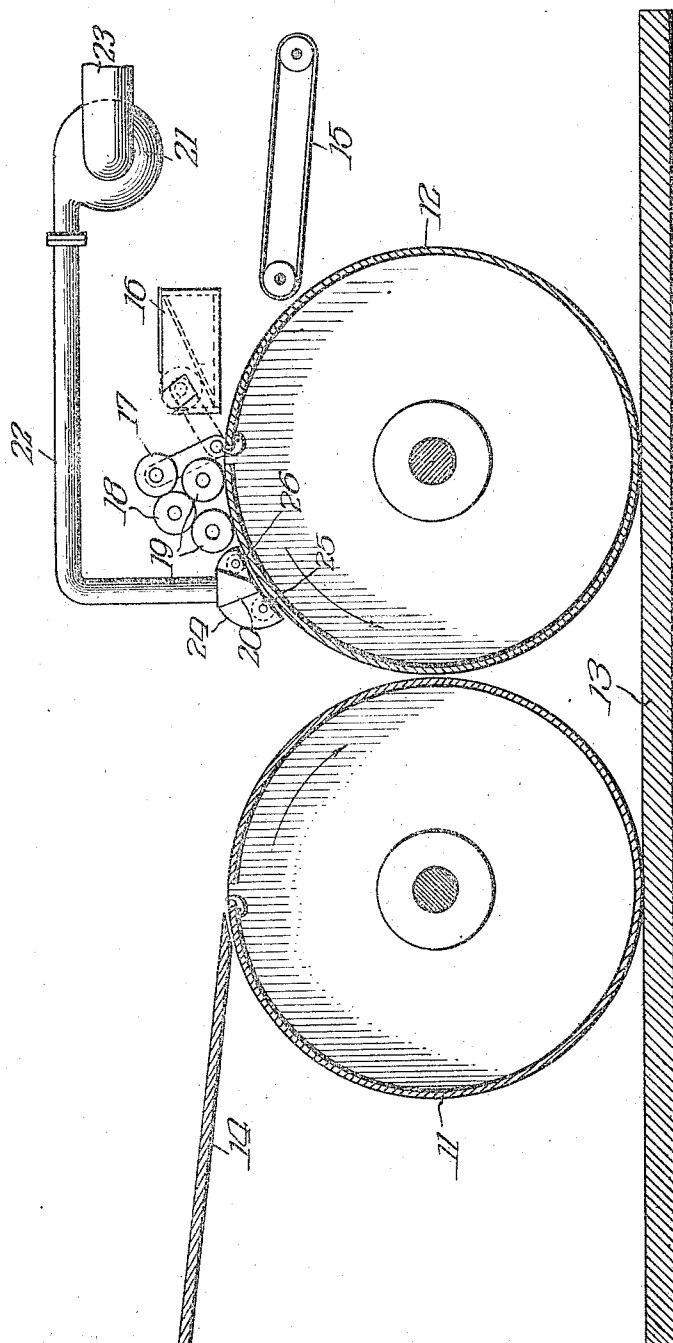


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ANTI-OFFSET DEVICE FOR PRINTING PRESSES.
APPLICATION FILED NOV. 1, 1913.

1,160,892.

Patented Nov. 16, 1915.



Witnesses
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UNITED STATES PATENT OFFICE.

CARL HENDERSON, OF OAK PARK, ILLINOIS, ASSIGNOR TO THE MIEHLE PRINTING PRESS & MANUFACTURING COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

ANTI-OFFSET DEVICE FOR PRINTING-PRESSES.

1,160,892.

Specification of Letters Patent.

Patented Nov. 16, 1915.

Application filed November 1, 1913. Serial No. 798,641.

To all whom it may concern:

Be it known that I, CARL HENDERSON, a citizen of the United States, residing at Oak Park, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Anti-Offset Devices for Printing-Presses, of which the following is a specification.

In the case of perfecting presses, where both sides of the paper are printed in rapid succession upon companion cylinders, a difficulty encountered has been the tendency of the ink taken up by the second cylinder from the printed surface of the preceding sheet to offset upon the surface of the next sheet. Various expedients have been resorted to to overcome this difficulty, but without being completely successful.

It is known that starch and some other powders when applied to an inked surface will dry the same by a blotting action and when removed will leave the surface in dry condition so the ink will not offset. It is not practicable, however, to apply such powder by hand to the second cylinder of perfecting presses between the printing of each sheet, and I have enabled the employment of such drying powder in connection with presses of this type by the provision of mechanical means for applying the powder evenly and uniformly. Moreover, the starch or other powder itself must be quickly and thoroughly removed from the cylinder, as otherwise it will cake thereon and interfere with the obtaining of subsequent clear impressions, and I have devised mechanically operating means for effecting such removal.

The present invention relates to improved means for efficiently applying and removing the drying powder used to prevent offset, and to that end resides in the advantageous combination and arrangement of elements hereinafter claimed and as set forth in the accompanying drawing and detailed description by way of example, it being understood that the drawing and description are to be taken in an illustrative rather than in an unnecessarily limiting sense.

In the drawing is shown in a diagrammatic manner a perfecting press having the present invention associated therewith, the press proper being shown in vertical section and the anti-offset device in side elevation.

The reference numerals 11 and 12 designate respectively the first and second cylinders, the bed plate is indicated at 13, the feed at 14, and the delivery at 15.

As will be readily understood, the unprinted sheet supplied to the cylinder 11 at 14 is carried in the direction indicated by the arrow upon the cylinder into contact with the bed plate where it receives upon its outer face an impression. It then travels with the cylinder past the feed and as it reaches a point adjacent the cylinder 12 is transferred from the first cylinder 11 to the second cylinder 12 and carried in the direction of the arrow upon the cylinder 12 into contact with the bed plate 13 from which it receives upon its other face the second impression, being removed from the cylinder 12 by the delivery 15. When the sheet is transferred from the cylinder 11 to the cylinder 12 its freshly printed outer surface becomes the under surface in contact with the cylinder 12 and a certain amount of the fresh ink is transferred from the sheet to the cylinder. In order to prevent offsetting of this ink on to the freshly printed surface of the next sheet the present invention is devised and consists of a powder supply box 16 from which the ductor roll 17, vibrating between the positions shown in dotted and full lines, takes the powder and transfers it to a distributing roll 18 which in turn supplies the powder to the applying rolls 19, 19. These latter rolls travel in contact with the periphery of the cylinder 12 and evenly apply the powder to the inked surface of the cylinder, and the powder acts instantaneously by absorption to take up the ink upon the cylinder surface. Arranged immediately after the powder applying rolls in the path of travel of the cylinder and closely adjacent thereto is an elongated suction nozzle 20 extending axially of the cylinder and with its open mouth close to the periphery thereof. A suction is created through this nozzle by means of the exhaust device 21 acting through the pipe 22 and discharging at 23. The nozzle 20 is preferably enveloped by a hood 24 and within the hood may advantageously be mounted suitably driven rotary brushes 25 and 26, by which the starch and ink adhering to the cylinder is loosened in readiness to be carried away by the suction.

It will be understood that the powder ap-

plied to the periphery of the cylinder 12, having acted to dry or blot the ink thereon, is thoroughly removed from the cylinder by the suction nozzle and the surface of the cylinder left clean and dry in readiness to receive from the cylinder 11 the next printed sheet.

I claim:

1. In an anti-offset device, the combination with a press cylinder, of mechanical means for applying powder thereto, said means comprising a powder box, applying rolls, and a ductor roll for transferring the powder to the applying rolls, and pneumatic means acting on the cylinder after the applying rolls to remove the powder, substantially as described.

2. In an anti-offset device, the combination with a press cylinder, of mechanical means for applying powder thereto, said means comprising a powder box and a roll for applying powder to the cylinder, and pneumatic means acting on the cylinder after the applying roll to remove the powder, substantially as described.

3. In an anti-offset device, the combination with the second impression cylinder, of a perfecting press, of positive means for applying powder thereto, and pneumatic means including a suction nozzle acting on the cylinder thereafter to remove the powder, substantially as described.

4. In an anti-offset device, the combination with the second impression cylinder of a perfecting press, of positive means for applying powder thereto, pneumatic means acting on the cylinder thereafter to remove the powder, said means comprising a nozzle having its mouth disposed adjacent the cylinder, and means to create an air current through said nozzle, substantially as described.

5. In an anti-offset device, the combination with the second impression cylinder of a perfecting press, of positive means for applying powder thereto, suction means acting on the cylinder immediately thereafter

to remove the powder, said removing means comprising a suction device having an elongated nozzle extending axially of the cylinder and close to its periphery, and means to create a suction through the nozzle, substantially as described.

6. In an anti-offset device, the combination with the second impression cylinder of a perfecting press, of means for applying powder thereto comprising a powder box, applying rolls, and a ductor roll for transferring the powder to the applying rolls, and pneumatic means acting on the cylinder after the applying rolls to remove the powder, substantially as described.

7. In an anti-offset device, the combination with a cylinder, of means for applying powder thereto comprising a powder box, applying rolls, and a ductor roll for transferring the powder to the applying rolls, and suction means acting on the cylinder immediately after the powder applying means to remove the powder and comprising a suction nozzle having its mouth disposed adjacent the cylinder, and means to create a suction through the nozzle, substantially as described.

8. In an anti-offset device, the combination with a cylinder, of means for applying powder thereto comprising a powder box, applying rolls, and a ductor roll for transferring the powder to the applying rolls, and suction means acting on the cylinder to remove the powder, said suction means comprising an elongated nozzle extending axially of the cylinder close to its periphery immediately after the powder applying means, and means to create a suction through the nozzle, substantially as described.

In testimony whereof I have hereunto signed my name in the presence of two subscribing witnesses.

CARL HENDERSON.

Witnesses:

H. M. HOBBS,
C. D. GIBBS.