

C. HENDERSON.
 PROCESS FOR PREVENTING OFFSET IN PRINTING PRESSES.
 APPLICATION FILED APR. 16, 1909.

996,642.

Patented July 4, 1911.

Fig. 1

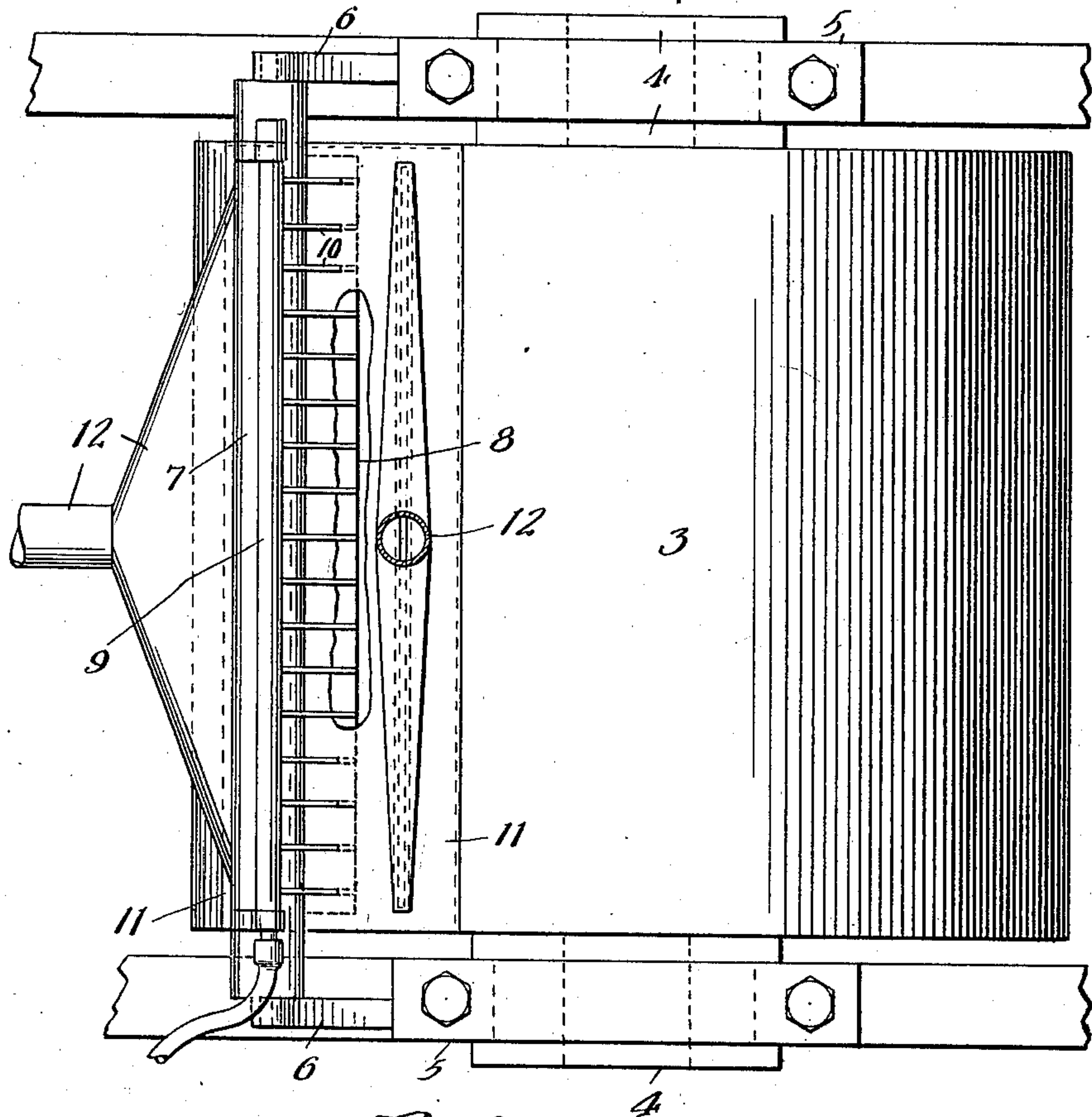
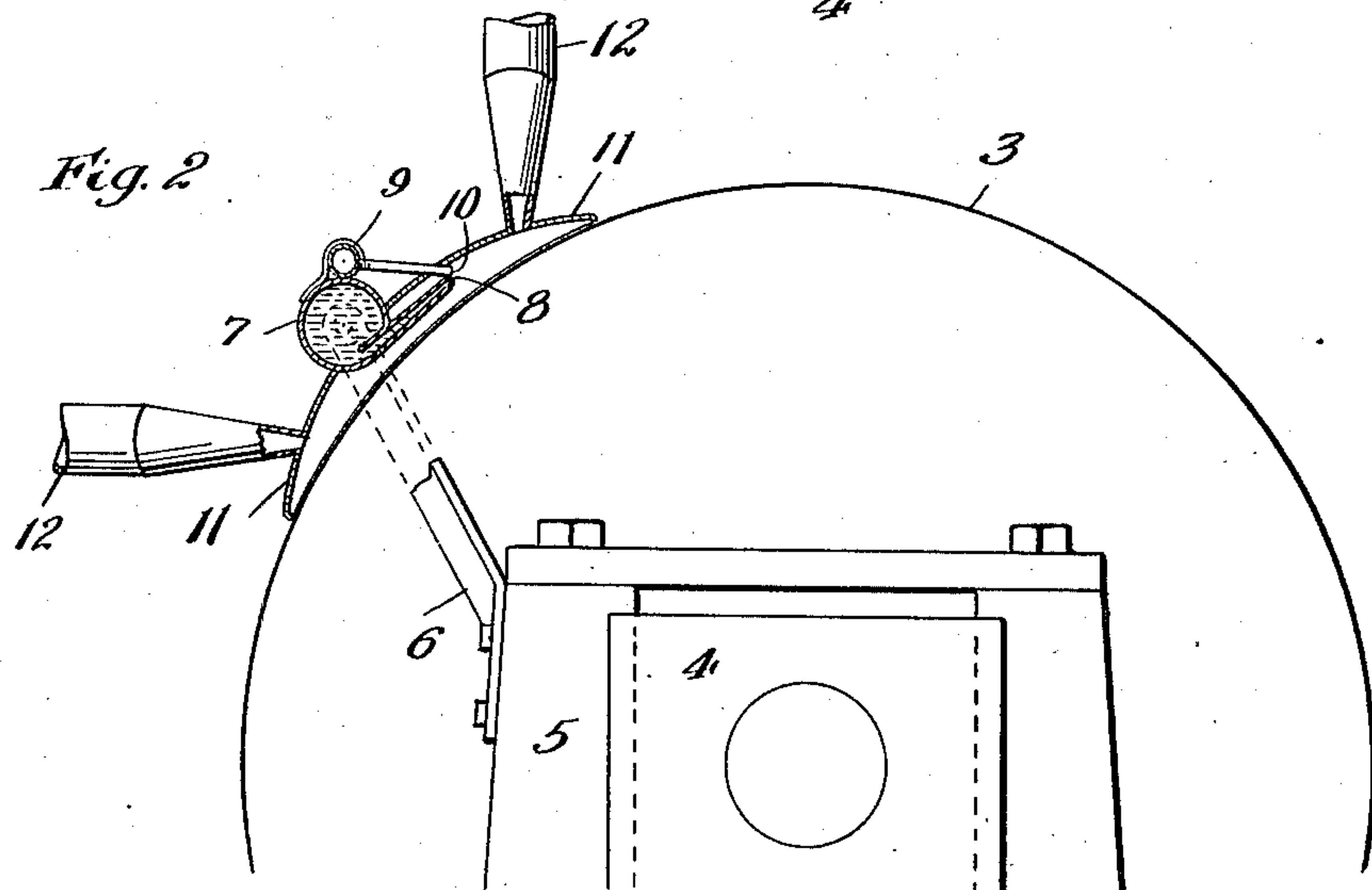


Fig. 2



Witnesses:

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UNITED STATES PATENT OFFICE.

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PROCESS FOR PREVENTING OFFSET IN PRINTING-PRESSES.

996,642.

Specification of Letters Patent.

Patented July 4, 1911.

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To all whom it may concern:

Be it known that I, CARL HENDERSON, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Processes for Preventing Offsets in Printing-Presses, of which the following is a specification.

This invention is intended to prevent offset in printing. The principal feature of it is the employment of volatile fluid which is a solvent of the ink and able to loosen it, so that it can then be drawn off or away from the cylinder by a suction blast. The means which I adopt in the practice of the process for administering the solvent and volatilizing fluid and for drawing the loosened ink away are fully set forth below and are also illustrated in the accompanying drawing, in which latter:

Figure 1 is a plan of the impression cylinder partly broken out of a printing press, to which my invention has been applied and Fig. 2 is an end elevation of the same, partly in cross section.

In said drawing 3 represents the impression cylinder, 4 the shaft support of the cylinder and 5 one of the bearings of the shaft. At 6 is a bracket attached to the bearing 5 and supporting a supply tank 7 containing the volatilizing fluid employed. This fluid must be one of which will volatilize quickly, and which will attack the ink and loosen it from the cylinder immediately, and thus at once bring it into condition so that a suction blast will carry it away. I may use as the solvent fluid some of the well known liquid carbons, or mixtures thereof, but other fluids will answer, and in applying them to the cylinder I use means for dividing or atomizing them so that all parts of the surface may be supplied with even quantities without permitting any excess supply at any point. These means may consist of a wide nozzle 8, the discharge end of which is directed upon the cylinder surface and is contracted, and is located in proximity to a series of small nozzles 10 discharging plenum air from pipe 9. These nozzles are adapted to exert suction upon the solvent discharging nozzle, and to draw the solvent therefrom. Both the solvent nozzle 8 and air nozzles are located within a chamber formed under a cover or shield 11 which sets down closely upon the cylinder and confines the solvent and the accompanying incoming air to their

proper sphere of action upon the cylinder within the chamber formed by said cover, and at the same time excludes the outer air from mixing therewith. It will be observed that the surface of the cylinder forms one wall of said chamber and that the solvent is applied to the surface as it passes through said chamber. A suction air blast draws the volatilized solvent laden with the loosened ink from the chamber by means of one or more pipes 12. These suction pipes may be located as shown or wherever needed, and the inclosure may be extended along the cylinder surface or the entire apparatus may be duplicated and the duplicate located so as to act on the offsetting surface at a later period in its revolution.

The jets of atomized solvent are forcibly impinged against the surface of the cylinder as such surface passes through the chamber under the cover 11, and the vaporized or atomized solvent takes up any ink on the surface of the cylinder and is immediately withdrawn from the chamber; so that the ink is removed by the blast or suction of air and is not redeposited on the cylinder.

I claim:

1. The herein described process of removing offset ink from the impression surface in printing presses consisting in locally inclosing a part of the impression surface, and directing atomized jets of a quick acting solvent of ink onto the part of the impression surface within such inclosure to cut and remove such ink, and continuously withdrawing the atomized ink laden solvent vapors from such inclosure.

2. The herein described process of removing offset ink from the impression cylinder of a printing press, consisting in applying a hood over a portion of the impression cylinder, forcibly applying jets of a quick acting solvent of ink directly onto the ink laden surface of the impression cylinder as it passes the hood thereby cutting the ink from such surface, and immediately and continuously sucking the ink laden solvent atoms from such hood.

3. The herein described process of removing offset ink from the impression surfaces of printing presses, consisting in directing atomized jets of a quick acting solvent of ink against the surface carrying the offset ink within a chamber to prevent dissipation of the solvent, said impression surface forming one wall of such chamber, and continuously

removing the solvent vapors charged with ink from such chamber.

4. The herein described process of removing offset from the impression cylinders of printing presses, consisting in forcibly directing atomized jets of a quick acting solvent of ink against the surface of the impression cylinder while such surface is pass-

ing through a chamber to prevent dissipation of the solvent, and continuously removing the solvent vapors charged with ink from such chamber by suction. 10

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Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
