No. 815,071. PATENTED MAR. 13, 1906.

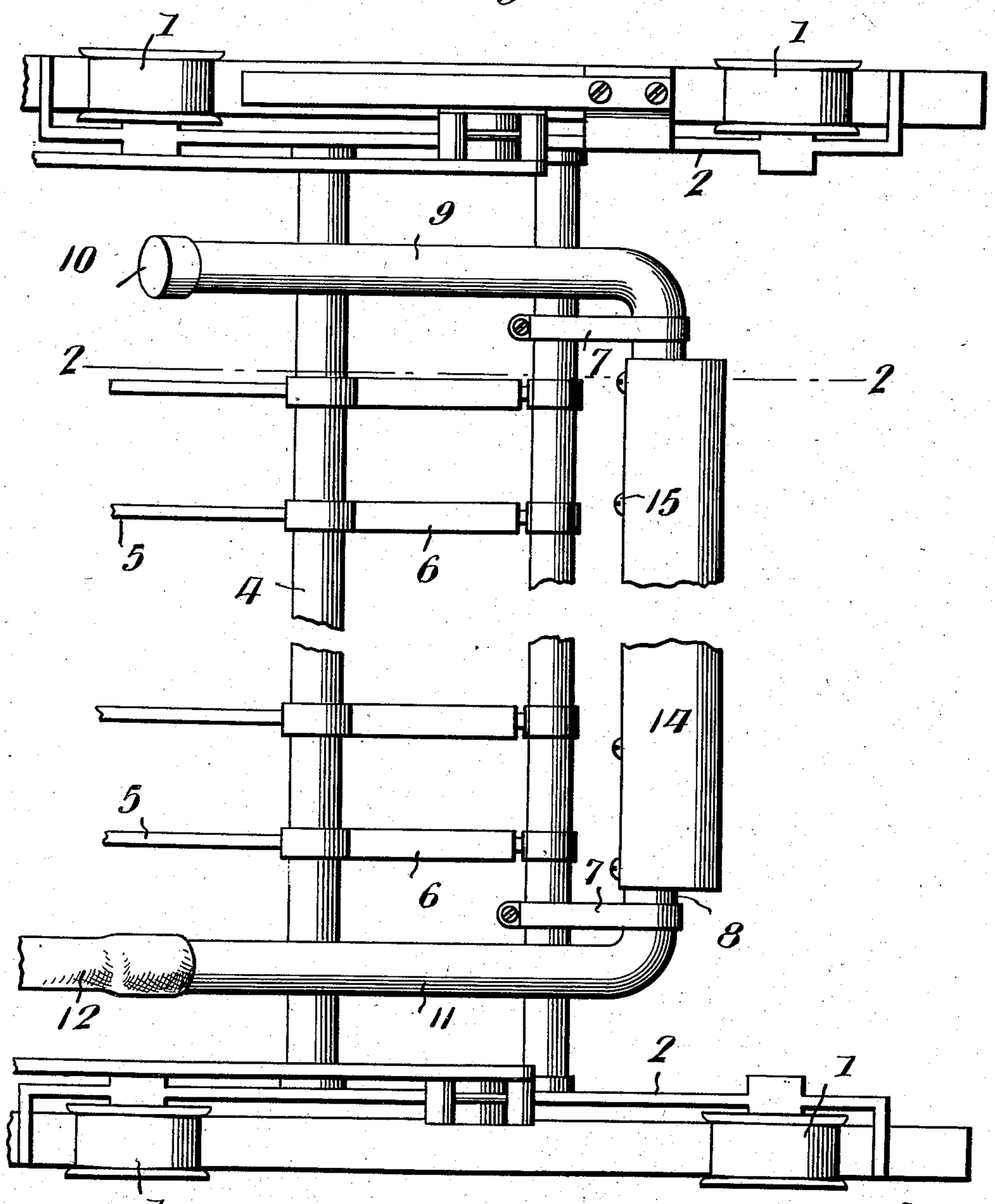
C. M. DANA & E. KIBBEN.

PRINTING PRESS ATTACHMENT.

APPLICATION FILED FEB. 20, 1904.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 2.

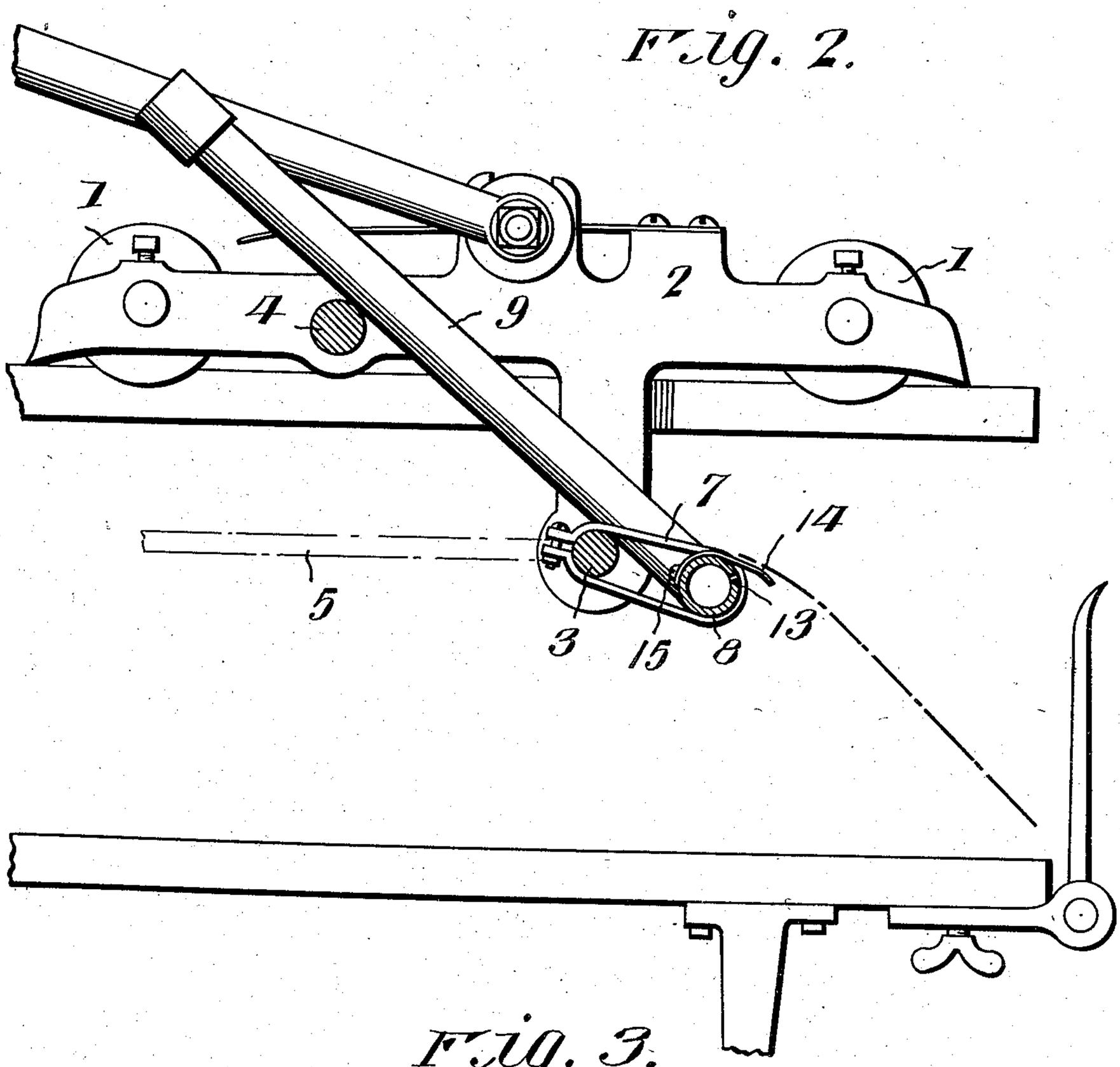
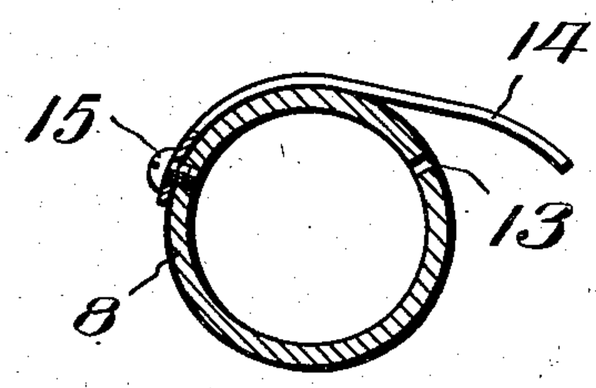


Fig. 3.



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UNITED STATES PATENT OFFICE.

CLARENCE M. DANA AND EDWARD KIBBEN, OF GRAND RAPIDS, MICHIGAN.

PRINTING-PRESS ATTACHMENT.

No. 815,071. Specification of Letters Patent. Patented March 13, 1906.

Application filed February 20, 1904. Serial No. 194,556.

To all whom it may concern:

Be it known that we, CLARENCE M. DANA and EDWARD KIBBEN, citizens of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented new and useful Improvements in Printing-Press Attachments, of which the following is a specification.

Our invention relates to new and useful improvements in printing-press attachments; and its object is to provide a simple, compact, and inexpensive device by means of which the electricity in the sheets of paper passing through the press can be dissipated.

It is well known in the art of printing that paper when subjected to certain atmospheric conditions contains a certain amount of electricity and that during the progress of the paper through the press an additional amount is generated, according to the speed of the press. This electricity causes the printed sheets to adhere to the delivering mechanism and often prevents them from being properly delivered. It also causes the sheets to adhere to each other after they have been stacked upon the delivery-table.

The object of our invention is to remove the electricity contained within the sheets before they are piled upon the delivery-table.

The invention consists of a transversely-extending pipe having outlets where gas contained within the pipe is adapted to be discharged and ignited. This transversely-extending pipe is so connected to the moving delivery-carriage as to direct the small jets of flame upon the paper as it is carried from the tapes to the delivery-board, and the direct contact of the flames with the paper dispels the electricity and permits the sheets to be readily piled upon the delivery-table.

The invention also consists of a deflecting-plate which is connected to the burner and which can be adjusted to deflect the flames in any direction.

The invention also consists in the further novel construction and combination of parts hereinafter more fully described and claimed, and illustrated in the accompanying drawings, showing the preferred form of our invention, and in which—

Figure 1 is a plan view of a portion of a moving delivery-carriage of the press and showing our improved burner connected thereto. Fig. 2 is a section on line 2 2, Fig. 1; and Fig. 3 is an enlarged section through the burner and showing the shield in elevation.

Referring to the figures by numerals of reference, 1 1 are the wheels of the movable delivery-carriage 2, and the sides of this carriage are connected by shafts 3 and 4, having delivery-fingers 5 and 6, respectively, extending therefrom. Secured to the shaft 3 are clamps 7, in which said shaft is adapted to rotate, and these clamps serve to support a burner 8, which is arranged parallel with the shaft 3 and in front thereof and has an arm 9 at one end, which bears on the two shafts 3 and 4 and is closed at its free end by a cap 10. The other end of the burner has an inlet-arm 11, which is adapted to be connected with a suitable fuel-supply by means of flexible tubing 12. The burner 8 has a series of apertures 13 formed therein adjacent its upper face, and extending over these apertures is a curved shield 14, which is secured to the rear portion of the burner by means of screws 15 or in any other suitable manner.

Gas is supplied to the burner through the tube 12 and arm 11 and is ignited at the apertures 13. As the carriage travels backward and forward upon the press the flames are directed upward upon the under surface of the shield 14 and forward upon the paper as it is delivered from the press, and as the flame comes in direct contact with the paper it will dispel the electricity contained therein. The burner travels under the paper, and in view of the speed at which said paper moves and the rapidity of the movement of the carriage it will be understood that the flames will not have sufficient time to ignite the paper contacted by them. It will of course be understood that the carriage should at no time be stopped with the burner in position under a sheet of paper.

The device herein described can be attached to any form of press having a movable delivery-carriage, and it forms a simple and effective device for facilitating the operation of the delivery and the stacking of the printed sheets. Moreover, by heating the lower faces of the sheets of paper a considerable amount of heat is retained between the sheets when they are stacked, and the ink is thus quickly dried and offsetting is prevented.

In the foregoing description we have shown the preferred form of our invention; but we

do not limit ourselves thereto, as we are aware that modifications may be made therein without departing from the spirit or sacrificing any of the advantages thereof, and we therefore reserve the right to make such changes as fairly fall within the scope of our invention.

Having thus described the invention, what is claimed as new is—

1. A printing-press provided with a burner movably mounted thereon to project a flame in direct running contact with the printed sheets of paper.

2. A printing-press provided with a reciprocating burner to project a flame in direct running contact with the printed sheets of paper.

3. In an attachment for printing-presses, the combination with a movable delivery-carriage having a shaft connecting the sides thereof; of arms secured to the shaft, one of said arms having an inlet, a burner parallel with the shaft and integral with the arms, and a deflecting-shield upon the burner.

4. The combination with a delivery-carriage of a press having a shaft connecting the sides thereof; of tubular arms secured to the shaft, a burner integral with and connecting the arms, one of said arms having a fuel-inlet, and a deflecting-shield secured to and extending longitudinally of the burner.

5. The combination with the delivery-carriage of a press having a shaft connecting the sides thereof; of tubular arms secured to the shaft, an apertured tube connecting the arms and forming a burner, one of the arms having a fuel-inlet, and a deflecting-shield extending longitudinally of the burner, said burner and shield being adapted to contact with the paper while the same is carried from the tapes to the delivery-board of the press.

6. A printing-press provided with a burner movably mounted thereon and provided with a shield to project the flame therefrom in direct contact with the printed sheets of paper, whereby the flame moves in running contact with the sheets of paper.

7. A printing-press provided with a burner movably mounted thereon and provided with a jet-aperture arranged to project a flame upwardly and forwardly in the direction of movement of the printed sheets of paper, and a shield having a deflecting-surface arranged over and projecting beyond the aperture to intercept the flame and direct it against the surface of said paper in advance of said aperture, whereby the proper direction of the flame in running contact with the paper is insured to prevent its destruction while dissipating the electricity.

8. A device for dissipating electricity from the printed sheets being delivered from a printing-press, the same comprising a flame-projecting burner, means for intercepting and directing the flame to contact with the printed sheets, and means for movably mounting the burner upon a press to bring the flame into traveling contact with the sheets of paper.

9. In an attachment for printing-presses, the combination with a movable delivery-carriage, of a burner extending transversely of the carriage and secured to and movable therewith, said burner having orifices for the outflow of gas therefrom and adapted to project jets of flame in an upward and forward direction, and an imperforate shield having a free deflecting edge projecting over and beyond the orifices of the burner.

In testimony whereof we affix our signatures in presence of two witnesses.

CLARENCE M. DANA.
EDWARD KIBBEN.

Witnesses:
MARTIN J. KIBBEN,
JOHN MORAN.