W. J. DANINGBURG.

ATTACHMENT FOR PRINTING PRESSES.

APPLICATION FILED MAR. 25, 1919.

**1,321,365.**

Patented Nov. 11, 1919.

Fig. 1.

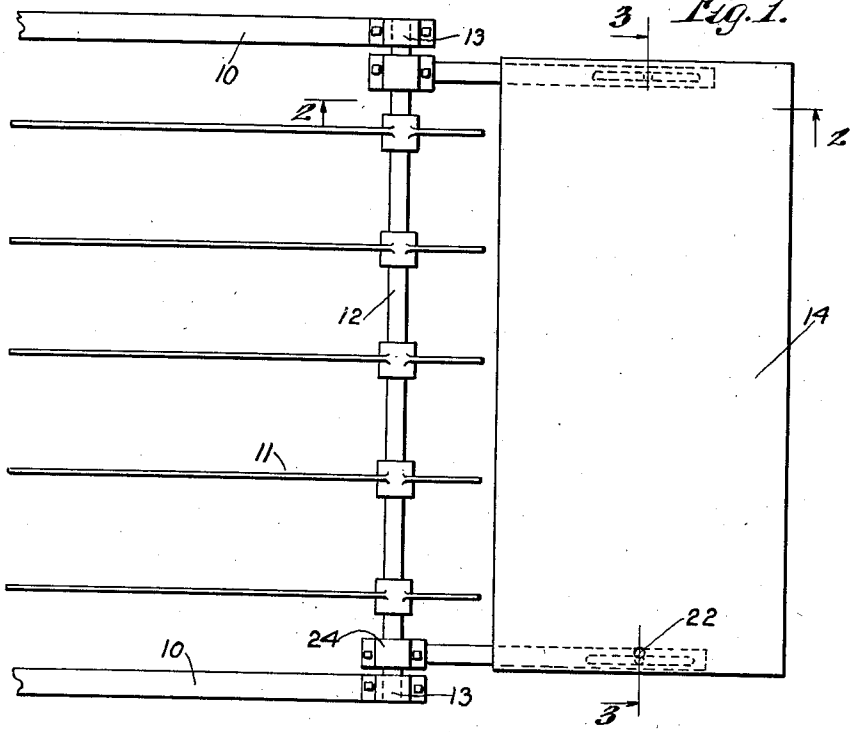



Fig. 2.

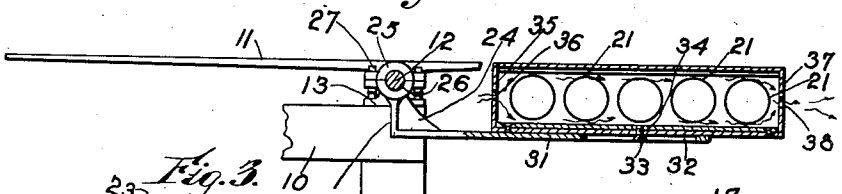



Fig. 3.

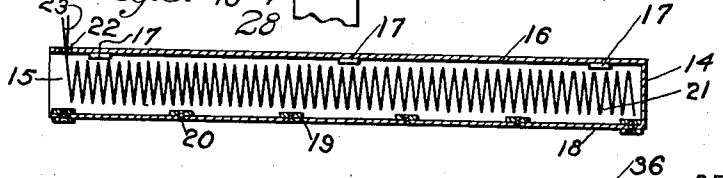



Fig. 4.

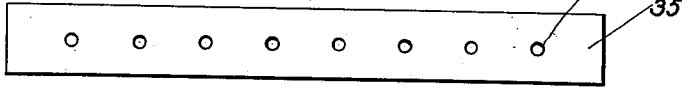
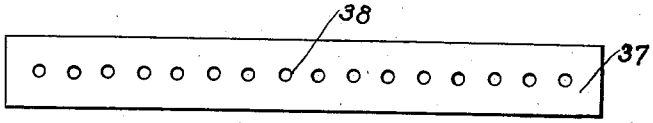



Fig. 5.




WITNESSES

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# UNITED STATES PATENT OFFICE.

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## ATTACHMENT FOR PRINTING-PRESSES.

1,321,365. Specification of Letters Patent. Patented Nov. 11, 1919.

Application filed March 25, 1919. Serial No. 284,910.

*To all whom it may concern:*

Be it known that I, WILLIAM J. DANINGBURG, a citizen of the United States, and a resident of the city of New York, East Elmhurst, borough of Queens, in the county of Queens and State of New York, have invented a new and Improved Attachment for Printing-Presses, of which the following is a full, clear, and exact description.

The present invention relates to new and useful improvements in heating devices, and pertains more particularly to a housing for heaters especially adapted for use in connection with printing presses.

The primary object of the invention is to provide means for drying the ink on the printed sheets as they are taken from the sheet-delivery mechanism.

A further object of the invention is to construct a device of this character in such a manner that the sheets will be directly subjected to a blast of heated air for the purpose of drying the ink thereon.

A still further object of the invention is to construct a device of this character in such a manner that it may be properly supported by the sheet-delivering mechanism of a printing press.

A still further object of the invention is to position a device of this character in the path of travel of the sheet in its removal from the sheet-delivering mechanism.

With the above and other objects in view, reference is had to the accompanying drawings in which—

Figure 1 is a top plan view of a portion of the sheet-delivering mechanism of a printing press showing the heater attached thereto;

Fig. 2 is a transverse sectional view on the line 2—2 of Fig. 1;

Fig. 3 is a longitudinal sectional view of the heater taken on the line 3—3 of Fig. 1;

Fig. 4 is a rear edge view;

Fig. 5 is a front edge view.

Referring more particularly to the drawings, the reference character 10 designates the frame of a sheet-delivering mechanism, and the reference character 11 designates the fly rods thereof. These fly rods are carried by a transversely extending brace or the like, 12, mounted in brackets 13 carried by the frame 10 of the sheet-delivering mechanism.

The housing comprises a rectangular casing 14, one end of which is open as at 15. The top wall 16 of the housing 14 is provided with a plurality of spaced transversely extending braces 17 on its inner face, and said transversely extending braces 17 are secured to the top wall 16 in any desired manner. The bottom wall 18 of the housing 14 is provided with a plurality of transversely extending braces 19, said braces being equi-distantly spaced with relation to each other, and secured to said bottom wall 18 by means of rivets or the like 20.

Mounted within the housing 14 and extending longitudinally thereof, is a plurality of resistance coils 21, which form the heating element of the device. Extending through an opening 22, near the open end 15 of the housing 14, are the terminals 23 of the heating element, which terminals are adapted to be connected in any desired manner to a suitable source of electrical supply.

The housing 14 is adapted to be supported from the transversely extending brace 12, and to provide for this feature, brackets 24 are employed. These brackets 24 comprise two half members 25 and 26, which are adapted to surround the transversely extending brace 12, near each end thereof, within the confines of the frame 10, as shown in Fig. 1, and the two half sections 25 and 26 are secured together around said brace by means of bolts 27. Depending from the half section 26, is an arm 28. Projecting forwardly from the arm 28 is an extension 31, which is provided with an elongated slot 32 on its outer end. Adapted to pass through said slot 32, is a screw 33, and said screw is adapted for threaded engagement within an opening 34 in the transversely extending end brace 19 of the bottom wall 18. The side walls of the slot 32 are inclined to permit of a tapered head screw being used, which construction permits of the outer face of the head of the screw lying flush with the bottom face of the arm 31 of the bracket 24.

While only one supporting bracket 24 has been described, it is to be understood that the same form of bracket is used on both sides of the machine to support the housing 14 at its opposite ends.

The reference character 35 designates the rear wall of the housing and said rear wall is provided with a plurality of equi-distantly spaced openings 36, the purpose of

which will be hereinafter described. The reference character 37 designates the front wall of the casing, which is likewise provided with a plurality of equi-distantly spaced openings 38. It will be noted that the front wall is provided with twice the number of openings as are used in the rear wall 35, and it is the purpose of this multiplicity of openings to distribute the discharge of air from the interior of the housing 14 throughout the entire length of the said front wall 37.

The operation of the device is as follows: The printed sheet is received on the sheet-delivering mechanism in the well-known manner, and said sheet-delivering mechanism is moved to further deposit the printed sheet on a table or piler connected to the press in the usual manner.

When the sheet-delivering mechanism starts its movement in the reverse direction, and the sheet is being delivered therefrom to the table or piler, it will be seen that a draft of air is set up within the housing 14, said air entering the openings 36 in the rear wall 35, and passing around the heating element 21, as shown by the arrows in Fig. 2. As the delivering mechanism is returned to receive the next sheet from the press, it will be seen that the air passes out of the housing 14 through the openings 38 in the front wall thereof, and that as the sheet moves over the housing 14, the same is subjected to the direct draft of heated air which serves to dry the ink on said sheet.

By the above outlined construction, it will be seen that the ink on the printed sheets will be thoroughly dried, thus preventing offsetting of one sheet upon another without the necessity of so-called slip-sheeting, which is common practice in the printing art.

Having thus described my invention, what is claimed as new is:

1. In combination with a sheet-delivering mechanism of the reciprocating type an inclosed heater carried by said sheet-delivering mechanism, and means for adjustably mounting said heater with respect to said sheet-delivering mechanism.

2. A device of the character described comprising in combination with the sheet-delivering mechanism of a printing press, a plurality of brackets carried by said sheet-delivering mechanism, a housing having two of its opposite side walls provided with perforations, means for adjustably securing said housing to said brackets, and a heating medium mounted within said housing.

3. A heater for printing presses comprising a housing provided in two of its side walls with a plurality of perforations, transversely extending rigid braces secured to said housing on opposite sides thereof, a heating element carried internally of said housing, and means for adjustably securing said housing to the sheet-delivering mechanism of a printing press.

4. A heater for printing presses comprising a housing, two of the opposite walls of which are provided with spaced openings to provide a draft through said housing, a heating element mounted in the path of said draft, and means for adjustably securing said housing in place on said printing press.

5. The combination with a sheet-delivering mechanism of the reciprocating type, of inclosed means carried by said sheet-delivering mechanism and adapted to subject the sheet carried thereby to the action of a blast of heated air upon movement of the sheet-delivering mechanism.

6. The combination with a sheet-delivering mechanism of the reciprocating type and a heater carried thereby, of means surrounding said heater and adapted to receive and subject the sheet carried by the sheet-delivering mechanism to a blast of heated air upon movement of the sheet-delivering mechanism.

7. In combination with a printing press and its sheet-delivering mechanism, a heater movable with said sheet-delivering mechanism and carried by its sheet-discharging end, and means for receiving and subjecting the sheets carried by the sheet-delivering mechanism to a blast of heated air upon their discharge from the sheet-delivering mechanism.

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