(No Model.)

J. McKEEN ARNOLD.

METHOD OF FREEING PAPER FROM ELECTRICITY.

No. 341,788. Patented May 11, 1886.

FIG. 1.

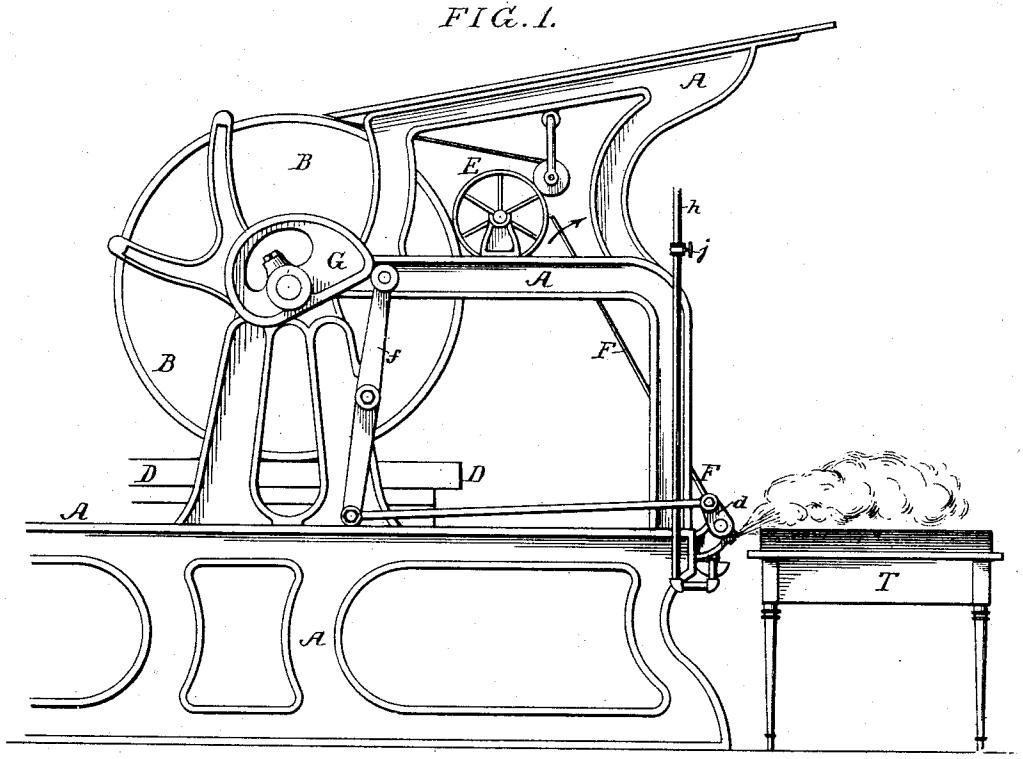
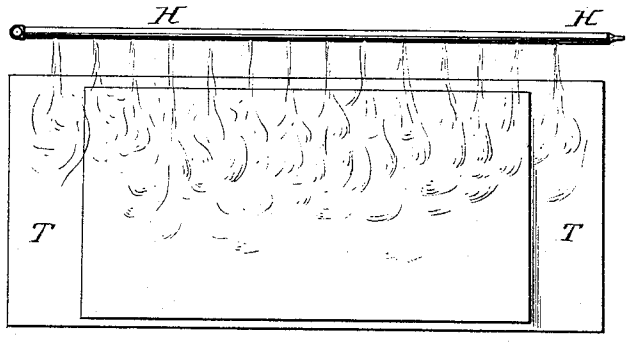


FIG. 2.



Witnesses.
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UNITED STATES PATENT OFFICE.

JAMES McKEEN ARNOLD, OF PHILADELPHIA, PENNSYLVANIA.

METHOD OF FREEING PAPER FROM ELECTRICITY.

SPECIFICATION forming part of Letters Patent No. 341,788, dated May 11, 1886.

Application filed February 23, 1886. Serial No. 192,869. (No model.)

To all whom it may concern:

Be it known that I, JAMES McKEEN ARNOLD, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented a certain Method of Freeing Paper from Electricity, of which the following is a specification.

The object of my invention is to free paper from electricity in printing, and thereby prevent what is termed the "set-off" from one printed sheet to another as they are delivered from the press; and this object I attain in the manner which I will now proceed to describe.

In the accompanying drawings, Figure 1 is a side view of sufficient of a printing-press to illustrate my invention, and Fig. 2 is a diagram plan.

It is frequently found that in printing, more especially on paper which has been highly calendered, the paper contains so much static electricity that as one sheet is laid on the top of another there will be such attraction between the two that the fresh impression on one sheet will be transferred or set off onto the other, and to meet this difficulty it has been customary to introduce what is termed "slip-sheets" between the printed sheets as they come from the press; but this, aside from the additional material required, also necessitates the time and services of an additional operative. To meet this difficulty I free the paper from electricity as it comes from the press by projecting steam onto the printed sheets as they are delivered from the press onto the fly-table.

In the accompanying drawings, A is the frame of a printing-press, B the impression-cylinder, and D the reciprocating bed, while E is the delivery-roll for the printed sheets, which are received onto the vibrating fly F, motion being imparted to the latter from a cam, G, on the shaft of the impression-cylinder, acting on one end of a lever, *f*, pivoted to the frame, and connected at its opposite end to a crank, *d*, on the axis of the fly.

Immediately under the axis of the fly, and transversely of the machine, I arrange a horizontal pipe, H, to which steam is supplied through a suitable valved pipe, *h*, Fig. 1. At intervals along the outer face of this pipe H are perforations in such positions as to direct jets of steam out onto the sheets of paper as they are delivered from the press and laid onto the receiving or fly table T, Figs. 1 and 2. By this means steam is thrown onto the successive printed sheets to furnish sufficient moisture to act as a conductor in carrying off and dissipating the electricity in the paper, and preventing the clinging of the sheets together, and the consequent set-off of the impression on one sheet onto the other. The supply of steam, however, should be so regulated by the valve *j* in the pipe *h* that there will be only sufficient to accomplish the desired result without injury to the paper.

I claim as my invention—

The herein-described mode of freeing paper from electricity to prevent set-off in printing, said mode consisting in projecting steam onto the printed sheets as they are delivered from the press, substantially as set forth.

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

JAMES McKEEN ARNOLD.

Witnesses:

WM. F. DAVIS,

HARRY SMITH.