

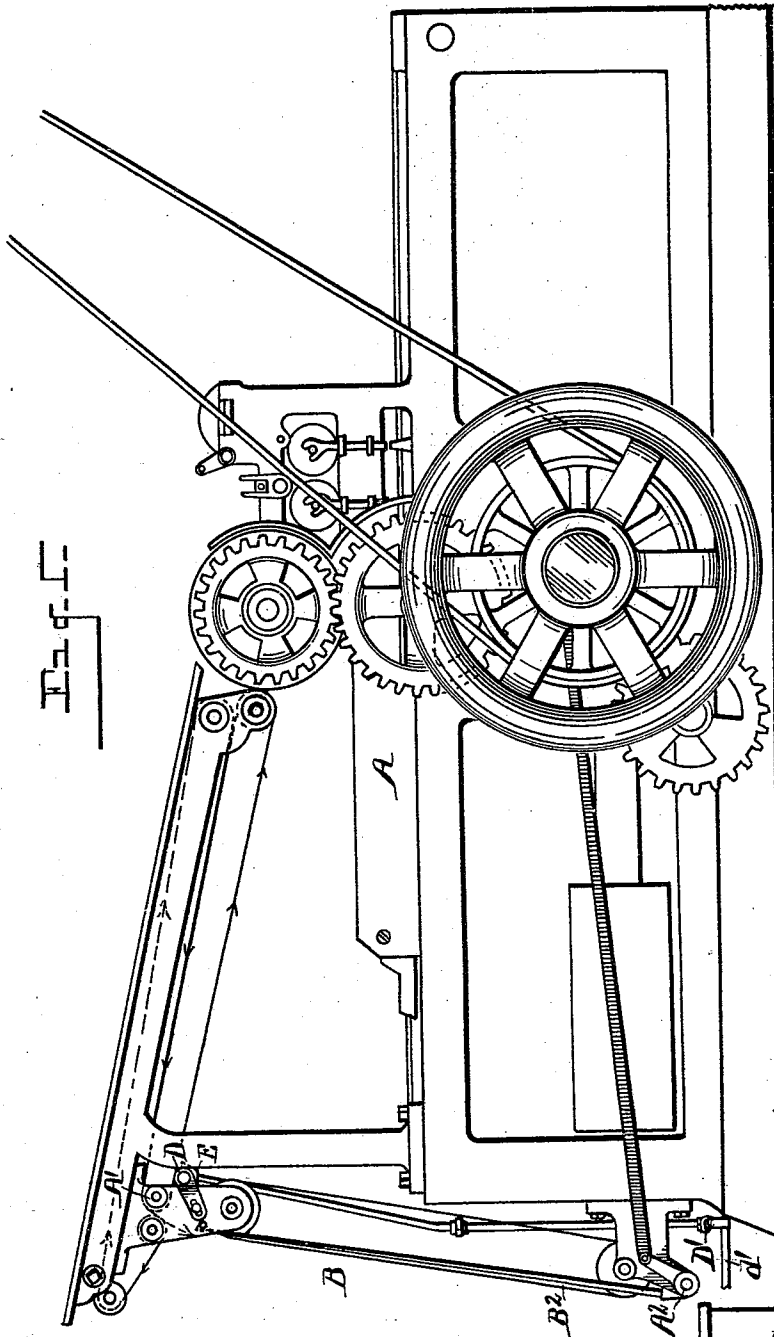
(No Model.)

2 Sheets—Sheet 1.

P. SCHNEIDER.
PRINTING PRESS ATTACHMENT.

No. 543,058.

Patented July 23, 1895.



WITNESSES

O. J. Paruziger
M. A. Martin

INVENTOR

Paul Schneider

By *his* Attorney

Wm. S. Wright

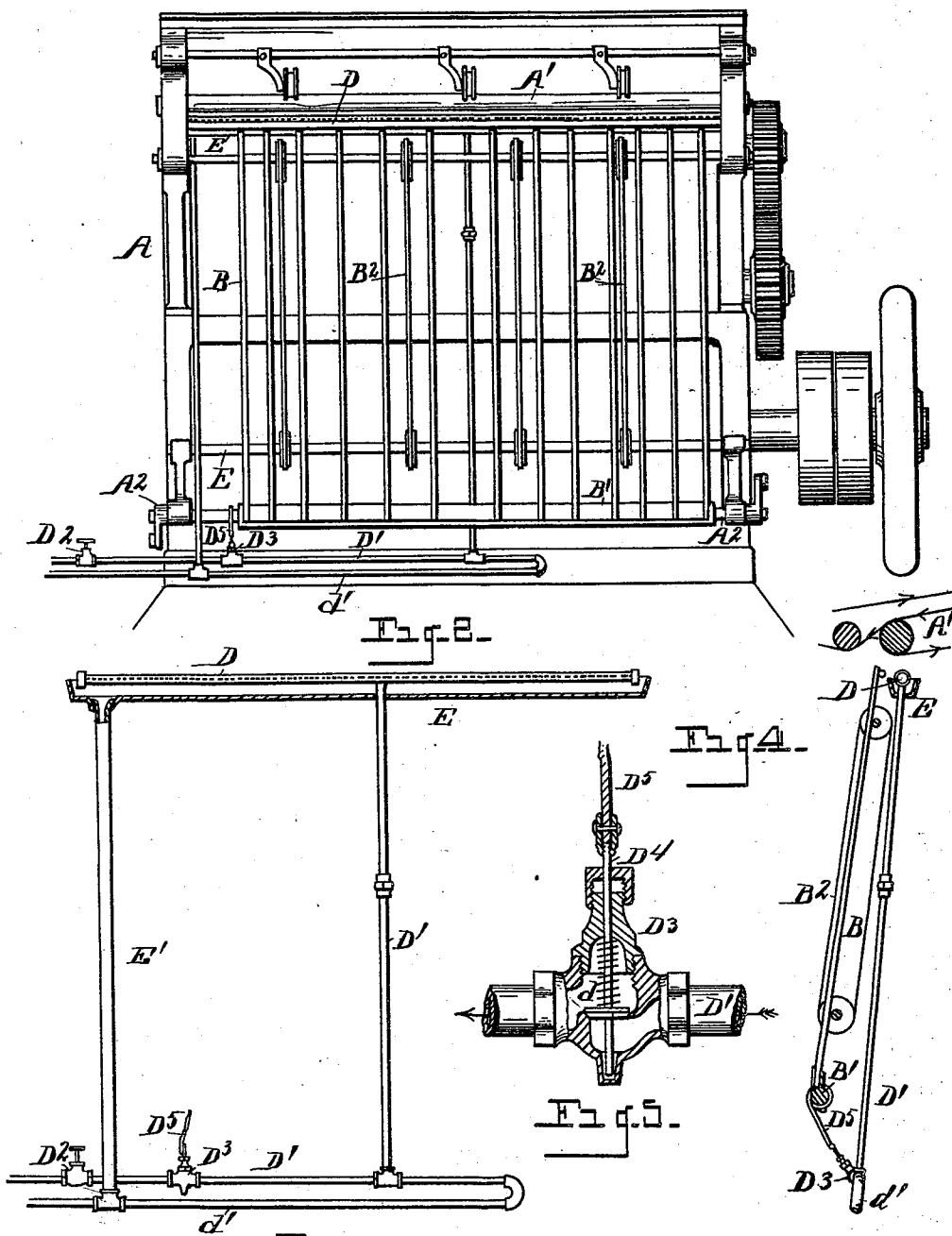
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UNITED STATES PATENT OFFICE.

PAUL SCHNEIDER, OF DETROIT, MICHIGAN.

PRINTING-PRESS ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 543,058, dated July 23, 1895.

Application filed March 21, 1895. Serial No. 542,641. (No model.)

To all whom it may concern:

Be it known that I, PAUL SCHNEIDER, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Printing-Press Attachments; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention has for its object a printing-press attachment adapted and designed to overcome the effects of electricity in the paper.

It is a well-known fact among printers that it is desirable to run the paper through the press without dampening it, as the dampening of the paper, as generally practiced, tends to wrinkle the paper and to injure the finish of the paper, as well as to change the color to some extent, on account of which the printed sheet loses the color and gloss and neatness of appearance. It has commonly been found necessary, however, to dampen the paper, especially in what are known as "flat-bed" presses, in order that the paper may be handled with facility in folding and otherwise after leaving the press. Papers of superior finish are found to possess a considerable amount of electricity, partly due to the friction of the machinery in which the paper is made, and when the paper has been run through the press the electricity contained therein makes it difficult to straighten up a block or body of paper and to separate the individual sheets in folding and in other handling thereof, since the electricity in the paper causes the sheets to stick together, rendering the handling thereof, after being printed, difficult. In perfection presses this difficulty is not apparent, inasmuch as the paper is handled and folded by the machine itself; but where, as in a flat-bed press, a large number of sheets are deposited one upon another after being printed, this difficulty is very apparent, and it has been found very necessary to find some means of overcoming the same.

My invention, therefore, is more especially adapted and designed as an attachment to what are termed "flat-bed" presses, and con-

sists of the construction and arrangement of devices and appliances hereinafter specified and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a flat-bed press, showing my attachment in place. Fig. 2 is a rear end elevation of the same. Fig. 3 is a detail view, partly in elevation and partly in section, showing the steam-pipe and its connections. Fig. 4 is a side elevation showing my attachment. Fig. 5 is a detail view illustrating the construction of the automatically-controlled valve.

A represents a flat-bed press of any desired construction. The same being well understood need not be herein specifically described as regards its various parts throughout. A' is a rear roller over which the printed paper is delivered from the machine to an oscillatory "fly" B, having the customary journaled connection with the press at its lower end, as at A². C is a platform upon which the paper is deposited in the usual manner by the downward movement of the fly. These features so far set forth are of the usual construction.

My invention consists in the location of a perforated steam-pipe D, adjacent to the rear roller A' of the press, so as to deliver jets of steam behind the paper and thereupon as the paper is delivered from the roller A' to the fly.

D' is a steam-pipe leading to the perforated pipe D, the pipe D being arranged horizontally adjacent to the roller A'. In the pipe D' is a shut-off valve D² to govern the pipe D'. D³ is an additional automatically-operated valve, (shown in detail in Fig. 5,) the valve-stem D⁴ being preferably connected by a flexible strap D⁵ upon the oscillatory rod or bar B' of the fly. The strap D⁵ is so engaged upon the rod B' that when the fly ascends into its upright position said strap will be wound upon said rod to open the valve and hold it open to permit the escape of steam through the perforated pipe D while the fly is in an upright position. When the fly is thrown downward to deposit the paper upon the platform, the strap is of course unwound and a spring d seats the valve, shutting off the steam from the perforated pipe D while the fly is in a downward position.

The fly is provided with the customary car-

rying-belt B², which operates to carry the sheet of paper downward upon the outer face of the fly until the sheet is entirely led off from the roller A'. It will be seen that during the entire time that each sheet is being carried down on the face of the fly steam from the pipe D will be emitted against the adjacent face of the sheet of paper, so that the steam is distributed over the entire sheet while it is being carried downward upon the fly ready to be discharged upon the platform by the downward movement of the fly. The means hereinbefore described cuts off the discharge of steam when the fly tilts downward, the steam being cut off until the fly rises again, by which operation, in the manner above described, the steam-pipe is opened by the opening of the valve D³. In this manner no steam is wasted while the fly is thrown downward and the admission of steam into the room is prevented and cut off.

Communicating with the pipe D' is a waste-pipe d' to lead off water of condensation. Beneath the perforated pipe D, I locate a trough E or other suitable device to catch any drip or condensed water which may be emitted from said perforated pipe, a discharge-pipe E' leading from said trough into the steam-pipe d'. The valve D³ may be of any desired construction, and may be connected with the fly in any suitable manner to be automatically opened upon the upward movement of the fly and automatically closed on the downward movement of the fly. The above provisions are made to lead off condensed water from the steam-pipe D or the pipe D', so that the steam ejected against the sheet of paper will be as dry as possible.

The operation of the device will now be understood, and its practical operation has demonstrated its entire efficiency in overcoming in a most satisfactory manner the difficulties hereinbefore mentioned.

Practical demonstration has also proven that in operation the dry steam ejected against

the paper as it is discharged from the press, by a proper control of the amount of steam ejected, does not dampen the paper so as to wrinkle it or mar its gloss or finish or to produce any discoloration thereof. By means of the valve D² the amount of steam from the pipe D can be readily controlled as may be desired.

What I claim as my invention is—

1. The combination with a printing press provided with an oscillatory fly having an oscillatory rod B', of a perforated steam pipe arranged at the rear end of the machine adjacent to the upper end of the fly to discharge steam upon the paper as it is delivered to the fly, said steam pipe provided with a pipe D' leading thereto having a portion located toward the base of the machine adjacent to the oscillatory rod B', a valve in said portion of the steam pipe, a flexible strap connecting the stem of said valve upon said oscillatory rod of the fly whereby as the fly ascends to upright position the strap will be wound upon said rod to open the valve and hold it open while the fly is in an upright position and whereby when the fly is thrown downward the strap will be unwound permitting the valve to be seated and held closed while the fly is in a downward position, substantially as and for the purpose set forth.

2. The combination with a printing press of a perforated steam pipe arranged transversely toward the rear end of the machine to discharge steam upon the printed paper, a trough located below said steam pipe adjacent thereto, and a discharge pipe leading from said trough to carry off the water of condensation from said trough, substantially as set forth.

In testimony whereof I sign this specification in the presence of two witnesses.

PAUL SCHNEIDER.

Witnesses:

N. S. WRIGHT,

M. A. MARTIN.