

(No Model.)

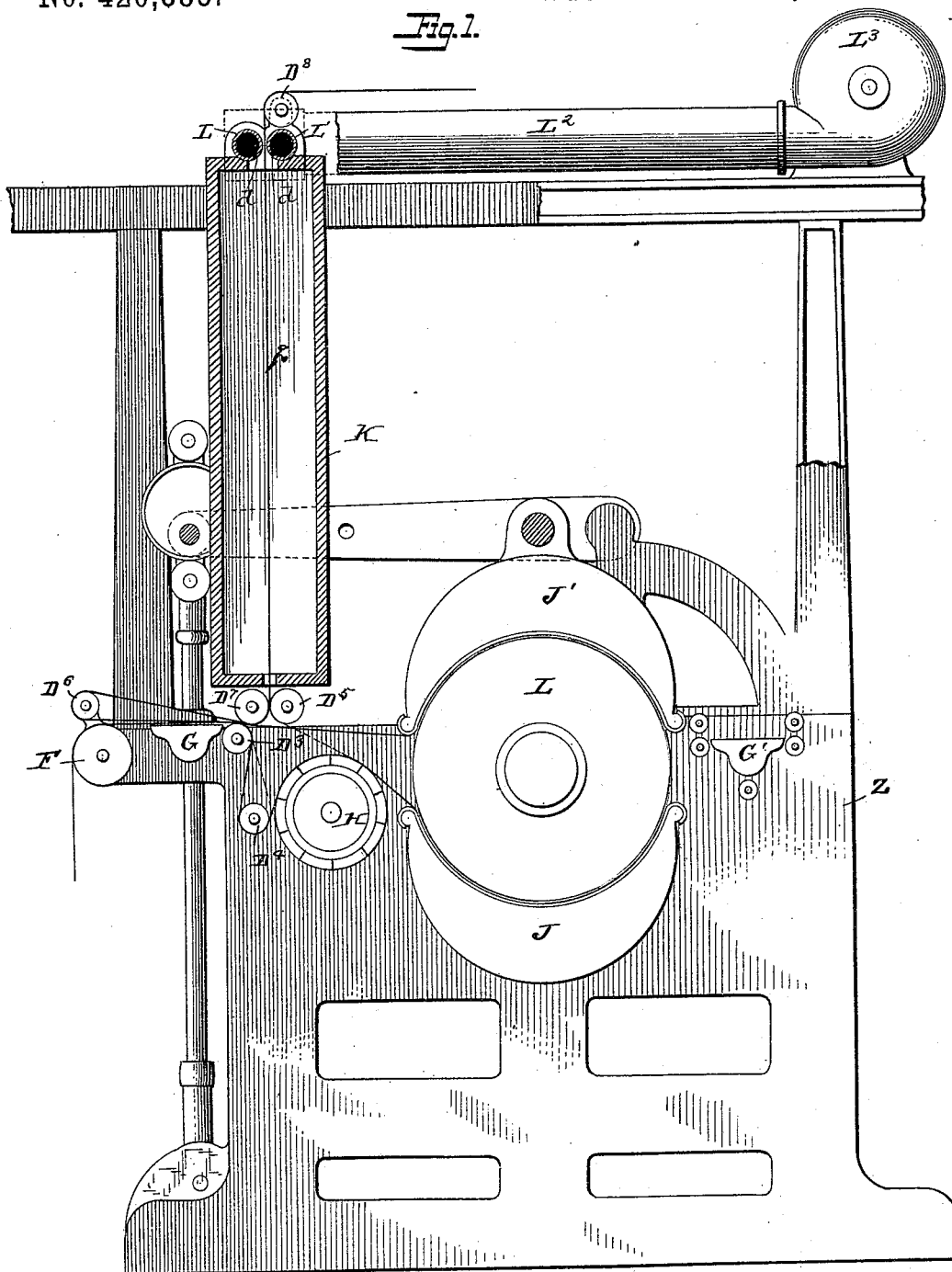
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G. W. MILLER.
CLOTH PRESSING APPARATUS.

No. 420,885.

Patented Feb. 4, 1890.

Fig. 1.



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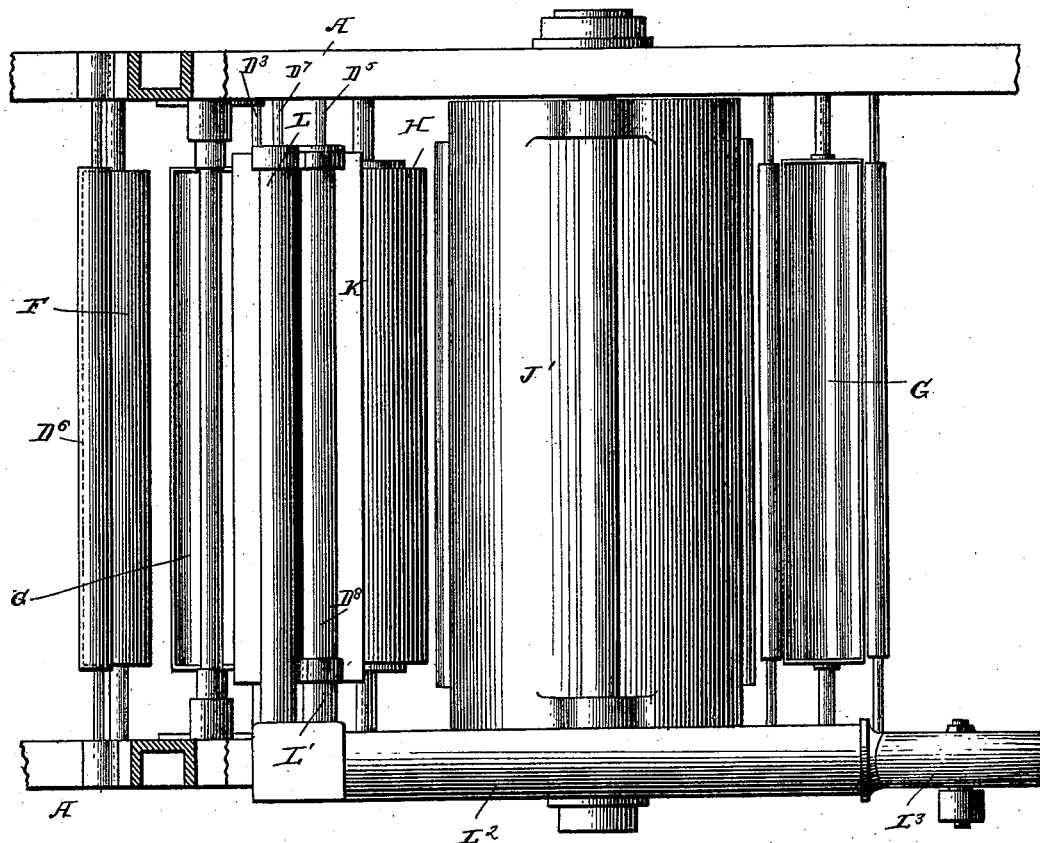
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Fig. 2.



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UNITED STATES PATENT OFFICE.

GEORGE W. MILLER, OF WOONSOCKET, RHODE ISLAND.

CLOTH-PRESSING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 420,885, dated February 4, 1890.

Application filed November 20, 1888. Serial No. 291,329. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. MILLER, a citizen of the United States, residing at Woonsocket, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Cloth-Pressing Apparatus, of which the following is a specification.

Pressing-machines employed for pressing cloth and other fabrics are usually provided with a presser-roller and one or more corresponding presser-beds, and with a steamer over which the fabric is passed either before or after being pressed, or both before and after being pressed, the fabric being thus moistened and heated by the steamer and also by the pressing appliances in most cases, although in some instances the fabric is subjected to cold pressure only. Whatever has been the construction of the machines and the arrangement of the steamers the fabric is either pressed while containing the heat imparted by the steam or is folded while heated, or both, and the result is often highly objectionable, as the pressure while the fabric is heated sometimes imparts a detrimental glazed appearance to the surface of the fabric, while the folding of the fabric while it is heated changes the color or appearance of the fabric along the transverse lines where the fabric is folded. To avoid such results whatever may be the point at which the fabric is steamed, and whether or not it is pressed between heated or cooled presser devices, I provide means whereby the fabric may be cooled after passing over the steamer and before or after being pressed. For this purpose I conduct the fabric during a portion of its travel in proximity to one or more blasts of cold air, and preferably through a tube through which the cold air is passed.

Appliances of different constructions may be employed in carrying out my invention, arranged differently, according to the character of the pressing device with which they are used. I have illustrated one construction in the accompanying drawings, in which—

Figure 1 is a sectional elevation of an ordinary cloth-pressing machine and attachments to illustrate my improvement. Fig. 2 is a plan of the parts illustrated in Fig. 1.

The side frames Z of the machine, of suit-

able construction, support the bearings of the pressing-cylinder L and for the two corresponding curved pressure-beds J J', and there are also bearings for friction-rollers F, guide-rollers D³ D⁴ D⁵ D⁶ D⁷, and for the shaft of the stretcher-roller H.

At the front of the machine, between the rollers F and D³, is arranged a steamer G of any ordinary construction.

Vertically above the rollers D⁵ D⁷ is supported a tube K, having openings at its ends and of sufficient width for the passage of the fabric z, and at the upper end of the said tube is a guide-roller D⁸, which will support the fabric in a vertical position in the tube and from which the fabric passes to the usual folding device or to the cylinder.

At the upper end of the tube K extend two parallel pipes L L', one upon each side of the path of the fabric, and each closed at one end and communicating at the other with a pipe or conduit L², into which a blast of air is directed by means of a fan L³ or other suitable blower. The pipes L L' are provided with series of perforations d, so arranged that the air from one pipe will be directed against one face of the fabric, while the air from the other will be directed against the other face of the fabric and the air will then pass downward upon both sides of the fabric through the tube K in a direction opposite to the direction of movement of the fabric through the air-tube, beginning the cooling of the fabric almost as soon as it leaves the cylinder. By thus subjecting the fabric as it travels through the press to the action of the air-blast the temperature of the fabric is speedily reduced, and if any moisture remains in the same after steaming it is rapidly evaporated.

By the arrangement of parts described I am enabled to subject the fabric to the cooling-blast either immediately after steaming and before pressing, or after steaming and pressing. Thus the fabric may pass round the roller F and over the steamer and round the rollers D³ D⁴, and over the stretcher-roller H to the pressing devices, thence below the roller D⁵ and between the latter and the roller D⁷, and upward through the tube K to the folder; or the fabric may pass from the roller F over the steamer and under the stretcher-roller, as shown in dotted lines, and

thence upward between the roller D⁵ and D⁷ through the air-tube, over the roller D⁸ to the pressing devices, and thence to the folder. In some cases a second steamer G' may be used
5 in connection with guide-rollers differently arranged, so as to subject the fabric to a second steaming process, or to steaming only after pressing, as is done in some classes of machines, and the air-blast may be directed
10 on either or both faces of the fabric at any point of its travel. In some cases the blast-pipe may extend only to one side of the fabric, so as to throw the blast upon one face only, and the pipe or pipes may be used to
15 direct the air upon the fabric in those machines in which the fabric is heated only by the pressing devices and in which no steamer is used.

Without limiting myself to the precise construction and arrangement of parts shown, I claim—

1. The combination, with the cloth-pressing devices, of a vertically-arranged air-tube slotted to permit the passage of the fabric
25 through it, two air-pipes arranged upon opposite sides of the fabric adjacent to the upper slot of the tube and perforated to direct blasts of air upon opposite sides of the fabric in a downward direction and substantially opposite to the direction of the movement of

the fabric through the tube, and a blower communicating with the perforated pipes, substantially as set forth.

2. The combination, with the steamer and pressing devices of a cloth-press, of an air-
35 tube through which the fabric passes to be cooled, a guide-roller situated between the steamer and the pressing devices, a stretcher-roll H, and guide-rollers adjacent to the end of the air-tube, said rollers being arranged,
40 substantially as set forth, to direct the cloth in different paths between the steamer, the pressing devices, and the air-tube.

3. The combination, with the steamer and pressing devices of a cloth-press, of the air-
45 tube K, the guide-rollers D³ D⁴, situated between the steamer and the pressing devices, and the guide-rollers D⁵, D⁷, and D⁸, arranged adjacent to the opening into the air-tube, the stretcher-roll H, and one or more blast-pipes
50 extending transversely of the air-tube, substantially as set forth.

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

GEORGE W. MILLER.

Witnesses:

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