H. H. PHILLIPS.

Machine for Painting Cloth.

No. 167,783. Patented Sept. 14, 1875.

Fig. 1.

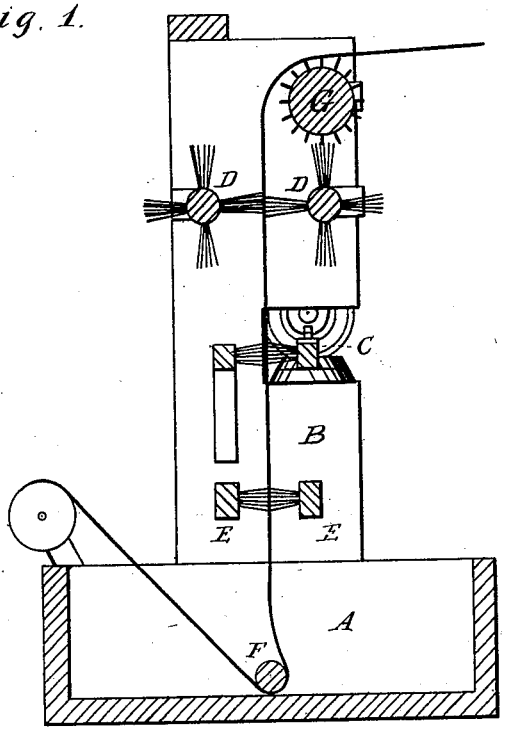
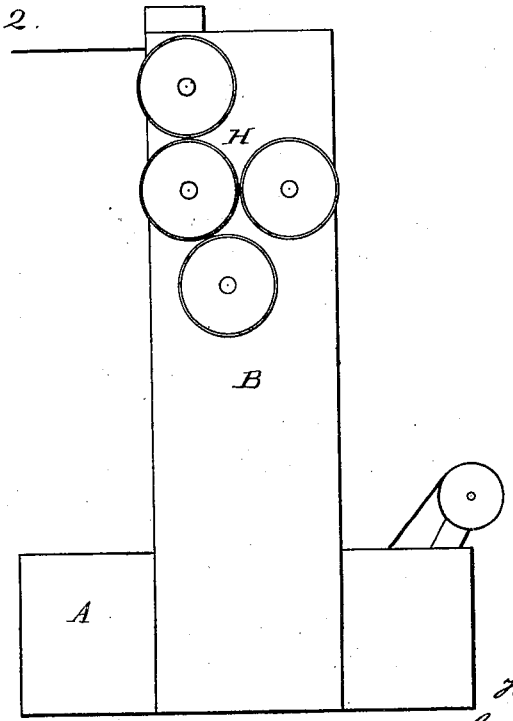


Fig. 2.



WITNESSES

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IMPROVEMENT IN MACHINES FOR PAINTING CLOTH.

Specification forming part of Letters Patent No. **167,783**, dated September 14, 1875; application filed July 10, 1875.

To all whom it may concern:

Be it known that I, HENRY H. PHILLIPS, of Buffalo, in the county of Erie and State of New York, have invented a new and valuable Improvement in Coloring or Sizing Machines; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a vertical section of my machine, and Fig. 2 is a front view of the same.

This invention has relation to means for distributing paint, size, or other liquid material, rapidly and evenly on both sides of a piece or roll of fabric without disfiguring the finished surface thereof; and it consists in the construction and novel arrangement, in combination with a color or size vat and its contained guide, of a bearing-roll, whose cylindrical surface is composed of bearing-points and intermediate brushes, arranged to operate on opposite sides of the work, as hereinafter fully shown and described.

In the accompanying drawings, the letter A designates the vat, in which is contained the coloring or other material to be distributed upon the fabric. Upward from the vat extends the frame B of my machine, in which are seated the journals of such rotary shafts as are found necessary. As my machine is an upright machine, the brush-carrying shafts and rods are arranged above the vat, or as nearly over it as practicable, in order that the fabric may pass upward between the brushes in a vertical or nearly vertical line, thereby facilitating an equal distribution of the liquid on the two sides or surfaces of said fabric. These brushes are arranged on rotary shafts, as indicated at D. I employ, in addition, rigid or movable scrapers E, just above the tank, to remove the superfluous liquid taken up by the fabric. In the tank should be arranged, parallel with the direction of the stocks of the brushes, a guide-roll or strip, F, whose office is to bring the sheet well under the surface of the liquid, and at the same time to keep it properly spread, and prevent folding, which would exclude the liquid from the part creased. This guide also serves to give the first or lower deflection to the fabric. Thence it passes upward through the scrapers and brushes, as stated, and is again deflected, passing over the pointed roll G. This consists of a suitable shaft thickly studded with bearing points or spines, which form the cylindrical bearing-surface, over which the fabric passes. These points are placed sufficiently close together to afford a bearing to the fabric, without marring the surface, and without penetrating the fabric. Suitable gearing, as indicated at H, is employed to communicate the required motion to the various shafts and rods referred to from the pointed roll. The fabric to be coated is passed by one end of the roll or piece under the guide in the vat, thence up between the brushes over the pointed deflecting roll, and drawn off.

The machine will operate readily in any factory-room of ordinary height. The coloring or sizing material will be deposited equally on each side of the fabric, and evenly spread by the brushes; and in drawing off the fabric over the pointed deflecting roll the danger of disfiguring the fabric by contact is obviated, as the bearing-points will support the fabric without marking it, and will at the same time afford sufficient friction to turn the roll when the fabric is pulled through, and thereby operate the other gearing or friction wheels, communicating motion to the other devices. The points on the roller may be of metal or other stiff material, and they should be sufficiently fine to enable the liquid to close over the impressions after passing over the roll.

What I claim as new, and desire to secure by Letters Patent, is—

1. The size-vat A, having the guide F, in combination with the stationary brushes E E and rotary brushes D D, arranged on opposite sides of the fabric to be sized, and roll G, armed with points, substantially as and for the purpose set forth.

2. The combination, with a color or size vat and its contained guide, of a bearing-roll, G, having its cylindrical surface composed of bearing-points over which the fabric passes, for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

HENRY H. PHILLIPS.

Witnesses:
B. H. MORSE,
WALTER C. MASI.