C. Bartholomew

Staining Paper.

No. 71681

Patented Dec. 3, 1867.

Fig. 3

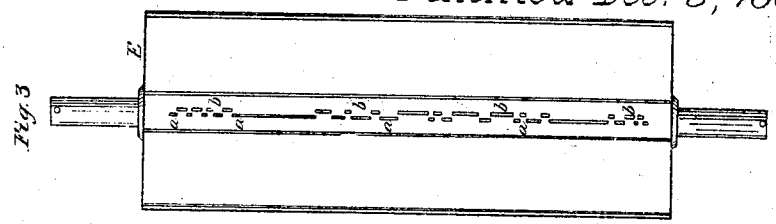


Fig. 1

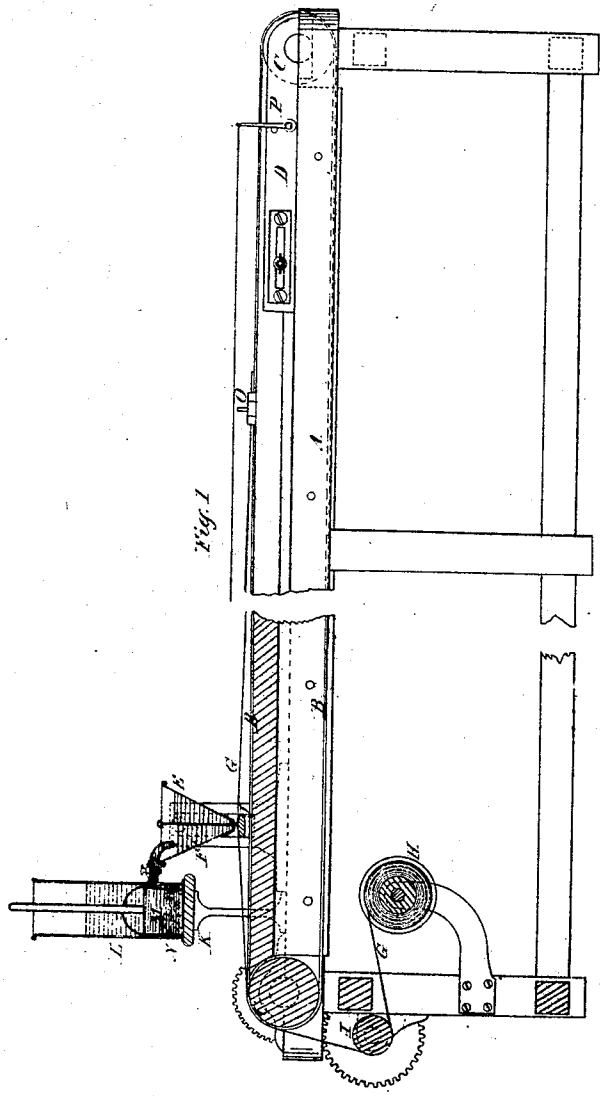
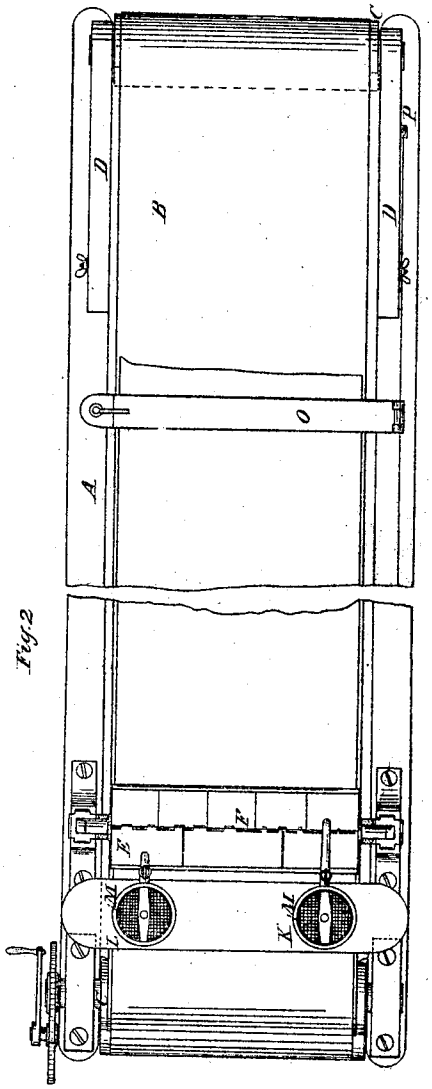


Fig. 2



Witnesses
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United States Patent Office.

CHARLES BARTHOLOMEW, OF NEW YORK, N. Y.

Letters Patent No. 71,681, *dated December* 3, 1867.

MACHINE FOR STAINING PAPER.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, CHARLES BARTHOLOMEW, of New York, No. 595 to 601 Ninth avenue, in the county of New York, in the State of New York, have invented a new and improved Machine for Staining Paper; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification, in which drawing—

Figure 1 represents a longitudinal vertical section of this invention, partly in elevation.

Figure 2 is a plan or top view of the same.

Figure 3 is an inverted plane of the color-box.

Similar letters indicate corresponding parts.

This invention relates to machines for staining or coloring wall or other paper. The color-box or trough is made with one or more partitions throughout its whole length, to enable me to employ different colors in advance of each other, and so produce new combinations; and the discharge-openings of the several compartments of the color-box are made short or long, with solid parts between them, for the purpose of producing stripes. Other novel features will be explained as the description proceeds.

The letter A designates the frame of the machine, which is of a length equal at least to the strip of paper to be operated upon. The machine is provided with the usual endless apron, B, that goes around rollers C C, placed at the opposite ends of the frame. The apron is tightened by means of adjustable pieces D placed on opposite sides of the machine, and which are so arranged that their right-hand ends press against the journals or journal-boxes of the right-hand roller, and consequently push the said roller outwards, so as to tighten the apron. Any other means can be adopted for tightening the apron. The color-box E is suspended across the forward or left-hand end of the machine, and is made in such a manner as to produce automatically different combinations, and also narrow stripes or lines of different colors. For the purpose of producing combinations from separate colors, I arrange the color-box so as to deposit one color in advance of another on adjacent portions of the sheet of paper in parallel lines. In carrying out my invention, I run a partition, F, across the whole length of the box, so as to divide the box from its bottom upwards into front and rear divisions or compartments. I produce numerous combinations of stripes by making some of the forward compartments overlap some of the rear compartments, as is shown in the plan view, which arrangement enables me to produce a great variety of colored lines and stripes, according to the number of compartments that are provided, the emission of colors therefrom being in alternation.

In addition to this arrangement of compartments, I make the openings at their bottoms, through which openings the coloring matters are discharged, of various length, instead of making the openings as long as the respective compartments. These arrangements are shown in the plan view, fig. 2, and also in the inverted view of the color-box, fig. 3, the letter *a* designating openings that are on one side of the common partition, and the letter *b* designating those openings that are on the other side. The several openings *a* are arranged opposite the interspaces of the openings *b*, where the bottoms of the compartments are left solid, and the openings *b* are arranged opposite the interspaces of the openings *a*. In consequence of this arrangement I am able to produce a great variety of stripes or lines across the whole breadth of the paper, the margins of the several stripes blending naturally with each other.

The several compartments of the color-box are supplied with color by means of cisterns L arranged on a stand, K. The spouts of the cisterns extend to the compartments they are intended to supply, respectively, and are governed by stop-cocks. The cisterns are provided with strainers M, through which all the coloring matters go before they pass to the spouts, and the strainers, for convenience in withdrawing them to clean out the cisterns, are provided with handles, that extend upwards through the tops of the cisterns, as shown in fig. 1. In order to prevent sediment and refuse which may be present in the coloring materials, and also the thicker portions thereof, from escaping into the color-box, I place the spouts above the level of the bottoms of the cisterns, high enough to form a well or place, N, where such sediment and thicker portions are collected and allowed to settle, while only the clear and more liquid portions run off through the spouts.

The paper marked G is secured at one end to the travelling apron by a clamp, O, that extends under the

apron and over the paper, and travels with them. When the clamp reaches the right-hand end of the machine it comes in contact with a lever, P, that is pivoted to the frame of the machine, or to one of the pieces D, and through it actuates a bell, with which it is connected by a cord, as a signal that the paper has reached the required length, the lever P being set at the point which will give the designed limit. The fresh paper is taken from a reel, H, beneath the apron, and is passed beneath and partly around a roller, I, and thence to the top of the apron and to the clamp O, the movement of the apron being accomplished by turning the left-hand roller C, and the feed of the paper being assisted by gearing that roller to the roller I in such a manner that they move at the same speed. The paper is not allowed to be in contact with the apron at the point where the colors are applied, but I raise the paper off the apron at that point by means of a supplementary table, J, whose ends are supported on the frame of the machine. The object of this device and provision is to cause the paper to be presented to the color-box in a uniform manner, and at the same level across its whole breadth, the supplementary table being capable of adjustment so as to be perfectly parallel with the bottom of the box, whereby the paper is made to receive the coloring matters in equal quantities and with uniformity. Another object is to prevent injurious effects from uneven places and roughnesses that exist in the apron, and which, when the apron and paper are in contact while the coloring matters are applied, cause inequalities and irregularities in the work, and mar it.

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

1. In machines for staining or coloring wall or other paper, the application and use of the supplementary table J, or equivalent device, between the paper and travelling apron, at the point or points where the coloring matters are applied, substantially as and for the purpose described.

2. The division of the color-box into front and rear compartments by a partition, F, so that one set or series of colors shall be discharged in advance of another set or series, substantially as described.

3. The arrangement of the several discharge-openings of the color-box in such a manner that those of the front compartments shall be opposite the solid interspaces of the rear compartments, substantially as described.

4. Two or more openings in the same straight line in the bottom of a color-box, or the bottom of a compartment of a color-box, in combination with solid interspaces between such openings, for the purpose of producing stripes of color from the same compartment or receptacle, substantially as shown.

5. The combination, with a cistern, L, for the supply of color, of a strainer, M, constructed and arranged substantially as described.

6. The arrangement, in the supply-cistern, of a settling-well, N, substantially as set forth and described.

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Witnesses:

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