

J. H. De WITT.

Apparatus for Painting Wire Cloth.

No. 149,843.

Patented April 21, 1874.

Fig. 1.

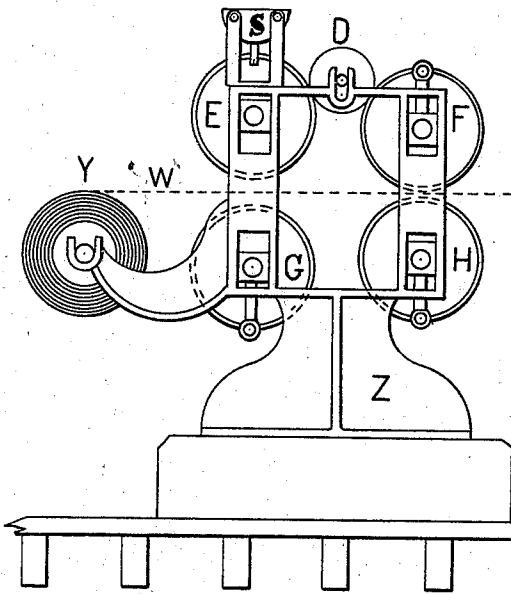


Fig. 2.

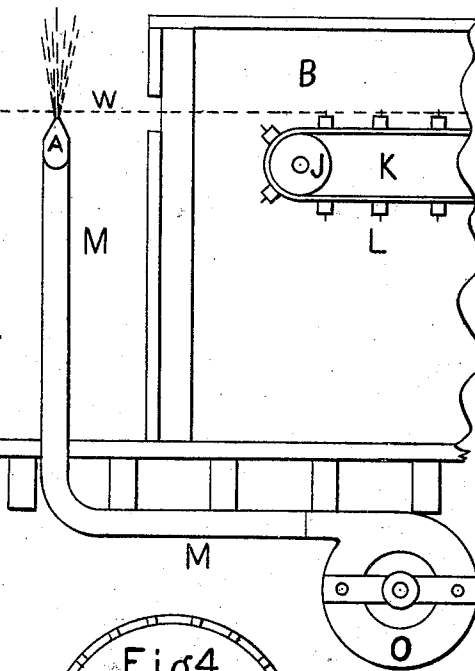


Fig. 3.

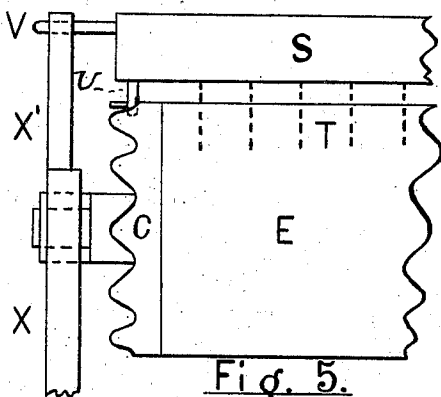
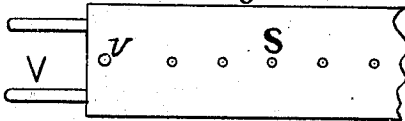


Fig. 4.

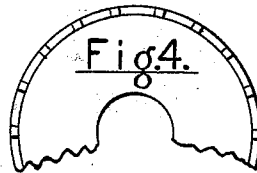
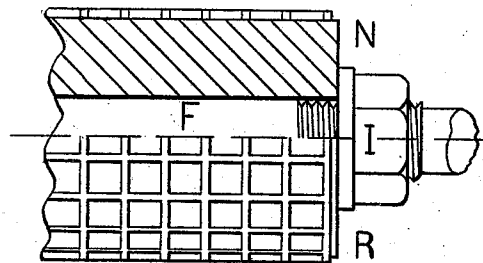


Fig. 6.



Witnesses.

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JOSIAH H. DE WITT, OF ORANGE, NEW JERSEY. *

IMPROVEMENT IN APPARATUS FOR PAINTING WIRE-CLOTH.

Specification forming part of Letters Patent No. **149,843**, dated April 21, 1874; application filed March 3, 1874.

To all whom it may concern:

Be it known that I, JOSIAH H. DE WITT, of Orange, Essex county, New Jersey, have invented certain Improvements in Painting Wire-Cloth, and in the machinery for printing figures upon the same, of which the following is a specification:

My invention relates to an arrangement of felt-covered rolls for painting wire-cloth, with means for supplying the same with paint, a figured roll in combination with others, and a blast-pipe interposed between these painting devices and a drying-machine, patented by me September 30, 1873.

The nature of my invention will be understood by reference to the accompanying drawings, in which—

Figure 1 is the painting-machine, arranged to apply either a plain tint to the cloth by the rolls E and G, or to print a figure upon the same by the rolls F and H. Fig. 2 is the drying-machine, patented by me September 30, 1873. In this, a heated chamber, B, contains driving-rolls J, to carry belts and slats L for transporting the wire-cloth W to a reel at the other end, where it is wound up dry. Fig. 3 is a plan of the paint-reservoir; Fig. 4, a direct end view of the printing-roll F. Fig. 5 is a side view of the roll E, and the means for moving the reservoir S. Fig. 6 is half in section and half an outside enlarged view of the printing-roll F.

The operation of the machine is as follows: The rolls D E F G H, as well as the roll Y, are supported on the frame Z, and provided with suitable adjustments, so that they may be pressed together or set apart, as shown at E and G. The rolls D, E, G, and H are made of wood, to which is tacked a coating of cloth or felt. This absorbs the paint sufficiently to distribute it wherever it is wanted, or, as in the case of H, to furnish an elastic support to the wire-cloth W when printed by the pressure upon it of the printing-roll F. This last roll is made in a peculiar manner, and is shown in detail in Figs. 4 and 6. It is made of wood, bored to slip onto a wrought-iron shaft, upon which it is secured by a nut I, Fig. 6. The figure upon the roll is formed by letting narrow strips of brass edgewise into the wood, and forcing felt, cut into the proper figure,

into the spaces between the projecting strips of brass. This felt readily absorbs the paint, and impresses it upon the cloth W in the proper figure, when the same is passed between it and the supporting-roll H, which, being upon the under side of the dry cloth, receives no paint, and makes no impression upon the wire-cloth.

The machine is supplied with paint, either for painting or printing, by the reservoir S, which is a box perforated at the bottom to throw the paint upon the roll E, and supported at each end by slides V, which enable it to slide back and forth, as it is impelled by the pin U acting against the cam C on the end of the roll E. This sliding movement of the reservoir distributes the paint equally over the felted surface of the roll E, which, for the printing operation, conveys it by contact to D, and thence to the printing-roll F.

To control the flow of paint from the reservoir, an attendant supplies but a small amount at a time, as it may be needed, from a pitcher.

It will be perceived that the reservoir S is not designed as a supply-chamber, in which any great quantity of paint is stored for use, but that it acts solely as a means of distributing the paint upon the roll E, the supply being kept up by an attendant, who graduates the amount placed in the trough for distribution by the amount appearing on the wire-cloth, where excess would be very detrimental. If the trough were filled with paint there would be no way of checking or regulating the flow until it all was discharged.

The slides V, upon which the reservoir vibrates back and forth, are simply short rods extending from each end of the reservoir, and working loosely in holes prepared in the top of the stands or frame Z. The pin U projects from the bottom of the reservoir and engages with the cam C, secured on the end of the roll E. When this machine is used for painting plain tints upon the cloth W, the roll D is removed, the rolls F and H are separated about two inches, and the rolls E and G being brought in contact, the paint covers them both, and the wire-cloth being drawn between them is painted upon both sides.

It will be seen from the above description

that the painting-machine is constructed to do two kinds of work, which have generally been done in two different machines, and that by the adjustment of the rolls E and G, or F and H, the machine can be readily adapted to plain painting, or the production of figures upon wire-cloth.

It will be observed that there is a blast-pipe, M, (connected with a blower, O,) which is interposed between the machines shown at Figs. 1 and 2. The design of this pipe is to remove occasional obstructions, such as paint-skins, scales of dirt, dust, &c., from the meshes of the cloth before it is dried. It also removes any surplus paint that may adhere in the meshes if the machine is allowed to deposit too much thereon.

To spread the blast over the whole breadth of the wire-cloth W, the top of the pipe M is formed with a T-head, A, long enough to reach across the cloth.

I am aware that a blast has already been used in combination with a reel of wire-cloth to dry the same after painting, and I therefore expressly disclaim any right to such a combination, restricting myself solely to the interposing of a blast-pipe between the painting and drying machines patented by me, for the purpose of removing obstructions that occasionally fill the meshes.

In Fig. 5 the paint is shown running from the holes in the reservoir S upon the roll E at T.

Instead of the straight lines shown at T, the paint will naturally take a zigzag course upon the roll, derived from the motion of S.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In combination with the painting-machine, Fig. 1, and the drying-machine, Fig. 2, the interposed blast-pipe M, arranged substantially as and for the purpose described.

2. The combination of the printing-roll F (with the figure constructed of felt and metal strips, as described, upon a cylindrical surface of wood) with a supporting-roll, H, and wire-cloth W, for printing figures upon the cloth, substantially as shown and described.

3. The reservoir S, cam C, and rolls E and G, made of wood, with a felt or cloth surface, for painting wire-cloth, substantially as shown and described.

4. The machine for painting plain tints or figures upon wire-cloth, constructed substantially as shown and described, with the reservoir S, wooden rolls D, E, G, and H, covered with cloth or felt, and the printing-roll F, with the figure constructed of felt and metal strips, as described, upon a cylindrical surface of wood.

J. H. DE WITT.

Witnesses:

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