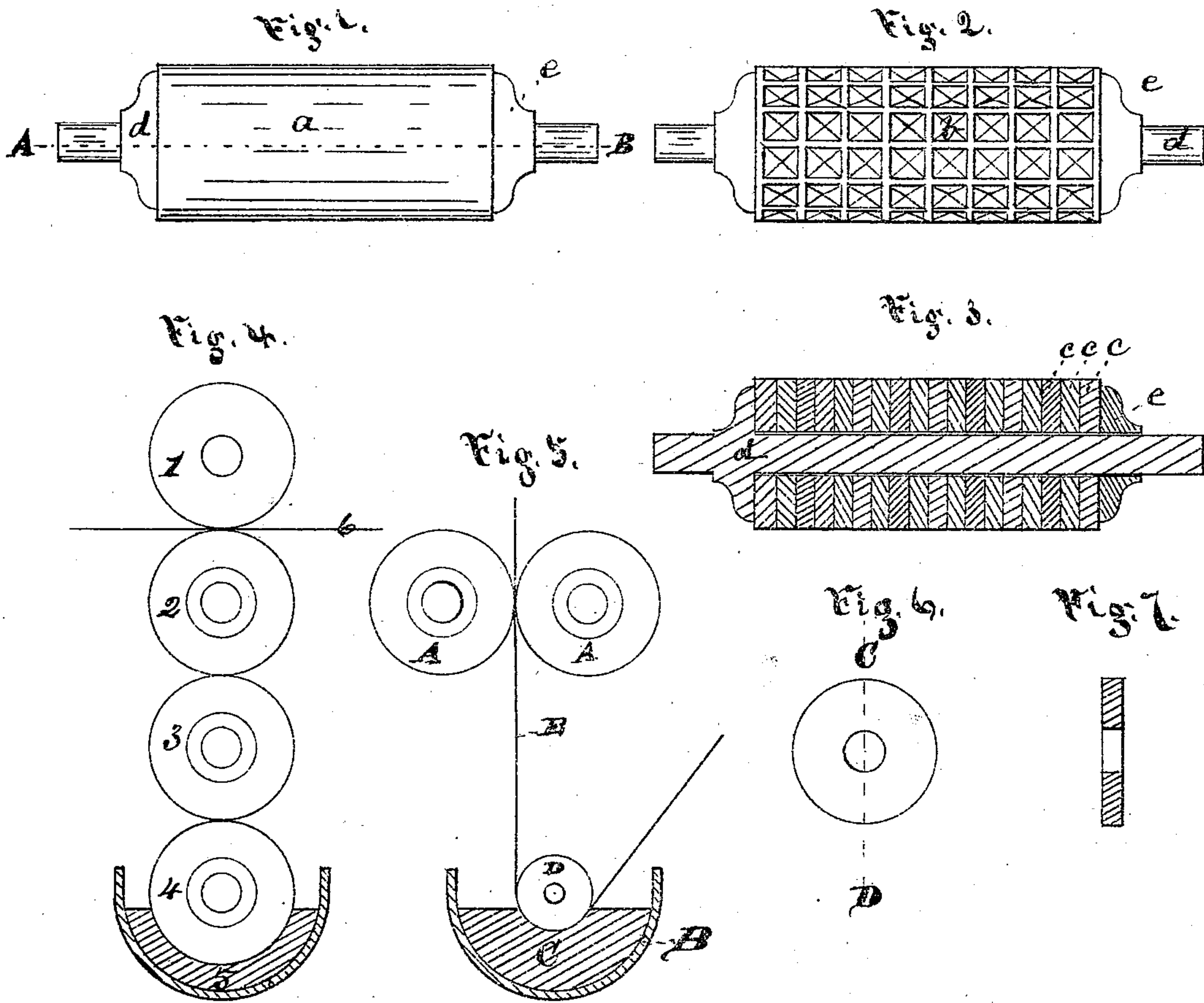


G. F. WRIGHT.

Improvement in Paint Rolls.

No. 123,373.

Patented Feb. 6, 1872.



Inventor:

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UNITED STATES PATENT OFFICE.

GEORGE F. WRIGHT, OF CLINTON, MASSACHUSETTS.

IMPROVEMENT IN ROLLS FOR PAINTING WIRE-CLOTH, &c.

Specification forming part of Letters Patent No. 123,373, dated February 6, 1872; antedated January 20, 1872.

SPECIFICATION.

I, GEO. F. WRIGHT, of Clinton, in the county of Worcester and State of Massachusetts, have invented certain Improvements in Rolls for Painting Wire-Cloth and Rolls for Dressers, &c., of which the following is a specification:

Nature and Object of the Invention.

The first part of my invention relates to the construction of a roll, of wool or any suitable fiber, in such a manner that the surface of the roll shall for the most part present the ends of the wool or fiber composing it, producing a surface as like as possible to that of the end of a paint-brush, and also to give it great durability and flexibility; the object of this part of my invention being, first, to lay paint evenly upon uneven surfaces, such as wire-cloth, &c.; and, secondly, to be used as rolls for dressers in applying the starch to the warp of cotton or other goods before weaving. The second part of my invention relates to the treatment of the rolls, when they are to be used as paint-rolls, to prevent them from becoming hardened with dried paint, and also to prevent them from injury by the water in which they must be immersed when not in use.

Description of the Accompanying Drawing.

Figure 1 is a side elevation of a roll embodying my invention. Fig. 2 is a side elevation of one of my rolls engraved for imparting a figure to wire-cloth or other uneven surface. Fig. 3 is a vertical transverse section from A to B, in Fig. 1, showing all the parts comprising the roll. Fig. 4 shows the position of an engraved roll, in connection with one plain roll and two iron rolls, for the purpose of printing a figure upon wire-cloth or other uneven surface. Fig. 5 shows the position of the rolls in a machine for painting wire-cloth, where the cloth is immersed in the paint and the rolls remove the surplus paint as the cloth passes between them. Fig. 6 is an elevation of one of the felt washers of which the improved roll is composed. Fig. 7 is a view of said washer, cut from C to D in Fig. 6.

General Description.

a is a plain roll. *b* is an engraved roll. *c c c* are sections or washers of woolen felt compos-

ing the rolls *b* or *a*. *d* is the shaft of the roll; and *e* is an iron washer fitted to said shaft, which is pressed up against the washers of felt *c c c* until the proper texture of the roll is obtained, and then secured to the shaft *d*.

The method of applying the paint is shown in Figs. 4 and 5. Fig. 4 is composed of four rolls and a trough of paint. 1 is an iron roll; 2 is an engraved felt roll; 3 is a plain felt roll; and 4 is an iron roll partially submerged in paint 5. The said rolls being geared together, when put in motion the paint is brought in contact with the roll 3 by the roll 4, which rolls being fitted closely together all the paint allowed to pass between them is contained in the meshes of the wool or fiber of the roll 3, which roll runs in close proximity to the engraved roll 2, and communicates the paint to the meshes of the roll 2, which imparts the paint to the lower side of the wire-cloth 6 to produce a figure upon the same as it passes between the rolls 1 and 2. Fig. 5 is composed of two plain felt rolls, A A; a trough of paint, B and C; a roller, D, and a piece of wire-cloth, E, showing the utility of this roll in graduating the amount of paint required on the wire-cloth, by the cloth passing through the paint C, and around the roll D, and between the plain felt rolls A A, which are set at a desired distance apart to leave the proper amount of paint upon the cloth as it passes through between them. In constructing these rolls I have selected wool felt, for the reason that in the manufacture of the felt the fibers composing it are laid flatwise in such a manner that when a washer is cut out of it the whole edge presents the ends of the fiber composing it. The washers *c c c* when cut are then put on the shaft *d* of the roll until there are enough for the length of it when compressed, and an iron collar or follower, *e*, fitted closely to the said shaft, is pressed against them until the roll exhibits the desired compactness; the collar *e* is secured to the shaft *d*, and the roll is then turned to the proper diameter.

For dressers no further preparations are necessary; but when these rolls are to be used in paint it is necessary to prevent them from absorbing the paint that will harden, or water when they are immersed in it, to prevent the surface paint from hardening; and I have ac-

complished that end by subjecting the roll to a bath of melted tallow until it is saturated to the shaft; then, by pressing two rolls together, a few revolutions of them will extract the tallow from the meshes in the wool, near the surface, and the roll is ready for painting.

The process of treating a roll for painting is quite different, inasmuch as the surface is required to be soft and porous, while a little below it should be hard and firm; and to accomplish this end it is first engraved; then suspended upon its journals in such a manner that its surface can just touch the surface of melted tallow; then turned one or two revolutions, the tallow being absorbed by the figure of the roll. The whole roll is then subjected to a bath of shellac varnish, which fills all the meshes except those previously occupied with tallow. When the shellac varnish is sufficiently dry

and hard the roll is ground off, leaving the meshes of the figure filled with tallow, which is removed by subjecting the roll to a bath of hot water, and then it is ready for receiving paint and imparting it to wire-cloth or other uneven surfaces.

Claims.

I claim as my invention—

1. The paint-rolls *a* and *b*, constructed substantially as and for the purposes hereinbefore set forth.

2. The process of treating the said rolls, substantially as and for the purpose hereinbefore set forth.

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Witnesses:

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