SAMUEL GRAVES.

Improvement in Machines for Painting Wire Cloth.

No. 124,569. Patented March 12, 1872.

Fig. 1.

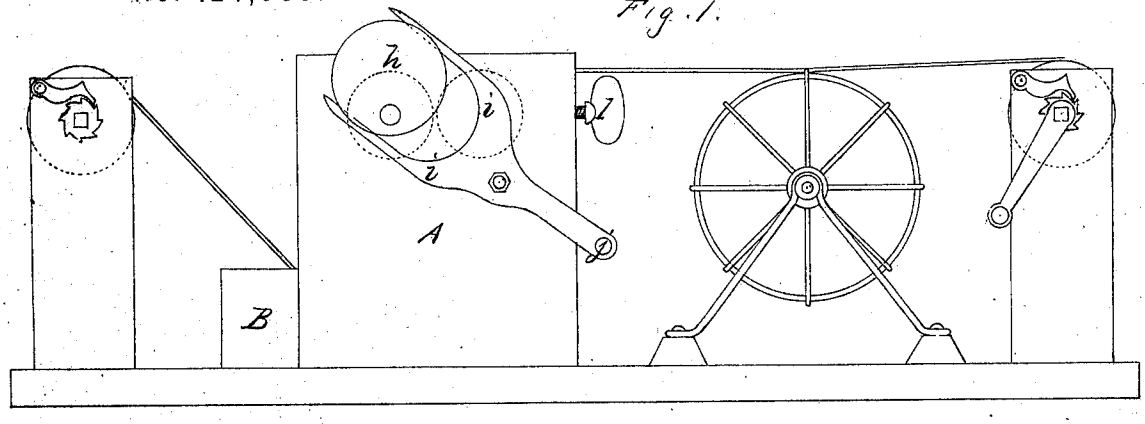


Fig. 2.

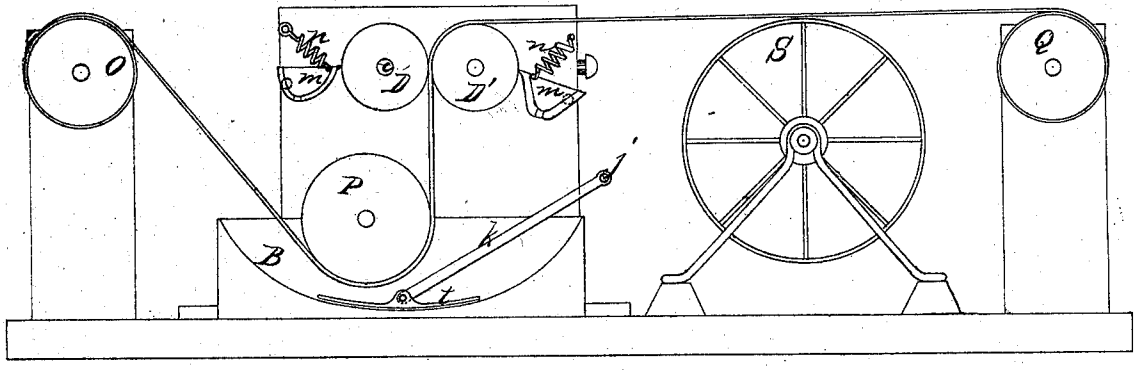
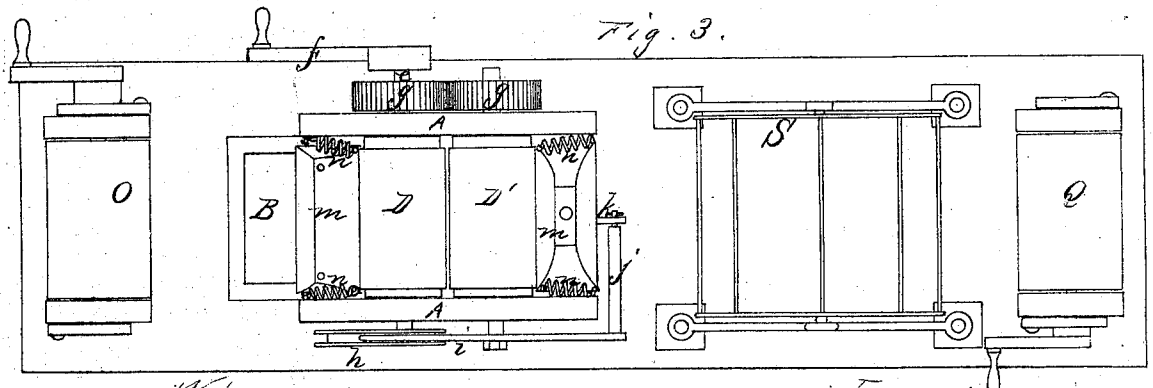


Fig. 3.



Witnesses.

Wm. H. Rummels

Geo. H. Strong

Inventor.

Samuel Graves

By his Atty's

Dewey & Co

UNITED STATES PATENT OFFICE.

SAMUEL GRAVES, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN MACHINES FOR PAINTING WIRE-CLOTH.

Specification forming part of Letters Patent No. 124,569, dated March 12, 1872.

SPECIFICATION.

To all whom it may concern:

Be it known that I, SAMUEL GRAVES, of the city and county of San Francisco, State of California, have invented a Machine for Painting Wire-Cloth; and I do hereby declare the following description and accompanying drawing are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention without further invention or experiment.

My machine is intended to be used for painting wire-cloth, such as is manufactured in strips of considerable length and afterward rolled in the manner of forming rolls of ordinary cloth. It can also be used for painting or coating any thin fibrous material, such as cloth, where such a process is required. The usual manner of applying paint to wire-cloth is by means of brushes, which render the process a very tedious one, especially so as it requires great care and pains to prevent the meshes of the cloth from becoming filled with the paint, where it will dry and not only injure the appearance, but also the usefulness of the cloth. My invention contemplates the passing of the cloth through a bath of paint or other mixture, so that it will become thoroughly covered, and afterward passing it between elastic rollers, which will press out all the superfluous paint which has lodged in the meshes, and leave the wires with a proper coating of paint to protect them. My machine consists of a box, in which the paint is kept. Proper mechanism is provided for stirring the paint, in order to prevent it from settling and becoming thick. India-rubber or other elastic rollers are secured above this vessel, so that the cloth can be carried directly up between them. Upon each side of these rollers are fixed hoppers or troughs, which receive superfluous paint, which the rollers take from the cloth, and direct it back to the main vessel or tank.

In order to explain my invention more fully, reference is had to the accompanying drawing forming a part of this specification, in which—

A A represent two vertical sides of the machine. These sides are placed as far apart as will be necessary to permit the widest wire-cloth to pass between them. Between these two sides, and at the bottom, is a tank, B, which, for the sake of convenience, I construct with sloping ends, so that the cloth may pass directly into it. This tank is kept partially filled with paint of the proper consistency. At some convenient point above the tank I place two India-rubber or other elastic rollers, D D′, which pass transversely across the space and bear in the two sides A. The journal *e* of one of these rollers D is extended upon one side and a crank, *f*, secured to it, by means of which the rollers are revolved. Gear-wheels *g* on the journals of each of these rollers serve to communicate the motion from one to the other and cause them to revolve in opposite directions. To the journal on the end of the roller D, opposite the crank, is fixed an eccentric, *h*, which gives a vibrating motion to a forked arm, *i*. This forked arm has a rod, *j*, extending at right angles to it, to which is attached a rod, *k*, which extends down into the paint-trough, and has secured to its lower end a scraper or stirrer, *t*, which, by the motion given to it by the vibrating arm, keeps the paint stirred up and prevents it from settling. Set-screws *l* pass through one edge of the sides A and bear upon the boxes in which the journals of the rollers bear, and by which the rollers can be set nearer together or further apart, as desired. At one side of each of the rollers D is secured a small trough, *m*, by means of journals at its two opposite lower corners, which bear in the sides A, while its opposite corners are upheld by springs *n*. The edges of this trough which bear against the rollers are so constructed as to form scrapers, which, by the tension of the springs *n*, are caused to scrape off the paint from the rollers as they revolve, and conduct it, through a hole or holes in the bottom of each trough, back into the main paint-trough.

The wire or other cloth to be painted is first wound upon a drum, O, which is stationed in a convenient position at one end of the machine. The end of the cloth is then directed down into the paint-trough under a drum, P, which revolves between the sides A, so that its lower portion will be in the paint. From thence the cloth is carried up between the rollers D D′. A string is then secured to the end of the cloth which has been passed between the rollers and carried to and around a drum, Q, which is stationed at a distance from the machine on the side opposite the drum P. One

man then turns the crank *f* of the machine, and the cloth is drawn through the paint and the superfluous paint pressed out by the rollers, while another person winds up the cord on the drum Q, drawing the painted cloth over reels *s*, one or more of which may be stationed between the machine and the drum Q to support the cloth as it passes from the machine. After the entire length of the cloth has thus been painted and stretched out over the reels *s*, it can be removed bodily to some place to dry.

By this means I am able to paint wire and other cloth with great facility without clogging the meshes, as the elastic rollers will be indented into the cloth so as to thoroughly remove every portion of superfluous paint.

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

1. The scraping-troughs *m*, having one side supported by journals and their opposite sides suspended from springs *n*, and provided with holes in their bottoms, in combination with the rollers D D and tank B, substantially as and for the purpose described.

2. I claim the stirrer *t*, operated by the eccentric *h*, vibrating arm *i*, and rod *k*, or equivalent device, substantially as and for the purpose above described.

3. I claim the combination of the tank B, stirrer *t*, drum P, rollers D D′, troughs *m*, and set-screws *l*, combined and arranged as described, for the purpose above specified.

4. I claim the process herein described for painting wire and other cloth by passing it first through a mixture of paint, and afterward between elastic rollers to remove the superfluous paint, substantially as above specified.

In witness whereof I have hereunto set my hand and seal.

SAMUEL GRAVES. [L. S.]

Witnesses:
WM. H. RUNNELS,
J. L. BOONE.