

M. KENNEDY.

2 Sheets—Sheet 1.

Apparatus for Painting Wire-Cloth.

No. 204,981.

Patented June 18, 1878.

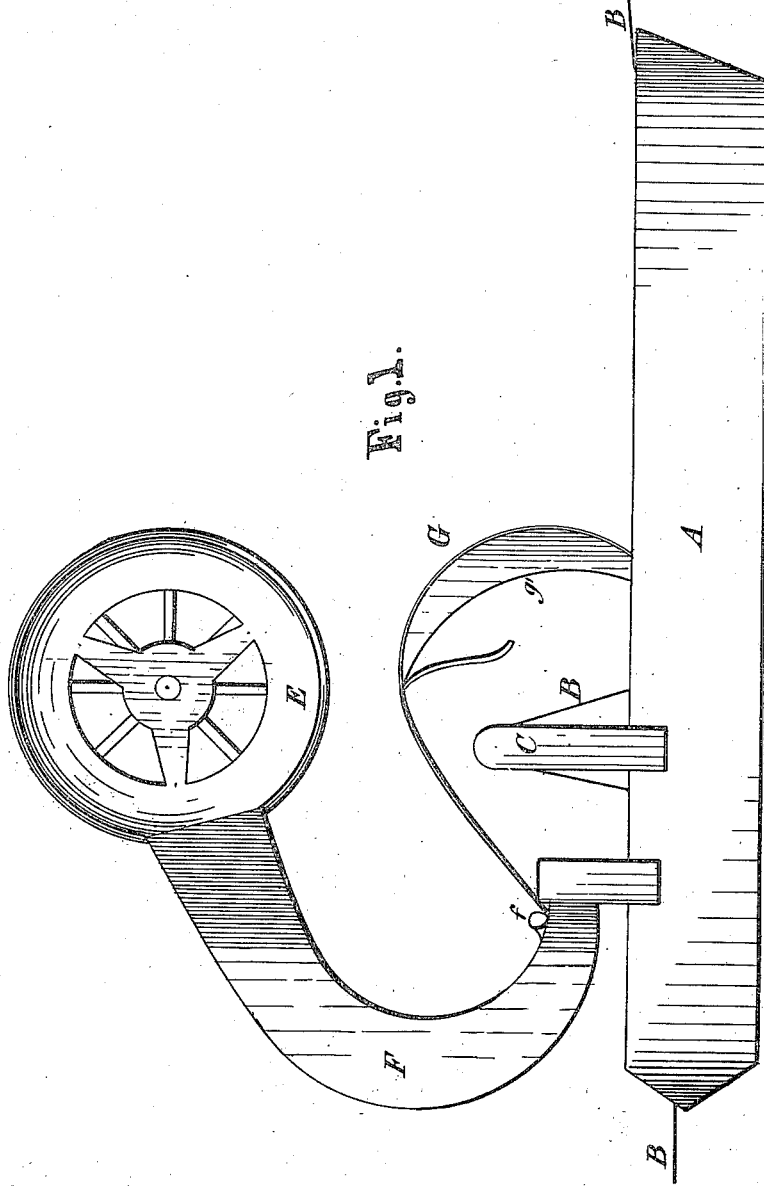


Fig. 1.

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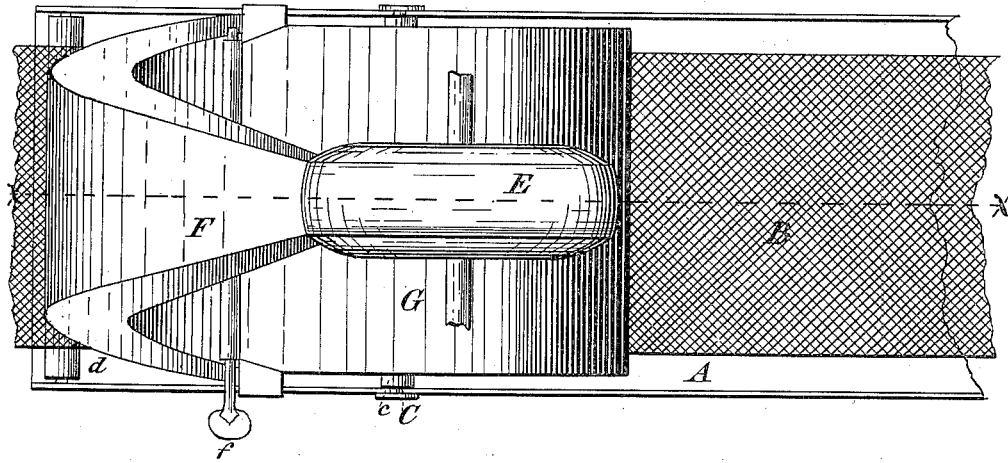


Fig. 2.

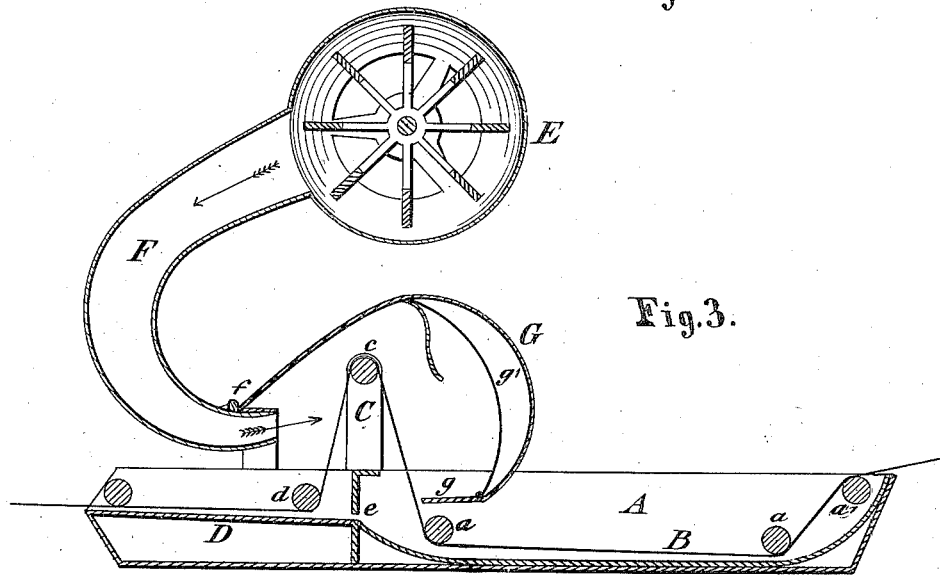


Fig. 3.

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# UNITED STATES PATENT OFFICE.

MICHAEL KENNEDY, OF CHICAGO, ILLINOIS, ASSIGNOR, BY MESNE ASSIGNMENT, TO HORACE H. WATERS, OF SAME PLACE.

## IMPROVEMENT IN APPARATUS FOR PAINTING WIRE-CLOTH.

Specification forming part of Letters Patent No. 204,981, dated June 18, 1878; application filed July 11, 1877.

*To all whom it may concern:*

Be it known that I, MICHAEL KENNEDY, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Apparatus for Painting Wire-Cloth, which is fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 represents a side elevation of my improved apparatus; Fig. 2, a plan view of same; and Fig. 3, a lateral section taken on the line *xx*, Fig. 2.

The object of my invention is to dispense with mechanical appliances for removing the surplus paint from the wire-cloth after it has passed through the bath of paint.

The invention consists in apparatus for driving the blast of air upon and through the wire-cloth after it comes from the paint-bath, by means of which the meshes are relieved of all surplus paint which remains therein after the cloth has passed through the paint.

It also consists in the special mechanism and combinations of devices for accomplishing this result, as will be hereinafter more fully set forth.

In the drawings, A represents a vat, which contains the paint, and is of any suitable form and construction for holding the paint while the wire-cloth is passed through it.

In the bottom of this vat are placed two rollers, *a a*, for the purpose of guiding the cloth, which passes under the rollers as it is drawn along through the vat. Another roller, *a'*, may be placed at the upper edge of the vat, where the roller enters the latter, over which the cloth passes, thereby avoiding friction upon the edge of the vat.

The web or sheet of wire-cloth is represented by B, and after it passes out of the vat to the opposite end thereof it is carried up over a roller, *c*, which is mounted upon suitable standards C, attached to the framework of the vat. Thence the cloth B is conducted almost directly downward under rollers *d*, which are arranged over an incline, D, projecting from the end of the vat, and sloping toward latter, as shown in Fig. 3 of the drawings.

A fan-blower, E, is mounted in any suitable

manner above the vat, and from it a conducting-pipe, F, leads down to a point just in front of the cloth as it passes downward after running over the roller *c*, as shown in Fig. 3 of the drawings.

The lower end of the conductor F should be as wide as the web of wire-cloth, and constricted somewhat in the other direction, so as to present a long narrow opening, through which the current of air is forced.

The lower portion of the conductor should also be bent, so that the current of air may be forced directly upon the web of wire-cloth.

A cover, G, is connected at one end by a loose hinge to lower end of conductor F, and is carried up over the roller *c*, forward and downward into the vat, terminating just above the rear roller *a*, and provided at this end with a narrow straight piece or shelf, *g*, and also with a shield or strip, *g'*, attached at its central portion, just in front of the roller *c*.

This cover G is hinged to the vat A, and by removing the pin of loose hinge *f* may be turned back whenever desired.

The end of the vat next to the incline D has a series of perforations, *e*, made in it on a level with the lower end of the incline D; or a narrow slot is cut in the end piece on said level.

The operation of my improved apparatus is as follows: The vat A being partially filled with paint, the strip of wire-cloth is drawn along through it under the rollers *a*, thereby becoming completely covered with paint. As it leaves the vat it is carried up over the roller *c*, and thence down under the rollers *d*.

It will be seen that by the arrangement of rollers *c* two separate thicknesses of the wire-cloth are directly in front of the mouth of the conductor F.

When the cloth leaves the vat the meshes are usually filled with paint, and it is necessary to remove the surplus portion thereof, so that the meshes will be clear, while at the same time the wire-threads will be well covered with paint. This is accomplished by forcing a strong blast of air out through the mouth or lower end of the conductor by means of the fan-blower E, which, being directed immediately against the cloth, will blow out of the meshes all the surplus paint,

leaving them clear and clean, while at the same time the paint will not be removed from the wires.

It will be seen from the arrangement of the cloth that each side thereof is brought under the influence of the blast of air which passes through both thicknesses of the web or strip, operating on the lower side of the web as the strip passes up, and upon the upper side thereof as it passes down, thereby effectually cleaning the meshes of the cloth from all surplus paint which is blown against the cover G, within which it is collected upon the shelf g, and runs back into the vat, or else falls upon the incline D, and runs through the perforations in the end of the vat.

It will be understood, of course, that the apparatus is provided with any usual mechanism for drawing the strip of wire-cloth through the vat.

It is evident that the fan-blower may be arranged in any convenient position, and may be in the same room with the rest of the apparatus, or in some other, as desired. It is also evident that the particular description and arrangement of the parts herein described may be considerably modified without essentially changing the principal operation upon which my improved apparatus works.

I do not limit myself, therefore, to the process of construction and arrangement of the several devices herein shown and described, but include therein any mechanism operating upon the same principle for painting cloth.

It is evident, also, that it is not absolutely necessary to arrange the web so that the blast of air will pass through the wire-cloth twice. A very satisfactory result will be obtained by simply arranging the sheet of cloth in front

of the blast, so it will pass through it but once. I prefer, however, the arrangement described, whereby the air-blast is made to pass through the sheet of wire-cloth twice, acting upon opposite sides thereof, for it tends to leave the surfaces on both sides of the web of the same clean, smooth, and even appearance.

The apparatus, it will be noted, should be left open at the sides, below cover G, to permit the air coming from the conductor to escape.

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

1. The paint-vat A, in combination with an air-blast mechanism, E F, and mechanism whereby the web of wire-cloth is conducted, after it leaves the paint-bath, directly in front of the mouth of the blast-conductor, substantially as and for the purpose set forth.

2. The air-blast mechanism E F, in combination with the paint-receptacle A and guide-rollers, suitably arranged to direct the strip of wire-cloth through the bath of paint, and thence in front of the mouth of the blast-conductor, substantially as described.

3. The paint-vat A, provided with one or more guide-rollers, a, at its bottom, in combination with the elevated roller c, guide-roller d, and blast-conductor F, substantially as described.

4. The cover G, in combination with the vat A, raised roller c, and blast-conductor F, substantially as and for the purpose set forth.

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