

(No Model.)

W. S. COGSWELL.  
MARBLEIZING GLASS.

No. 283,861.

Patented Aug. 28, 1883.

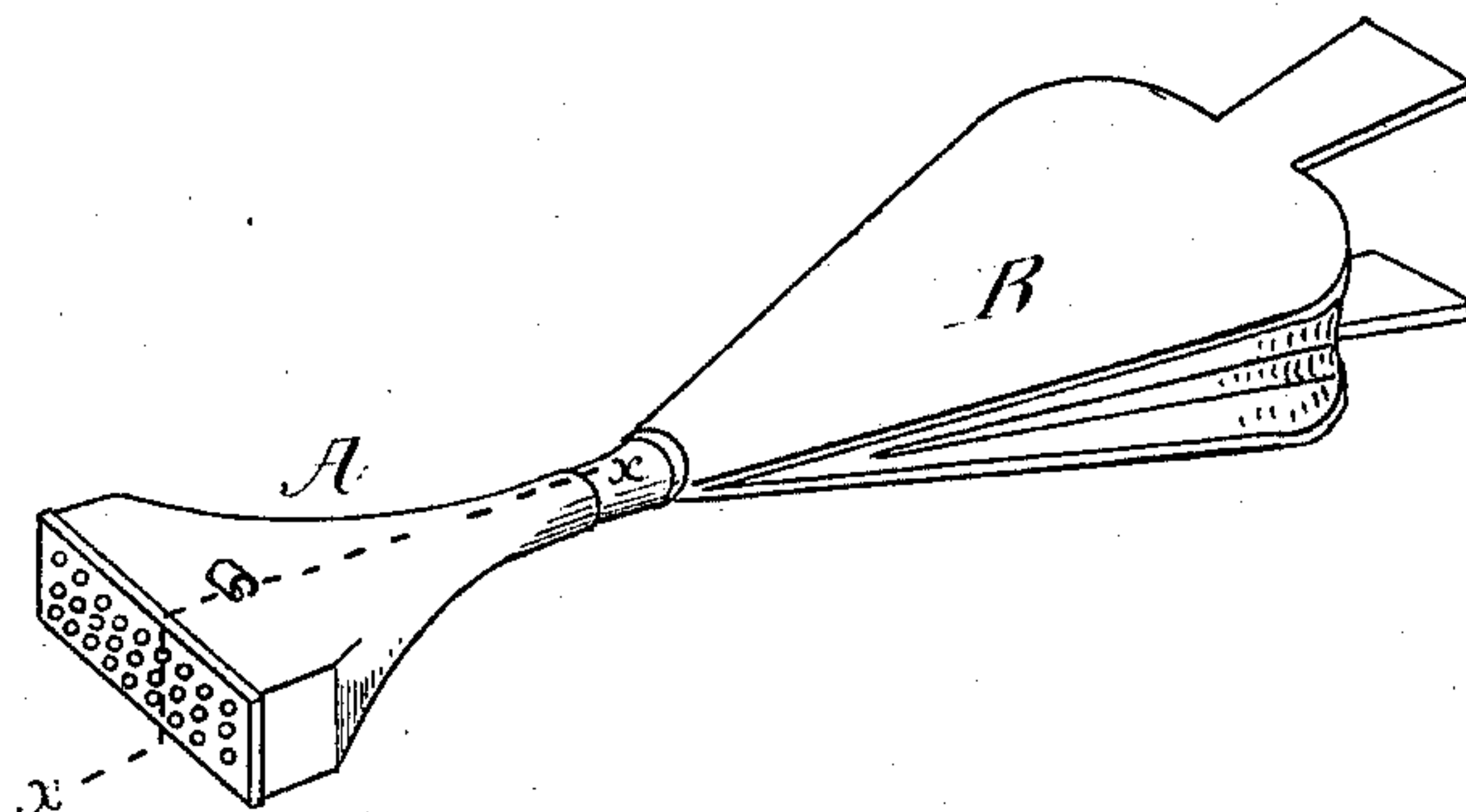


Fig. 1.

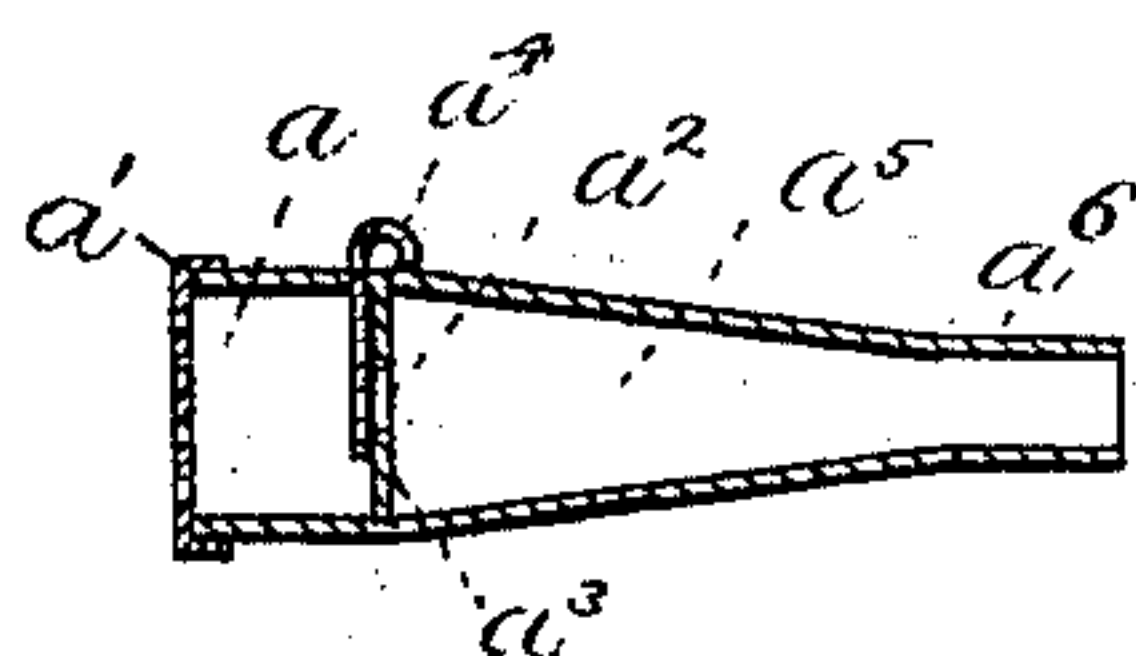


Fig. 2.

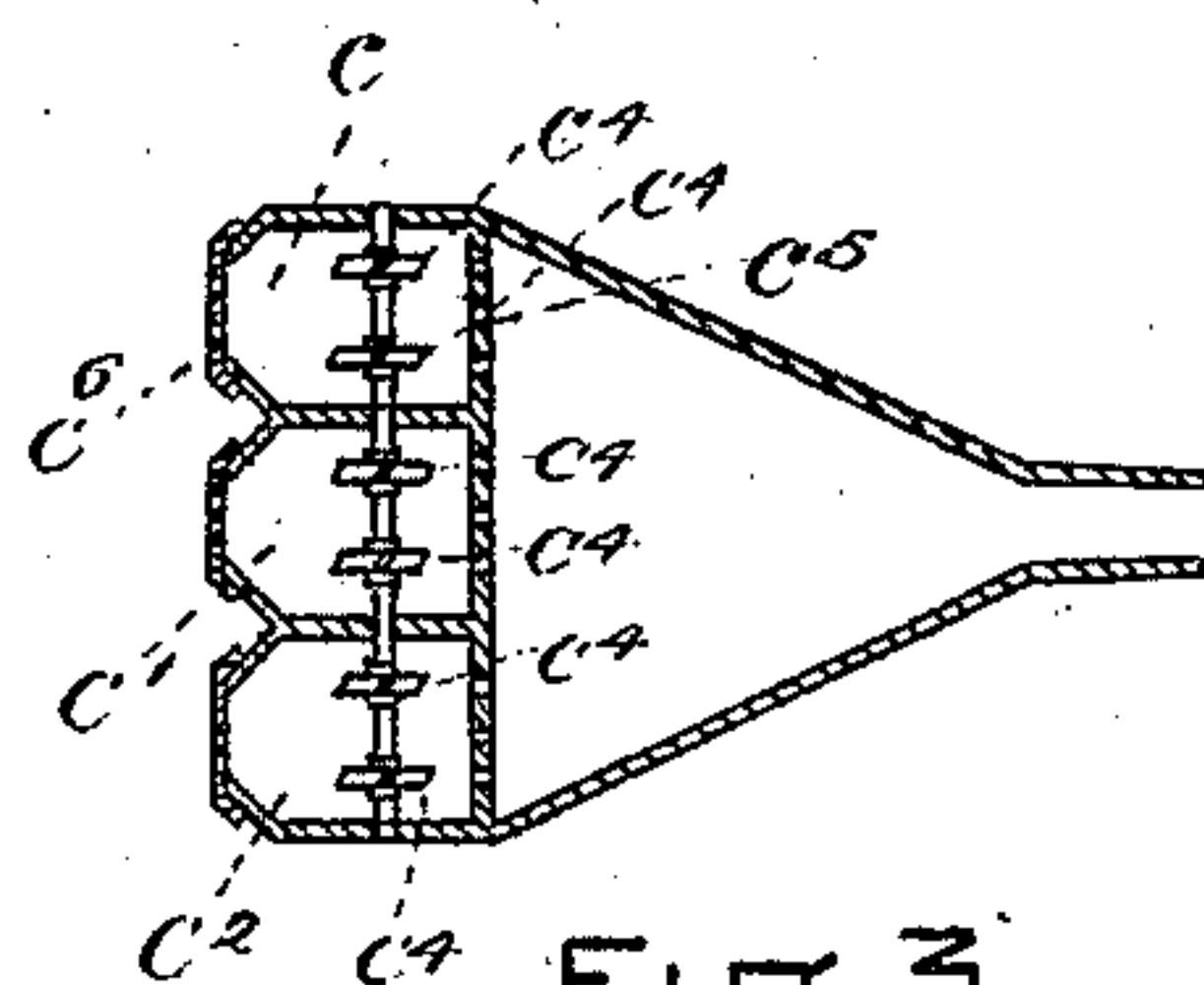


Fig. 3.

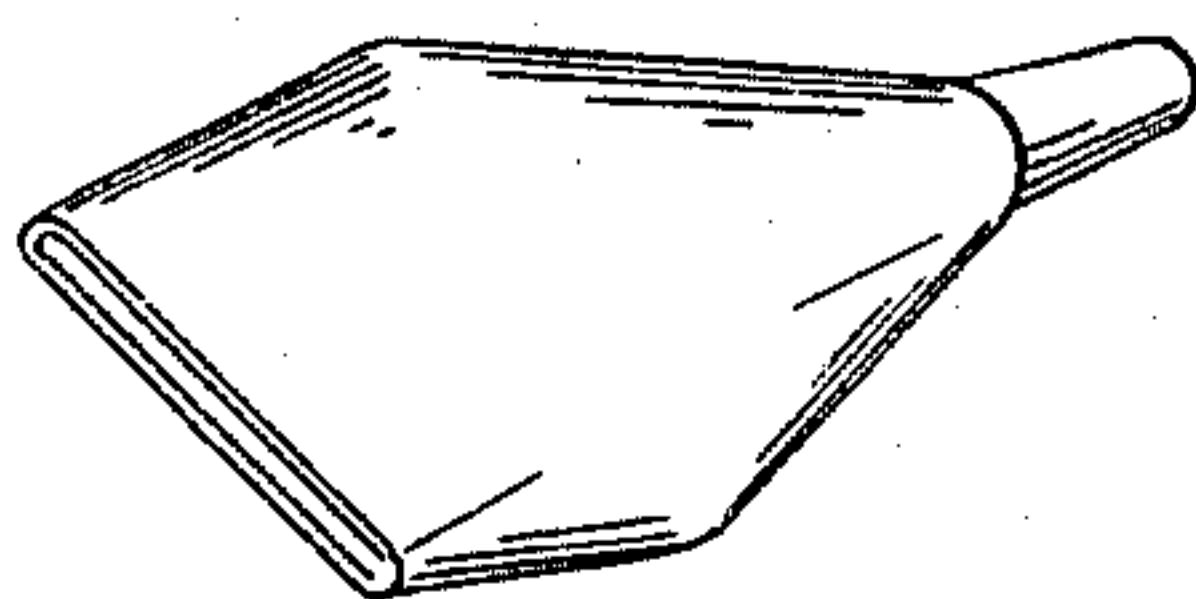


Fig. 4.

WITNESSES

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# UNITED STATES PATENT OFFICE.

WILLIAM S. COGSWELL, OF HYDE PARK, MASSACHUSETTS.

## MARBLEIZING GLASS.

SPECIFICATION forming part of Letters Patent No. 283,861, dated August 28, 1883.

Application filed July 19, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM S. COGSWELL, of Hyde Park, in the county of Norfolk and State of Massachusetts, have invented a certain  
5 new and useful Improvement in Marbleizing Glass, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in explaining its nature,  
10 in which—

Figure 1 represents in elevation a bellows and a distributing device which is used in the process, and which will be hereinafter more fully described. Fig. 2 is a vertical section  
15 upon the line  $x x$  of Fig. 1. Fig. 3 is a horizontal section illustrating another device which is used in the process, and Fig. 4 is a view in perspective of still another.

The invention consists in applying a mixture of varnish and oil to the surface of water of proper extent and spraying or blowing upon the layer film or drops of oil and varnish dry colored powders to represent the mottled, speckled, veined, or other appearance of marble or other stone.  
25

The glass is prepared by being coated upon one surface with varnish or japan, and is then placed upon the powder supported by the oily-surfaced water, and the powder immediately  
30 adheres or fastens itself to the varnish or japan on the glass.

In practicing the process I prefer to use a receptacle for holding a mixture of japan and oil adapted to be connected with a bellows, blower, or other device for forcing air there-  
35 through, so that the mixture may be blown upon the water in drops or spray; and in Fig. 1 I have represented this contrivance as applied to an ordinary bellows.

A represents this spraying device or distributor. It has the receptacle  $a$  for the composition, which is introduced through the hole covered by the perforated cap  $a'$ , and there are holes or perforations  $a^2$  in the diaphragm  $a^3$ , which are closed by the slide  $a^4$ . This diaphragm separates the space containing the mixture from a passage or extension,  $a^5$ , the end  $a^6$  of the casing of the passage  $a^5$  being contracted sufficiently to fit upon the end of the bellows. To operate this device the receptacle  $a$  is filled with the composition, the cap  $a'$  is secured in place, and the slide  $a^4$  lift-  
40 45 50

ed. The bellows are then operated and the pressure of air drives the mixture in fine spray or drops upon the surface of the water. 55

The device for applying the dry colors to the floating sheet or drops of oil and varnish is similar to that above described; but in order that a number of colors may be sprayed or blown upon the floating oil and varnish at the same time, I divide the receptacle in the end into two or more parts, and in the drawings I have shown it divided into three parts,  $c$   $c'$   $c^2$ , and I extend through them the shaft  $c^3$ , upon which are the agitators  $c^4$ . The air is forced by bellows or other suitable means through perforations in the diaphragm  $c^5$ , and the device is shown in Fig. 3 as adapted to fit upon the end of a bellows. The caps  $c^6$  cover the various chambers  $c$ , &c., and are perforated to admit of the escape of the powder. In operation, the air from the bellows or other source enters the perforations in the plate  $c^5$ , and, passing through the chambers  $c$   $c'$ , &c., causes the agitators  $c^4$  to lift the powder and agitate it, and at the same time the air-pressure forces the powder through the perforations in the cap  $c^6$  in fine streams or dust, and of course by moving the distributor the dust may be distributed upon the floating oil and varnish as may be desired. 60 65 70 75 80

In lieu of a distributor such as is shown in Fig. 3, the one shown in Fig. 4 may be employed. When such a distributor is used, the dry powder of different colors may be mixed before it is put into the receiving-receptacle, and it is adapted to be blown out therefrom by the passage of air through the same. The size of the orifice through which it is blown may be graduated according to the amount which it is desired to deposit upon the floating oil and varnish. Of course any other suitable receptacles for holding the dry powder adapted to have a current of air forced through them and adapted to blow the powder into fine spray, sheets, or dust may be used in lieu of the device described. 85 90 95

The advantage of this process is that the colors are easily and uniformly applied, and that very beautiful combinations can be obtained, and the mixing and straining of paints is entirely done away with. 100

It is obvious that the design of the marble, stone, or other article is produced upon the



floating body of oil and varnish before it is applied to the glass; and it is also obvious that by coating the surface of the glass with varnish or other adhesive material of a like nature, upon placing the same with the surface having the varnish or adhesive material down, so that it shall be brought in contact with the coloring-matter held by the floating surface or layer of oil and varnish, the coloring-matter will immediately adhere to the japan or other adhesive coating, and will thereby become fastened to the glass, so that upon the removal of the glass the design laid out upon the floating layer of japan and oil is removed from the water, together with such of the floating oil and japan as unites therewith.

Of course the coloring or mottled or other appearance of any marble or other stone, or of any other material, may be reproduced upon the glass by this process, as it will only be necessary to change the dry colors to correspond to those of the stone or article to be imitated or copied.

Having thus fully described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The process of marbleizing glass, consisting in distributing upon a layer of oil and varnish or other equivalent vehicle supported upon water, dry colors, and in coating the surface of the article to be marbleized with varnish, and then placing the varnished surface of said article upon the liquid-supported powder, so that the varnished surface shall come in contact therewith, and then removing the article therefrom, all substantially as and for the purposes described.

2. As a means of distributing dry powder in a manner to imitate marble or other stone or any other design in a thin layer suitable for application to the article to be marbleized, a

body of water supporting a film of oil and varnish, upon which is sprayed, dusted, or otherwise distributed the coloring-powders, all substantially as and for the purposes described.

3. In the process of marbleizing glass, &c., the method of distributing a mixture of oil and varnish upon the surface of a body of water by confining the same within a receptacle and forcing it in spray or drops upon the water by air driven through the receptacle, all substantially as and for the purposes described.

4. In the process of marbleizing glass, &c., the method of distributing coloring-matter upon a layer of oil and varnish supported upon water by confining the same within one or more receptacles, and forcing the dry powder upon the oil and varnish by air driven through the receptacles, all substantially as and for the purposes described.

5. In a receptacle for distributing oil and varnish or dry powder in spray or drops, the combination of the distributor A, having a perforated end, and also a perforated diaphragm, and an extension,  $a^6$ , with the bellows B or other means for forcing the air therethrough, all substantially as and for the purposes described.

6. The combination of the perforated distributor A, having a perforated diaphragm,  $a^3$ , with the slide  $a^4$  and extension  $a^5$ , all substantially as and for the purposes described.

7. The combination of a powder-distributor, having a perforated end, with an agitating device adapted to be revolved by the passage of air through the powder-distributor, all substantially as and for the purposes described.

WILLIAM S. COGSWELL.

Witnesses:

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