C. B. NEWCOMB.

VARNISHING BOOTH.

APPLICATION FILED MAR. 28, 1914.

1,183,397. Patented May 16, 1916.

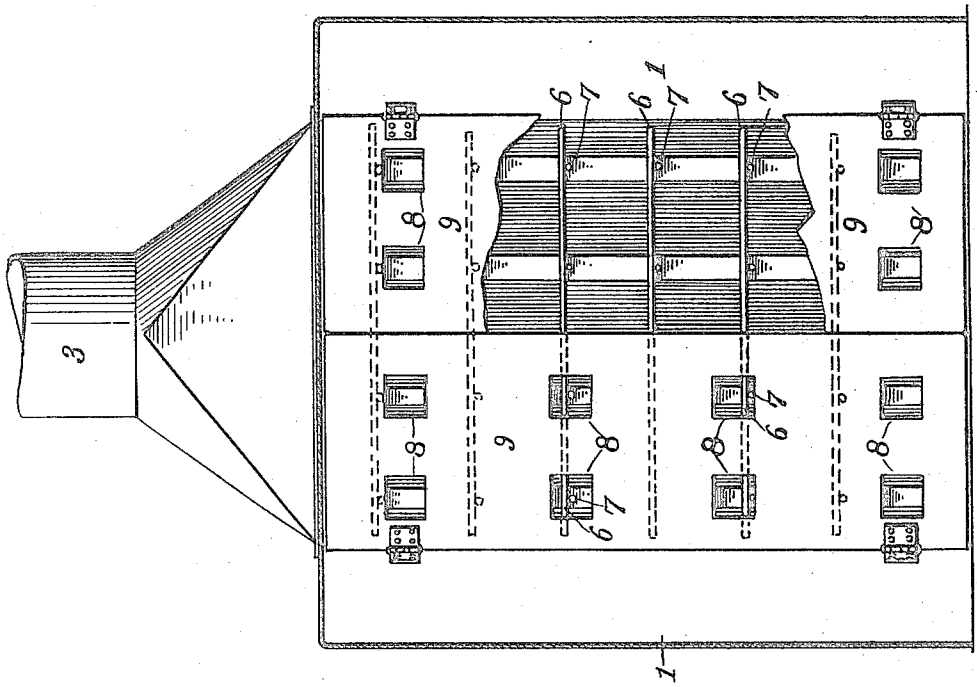


Fig. 2.

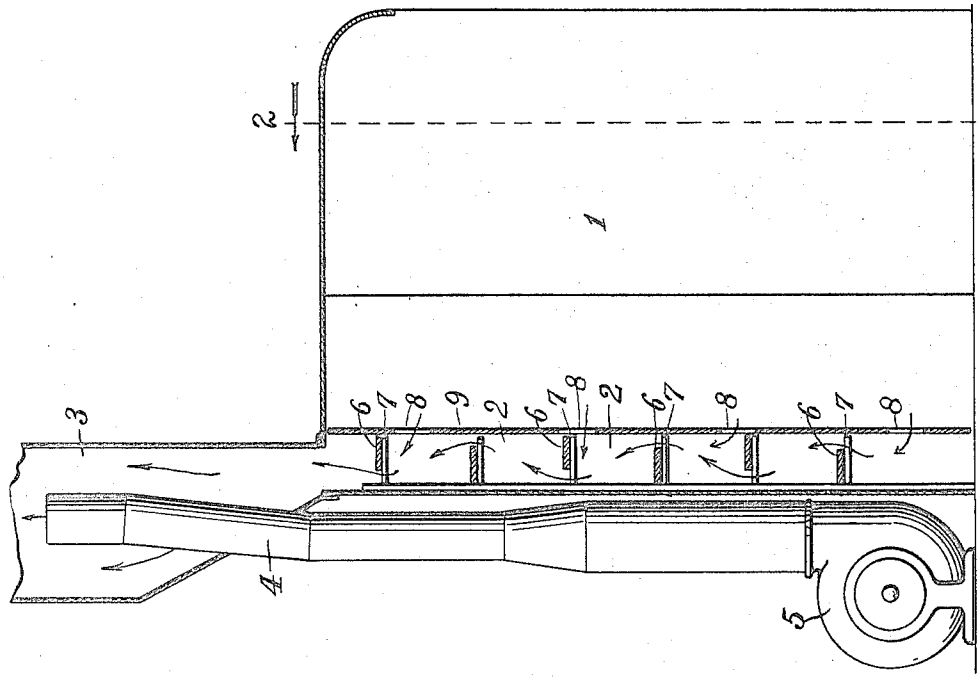


Fig. 1.

Witnesses

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VARNISHING-BOOTH.

1,183,397. Specification of Letters Patent. Patented May 16, 1916.

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To all whom it may concern:

Be it known that I, CYRUS B. NEWCOMB, a citizen of the United States of America, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Varnishing-Booths; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improved varnishing booth, and its object is to provide a device whereby the vapors from varnish will be carried away and a portion of the ingredients of the varnish in the vapor condensed and recovered, and to provide the device with various new and useful features hereinafter more fully described, and particularly pointed out in the claims.

In applying varnish to various goods, such as furniture, and especially if applied in the form of spray instead of with a brush, a portion of the varnish escapes into the air in the form of a minutely divided mist and vapor. Inhaling this is very injurious to the workmen and it also contains certain ingredients which it is desirable to recover.

My invention comprises a chamber in which the article to be varnished is placed, said chamber being provided with a conduit or flue at one side in which are placed plates upon which certain portions of the vapor passing therethrough will be condensed and recovered, a stack or chimney to the flue and a blower to increase the draft in said chimney, as will more fully appear by reference to the accompanying drawings, in which:—

Figure 1 is a vertical sectional elevation of a device embodying my invention; and Fig. 2 a front elevation of the same, with portions broken away and showing a vertical section on the line 2—2 of Fig. 1.

Like numbers refer to like parts in all of the figures.

1 represents a chamber of any convenient dimensions and preferably open at the front, the rear of said chamber being provided with a vertical conduit or flue 2, above which and communicating therewith is a stack or chimney 3, opening into which is a blow pipe 4 to increase the draft of the stack, and 5 is a fan or blower to force air upward through said pipe into the chimney and thus create a strong draft or current of air and vapor in the direction of the arrows in Fig. 1. The front of the conduit 2 is preferably closed by doors 9 provided with numerous openings 8 therethrough. These openings are preferably distributed in the doors to uniformly ventilate the interior of the chamber, and by placing the blower where the vapors of varnish do not go through it, no condensation will accumulate in the blower. These doors may be opened to provide access to the conduit in which are removable horizontally disposed plates 6, preferably of metal, spaced apart at intervals, said plates being narrower than the horizontal section of the conduit and arranged alternately close to the front and rear of the same, whereby the vapor and air passing upward through the conduit impinges successively upon the under side of each plate. These plates 6 are preferably supported upon pins 7 projecting from the rear wall of the conduit, and by opening the doors 9 the plates can be removed or replaced as occasion may require. These plates are preferably arranged horizontal but will operate in any other position in the flue.

In operation, as the varnish is sprayed upon the article placed in the chamber 1, there will be a draft of air toward the conduit which will carry the vapor of the varnish and some of the ingredients thereof rearward through the openings 8 in the doors 9. The plates will serve to collect the more readily condensed ingredients of the varnish, such as the gums therein, the more volatile portions of the solvents of the varnish escaping upward and out of the stack 3. The workmen are thus protected from the necessity of inhaling the vapors of the varnish, the air in the workroom is kept clear of injurious odors and certain ingredients of the varnish are recovered upon the plates 6, from which they can be removed and again utilized as occasion requires.

What I claim is:—

1. A varnishing booth, comprising a chamber to receive the object to be varnished and having an open front, a vertical flue or conduit at the rear of the chamber, having openings at intervals communicating

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with the chamber and the flue, plates at intervals in the flue, and a chimney communicating with the top of the flue.

2. A varnishing booth, comprising a chamber to receive the article to be varnished and having an open front, doors near the rear wall of the chamber spaced apart therefrom to form a flue at the rear of the chamber, said doors also having openings therethrough at intervals to permit the passage of vapors from the chamber to the flue, pins projecting from the rear wall of the flue, plates removably supported on the pins and spaced apart alternately from the doors and the rear wall, a chimney above the flue, and means for producing a forced draft in the chimney.

3. A varnishing booth, comprising a chamber to receive the article to be varnished and open at the front, doors near the rear wall of the chamber spaced apart therefrom, said doors having openings therethrough and forming one wall of the flue, a flue adjacent the doors, a chimney above the flue and communicating therewith, horizontally disposed plates arranged at intervals in the flue, a blower outside of the flue and chimney, and a pipe to convey air from the blower to the chimney to increase the draft therein.

4. A varnishing booth comprising a chamber to receive the article to be varnished, a vertical flue communicating with the chamber, a chimney above the flue, horizontally disposed removable plates in the flue, said plates being spaced apart from each other and alternately close to one wall of the flue at one edge and spaced apart from the opposite wall of the flue at the other edge and doors forming one wall of the flue to permit removal of varnish from the plates.

In testimony whereof I affix my signature in presence of two witnesses.

CYRUS B. NEWCOMB.

Witnesses:

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