Feb. 25, 1930. E. G. WHITMORE 1,748,161

SPRAY COATING EXHAUST SYSTEM

Filed April 7, 1927

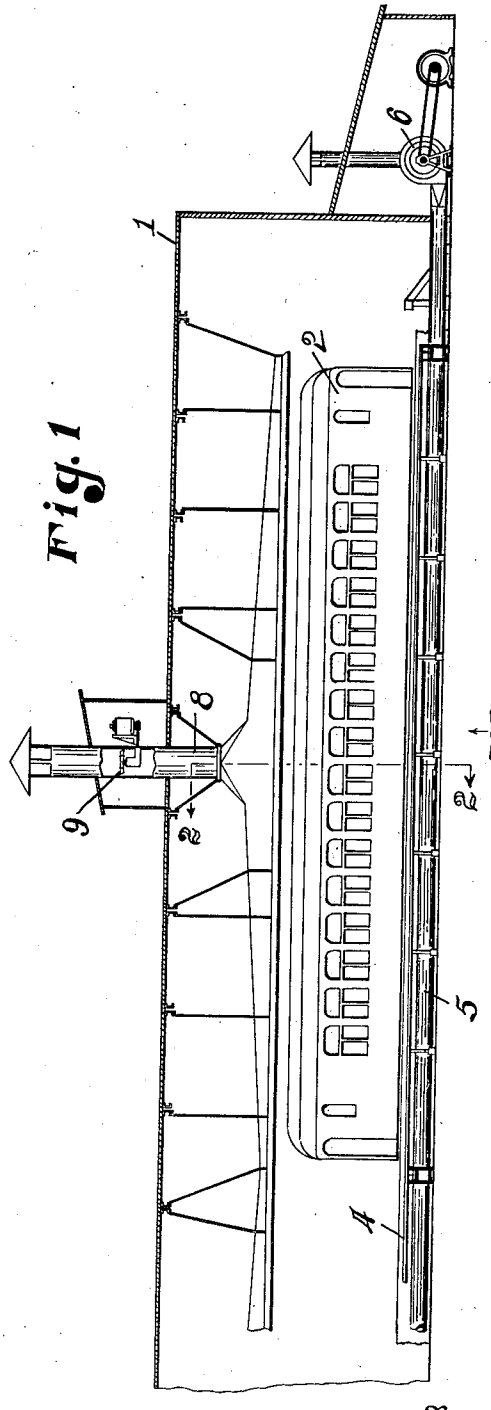

Fig. 1

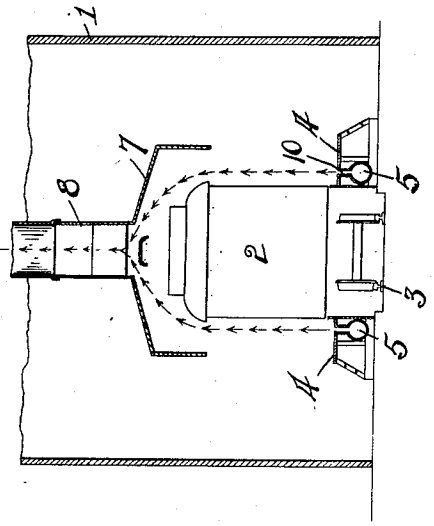

Fig. 2

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UNITED STATES PATENT OFFICE

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SPRAY COATING EXHAUST SYSTEM

REISSUED

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This invention relates to the surface coating of portable objects by the spraying method.

In the application of surface coating materials by the spraying method, particularly where the work is performed indoors, it is important to make provision for protecting the operator from the spray dust and fumes arising from the spraying operation, which would otherwise be inhaled to a greater or less extent, depending on the particular job and the material being sprayed. These conditions are overcome in some cases by the operator wearing a mask somewhat similar to a gas mask, and with small portable work the spraying is usually in a booth through which an induced draft is set up to carry the fumes and spray dust from the operator. Such practice is not practicable, however, in the spraying of large objects, such, for instance, as railroad cars.

The object of this invention is the provision of a method and means for protecting the operator from the fumes and spray dust resulting from surface coating objects by spraying, and is particularly applicable to the spraying of large portable objects.

The invention is fully described in the following specification and two embodiments of the same illustrated in the accompanying drawings, in which,—

Figure 1 is a fragmentary longitudinal section of a building or housing equipped for the use of my invention with a railway car in position therein to be surface coated. Fig. 2 is an enlarged fragmentary cross-section thereof on the line 2—2 in Fig. 1, with the car diagrammatically shown.

Referring to the drawings, 1 designates a shed or housing which may be of a length to receive one or more cars 2, or other objects to be spray-coated. The car, in the present instance, is run in on a track 3 disposed lengthwise within the housing and in spaced relation to both sides thereof. At each side of the car is disposed a platform 4 on which the operator may stand while spray-coating the adjacent side of the car. Beneath this platform is disposed a longitudinally extending manifold or conduit 5 having communication at one end with a source of air pressure supply, such, for instance, as a fan 6, whereby an induced draft may be set up through the conduit. This conduit has provision for discharging air therefrom in the form of a protecting curtain up by the side of the car 2, but preferably in slightly spaced relation to such side, such air current entering a hood 7 above the car and passing therefrom through an outlet flue 8 in which an induced current is set up by a fan 9 or other suitable means. The air, in the present instance, is shown as discharging from the conduits 5 through upwardly extending slots 10 therein which open through the platform 4.

In the use of this protecting means, the operator stands without the protecting air curtain and discharges the spray stream therethrough against the surface to be coated, or preferably extends the discharge nozzle for the surface coating material substantially through the curtain of air, so that the spray stream emitted from the nozzle is not materially affected by the current of air passing between the operator and the object being coated. The air curtain is substantially parallel to the surface being coated or at an angle to the direction of discharge of the spraying material, so that any fumes or spray dust arising from the material being sprayed or rebounding from the surface of the object against which it strikes is picked up by the moving curtain of air and carried away from the operator.

I wish it understood that my invention is not limited to any specific construction, arrangement or form of the parts, or to the particular method described, as they are capable of numerous modifications and changes without departing from the spirit of the claim.

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

A protective device for use in spray coating an object, comprising a support adapted to extend about the object to be coated near the base thereof for supporting the operator, an air supply conduit having a slit opening upwardly from said support in a plane paral-

lel to the surface of an object being coated and spaced therefrom to discharge a continuous upwardly moving pneumatic curtain, a canopy spaced above said support, overhanging the side of said object and having an outlet for receiving the flow of air from the pneumatic curtain, and means for creating said flow.

In testimony whereof I have hereunto signed my name to this specification.

EDSON G. WHITMORE.