Nov. 5, 1946. J. D. TESSIER 2,410,532

APPLIANCE FOR PAINT SPRAYERS

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Fig. 1

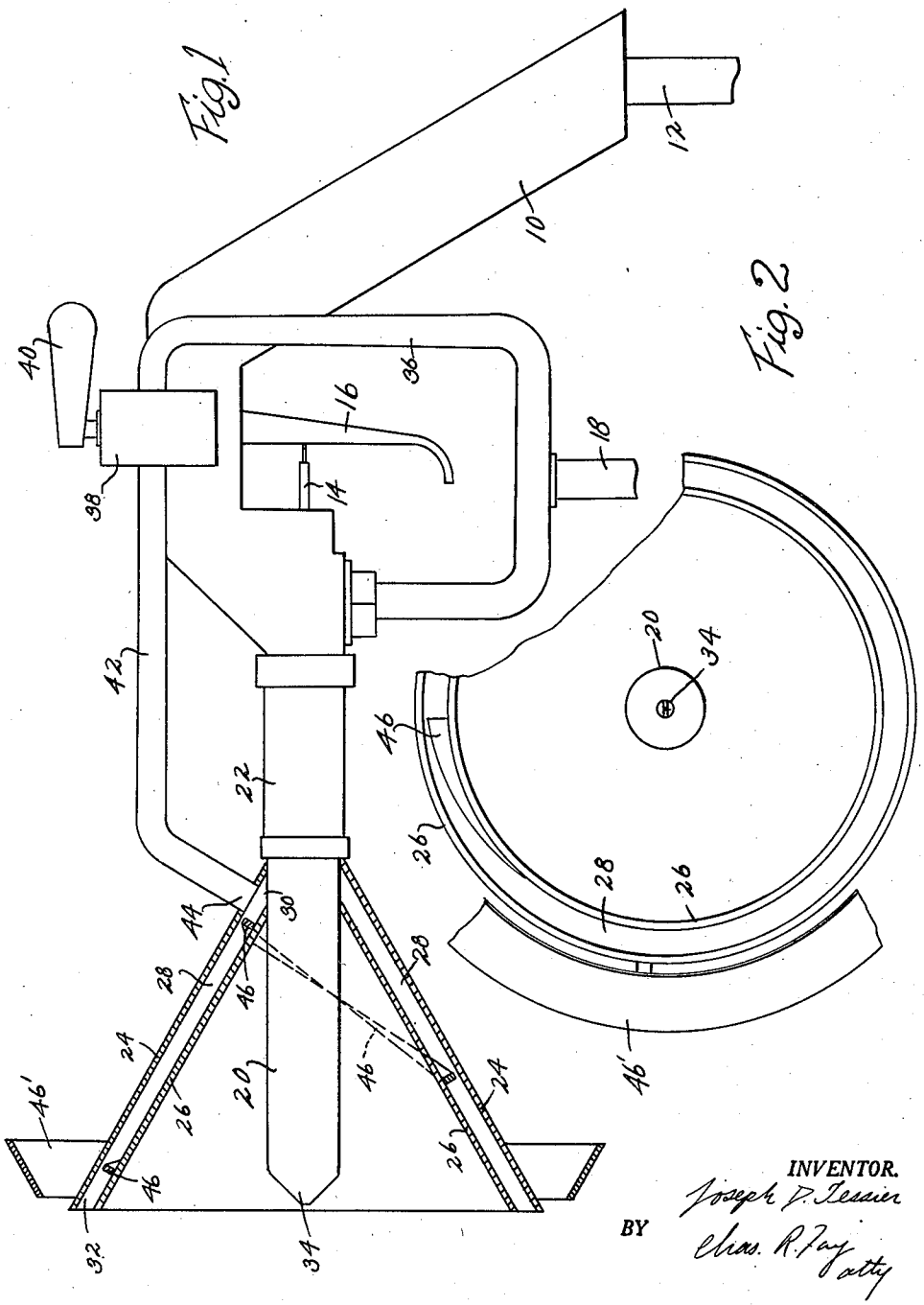


Fig. 2

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APPLIANCE FOR PAINT SPRAYERS

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4 Claims. (Cl. 299—140)

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This invention relates to an improvement which may be applied to existing paint sprayers or which may be built into the sprayer during manufacture thereof.

Objects of the invention include the provision of a device for blowing splattering paint and paint drops directly onto the surface being painted, this device being arranged in such a way as to carry all air-borne paint to the surface being painted and to thereby eliminate the hazard of paint sickness and poisoning to the operator.

Further objects of the invention include the provision of a funnel-like appliance, having double spaced walls, which may be applied to any existing paint sprayer and which is supplied with compressed air for surrounding the stream of paint issuing from the sprayer so as to produce a complete air envelope which will throw all the paint splattering from the surface being worked on and all paint fog due to the sprayer in a direction to apply this splattering to the painted surface, whereby all the paint is used for the purpose intended and cannot splatter or fill the air with paint drops, completely avoiding the common hazard accompanying the conventional paint sprayer that the operator breathes in the paint and thereby becomes poisoned.

Other objects and advantages of the invention will appear hereinafter.

Reference is to be had to the accompanying drawing, in which

Fig. 1 is a view in elevation of a paint sprayer showing the new appliance in section; and

Fig. 2 is a partial front view of the appliance showing it in position for operation.

The conventional paint sprayer comprises a handle 10 having means such as a pipe 12 for leading the paint to the valve, not shown, the valve rod being shown at 14, operation being had by means of a trigger 16.

A pipe 18 leading from a compressed air tank supplies compressed air to the valve so that when the valve is opened by retracting the trigger the air forces the paint through the nozzle of the sprayer. These sprayers are well known in the art and further description is deemed to be unnecessary.

The present invention involves the use of a supplementary nozzle 20 which is elongated as compared to the conventional nozzle and which takes the place thereof being secured to the paint sprayer in the barrel 22 by means of screw threads or any other desired means, not shown.

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A funnel is secured in any way desired to the barrel 22 or nozzle 20 and this funnel comprises a pair of spaced walls 24, 26, which are in the form of a pair of spaced funnels, funnel 26 being smaller in diameter than funnel 24. This construction forms an air chamber between the two funnels as at 28, this chamber being continuous between the walls of the funnels and flaring from a closed end 30 to the open end 32, the latter being more or less in line with the tip 34 of the paint sprayer nozzle.

I provide a line 36 leading from the air supply 18 through a separate cut-off valve 38 operated by a handle 40 and proceeding through a pipe 42 to the space 28 between the funnels as shown at 44. In order to evenly disburse the air 360° around the funnel at the open end thereof, I provide a baffle 46 which is spiral in form and surrounds the inner funnel 26. This baffle is slightly spaced from the interior side of the outer wall 24, thus leaving a small continuous space for issuance of the air. By this means the blast of air is prevented from issuing at one point only and is carried evenly around the entire chamber 28.

I may also provide a skirt 46' surrounding the open end of the funnels and spaced therefrom, this skirt resulting in an induction of air from the surrounding atmosphere into the region of the air blast.

In the use of the device the valve 38 may be opened by the handle 40 and the trigger 16 being retracted, the paint issuing from the nozzle will be completely surrounded by an air blast which will throw all defusing paint drops against the wall being painted and which is wide enough, because of its conical form to pick up all splattering paint and throw it back against the surface being painted. Whenever the trigger 16 is released the conical air blast will still continue and may be used to smooth the paint on the wall until such time as the valve 38 is actuated to close this air pressure.

It will be seen that the present device may be used with an existing paint sprayer or may be manufactured with the paint sprayer and it has been found that no paint will get into the air exterior of the funnels so that the operator is completely protected and may paint without using a mask and without any danger of inhaling paint-laden air. In addition a smooth paint job is obtained by the use of the appliance because of the fact that the air blast tends to render the layer of paint applied into a uniform thickness.

Having thus described my invention and the advantages thereof, I do not wish to be limited to the details herein disclosed, otherwise than as set forth in the claims, but what I claim is:

1. In a device of the class described, a paint sprayer, an elongated nozzle therefor, a funnel surrounding the nozzle, said funnel having a pair of spaced walls forming an air chamber therebetween, means supplying air to said chamber, means providing for a substantially uniform exit for the air all around the funnel, said means including a spiral baffle between the walls of the funnel, said baffle stopping short of one wall, to provide a narrow continuous opening between the walls.

2. A paint sprayer comprising a nozzle, a double-walled funnel about the nozzle, the walls being spaced to form a chamber, a spiral baffle in the chamber means supplying air to the chamber, said baffle having a height less than the width of the space between the walls to provide an even air flow from the chamber in conical form about the nozzle.

3. The device of claim 2 wherein the baffle has an end adjacent the air supply.

4. The device of claim 2 wherein the baffle has an end adjacent the air supply, said baffle gradually extending farther from the air supply as it progresses about the funnel in the air chamber.

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