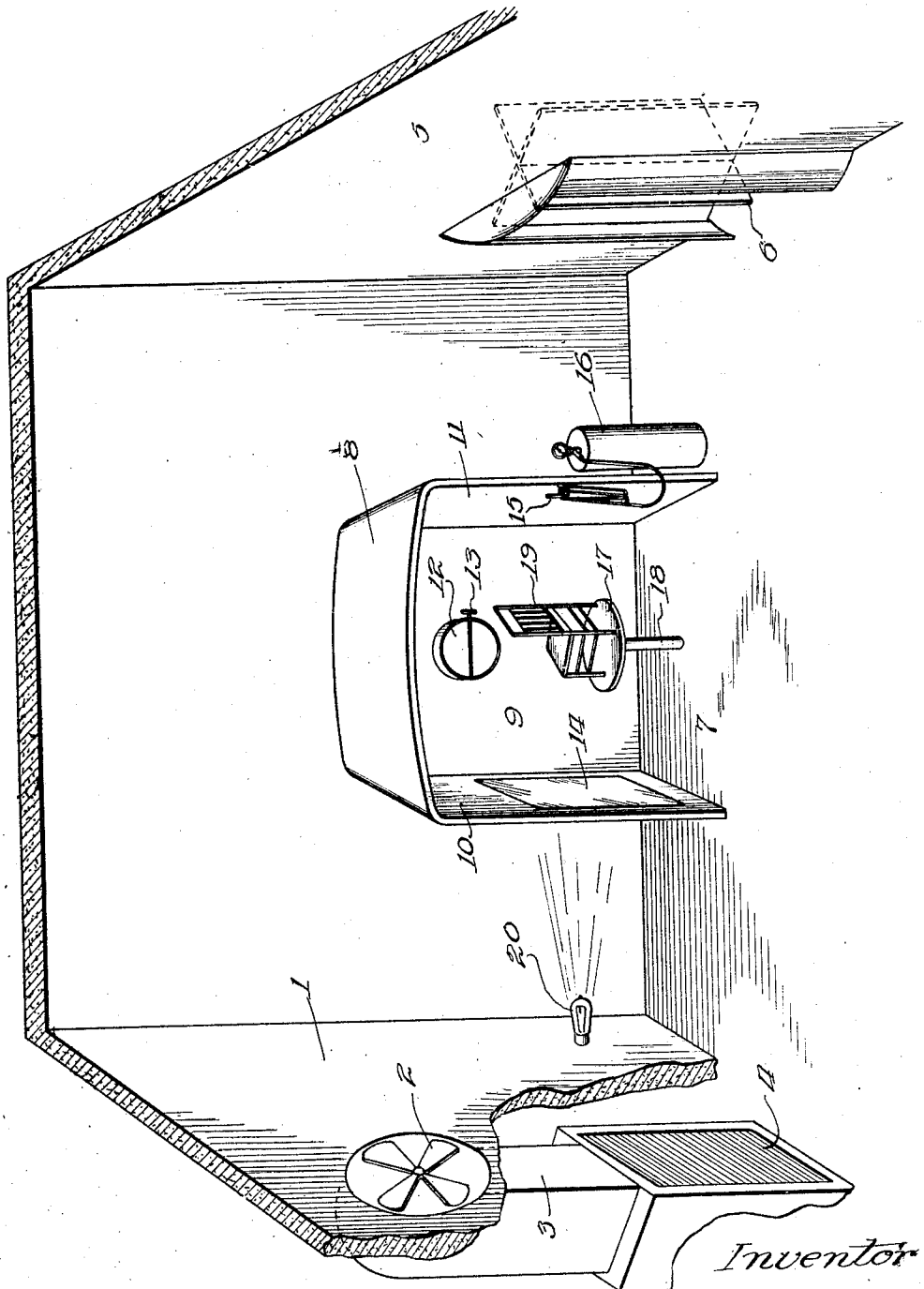
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R. F. ONSRUD

FINISHING ROOM

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FINISHING ROOM.

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This invention relates to finishing chambers and more particularly to finishing chambers provided with one or more spray booths.

The main objects of this invention are to provide a finishing chamber having an improved interior constructional arrangement wherein the usual exhaust fan is dispensed with, thereby reducing the fire hazard to a minimum; to provide a sealed finishing chamber having one or more spray booths each provided with a controlled exhaust port and means for supplying conditioned air under pressure to said chamber, whereby the flow of air therethrough will carry the fumes and paint laden air out through the exhaust ports; and to provide a finishing chamber having improved means of ingress and egress in order that there may be a minimum of air disturbance during the spraying process.

An illustrative embodiment of the invention is shown in the accompanying drawings in which is shown a perspective view of the interior of the sealed finishing chamber, the ceiling and portions of some of the walls being broken away to better show its interior.

In prior types of finishing chambers having one or more spray booths, each spray booth has been provided with an electrically operated exhaust fan for carrying the fumes and paint laden air from the vicinity of the article being finished. Fires were frequently caused by the sparking of the electric fan motor because of the inflammable and explosive nature of the paint fumes within the booths.

In the present construction means are provided for supplying conditioned air under pressure to a sealed chamber having one or more spray booths and each spray booth is provided with an exhaust port having means such as a damper for varying the flow of air through its respective port. No exhaust fan is used, the flow of air being caused by the pressure of the air within the finishing chamber being greater than atmospheric.

The finishing chamber shown in the drawings is sealed with the exception of inlet and outlet ports, within four walls, the front wall, ceiling and portions of the side walls being broken away to show the interior construction. The side wall 1 is provided with an air intake fan or blower 2 which draws conditioned air through the conduit 3 and discharges it into the chamber. This conduit communicates with an air conditioner 4 which heats, filters, and humidifies the air prior to its flow into the finishing chamber.

The side wall 5 is provided with a revolving door 6, so that ingress and egress to and from the finishing chamber may be had without materially disturbing the air within the chamber.

The interior of the finishing chamber is provided with a spray booth 7 which has an arched ceiling 8, a rear wall 9 which is a part of the rear wall of the chamber, and side walls 10 and 11. The rear wall 9 of the spray booth is provided with an exhaust port 12 which may be varyingly opened and closed by a damper 13. The side wall 10 has a glass window 14 for admitting light, and the side wall 11 has a hook 15 for supporting the flexible hose of a spray pressure tank 16. The spray booth is open at its front side and is in direct communication with the interior of the finishing chamber.

The spray booth is provided with a table having a revolving top 17 mounted on a pedestal 18 and is adapted to support the article, such as a chair 19, that is being finished.

An electric light 20, mounted on the wall 1, is wired with a suitable source of electric current. This light is adapted to project its light through the window 14 of the spray booth in order that the spraying operation may be illuminated without having a light located directly within the booth. This lighting arrangement further reduces the fire hazard.

In operation, the finishing room serves as a plenum chamber into which conditioned air under pressure is forced by the fan 2. The static pressure of the conditioned air within the finishing room being greater than atmospheric, causes a rapid flow through the open end of the spray booth and out through the exhaust port 12 carrying the fumes and paint laden air away from the vicinity of the article being finished. The rapidity of flow of air through the exhaust port may be varyingly controlled by means of the damper 13.

With this arrangement the usual electric motor driven exhaust fan within the spray booth is eliminated and the fire hazard is thereby reduced to a minimum.

While but one specific embodiment of this invention has been herein shown and described, it will be understood that details of the construction shown may be altered or

omitted without departing from the spirit of this invention as defined by the following claims.

I claim:

1. A spray booth open at the front and having an exhaust port at the rear, a sealed plenum chamber communicating with said booth at the front, and means for maintaining a greater than atmospheric pressure in said sealed plenum chamber to induce a rearward flow of air through the booth.

2. The combination of a sealed finishing chamber, a spray booth in said chamber, said spray booth having an exhaust port, and means for supplying air to said chamber with sufficient pressure to cause a flow of air through said booth to exhaust port for carrying away fumes and the excess of paint laden air.

3. The combination of a sealed finishing chamber, a spray booth in said chamber, said spray booth having an exhaust port, means for supplying air to said chamber with sufficient pressure to cause a flow of air through said booth to exhaust port for carrying away fumes and the excess of paint laden air, and means for varying the flow of air through said exhaust port.

4. The combination of a sealed finishing chamber, a spray booth in said chamber, said spray booth having an exhaust port, means for supplying air to said chamber with sufficient pressure to cause a flow of air through said booth to exhaust port for carrying away fumes and the excess of paint laden air, and a revolving door in one wall of said chamber for permitting ingress and egress to and from said chamber without disturbing the flow of air therein.

Signed at Chicago this 4th day of May, 1927.

RUDOLPH F. ONSRUD.