Aug. 17, 1948. R. N. SCHROEDER 2,447,433

PROTECTIVE HOOD

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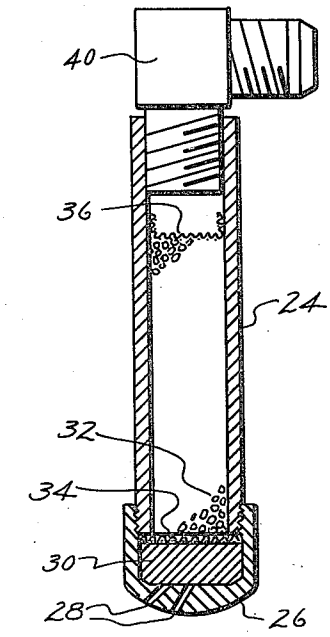



Fig. 2

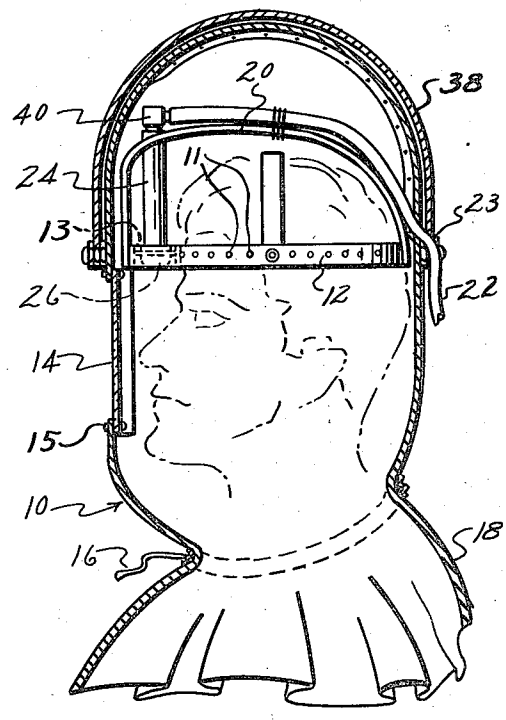



Fig. 1

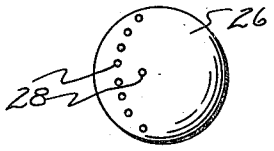



Fig. 3

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## PROTECTIVE HOOD

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4 Claims. (Cl. 128—142)

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My invention relates to a protective device or hood particularly designed to be worn by operators of spray gun equipment, although equally valuable for use in working conditions in which there may be danger to the operator by reason of the presence of poisonous fumes or fine dust particles in the atmosphere.

In many industries harmful conditions are present, and the use of the hood of my invention in paint spraying is described as an example of such conditions, but it will be understood that the use of the hood is in no way restricted to this use. The operator of spraying equipment even when working in the open air is exposed to a cloud of particles of the material being sprayed which are usually injurious to the eyes and respiratory tract of the operator. Further, such spraying operations are often carried on in closed chambers, such as chemical reaction vessels, to which protective inner coatings are being applied by spraying, under which circumstances the atmosphere can become highly poisonous.

Spraying equipment is commonly transported from job to job, and it may easily happen that the material to be sprayed works into the means for supplying air to the hood. Most spraying work consumes considerable time and it is very desirable, therefore, that any hood worn by the operator should be comfortable, and that he should have an adequate field of view.

The general object of my invention is to provide a hood having characteristics particularly fitting it to meet the various conditions outlined above.

An object of the invention is to provide a protective hood or device having a crown member spaced from the head of the operator to support an air hose, the crown member being attached to a light, adjustable head band.

A further object of the invention is to provide an outlet tube for the air hose fitted with a nozzle arranged to filter the air and to dispense it so as to obtain a satisfactory clearing action on a clear view panel with which the hood is fitted, and also to silence the issuing air.

A still further object of the invention is to provide a hood so arranged that the wearer's head is surrounded with air under sufficient pressure to prevent the entry of fumes into the hood.

A still further object of the invention is to provide a hood of simple construction while incorporating all necessary adjustments, provision being made for readily separating the parts of the hood for cleaning or replacement purposes.

Further objects and features of the invention

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will hereinafter appear in the following description taken in conjunction with the accompanying drawings.

The invention is herein described and illustrated in a preferred form, but it is to be understood that the scope of the invention is not in any way limited by this illustrative showing but only as indicated by the scope of the appended claims.

In the drawings Fig. 1 is a general view showing the hood in operative condition;

Fig. 2 is a cross-section through the air inlet nozzle drawn to a much larger scale; and

Fig. 3 is a bottom view of the tip of the air inlet nozzle showing the arrangement of passages for the outlet of air into the hood.

In Fig. 1 the numeral 10 indicates a sack-like fabric body of the hood which is secured to a head band 12 by lacing passed through holes 11 therein. Head band 12 may be adjustable by any suitable means not shown. The body of the hood is furnished with a transparent panel 14, preferably curved so as to afford a wide angle of vision to a wearer. The transparent panel may be made from a plastic material and secured to the hood in any suitable manner such as by rivets 15.

The hood is furnished with a drawstring 16 positioned so that it may be cinched around the wearer's neck to provide sufficient resistance to the flow of air to insure that a body of air under sufficient pressure to prevent the entry of outside air is maintained within the hood.

The upper end of the hood may be closed by lacing permitting ready access to the air hose and outlet tube, which tube may pass through the laced portion of the hood.

The lower part of the body of the hood is furnished with a flared skirt 18 shaped to drape comfortably over the shoulders of the wearer and afford protection against material falling from overhead surfaces on which paint or other material is being sprayed.

The upper portion of the hood includes an arched member 20 connected to the back of the head band and supported at its other end by a spacing member 21 attached to the head band. The air hose 22 is arranged to lie over the arched member to which it may be tied, and is attached to a vertically arranged outlet tube 24. The outlet tube passes through an aperture in the arched member and is provided with a perforated tip 26 positioned above the eye level of the wearer between the head band and arched member, and is tied to said members as at 13.

The outlet tube and tip are shown in detail in Fig. 2, from which it will be noted that the tip is of thick walled material, such as plastic, in which orifices 28 are bored, as indicated in Fig. 3, to direct the issuing air outwardly and downwardly over the inner surface of the transparent panel 14 for the purpose of keeping the panel clear of fog caused by condensation of moisture thereon.

It will be understood that air under pressure issuing directly from a series of small apertures would cause a high pitched hissing sound which might cause an appreciable nervous strain in some individuals if they were continuously exposed to it. For the purpose of breaking up the stream of air flowing to the orifices 28, I arrange a pad of felt 30 above the orifices. The body of the tube 24 is filled with filtering material, indicated by 32, which may be formed of carbon granules of relatively small size. To separate the filtering material from the felt I provide a fine mesh screen 34 of brass or other suitable material lying on the surface of the felt pad, and the filtering material may be retained in position by second screen 36 arranged at the upper end of the filter.

The purpose of the filter is to prevent the ejection into the hood of material being sprayed as may happen under certain conditions, or any particles that may work into the air hose.

In order to keep the head of the hood clear of paint and the like, I prefer to provide an outer cap 38 which may be secured to the hood in any suitable readily detachable manner.

It will be noted that all parts of the hood and air outlet tube and air hose may be readily demounted for cleaning purposes by unlacing the inner cap to permit removal of the air hose and tube, while the air outlet tube, which is connected by a threaded union 40 to the air hose, may be unscrewed from the union. Tip 26 may be unscrewed from the end of tube 24 and the filter material may be pushed out of the tube and replaced by fresh material, as also may the felt pad positioned in the tip.

It will be evident that I have provided a comfortable and efficient hood for use under the conditions met with in a large number of industrial operations, and although one form of the invention has been particularly shown and described, it is contemplated that various changes and modifications can be made without departing from the scope of the invention and it is intended to cover such changes and modifications as come within the scope of the appended claims.

I claim:

1. A protective hood supplied with air under pressure including: a head band; a cap and sack-like body portion supported by said head band; a transparent panel in said body portion; a supporting member connected to said head band; an air hose positioned by said supporting member; an air outlet tube connected to said air hose; an air outlet tip at the lower end of said air outlet tube provided with apertures arranged to direct the issuing air against the inner face of the transparent panel; and a pad of fibrous material arranged above said apertures to break up the column of air flowing toward said pertures.

2. A protective hood supplied with air under pressure including: a head band; a hood having a cap and a sack-like body portion supported by said head band; a transparent panel in said hood; an air hose and air outlet tube positioned by said head band whereby air is admitted into said hood; filter means arranged in said tube; an outlet tip for the air outlet tube provided with apertures directing the air issuing therefrom onto said transparent panel; a pad of permeable material arranged between the filter and the tip to break up the flow of air to said apertures; and a drawstring arranged around said body portion whereby the hood may be drawn around the neck of the wearer to maintain sufficient air pressure in the hood to prevent the entry of the adjacent atmosphere thereto.

3. A protective hood as set forth in claim 2 and in addition comprising a detachable cap covering the cap of the hood and serving to protect it against falling material.

4. A protective hood supplied with air under pressure including: a head band; a hood having a cap and sack-like body portion supported by said head band; a transparent panel in said body portion; an air hose extending into said body portion supported by said head band; an air outlet tube on the inner end of said air hose; a tip at the end of said tube provided with apertures constructed and arranged to direct the issuing air against the inner face of the transparent panel; and means between said tip and said hose to break up the column of air flowing toward said apertures.

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