

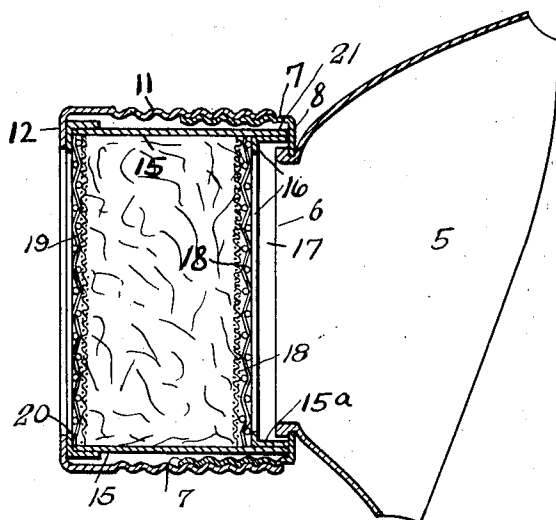
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F. WILLSON

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RESPIRATOR

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Frederick Willson Inventor

By *W. G. A. Stewart*

Attorney

UNITED STATES PATENT OFFICE

FREDERICK WILLSON, OF READING, PENNSYLVANIA, ASSIGNOR TO WILLSON PRODUCTS INC., OF READING, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA

RESPIRATOR

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This invention relates to respirators or like devices comprising a face-fitting member carrying filtering means for neutralizing noxious fumes or gases; and the main object is to provide for conveniently and safely renewing the filtering or neutralizing material employed in inexpensive discardable cartridge form which may be renewed without involving any change or impairment of fixed or relatively expensive parts.

The drawing is a sectional elevation of a respirator having my invention applied thereto in preferred form.

A cup shaped face-fitting member of known type is indicated at 5, the reduced forward portion of which is provided with a flanged opening 6 and an extension casing 7 secured thereto. This attached casing portion 7, as shown, is a cylindrical sheet-metal ring, the engaged flange of which forms an inner cartridge-seat 8 around the flanged opening 6 of the face member 5, and the cylindrical portion of which is formed with a screw-thread. Upon this fixed casing part 7 is fitted a corresponding screw-cap part 11 having an inwardly extending cartridge-retaining flange 12 at its forward end. This two-part extension casing is adapted to receive and firmly retain the special filtering cartridge shown in position therein, which cartridge is an entirely independent device intended to be wholly discarded after use, and which is readily inserted and removed.

This cartridge is inexpensively made of pasteboard tubing as indicated. The cylindrical shell 15, adapted to fit loosely in the casing 7, is provided with an annular interior offset 16, which is spaced away from the seating inner end 21 of the shell and forms the seating flange 8 therefor on the extension casing 7, so as to provide an air chamber 17 between the face-fitting member 5 and a bottom screen-disc 18 supported on said offset 16. This screen 18 is itself adapted to support the filtering material shown; and the offset 16 is formed as indicated by the inwardly turned inner end of a telescopically engaged lining section 15a. In loading this shell 15, the screen-disc 18

is first placed within it upon the annular offset 16, and the desired filtering or neutralizing material then suitably packed down upon the said screen with another screen-disc 19 inserted in the outer end of the shell to cover it; an open cap 20 being finally fixed to the cartridge shell so as to retain the charge with circulation there-through provided for as indicated. As will be readily understood, these loaded cartridges are adapted to be made and handled independently of the respirator device itself, a new one being easily substituted for a used one as required, by mere operation of the retaining screw-cap 11 of the casing, and without waste of time in effecting the change or of expense in construction.

What I claim is:

In a respirator comprising a flexible face-engaging member having a cylindrical opening and an exteriorly threaded cylindrical ring secured thereto exteriorly of said opening to form a communicating cartridge-receiving extension with an annular cartridge-seating flange; a discardable filter cartridge comprising a cylindrical shell loosely fitted within said extension and provided with an interior screen-supporting offset provided with an opening of substantially the same size as the opening in the face-engaging member and spaced away from the seating edge of the shell to form an air chamber adjacent said face-engaging member, a supporting screen in said shell resting on said offset, and a cover screen retained therein by an open shell-engaging cap; and a flanged screw cap on said extension ring for retaining said cartridge in the latter.

In testimony whereof I affix my signature.

FREDERICK WILLSON.

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