Feb. 1, 1949. W. J. BUSS 2,460,335

AIR PURIFYING DEVICE

Filed Oct. 9, 1945

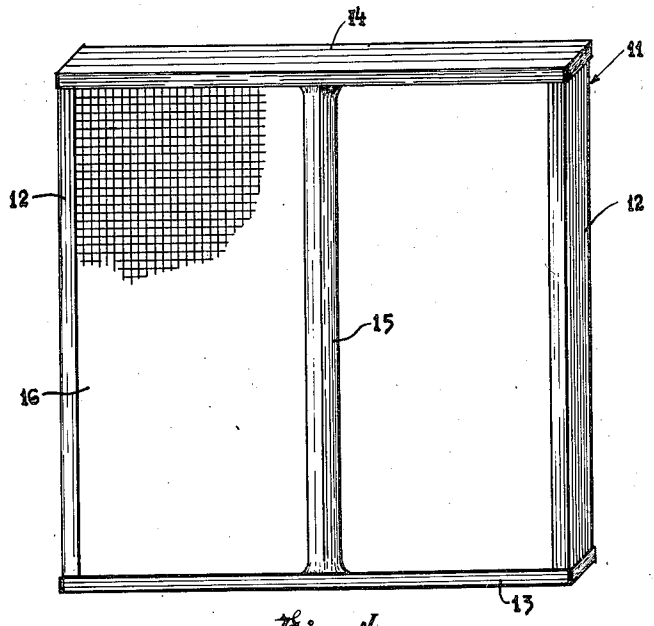


Fig. 1.

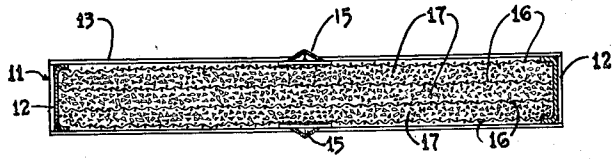


Fig. 2.

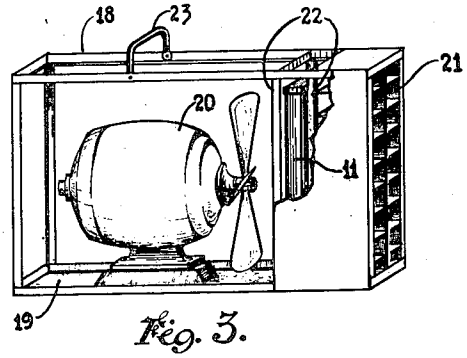


Fig. 3.

INVENTOR
WILLIAM J. BUSS.

McMorrow, Berman & Davidson
ATTORNEYS.

Patented Feb. 1, 1949 2,460,335

UNITED STATES PATENT OFFICE

2,460,335

AIR PURIFYING DEVICE

William J. Buss, Norristown, Pa.

Application October 9, 1945, Serial No. 621,294

2 Claims. (Cl. 21—74)

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This invention relates to air purifying devices and more particularly to a device for deodorizing and disinfecting air.

A main object of the invention is to provide a novel and improved air purifying device which is of very simple construction, very inexpensive to manufacture and which is very effective in removing undesirable odors from the atmosphere where employed.

A further object of the invention is to provide an improved deodorizing and disinfecting means employing a current of air and a deodorant-carrying screen member, and wherein said screen member is readily replaceable after a period of use.

Further objects and advantages of the invention will appear from the following description and claims, and from the accompanying drawings, wherein:

Figure 1 is a perspective view of a deodorizing and disinfecting screen constructed in accordance with this invention.

Figure 2 is a horizontal cross-sectional view of the screen member of Figure 1.

Figure 3 is a perspective view of a portable air purifying unit according to this invention, parts thereof being broken away to show the interior construction.

Referring to the drawings, 11 designates a screen member of generally rectangular shape comprising a pair of channel shaped vertical side frame elements 12, 12, a bottom pan member 13, a top pan member 14, and a pair of center vertical brace members 15, 15 respectively disposed between the front edges and the rear edges of the top and bottom pan members, the parts being rigidly secured as by welding to form a stiff frame. Vertical brace members 15, 15 are generally V-shaped in cross-section to provide extra rigidity to the frame.

Disposed between the vertical brace members 15, 15 and received within the side channels 12, 12 are a plurality of sheets of wire mesh 16, and between the adjacent sheets of wire mesh 16 is a filling of deodorant and disinfecting material 17 such as paradichlorobenzene crystals or the like. The deodorant material is loosely packed so as to provide substantial porosity for the screen and to allow air to be blown therethrough without excessive resistance.

Screen 11 is adapted to be positioned across the outlet duct opening of a conventional ventilating or air conditioning system to thereby disinfect and deodorize air as it is blown into a room. Where no source of flowing air is initially available, a portable unit, such as shown in Figure 3, may be employed. Said unit comprises a

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frame 18 provided with a bottom plate 19 upon which an electric fan 20 is mounted, the forward end of the frame being formed with a grille 21. Provided between grille 21 and fan 20 is a space formed with vertical guides 22 adapted to slidably receive a deodorant screen 11 and to support it in vertical position across the path of the air current produced by fan 20. In operation, air is blown through screen 11 and is thereby deodorized and disinfected.

Frame 18 is provided with a carrying handle 23 for moving the unit from one location to another.

Ordinarily the screen will be effective through several months of use. When the deodorant material has been substantially evaporated or otherwise dissipated, the screen may be easily removed and replaced by a fresh screen.

While certain specific embodiments of an air purifying device have been disclosed in the foregoing description, it will be understood that various modifications within the spirit of the invention may occur to those skilled in the art. Therefore it is intended that no limitations be placed on the invention other than as defined by the scope of the appended claims.

What is claimed is:

1. An air purifying screen comprising a pair of inwardly facing vertical side frame members, a horizontal bottom pan secured to the lower ends of said side frame members, a horizontal top pan secured to the top ends of said side frame members, a vertical front brace member secured centrally between the front edges of said top and bottom pan, a vertical rear brace member secured centrally between the rear edges of said top and bottom pan, said vertical brace members being V-shaped in cross-section and facing inwardly, a plurality of sheets of wire mesh positioned between said vertical brace members and received within and perpendicular to the side frame members, and a filling of loosely packed deodorant material between adjacent sheets of wire mesh.

2. The structure of claim 1, and wherein the deodorant material is paradichlorobenzene crystals.

WILLIAM J. BUSS.

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The following references are of record in the file of this patent:

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