May 9, 1944. A. T. DAUDELIN 2,348,455

PORTABLE COLLAPSIBLE FUME EXTRACTOR

Filed Sept. 26, 1941 2 Sheets-Sheet 1

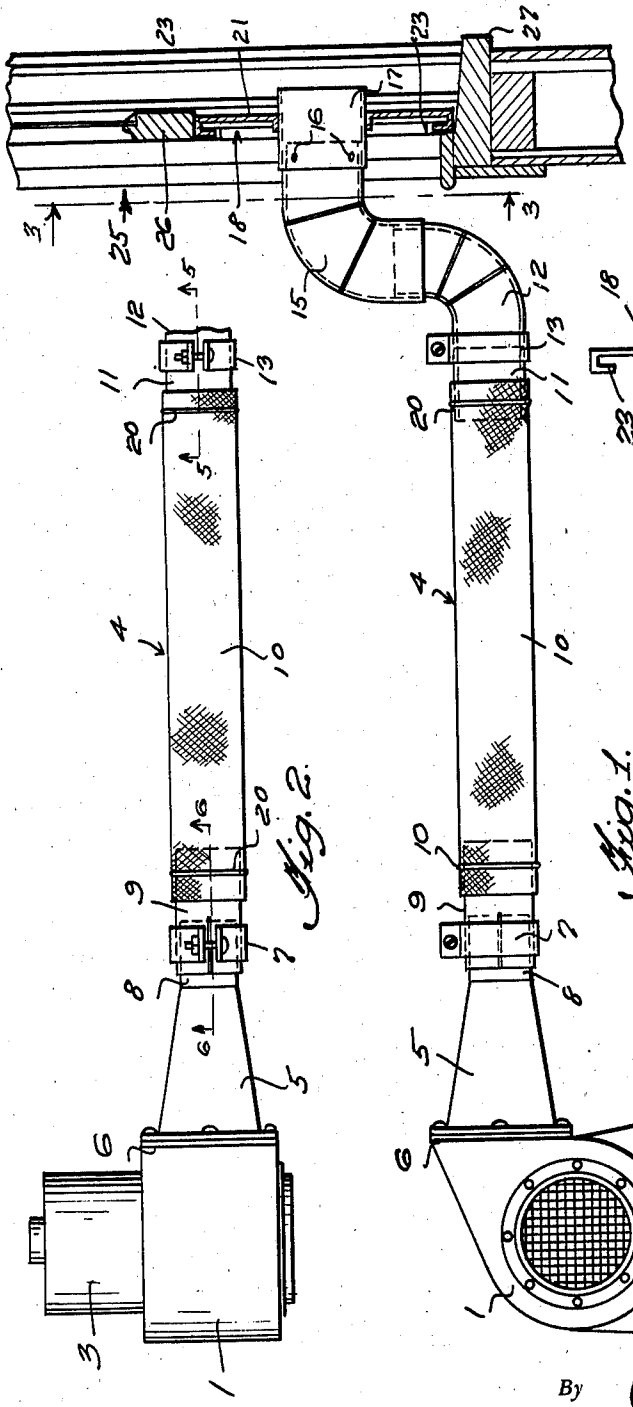


Fig. 2.

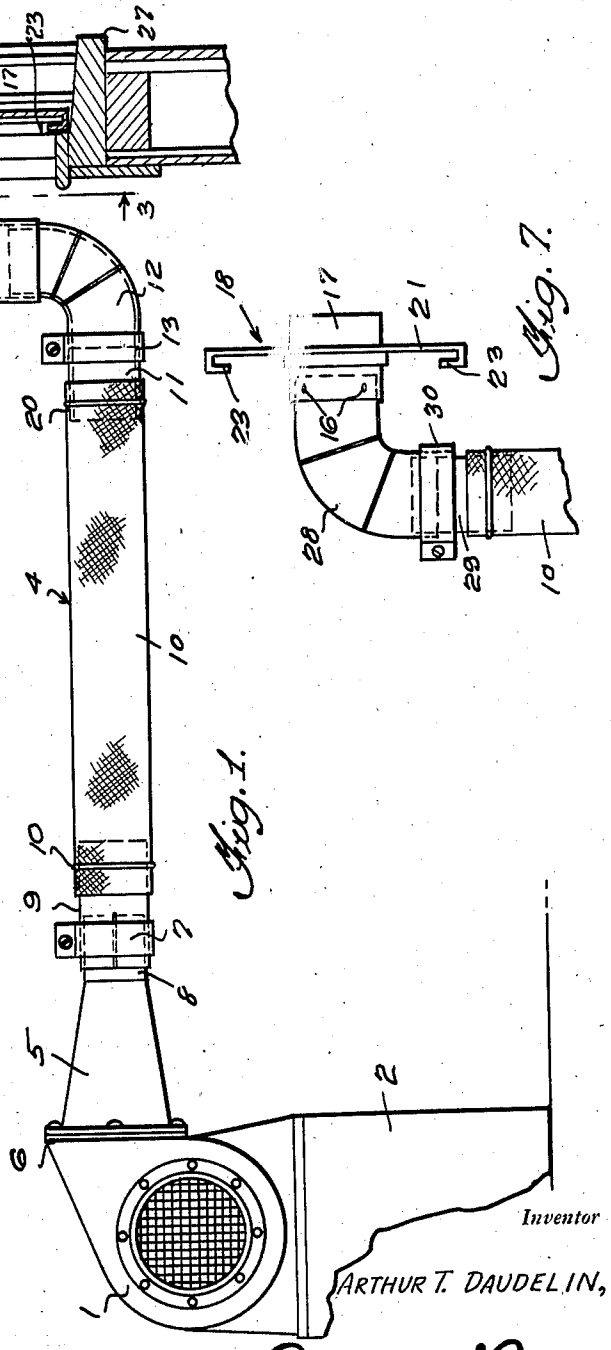


Fig. 1.

Fig. 7.

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PORTABLE COLLAPSIBLE FUME EXTRACTOR

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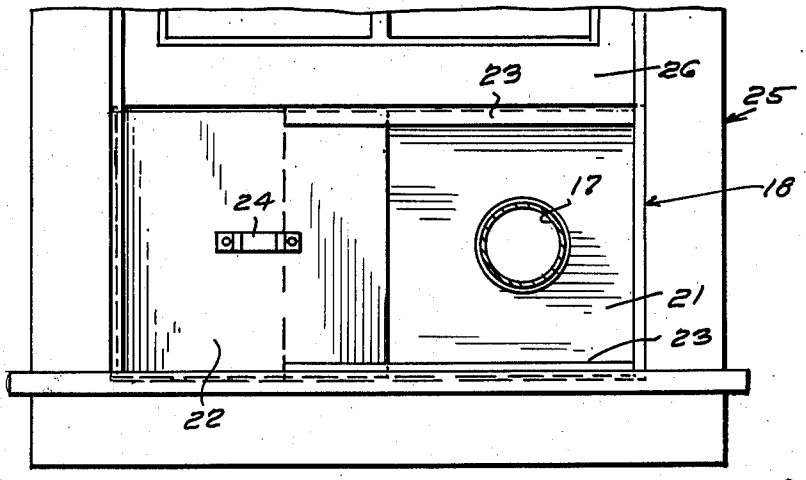


Fig. 3.

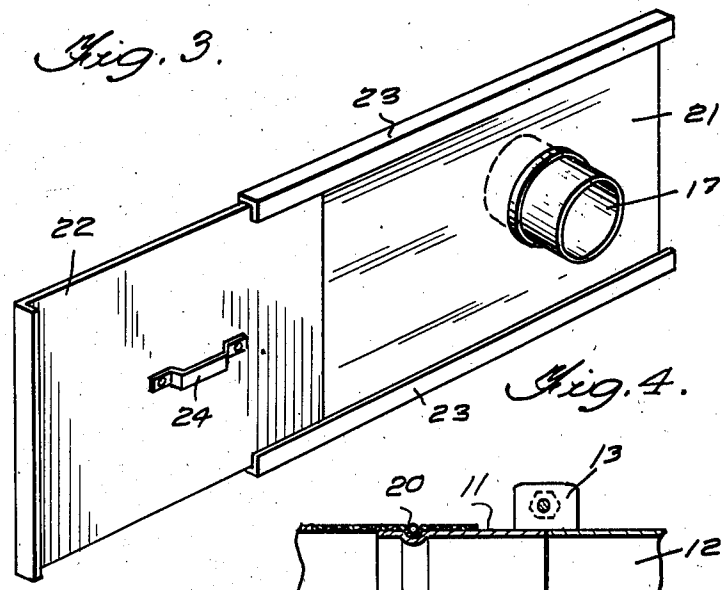


Fig. 4.

Fig. 5.

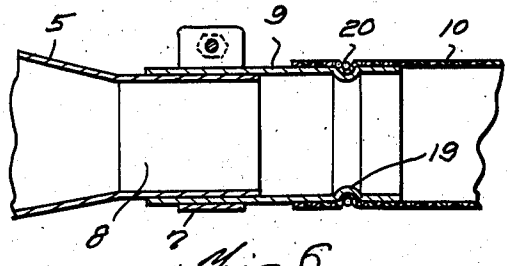


Fig. 6.

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Patented May 9, 1944 2,348,455

UNITED STATES PATENT OFFICE

2,348,455

PORTABLE COLLAPSIBLE FUME EXTRACTOR

Arthur T. Daudelin, Yakima, Wash.

Application September 26, 1941, Serial No. 412,497

1 Claim. (Cl. 98—43)

The present invention relates to new and useful improvements in ventilating apparatus and has for its primary object to provide, in a manner as hereinafter set forth, portable means embodying a novel construction and arrangement for expelling paint and other obnoxious fumes from rooms and other enclosures.

Other objects of the invention are to provide a ventilating apparatus of the aforementioned character which will be comparatively simple in construction, strong, durable, highly efficient and reliable in use, compact, light in weight and which may be manufactured at low cost.

All of the foregoing and still further objects and advantages of the invention will become apparent from a study of the following specification, taken in connection with the accompanying drawings wherein like characters of reference designate corresponding parts throughout the several views, and wherein:

Figure 1 is a view in side elevation of a ventilating apparatus constructed in accordance with the present invention, showing the window closure or panel in cross-section.

Figure 2 is a top plan view of a portion of the apparatus.

Figure 3 is a cross-sectional view, taken substantially on the line 3—3 of Figure 1.

Figure 4 is a perspective view of the adjustable window panel.

Figure 5 is a fragmentary view in vertical longitudinal section, taken substantially on the line 5—5 of Figure 2.

Figure 6 is a fragmentary view in vertical longitudinal section, taken substantially on the line 6—6 of Figure 2.

Figure 7 is a view in side elevation, showing a slight modification.

Referring now to the drawings in detail, it will be seen that reference numeral 1 designates a centrifugal exhaust fan which is mounted on a suitable base 2. An electric motor 3 drives the fan 1.

Connected to the fan 1 is a conduit which is designated generally by the reference numeral 4. The conduit 4 includes a reducer 5 which is secured to the outlet 6 of the fan 1. Secured by a split collar or clamp 7 to the small end portion 8 of the reducer 5 is a nipple 9.

The conduit 4 further includes a tube 10 which may be of any suitable flexible material and which has one end portion secured on the nipple 9. The other end portion of the flexible tube 10 is secured to a nipple 11 which, in turn, is connected to one end of an adjustable elbow 12 through the medium of a split collar or clamp 13. A rivet 14 (see Fig. 5) secures the clamp 13 to the elbow 12.

The other end portion of the elbow 12 is connected to one end portion of an adjustable elbow. 15. The other end portion of the elbow 15 is secured, as at 16, in one end portion of a relatively short pipe section 17 which is mounted in a window panel 18.

The end portions of the nipples 9 and 11 which receive the flexible tube 10 have pressed therein circumferential grooves or channels 19. The end portions of the flexible tube 10 are cemented to the nipples 9 and 11 and are further secured by wire bands 20 which the grooves or channels 19 receive. This is shown to advantage in Figures 5 and 6 of the drawings.

The panel 18 is adjustable for mounting in windows of different widths. Toward this end, the panel 18 includes a pair of slidably connected sections 21 and 22. The upper and lower edges of the section 21 are provided with guides 23 in which the section 22 is slidable. A handle 24 is provided on the panel section 22. The pipe section 17 is mounted in the panel section 21.

It is thought that the manner in which the apparatus functions will be readily apparent from a consideration of the foregoing. Briefly, with the fan 1 in operation paint and other fumes are drawn thereinto and expelled from the room or other enclosure to the outside atmosphere through the conduit 4. The construction and arrangement of the conduit 4 is such as to permit the fan unit to be placed in substantially any desired position relative to the window in which the adjustable panel 18 is mounted. In Figure 1 of the drawings, reference numeral 25 designates generally a portion of a conventional window comprising a vertically slidable lower sash 26. The panel 18 is placed on the sill 27 of the window 25 and adjusted so that the ends of said panel engage the vertical sides of the window frame. The sash 26 is then lowered into engagement with the panel 18, thus closing the window opening.

In Figure 7 of the drawings, reference numeral 28 designates a single depending adjustable elbow which is secured to the inner end portion of the pipe section 17. A vertical nipple 29 is secured by a split collar or clamp 30 in the lower end portion of the elbow 28. Then, the flexible tube 10 is secured to one end portion of the nipple 29.

It is believed that the many advantages of a ventilating apparatus constructed in accordance with the present invention will be readily under-

stood, and although preferred embodiments of said apparatus are as illustrated and described, it is to be understood that further modifications and changes in the details of construction may be resorted to which will fall within the scope of the invention as claimed.

What is claimed is:

A portable fume extractor comprising a portable exhaust fan having a casing provided with a tapered reducer extending outwardly from its outlet, a panel adapted to be mounted in a window opening and having a main section and an auxiliary section, a pipe section extending through the main section of said panel, a flexible conduit, a coupling extending from the inner end of said conduit, a clamp detachably securing said coupling to the outer end of said reducer, a nipple extending from the outer end of said flexible conduit, a pair of rotatably connected elbows, the outer one of said elbows being secured to the inner end of the pipe section, and a clamp secured about the inner elbow for detachably securing the same about the nipple at the outer end of said conduit.

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