Oct. 31, 1933. A. H. ROBINSON 1,933,150

VENTILATING DEVICE

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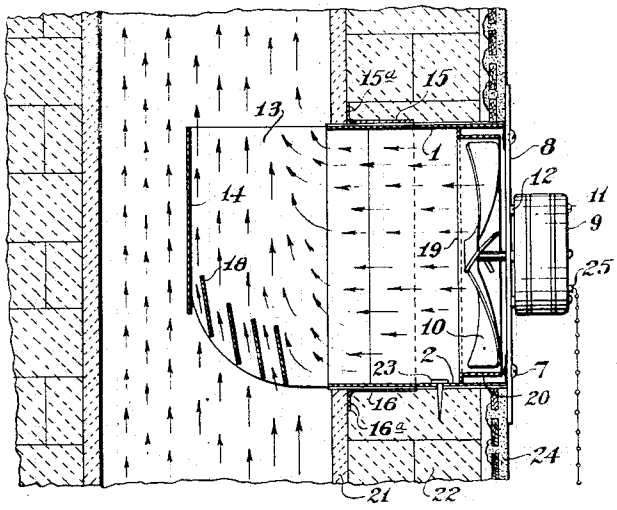


Fig. 2

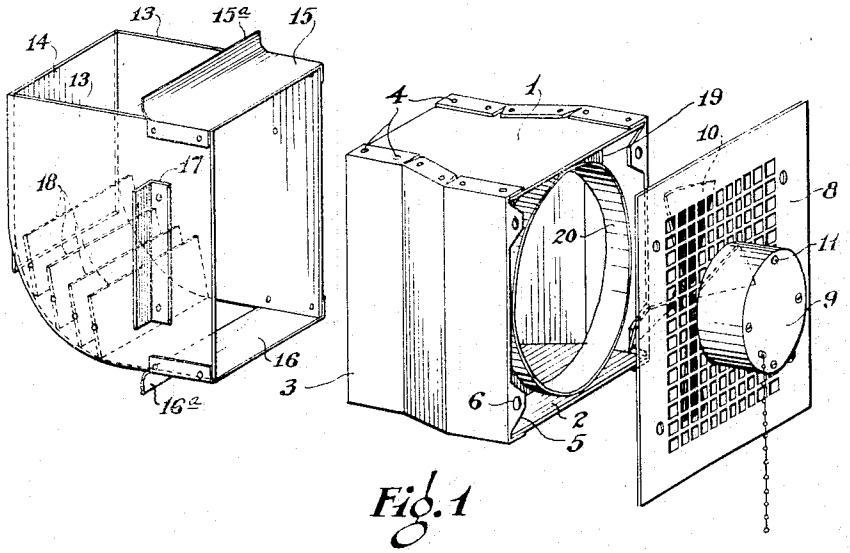


Fig. 1

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VENTILATING DEVICE

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2 Claims. (Cl. 98—43)

This invention relates to a ventilating device and is particularly applicable to the inducing of circulation in such rooms as kitchens where smoke, products of combustion and the like may accumulate.

An object of the invention is to provide an improved ventilating device which will be simple in construction.

Another object is to provide an improved ventilating device which may be easily installed in either new or old buildings.

Another object is to provide an improved ventilating device which may be used in conjunction with a chimney, flue or other duct or conduit without impairing the efficiency of the same.

Other objects will hereinafter appear.

The invention will be better understood from the description of one practical embodiment thereof, illustrated in the accompanying drawing, in which;

Figure 1 is a perspective view of the parts of the ventilating device in dis-assembled relation; and

Figure 2 is a central sectional view of the parts installed within a wall in conjunction with a flue, such as that provided for a furnace.

The apparatus illustrated in the drawing consists of a casing arranged to be installed in an aperture through a wall between the room to be ventilated and the conduit to which air is to be discharged, the casing being provided with means for drawing air into it and directing it outwardly along the conduit, these means being arranged so as not to impede passage of gases along the conduit from some other point, such as may be discharged into it by a stove or furnace.

The casing is shown as consisting of two parts telescopically associated with each other, one of which consists of upper and lower plates 1 and 2 having parallel edges adjacent their ends, and narrowing intermediate these ends. These plates are connected by side pieces 3 secured to them in any desired manner as by flanges turned over the upper and lower plates, and riveted thereto as illustrated at 4. Adjacent the outer or room-facing end of this section angles 5 are secured to the casing, these being provided with threaded apertures 6 for the reception of screw 7 by which a grill or grating 8 may be secured to the casing, this grill overlying the aperture, as illustrated in Figure 2, and carrying a motor 9 which is provided with a fan 10 for blowing air through the aperture.

The motor is very conveniently secured to the grating by the motor-frame-bolts 11 which may extend through apertures in the grating, the motor frame being held slightly spaced therefrom by washers 12. The inner part of the casing consists of side pieces 13 connected by an inner end piece 14 and by narrow upper and lower strips 15 and 16.

These strips have ends 15*a* and 16*a* respectively, adapted to be bent over after insertion in a wall and to constitute a kind of flashing. The strips 15 and 16 and the side pieces 13 are adapted to telescopically embrace the exterior of the narrow inner end of the first described section of the casing, so that a given pair of sections may be arranged to fit walls of different thicknesses.

The sides 13 are provided wih flanges 17 which are adapted to contact the outer surface of the flue liner, and assist in retaining the inner portion of the casing in position.

It will be seen that this inner portion of the casing projects within the flue, but that the side pieces 13 and end 14 are arranged lengthwise of the flue, and so do not obstruct the same to any substantial extent.

Between the side pieces 13 are a plurality of baffles 18 secured thereto by bolts or rivets and arranged something like a series of louvres or the slats of a Venetian blind. These baffles are so inclined that air being driven through the casing will impinge upon their upper surfaces and be deflected upwardly along the flue. Gases passing through the flue from below will impinge upon the lower surfaces of the baffles and be deflected away from the aperture in the wall, so that they will not emerge through this aperture, while this deflection is so slight as to not appreciably impede their passage along the flue.

A baffle 19 having a circular opening bordered by a cylindrical flange 20 is positioned to surround the fan 10, so that substantially all the air passes through the blades of the fan and a greater velocity is imparted thereto than if the air were allowed to flow through the corners of the grating 8.

Also, rain, dirt and the like descending the conduit may pass between the baffles and will not be deflected into the room being ventilated.

The parts are simply installed as best shown in Figure 2, either by being included in the wall while it is being constructed, or, afterward, by cutting a hole therethrough, the inner section being placed so that it protrudes into the interior of the conduit with flanges 17 resting upon the outer side of the liner 21, while the outer section is retained in place by the wall itself, for

instance the brick work shown at 22, and may be further secured to this wall by nails or screws 23 driven outwardly through the metal of the casing. After these two parts have been placed in position and the finishing plaster 24 has been applied around the aperture, the grating, together with the motor and fan, is simply secured in place by the screws 7. The motor is, of course, connected to a power circuit (not shown) and may conveniently be controlled by a switch 25 mounted upon the motor itself, the grating, or in any other easily accessible position.

While I have described the illustrated embodiment of my invention in some particularity, obviously many other embodiments will readily occur to those skilled in this art, and I do not therefore limit myself to the precise details shown and described herein, but claim as my invention all embodiments, modifications and variations coming within the scope of the appended claims.

I claim:

1. A ventilating device adapted to be positioned in the flue intermediate its ends comprising two telescopic casing members, one arranged to extend into the flue and being provded with a series of baffles, the portion of the casing within the flue and the baffles presenting substantially only edge surfaces to the normal flow of fluid through the flue, the second member arranged to be positioned through a wall a grating, means securing the grating to the second member of the casing, and a fan carried by said grating.

2. A ventilating device adapted to be positioned in a flue intermediate its ends comprising two telescopic casing members, one adapted to be positioned through a wall and the other extending into the flue, the second being provided with a series of baffles presenting substantially only edge surfaces to the normal flow of fluid along the flue, a grating secured to the first mentioned casing member, a motor secured to one side of said grating havng a shaft passing through the grating, and a fan secured to said shaft on the other side of the grating.

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