Dec. 31, 1940. B. SONNTAG 2,226,641

VENTILATOR

Filed April 10, 1939

FIG. 1.

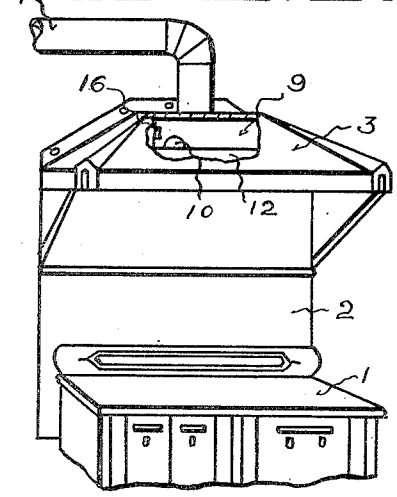



FIG. 2.

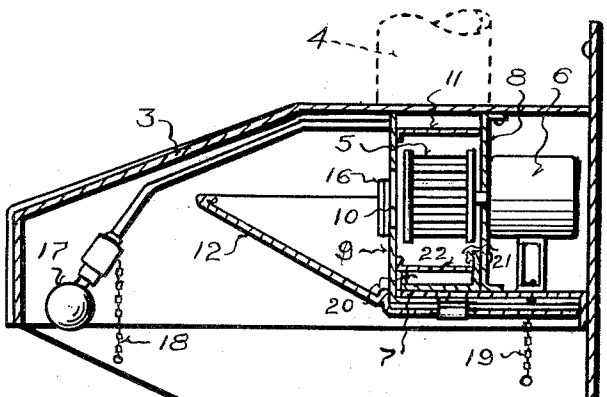



FIG. 3.

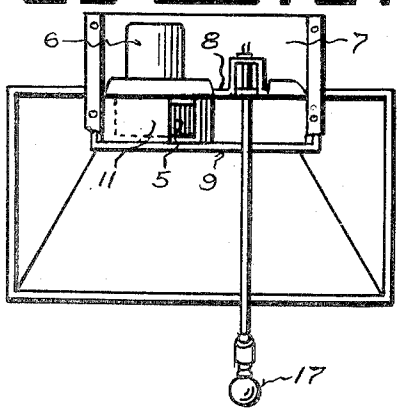



FIG. 4.

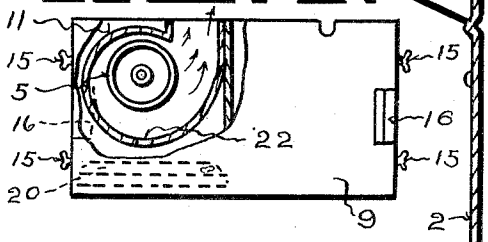



FIG. 6.

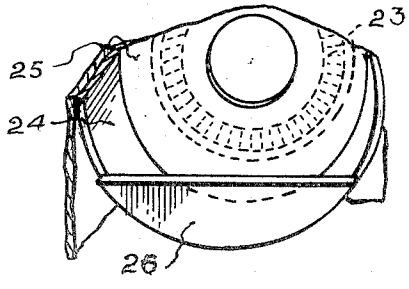



FIG. 7.

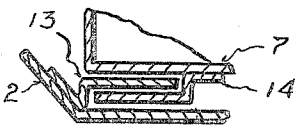
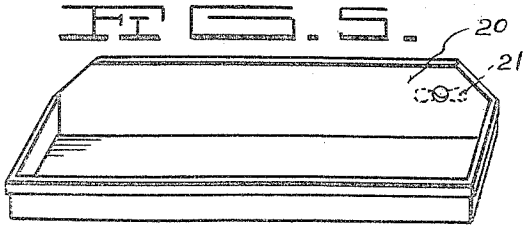



FIG. 5.




Bernhard Sonntag
INVENTOR.

BY John M. Spellman

ATTORNEY.

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# UNITED STATES PATENT OFFICE

2,226,641

## VENTILATOR

Bernhard Sonntag, Dallas, Tex.

Application April 10, 1939, Serial No. 267,082

1 Claim. (Cl. 98—115)

This invention relates to ventilators, and it has particular reference to ventilators of the type used to carry away grease-laden vapors, smoke and heat resulting from the use of kitchen ranges and stoves for cooking purposes.

The principal object of the invention is to provide a ventilator assembly so arranged that accumulations of grease may readily be removed with a minimum of effort.

Another object is to provide a ventilator structure so constructed that liquified grease is drained from the centrifugal blower housing prior to solidification, thereby precluding the possibility of the congealed grease clogging the blower and preventing its rotation.

A still further object is to provide a ventilator so arranged that the parts thereof are easily assembled and disassembled for cleaning or other purposes.

With the foregoing objects as paramount, the invention has particular reference to its salient features of construction and arrangement of parts which will become manifest as the description proceeds taken in connection with the accompanying drawing, wherein:

Figure 1 is a fragmentary perspective view of a gas range showing the hood in place and with portions thereof broken away,

Figure 2 is a view in vertical transverse section of the hood and showing in detail the centrifugal blower and its attendant parts,

Figure 3 is a top plan view of Figure 2, shown with the hood removed,

Figure 4 is an elevational view of the exhaust housing cover plate, shown with portions broken away,

Figure 5 is a perspective view of the preferred form of the grease trap,

Figure 6 is a fragmentary view in perspective of a modified form of grease trap, and

Figure 7 is a cross-sectional view of the means for slidably interconnecting the smoke deflector to the ventilator assembly.

The present invention is a continuation of U. S. Patent No. 2,077,496 issued to Bernhard Sonntag, April 20, 1937.

Referring to the drawing, the reference numeral 1 denotes a cooking range. A back plate 2 is arranged as shown, to which plate a hood 3 is attached, both units being affixed to the wall of the kitchen or directly attached to the range or made a part thereof.

A vent pipe 4 leads to the flue or other suitable vent of the building structure.

The exhaust unit is comprised primarily of a centrifugal blower 5, which blower is driven by an electric motor 6.

The blower 5 and the motor 6 are enclosed by a housing comprised of a bottom plate 7, a partition wall 8, and a cover plate 9.

An opening 10 is provided in the cover plate 9, through which air and grease-laden vapors, smoke, heat, etc., are drawn and subsequently delivered to the vent pipe 4 by the action of the blower 5, which blower is surrounded by a scroll shaped member 11, best shown in Figure 4.

A smoke deflector 12 is slidably attached to the base 7 by means of the angularly bent members 13 and 14, which members are affixed to the shield 12 and base 7 as best shown in Figure 7. Ready assembly and disassembly of the smoke deflector may thus be accomplished. Removal of the cover plate 9 is accomplished by loosening the wing nuts 15, handles 16 being arranged as shown.

Operation of a light 17 is controlled by a pull cord 18 and current to the motor 6 is switched off or on by means of a pull cord 19.

The preferred form of grease trap 20 is illustrated in perspective in Figure 5. The trap or pan 20 is secured to the wall 8 by means of a wing nut 21. Liquified grease entrapped within the scroll member 11 passes by gravity through a hole or opening 22 into the pan 20 from which the grease may be periodically removed in a solid state when so required. Undesirable grease accumulation is thus prevented within the scroll housing 11, centrifugal blower 5, vent pipe 4 and the flue or chimney to which vent is attached.

Figure 6 is a fragmentary view in perspective of a modified form of the invention wherein a blower 23 is encased by a scroll housing 24. A back plate 25 which is secured to the housing 24 serves to form a wall which, combined with the housing 24 and plate 26 forms a grease-trap below the blower 23, from which solidified grease may be removed.

Manifestly, the construction shown is capable of considerable modification, and such modification as is considered within the scope of the appended claim is likewise considered within the spirit and intent of the invention.

What is claimed is:

A ventilator of the class described and in combination with a hood, said hood including a housing having a rearwardly projecting support, the said housing comprising a bottom wall, and a rear wall, a removable cover plate for the housing, the said removable cover plate having an opening for inlet of smoke and fumes, an outlet

pipe connected to the top of the housing for exhaust of said fumes and smoke, a scroll housing positioned within the first-mentioned housing, the scroll housing having communication between the inlet opening of the removable cover plate of the first-mentioned housing and the outlet pipe thereof, a blower for creating air suction spaced in the scroll housing, an electric motor mounted on the said projecting support for operating said blower, a removable grease trap spaced in the first-mentioned housing and beneath the scroll housing, said scroll housing having an opening in the lower portion thereof to allow drainage of grease from the interior of the said scroll housing to said grease trap, an angular means secured to the bottom wall of the first-mentioned housing, a removable smoke deflecting apron having means for slidably engaging the angular means of the bottom wall for holding the smoke deflecting apron in operable position in the hood, and the removable trap being accessible by removing the said removable deflecting apron and the removable cover plate.

BERNHARD SONNTAG.