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A. L. ERICKSON

2,633,071

LOCK FOR VENTILATOR DAMPERS

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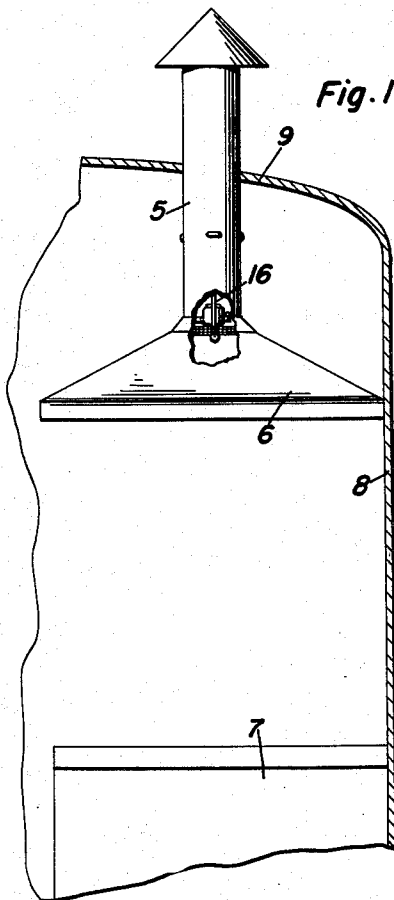


Fig. 1

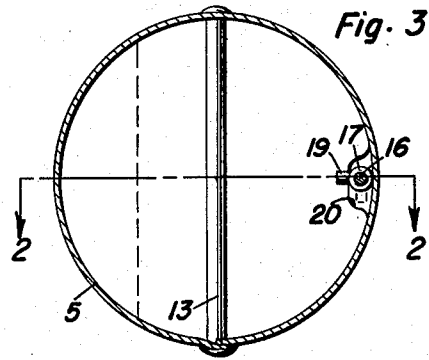


Fig. 3

Fig. 2

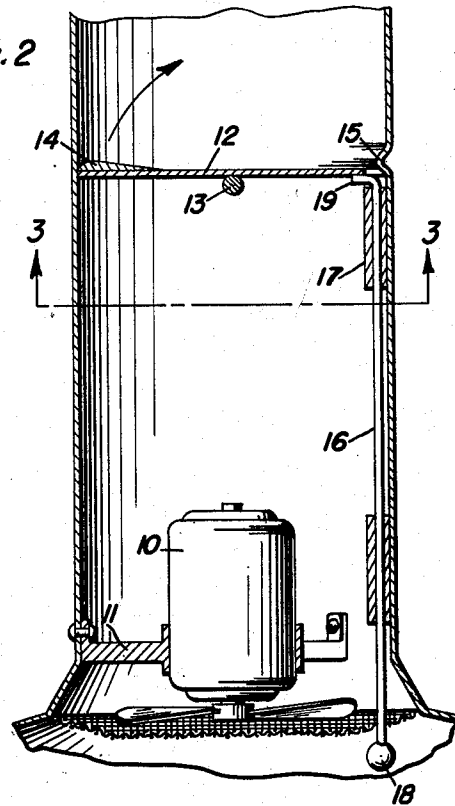
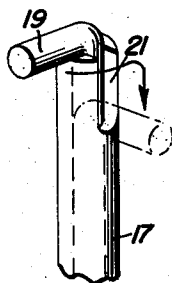


Fig. 4

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LOCK FOR VENTILATOR DAMPERS

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1 Claim. (Cl. 98—115)

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The present invention relates to new and useful improvements in ventilators adapted particularly for use in removing the fumes arising from a cooking stove and more particularly to a lock for the damper on the ventilator flue to prevent rattling of the damper caused by wind blowing down the flue, when the ventilator is not in use.

An important object of invention is to provide a rotatable locking rod leading upwardly in the flue from the throat or canopy thereof and providing the upper end of the rod with a swingable locking arm movable into and out of position under one edge of the damper to hold the damper from opening movement.

A further object is to provide a device of this character of simple and practical construction, which is efficient and reliable in operation, relatively inexpensive to manufacture and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, references being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a side elevational view of the ventilator with parts broken away and shown in section;

Figure 2 is an enlarged fragmentary vertical sectional view of the flue of the ventilator taken on the line 2—2 of Figure 3;

Figure 3 is a transverse sectional view taken on a line 3—3 of Figure 2; and,

Figure 4 is an enlarged perspective view of the upper end of the locking rod and showing the slot in the upper end of the guide to hold the rod out of locking position.

Referring now to the drawing in detail wherein for the purpose of illustration I have disclosed a preferred embodiment of my invention, the numeral 5 designates a ventilator flue having a throat or canopy 6 at its lower end and of a type designed particularly for use in supporting over a stove 7 in a trailer 8 and with the flue 5 extending upwardly through the top 9 of the trailer. An exhaust fan 10 is supported in the lower portion of flue 5 by means of a spider 11 to draw cooking fumes and odors upwardly through the throat 6 and flue 5.

A damper 12 is mounted for pivotal movement in the flue 5 by means of a transverse rod 13 supported in the sides of the flue, one edge of the damper being provided with a weight 14 for holding a diametrically opposite edge of the damper

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upwardly against a stop 15 pressed inwardly at the side of the flue, the damper being open in a direction shown by the arrow in Figure 2 by pressure from the exhaust fan.

A vertical locking rod 16 is rotatably and slidably mounted in guides 17 secured to the inside of flue 5, the lower end of the rod having an operating knob or handle 18 positioned in throat 6 and the upper end of the rod having a horizontal arm 19 swingable into and out of position under the damper 12 at its edge diametrically opposite from the weight 14. The edge of the damper in the region of the arm 19 is formed with a notch 20 to clear the locking arm 19 and guides 17 when the arm is turned into its unlocking position, as shown by the dotted lines in Figure 3 of the drawing.

The upper edge of guide 17 is formed with a vertical slot 21 into which the arm 19 may be lowered to hold the arm out of the path of the downward swinging movement of the adjacent edge of the damper.

In the operation of the device, when the exhaust fan 10 is in use to draw air upwardly through flue 5, the arm 19 is turned by rod 16 to align the arm with slot 21 in guide 17 and the rod 16 pulled downwardly to hold the arm 19 in the slot whereupon the damper 12 is free to swing on its pivot 13 and the weighted edge 14 may then swing upwardly by pressure from the fan to permit the air to pass upwardly through the flue.

When the exhaust fan is not in use, the damper 12 may be locked by sliding rod 16 upwardly to clear arm 19 from slot 21 and then by turning rod 16 the arm may swing under the adjacent edge of the damper to hold the same against the stop 15 and prevent opening movement of the damper by pressure of wind entering the upper end of the flue.

In view of the foregoing description taken in conjunction with the accompanying drawing, it is believed that a clear understanding of the device will be quite apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though there is herein shown and described a preferred embodiment of the invention, the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and the scope of the appended claim.

Having described the invention, what is claimed as new is:

In combination, a ventilator including a venti-

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cal flue having a pivoted damper and an exhaust fan in the flue subjecting the damper to opening pressure, a vertically slidable locking rod having a horizontal locking arm, and a guide supported by the flue and rotatably and slidably supporting the rod in a position for swinging the arm into and out of locking engagement with one edge of the damper, said guide having a slot adapted to receive the arm to hold the arm in its damper unlocking position.

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