Nov. 14, 1950 C. V. RENTZ 2,529,965

DUST ELIMINATOR FOR ASH CANS

Filed Aug. 8, 1946

Fig. 1.

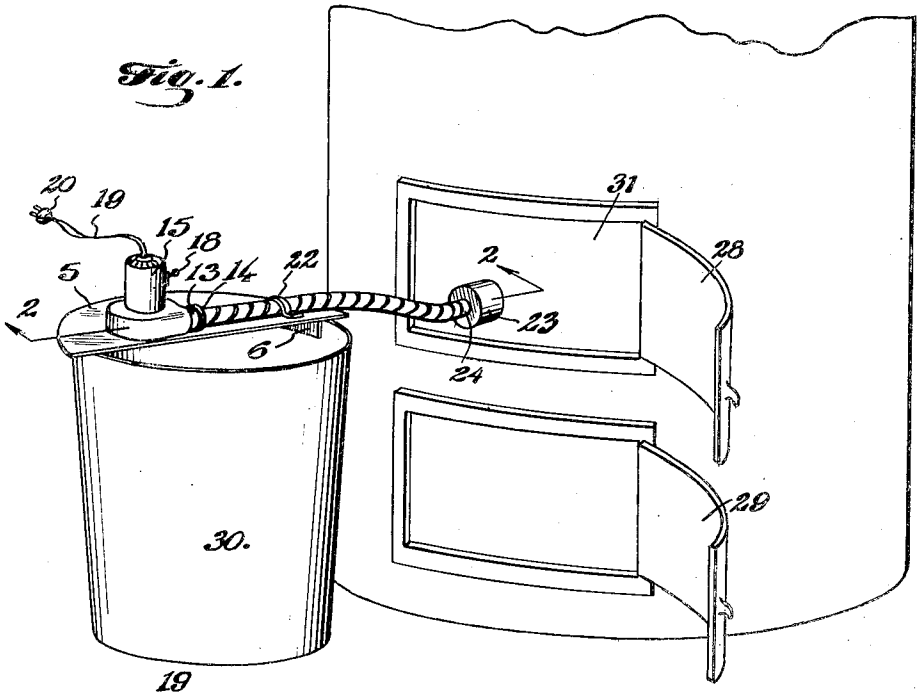
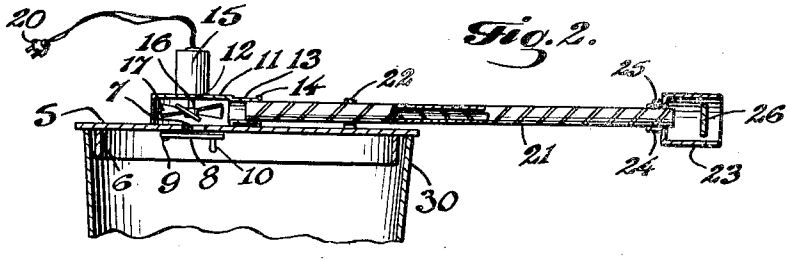


Fig. 2.



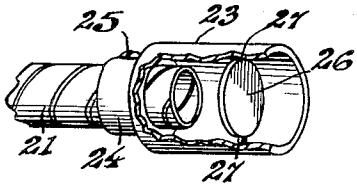


Fig. 3.

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DUST ELIMINATOR FOR ASH CANS

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2 Claims. (Cl. 126—242)

1

The present invention relates to new and useful improvements in devices for eliminating dust from an ash can while depositing ashes from a furnace into the can and the invention has for its primary object to provide relatively simple and practical means for carrying out this purpose.

An important object of the invention is to provide a dust eliminating device of this character adapted for removably mounting on ash cans of various sizes.

Still another object of the invention is to provide a suction device adapted for attaching on top of an ash can for removing dust from the ash can and returning the same to a furnace thereby preventing dust from entering a furnace room while ashes are being removed from a furnace.

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

Figure 1 is a perspective view of the invention in place ready for operation.

Figure 2 is a fragmentary sectional view taken on line 2—2 of Figure 1, and

Figure 3 is a perspective view of a diffuser at the discharge end of the device and with parts broken away and shown in section.

Referring now to the drawing in detail wherein for the purpose of illustration I have disclosed a preferred embodiment of the invention the numeral 5 designates a flat semi-circular plate with a vertical flange 6 welded or otherwise joined thereto at the underside of the plate adjacent the edges thereof. Near the curved edge of the plate is drilled a hole or air vent 7 and controlling communication through the hole is a cover plate 8 pivoted to swing on a pin 9 at the underside of the plate, the cover having a downwardly extending finger grip 10 for moving the cover to adjust the size of the opening 7.

Located over the opening 7 and suitably secured on the top surface of the plate is a metal case 11 with a small hole 12 in its top and a neck 13 integrally cast therewith, the neck projecting outwardly from the case at one side thereof and formed at its end with an out-turned flange 14.

An electric motor 15 is secured on top of the case 11 with a vertical shaft 16 extending through the hole 12 into the case. On the lower end of the shaft is secured a propeller having a plurality of blades 17 arranged upon rotation thereof to cause air to be drawn through the opening 7 into the case and forced out through the neck 13

2

thereof. On the side of the motor 15 is a switch 18 and electric wires 19 extend from the motor to a plug 20 for connecting the motor to an outlet of a house circuit.

A flexible metal tube or conduit 21 is secured at one end in the neck 13 and is held in place on top of the plate 5 by a U-bracket 22 which is bolted or otherwise secured to the plate. The outer end of the tube 21 is secured a diffuser 23 including a neck 24 secured to the tube by a set screw 25.

A circular baffle 26 is fixedly secured in the diffuser transversely thereof and with the edges of the baffle spaced from the sides of the diffuser, the baffle being secured in position by pins 27.

In the operation of the device the plate 5 is supported in position on top of an ash can 30 adjacent a furnace 31, the stack damper, not shown, for the furnace being open. The diffuser 23 is positioned in the coal feeding opening of the furnace with the furnace door 28 and ash pit door 29 also open.

The electric motor 15 is started and as ashes are shoveled into the ash can from the ash pit of the furnace the dust in the ash can is drawn up through the opening 7 by the blades 17 of the propeller and forced through the flexible tube 21 and the diffuser 23 back into the furnace, the dust then passing out through the flue of the furnace. The escape of dust from the ash can into the furnace room is thus eliminated and after the ash can has been filled with ashes the plate 5 and suction attachment is removed from the ash can until it is again desired to be used.

In view of the foregoing description taken in conjunction with the accompanying drawings it is believed that a clear understanding of the construction, operation and advantages 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 claims.

I claim:

1. Means for exhausting dust from an ash receptacle to a furnace comprising a receptacle open at one end, a plate closing a portion of the open end of said receptacle, said plate provided with an air vent, a valve pivoted to said plate for controlling the flow of air through the air vent, an exhaust conduit communicating with the vent

and adapted to extend into a furnace, a fan housed on said plate and including a propeller for directing the air from said receptacle to said conduit, and means for diffusing a flow of air leaving said conduit.

2. The combination of claim 1 wherein said last-mentioned means includes a sleeve removably engaging one end of said conduit, and a baffle plate rigidly mounted in said sleeve having a continuous edge spaced relative to the inner periphery of said sleeve.

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