July 7, 1953 G. M. BREIDERT 2,644,467

SMOKE SIPHONING ASH TRAY

Filed March 20, 1950

FIG. 1.

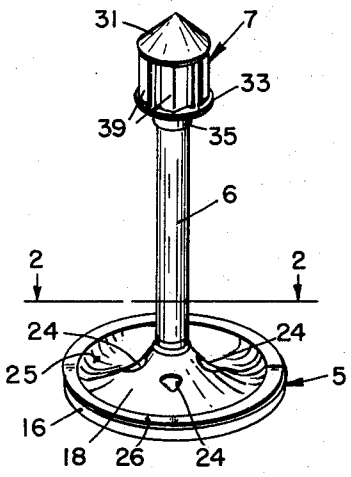


FIG. 2.

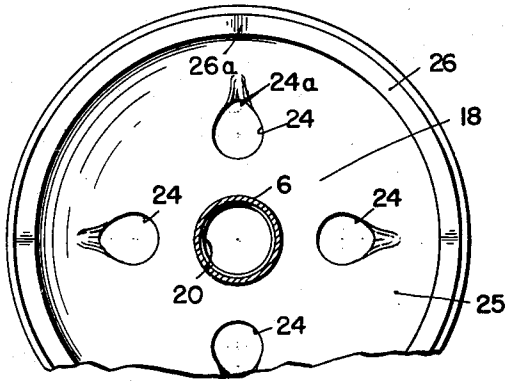


FIG. 4.

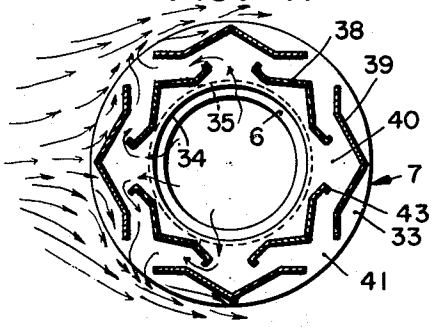


FIG. 3.

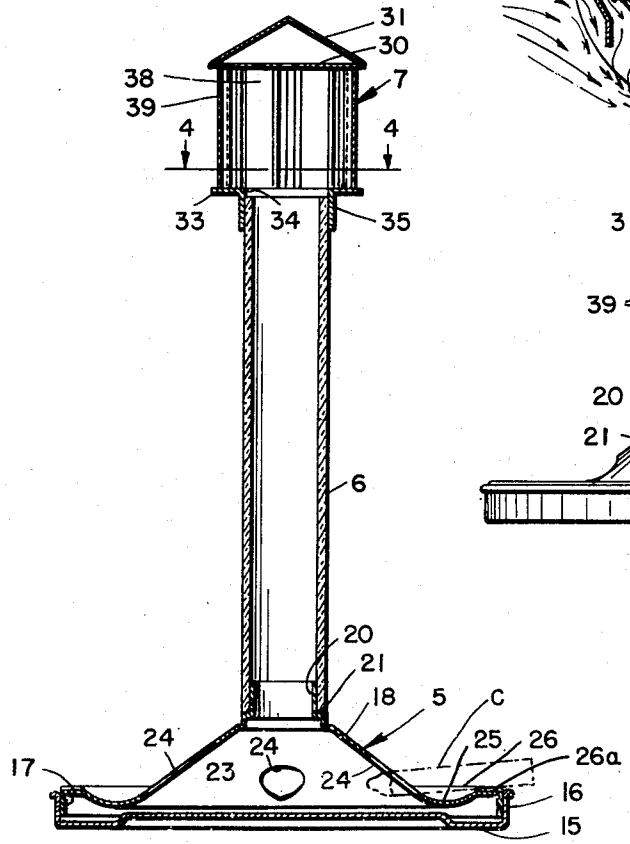
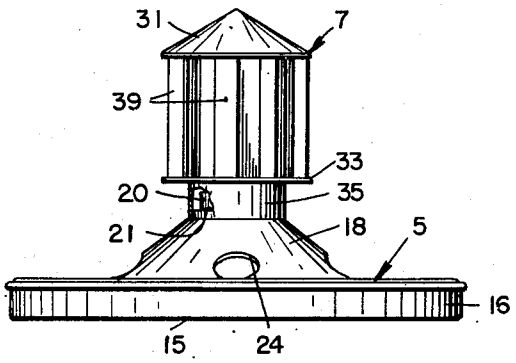


FIG. 5.



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SMOKE SIPHONING ASH TRAY

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1 Claim. (Cl. 131—238)

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This invention relates to smoke siphoning ash trays which may also be used for demonstrating a ventilator device of the siphoning type.

Siphoning type ventilator devices, which are usually mounted on the roof of a building in communication with an air passing opening therein to withdraw contaminated air from the building, operate to siphon air by virtue of air currents playing over the exterior of the ventilator head. The devices are quite large. Salesmen often experience difficulty in making a prospective buyer fully understand that such a device actually siphons air, and in making the prospective buyer understand how it operates. Due to the size of such devices, and the manner of operation, it is difficult to arrange an effective and convincing demonstration without taking the prospective buyer out to a building equipped with the devices, and even then the visual demonstration is not effective.

By use of my device such a demonstration can be readily made by placing the demonstrating unit upon an office desk within an office.

Other objects will appear hereinafter.

Without intending thereby to limit the broader scope of the invention as defined by the appended claim, I shall now describe a preferred embodiment, for which purpose I shall refer to the accompanying drawings, wherein:

Fig. 1 is a perspective view;

Fig. 2 is a plan section taken on line 2—2 of Fig. 1;

Fig. 3 is a vertical section;

Fig. 4 is a cross-section of the ventilator element taken on line 4—4 of Fig. 3; and

Fig. 5 is a side elevation of a variational form of the invention.

Referring to Figs. 1–4, inclusive, I show generally the combination of an ash tray like base 5, a tube 6 and a siphoning type ventilator head 7.

The base 5 comprises a bottom wall 15 having an upright peripheral flange 16 within which fits an annular skirt portion 17 of a top wall 18. The central portion of the top wall is frustroconical and terminates at its top end in a cylindrical neck 20 which has a larger diameter portion providing an upwardly facing shoulder 21. The base construction thus described provides a smoke chamber 23 with which circumferentially spaced smoke inlet holes 24 in wall 18 communicate. The holes are so placed with reference to the dished portion 25 and the rim portion 26 of the top wall that a burning cigarette C may be placed on the base with the burning end disposed within or closely adjacent one of the holes and with its butt end resting on the rim.

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The tube 6 is preferably transparent, and may be made of glass or a suitable plastic. While transparency is not an essential characteristic of the tube, it is highly preferable since it better enables an observer to view the operation. The lower end of the tube frictionally fits over the neck 20 so that the tube is in communication with the chamber 23.

On the top end of the tube I mount a miniature siphoning type ventilator 7 constructed, except for size, in accordance with the particular ventilator head desired to be demonstrated.

While siphoning type ventilator heads of any desired type may be used, I show in the drawings a ventilator constructed substantially as shown in United States Letters Patent No. 2,269,428, dated June 19, 1940. This particular ventilator has a top wall 30, a conical cap 31, a bottom wall 33 having a central opening 34, and a depending annular flange 35 to frictionally fit over the top end of the tube. The ventilator has inner baffle members 38 and outer baffle members 39, secured at their ends to the respective top and bottom walls. As best shown in Fig. 4, the inner baffles 38 are spaced apart circumferentially to provide outlet passages 40 therebetween, and the outer baffles 39 are circumferentially spaced apart to provide passageways 41 therebetween. The baffles are generally V-shaped in cross-section and the inner baffles terminate in outturned angular edge portions 43. Thus, as denoted by the arrows in Fig. 4, air currents blowing over the outer surface of the ventilator are so deflected by the baffle arrangement as to siphon smoke from the inner portion of the ventilator, which is in communication with the tube 6, and to prevent air from entering the passageways 40. As I have said, other ventilator constructions capable of creating such a spihoning effect in response to air currents may be substituted for the specific ventilator shown.

In operation, the user lights a cigarette C, places the burning end in or adjacent a hole 24 as shown in Fig. 3. If there are no air currents blowing upon the ventilator 7, the smoke will tend to seep outwardly from the holes and also to accumulate in the chamber and tube. However, if air is blown upon the ventilator from any angle, it will be observed that the smoke will be withdrawn through the ventilator and thus cause more smoke to rise through the tube from the chamber, stopping the seepage from the holes. Instead of blowing upon the ventilator air may be fanned onto it.

Another effective demonstration which may be made by the device is to first chill the tube

6 as by placing it in cold water. The smoke will rise very slowly in the chilled tube until the smoke itself becomes cooled, and it will then reverse its direction and flow downwardly. Such downward flow may be immediately stopped by blowing or fanning air onto the ventilator as before described.

While the presence of the tube is very desirable, both to remove the ventilator head from the immediate vicinity of the base and to permit better observation of the operation, the tube may be dispensed with in some cases, such as where it is merely desired to use the device as an ash tray. Such an embodiment is shown in Fig. 5. Here the parts are the same as before described except that the tube is omitted, and the flange **35** of the ventilator is frictionally fitted directly over the neck **20** of the base.

As is more apparent from Fig. 2, each of the holes is substantially round, except that it is somewhat elongated at its bottom portion **24***a* and the wall **18***a* defining portion **24***a* is depressed to provide a cigarette receiving trough to more positively hold a cigarette in position. Also, I prefer to provide a slight depression **26***a* in the rim, in alignment with each portion **24***a*.

I claim:

An ash tray comprising a hollow base having

a bottom wall, a side wall and a top wall, together defining a smoke chamber, said top wall having an annular flat marginal portion defining a cigarette supporting surface, a frusto-conical center portion having a central outlet opening, a cylindrical upright neck in register with said opening, and an annular ash-receiving channel between said marginal and center portions, said frusto-conical center portion having a side opening, that part of said center portion defining the lower boundary of said opening being trough-shaped and substantially in the plane of said marginal portion whereby a cigarette may rest with its burning end portion in said side opening and with its other end portion supported upon said marginal portion, a vertically disposed tubular stack member frictionally fitted on said neck, and a smoke siphoning member on the top end of said stack member.

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