

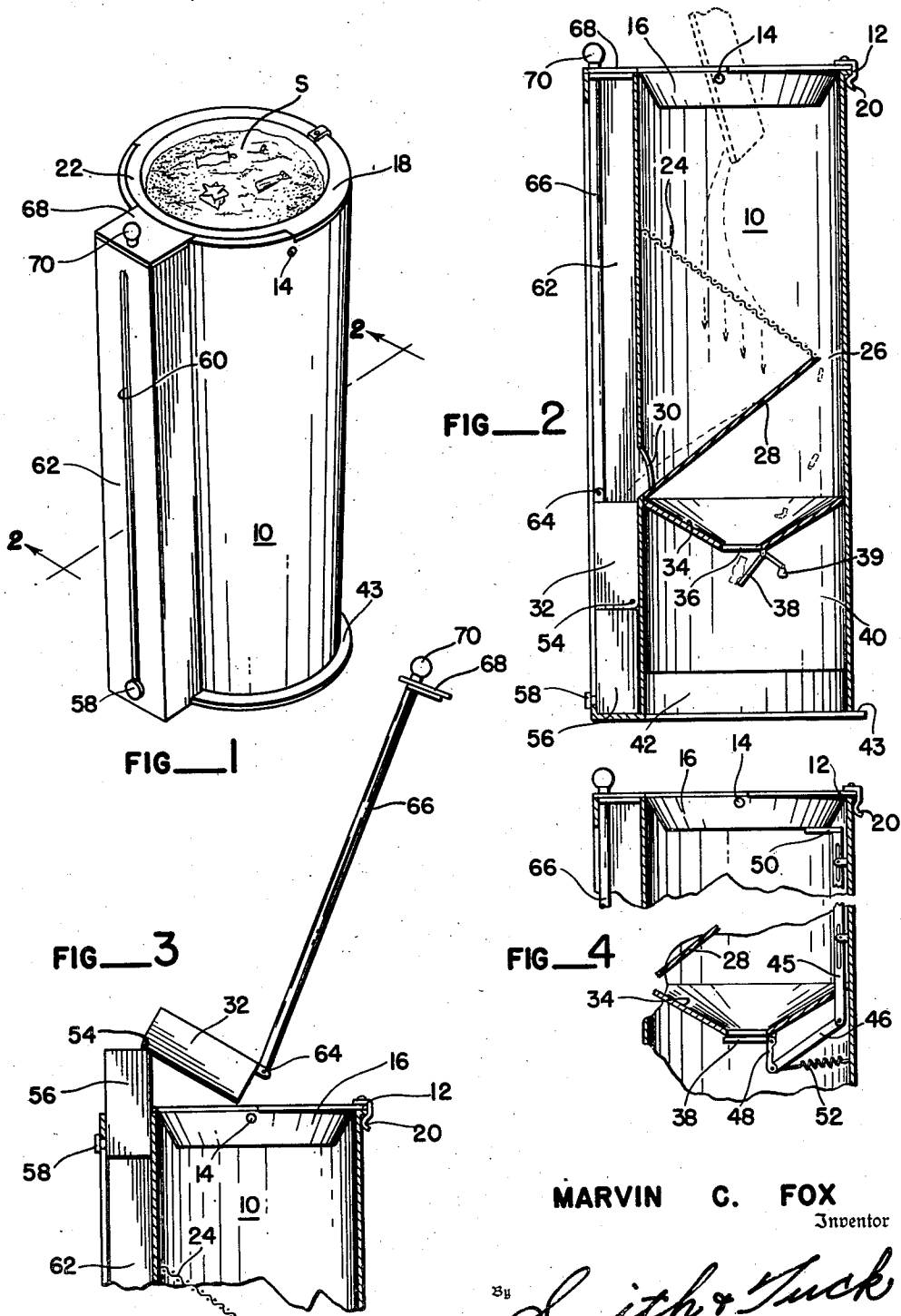
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CIGARETTE SNUFFER WITH SAND RENEWING MEANS

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CIGARETTE SNUFFER WITH SAND  
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1

My present invention relates to sand filled cigarette snuffing devices, wherein the sand is employed to smother the coal and by conduction to reduce its temperature so that it is quickly extinguished. Such sand-filled cigarette snuffers and trays, particularly when employed in public places, must be repeatedly cleaned. This has been an irksome, time-consuming task and in my present invention I provide means whereby the debris, as well as cigarettes, can be separated from the sand periodically and the sand returned to the tray with a minimum of inconvenience.

In public places it is quite common to employ rather large trays or in some instances urns, which are filled with sand and which are used by the public, in such places, as a receptacle for all sorts of trash in addition to the snuffing of cigarettes and cigars. An inspection of such ash filled receptacles will show them to collect such things as apple cores, crumpled up cigarette packages, which have been emptied, paper drinking cups, chewing gum wrappers, and, in fact, almost anything that the individual desires to dispose of. It has been found necessary to frequently clean these; first, because the debris accumulated is unsightly and fires are apt to be started, which if they are not dangerous, are most annoying. Consequently, it is common for an employee to be constantly cleaning such receptacles. This is not an easy task, using normal means, such as a perforated spoon or ladle or the like, and the person doing the work has to repeatedly dispose of small quantities of debris. All of this is time-consuming and objectionable. It is particularly true in theatres and eating establishments that are normally busiest at certain peak hours and it is at these periods employees are also busiest and least available for maintenance.

With my present cigarette snuffing means, I provide a sand-filled tray or pan which is mounted on trunnions so that it may be unlatched and quickly dumped into the main body of a container. The sand as it is dropping downwardly, engages a sloping screen, where the sand particles that are in good condition pass on through the screen and the debris and any sand that may be clogged from moisture and the like, slides off the screen into a bottom receptacle, and I have found that this bottom receptacle should be of such a size that it will require cleaning, at most, once a day.

I further provide means for the convenient replacement of the sand, so that it may be quickly accomplished and done even in the presence of

2

patrons of a public place without offensive handling of trash or spilling of sand or the like.

The principal object of my present invention therefore is to provide a sand-filled tray for snuffing cigarettes, together with means for screening out of the sand any cigarettes or other debris that may be deposited in the same.

A further object of my invention is to provide means for association with a cigarette snuffing tray which will segregate the sand from the trash, depositing the trash in a large storage receptacle and depositing the sand in a container which is used for replacing the sand that has been dumped from the pan.

A further object of my invention is to provide an air-tight storage chamber for debris which has a funnel-shaped cover adapted to direct debris through a central orifice, which in turn may be closed automatically after each use and thus provide a chamber which normally will become filled with carbon dioxide and effectively extinguish any lighted materials that may get into the receptacle.

Further objects, advantages and capabilities will be apparent from the description and disclosure in the drawings, or may be comprehended or are inherent in the device.

In the drawings:

Figure 1 is a perspective view showing one preferred form of my device;

Figure 2 is a vertical sectional view, taken along the vertical plane embracing the line 2-2 of Figure 1;

Figure 3 is a fragmentary view similar to Figure 2 but illustrating the manner of replacing the sand in my tray;

Figure 4 illustrates an alternate construction wherein the storage chamber is mechanically opened and closed for the reception of debris.

Referring more particularly to the disclosure in the drawings, I have illustrated one preferred manner in which my invention may be employed. It should, of course, be borne in mind that the principle might be employed in devices of reduced size, such as would be suitable for use in automobiles, airplanes or on boats or even in the private home. The form I have elected to illustrate is of the type that would be used in a public place and it would normally be the urn type.

The numeral 10 designates generally the main housing of my design. This in its simplest form may be tubular and normally be open at top and bottom, although it may be reinforced at these points with an annular rim or bead. At its top housing the tube 10 is normally provided with a

rim or flange, as 12, and is pierced for the diametrically opposed trunnions 14. Trunnions 14 are secured to and formed as a part of the sand receiving tray or pan 16. By reference to the figures it will be noted that pan 16 has an extended rim 18 for substantially one-half of its circumference. This rim rests upon flange 12 and is secured in its horizontal position by means of the resilient clip member 20. Clip member 20 is arranged so that it may be grasped by the service man and released from flange 12 during the tipping of the tray, as suggested by the dotted line position of the same in Figure 2. It will be noted that the balance of the rim, the portion 22, has an outside diameter slightly less than the inside diameter of housing tube 10 so that the pan may be swung down into housing 10 for dumping purposes.

Referring to Figure 2 of the drawing, it will be noted that as the debris is dumped from pan 16, it falls upon the sloping, preferably, wire screen 24. This screen will freely pass all dry sand and the balance together with the accumulated debris such as cigarettes, apple cores and the like, will slide down the same and be discharged through the restricted opening 26. The sand, on the other hand, as it passes through screen 24, will be caught by the sloping plate or baffle 28 and will be directed downwardly through an opening, as 30 in housing 10, into the sand receiving bucket 32. The bucket 32 has hingedly secured, as at 54, to its lower corner, the guide block 56. This guide block has at its lower end a guide member 58, which is adapted for vertical movement within the guideway 60. This guideway is formed adjacent to and integral with the sand bucket housing 62. At its upper end, bucket 32 has hingedly secured to it, at 64, the operating or pull rod 66. This rod terminates at its upper end in a cover plate 68 and, as a convenience, some form of handle, as the knob 70.

The debris as it passes through the restricted opening 26, will fall upon the funnel-like collecting surface 34. This terminates in a centrally disposed opening 36, which is normally closed by a cover 38 counterweighted by member 39, but which will open under the urgency of added weight. The purpose of cover 38 is to prevent air circulation within the debris collecting chamber 40. And it has been found that if air currents can be kept out of the chamber that gradually the oxygen will be consumed by coals, lighted materials, and the like, entering the same and the chamber will be substantially filled, either with carbon dioxide or inert nitrogen, so that an excellent means is provided for finally snuffing out the burning debris and making the device especially safe.

At the bottom of chamber 40 I provide a removable tray or pan, 42. This pan is provided with a flange, as 43, and forms the actual bottom and support of my device. When it is desired to clean out the debris collected in tray 42, the most convenient manner is to lift the entire device off of the tray, and this is best performed by having someone stand on flange 43, and remove main housing 10. Tray 42 should have a reasonably air-tight fit into the bottom of housing 10, so it will require some force to separate the two. As soon as tray 42 is exposed, of course it is a simple matter to dispose of the materials collected.

In Figure 4, which is broken away to better illustrate the construction, I have provided a mechanical linkage between the cover member

38 and pan 16. This linkage consists of the length of the vertically disposed bar 45, which is slotted and operates in guides, so that it is capable of vertical movement. At its lower end, it is connected by link 46, to a crank-arm 48, which in turn is fixedly secured to cover 38. At its upper end, bar 45 is provided with a foot member 50, so that when the pan 16 is released by pulling out a clip 20, spring 52 will move bar 45 upwardly and open cover 38. This can only be done when pan 16 is being dumped and then as pan 16 is brought back into its normal position and locked, it presses upon foot member 50, moving bar 45 downwardly and closing cover 38.

#### Method of operation

In using my device, the equipment is positioned, as shown in Figure 1, in which tray 16 is substantially filled with sand and is in position to receive all the things that a public receptacle must accept. It is intended primarily, of course, for the snuffing out of cigarettes and cigars by pressing them, lighted end downwardly, into the sand. This has proved to be a very effective extinguishing means, in that the cold body of the sand tends to conduct the heat away very rapidly and this, aided by the smothering effect of the sand, quickly extinguishes such cigarettes and cigars. However, all other sorts of debris are placed in containers of this order—refuse from materials not fully consumed in eating—candy bar wrappers, gum wrappers, paper drinking cups and the like.

Periodically, an attendant grasping latch 20, tips the pan, after the showing in Figure 2, and as the sand and debris fall downwardly, the sand, passing through screen 24, is collected and separated from the debris, which finds its way into the storage compartment 40. The sand on the other hand is collected in the sand bucket 32. As soon as pan 16 has been emptied, it is then dropped back to its normal position and clip retaining member 20 re-engaged to hold the pan in its horizontal position. It is now, of course, empty of sand. To replenish the sand supply, the operator grasps handle 70 and pulls upwardly on rod 66, until guide member 58 comes to the upper limit of its guideway 60. Here the sand bucket is hinged after the fashion shown in Figure 3 and the pan re-supplied with sand. The sand bucket is then returned to its position of rest and cover 68 again covers up the sand bucket housing 62 and the device is again operable. It will be noted that this is a simple operation that does not require carrying about, particularly during busy times, the debris removed from pan 16, and it is the intent of my design that no matter how large or small the unit, it should be designed with a sand capacity and a refuse storage capacity sufficient to accommodate the accumulation that would be expected during a convenient servicing period.

It is believed that it will be clearly apparent from the above description and the disclosure in the drawings that the invention comprehends a novel construction of a cigarette snuffer with sand renewing means.

Having thus disclosed the invention, I claim:

1. A cigarette snuffer with sand renewing means, comprising: a supporting housing; a sand receiving tray supported at the top of said supporting housing adapted to be substantially filled with sand; discharge means for discharging the contents of said tray downwardly into said supporting housing and separating means for sepa-

rating debris of larger size than the sand particles in said contents from sand in said contents and directing the separated sand to one side; a sand bucket and guide means hingedly secured to the bottom of said bucket; a sand bucket housing positioned at one side of said supporting housing and providing a vertical guideway for said guide means so that said sand bucket can travel from a lower position in which said sand bucket is disposed to receive said separated sand to an upper position where said sand bucket can be pivoted on said guide means and said separated sand can be dumped back into said sand receiving tray; and an elongated operating handle hingedly secured to the upper portion of said bucket for moving said sand bucket between its upper and lower positions.

2. A cigarette snuffer with sand renewing means, comprising: a supporting housing; a sand receiving tray supported at the upper portion of said supporting housing; discharge means for discharging the contents of said tray downwardly and separating means for separating debris of larger size than the sand particles in said contents from sand in said contents; a bucket assembly consisting of a sand bucket and guide means pivotally secured to said sand bucket; a vertical guideway for said guide means secured to said supporting housing and guiding said guide means so that said sand bucket can travel from a lower position in which said sand bucket is disposed to receive the separated sand to an upper position where said sand bucket can be pivoted on said guide means and said separated sand can be dumped back into said sand receiving tray; and an operating handle secured to said bucket assembly for moving said sand bucket between its upper and lower positions.

3. The subject matter of claim 2 in which said vertical guideway and sand bucket assembly have key and slot means therebetween limiting said sand bucket from passing upward beyond said upper position and preventing said guide means from becoming disengaged from said vertical guideway.

4. A cigarette snuffer with sand renewing means, comprising: a supporting housing; a sand receiving container supported at the top of said supporting housing; discharge means for discharging the contents of said container downwardly, and separating means, positioned below said sand receiving container in said supporting housing, adapted to separate debris of larger size

than the sand particles in said contents from sand in said contents and directing the separated sand to one side of said supporting housing; a vertical guideway positioned at said side of said supporting housing; a sand bucket positioned in said vertical guideway, said guideway guiding said sand bucket from a lower position in which said sand bucket is disposed to receive said separated sand to an upper position where said separated sand in said sand bucket can be dumped back into said sand receiving container.

5. A cigarette snuffer with sand renewing means, comprising: a supporting housing; a sand receiving container supported at the top of said supporting housing; separating means, positioned below said sand receiving container in said supporting housing, adapted to separate the contents of said sand receiving means when the sand is discharged downwardly therefrom, said separating means separating debris of larger size than the sand particles in said contents from sand in said contents and directing the separated sand to one side of said supporting housing; a sand bucket housing positioned at said side of said supporting housing; a sand bucket positioned in said sand bucket housing and disposed to receive said separated sand; and means for moving said sand bucket upwards in position to dump said separated sand back into said sand receiving container.

MARVIN C. FOX.

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