United States Patent

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[15] **3,643,040**

[45] **Feb. 15, 1972**

[54] **DISINFECTANT FOR A TELEPHONE MOUTHPIECE AND A MANUFACTURING METHOD THEREOF**

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[22] Filed: **Mar. 5, 1970**

[21] Appl. No.: **16,859**

[30] **Foreign Application Priority Data**

Mar. 31, 1969 Japan.....44/23871
Mar. 15, 1969 Japan.....44/22633

[52] **U.S. Cl.**.....**179/185**, 55/279
[51] **Int. Cl.**.....**H04r 1/12**
[58] **Field of Search**.....179/185, 184, 187, 180, 179

[56] **References Cited**

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[57] **ABSTRACT**

The present invention relates to a disinfectant wafer of the disc shape and a container therefor, which is usable by fitting in a telephone mouthpiece and is simple to handle, and yet the disinfectant sublimates or volatilizes at normal temperature and has a strong bactericidal and disinfectant effect.

2 Claims, 8 Drawing Figures

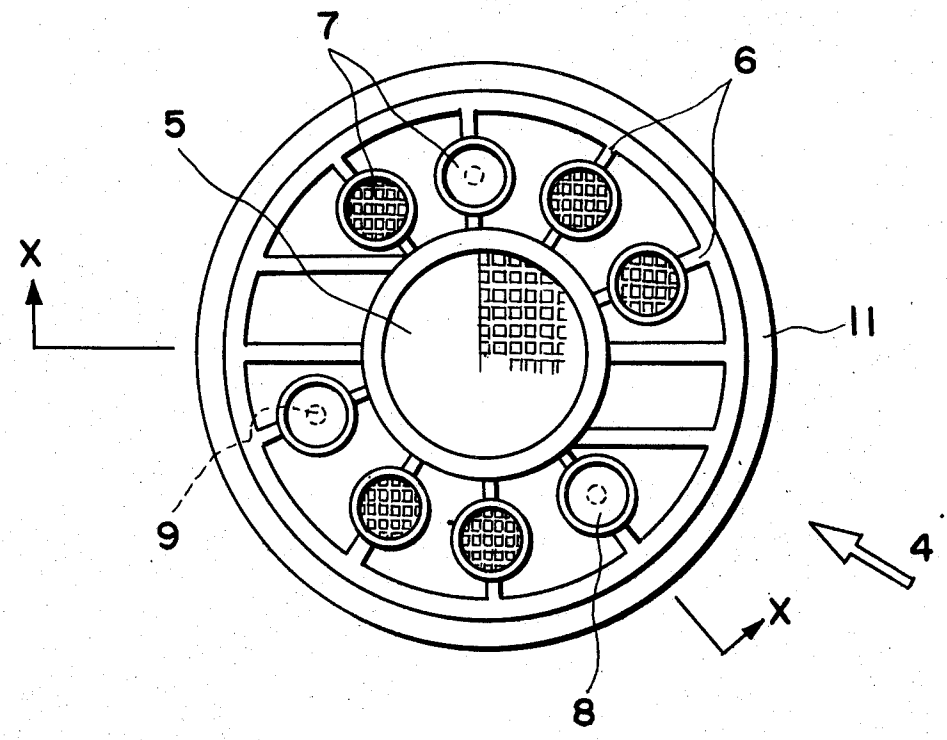


FIG. 1



FIG. 2



FIG. 3

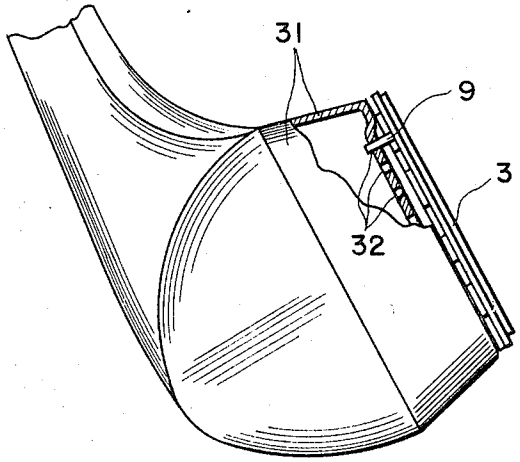
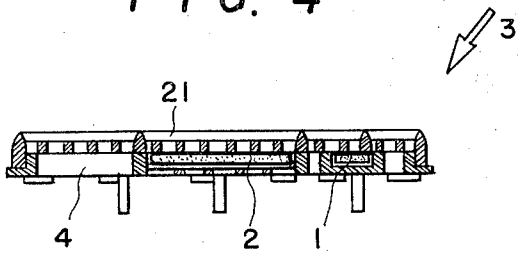


FIG. 4



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FIG. 5

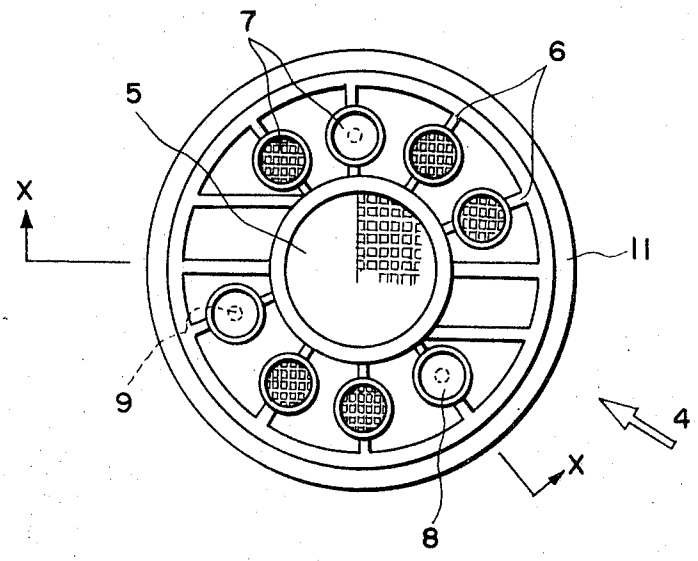
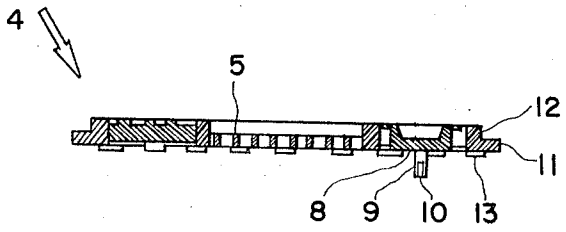


FIG. 6



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FIG. 7

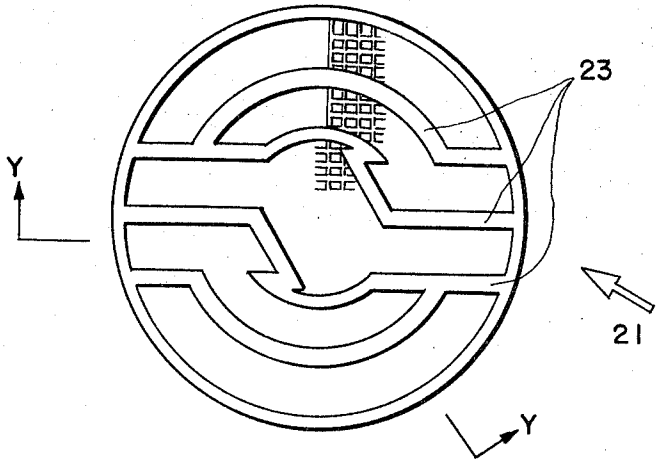
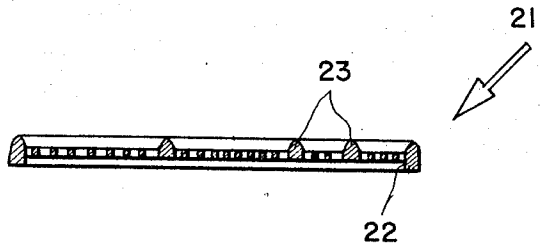


FIG. 8



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DISINFECTANT FOR A TELEPHONE MOUTHPIECE AND A MANUFACTURING METHOD THEREOF

BACKGROUND OF THE INVENTION

In disinfectant devices for instruments such as a telephone, heretofore, volatile medicinal fluid is absorbed into a medium such as absorbent cotton and put in a container, or a medicine in the form of small particles is put into a container to be attached to the instrument. When exchanged the medicine may spill, or otherwise it is necessary to enclose it in another container in order to prevent it from spilling, and accordingly these devices have been uneconomical because, on all such occasions, another container also must be exchanged together with the medicine. Even in the case of particles, the medicine may spill from the container for the medicine, and for the construction of the container with a reticulated portion for ventilating, it is necessary to use material provided with very small meshes because the medicine is in small particles. Therefore, it is impossible to mold the reticulated portion and the container as a body and there have been various knotty problems in manufacturing the container and handling the medicine.

SUMMARY OF THE INVENTION

In order to solve the aforesaid problems, the present invention provides a disinfectant tablet or wafer of a disc shape to fit a similar shape of the container, that is, a tablet made by adding a medicine such as formalin, chlorobutanol, paraformaldehyde, thymol, and 8-oxynoline, together with a suitable perfume, to a colloidal silica, and mixing microcrystalline cellulose and corn starch therewith, and then coloring it and molding it into flat discs.

The primary object of the present invention is to provide a solid disinfectant tablet or wafer for a telephone mouthpiece, having a strong bactericidal force and good sublimation or volatization properties.

The second object of the present invention is to provide a solid disinfectant wafer for a telephone mouthpiece, which is easy to install or to exchange into a disinfectant receptacle in a disinfectant container of a flat shape to be fitted in the mouthpiece of a telephone.

The third object of the present invention is to provide a solid disinfectant wafer for a telephone mouthpiece which not spill from a reticulated telephone disinfectant container provided with large meshes.

Further, another object of the present invention is to provide a solid disinfectant wafer for a telephone mouthpiece which is not offensive to one talking over the telephone and is good in volatization, and has a good durability and can be exchanged easily when consumed.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a plan of larger and smaller tablets in accordance with the present invention.

FIG. 2 is a side view of said tablets shown in FIG. 1.

FIG. 3 is a side view of said tablets in a container fitted in a mouthpiece.

FIG. 4 is a diametral section of a container containing said tablets.

FIG. 5 is a plan of the container body.

FIG. 6 is a section of the container body taken along a plane in line X—X in FIG. 5 and seen from the direction shown by the arrow.

FIG. 7 is a plan of the container cover.

FIG. 8 is a section of said container cover taken along a plane in line Y—Y in FIG. 7 and seen from the direction shown by the arrow.

DESCRIPTION OF THE PREFERRED EMBODIMENT

With reference to the embodiment shown in the drawings in accordance with the present invention, tablets or wafers 1 and 2 shown in FIGS. 1, 2 are made by mixing a bactericidal disinfectant such as paraformaldehyde 5.00 percent, by weight

hexamine of 7.00 percent by weight and thymol 5.00 percent by weight together with a perfume 0.90 percent by weight, a colloidal silica 2.00 percent, by weight microcryptalline cellulose 60 percent by weight and corn starch 20 by weight, and then coloring it and hardening by adding a coloring matter 0.10 percent by weight, and molding the mixture into a flat disc form or a flat ring.

Container 3 is required to be a flat shape because it is disposed in the telephone mouthpiece, and comprises a container body 4 and cover 21 fitted thereon, as shown in FIGS. 3, 4, 5, so as allow ventilation of the disinfectant to be volatized, not interfere with use of the telephone, and to be inexpensive in manufacture. Said container body 4 is a disc-shaped open work body molded of a synthetic resin.

Concentrically with the peripheral frame of said container body 4 there is provided a larger disinfectant receptacle 5, and radially outward of said receptacle 5 there are provided several ribs 6 about the central portion of said each rib 6 there is provided a smaller disinfectant receptacle 7, several of said receptacles 7 having a bottom 8 on the back of which there is provided perpendicularly a leg 9 of outer diameter a little larger than the inner diameter of the usual hole 32 of mouthpiece 31 as shown in FIG. 3, said leg 9 having a hollow 10 formed longitudinally along the center thereof. The bottoms of said larger disinfectant receptacle 5 and smaller disinfectant receptacles 7 having no legs 9 are reticulated as shown in FIG. 5. The peripheral framework of said container body is provided with a stepped flange 11, and vertical surface 12 thereof is tapered a little so as to fit internal circumferential surface 22 of cover 21. On the back of flange 11 raised portions 13 are provided at proper intervals.

Cover 21 is a disc-shaped reticulated body made of a synthetic resin and molded in one piece and is provided with strengthening ribs 23 of any suitable shape as shown in FIGS. 7 and 8. Internal circumferential surface 22 is formed so as to fit tightly surface 12 of the flange of container body 4.

In using the present invention, the larger and smaller disc-shaped disinfectants 1, 2, respectively, are inserted in disinfectants receptacles 5 and 7 of container body 4 and cover 21 is affixed thereover, the internal circumferential surface 22 of cover 21 and vertical surface 12 of the peripheral framework of container body 4 fitting tightly with each other, preventing the wafers from getting out of place during handling the telephone.

For attaching container 3, upon pushing legs 9 provided on container body 4 into holes 32 of mouthpiece 31 said legs 9 are compressed by reason of the hollows 10 to contact tightly the walls of holes 32 and thus to be fixed to said mouthpiece 31.

The volatile gas of the disinfectant in container 4 passes through the container body so that the mouthpiece is disinfected throughout, and on the surface where the container is in contact with the mouthpiece there are the raised portions 13 so that the disinfectant gas goes round to the sides of the mouthpiece. When the disinfectant is used up, because of the tablet or wafer form it is easy to take off the cover and exchange a new tablet or wafer for the expended one.

I claim:

1. A disinfectant wafer for telephone mouthpieces comprising:

A mixture of microcrystalline cellulose about 60 percent by weight, corn starch about 20 percent by weight, paraformaldehyde about 5.00 percent by weight, hexamine about 7.00 percent by weight, thymol about 5.00 percent by weight, and colloidal silica about 2.00 percent by weight, and a perfume about 1.00 percent by weight;

said mixture being molded into the disc form in conformity with the shape of a disinfectant receptacle in a container.

2. A telephone mouthpiece sterilizer comprising:

disinfectant wafers as set forth in claim 1;

a container having a peripheral flange, raised portions provided at intervals on the back of said peripheral flange, said container including a larger disinfectant receptacle

and smaller disinfectant receptacles to contain disinfectant wafers, rib means connecting said peripheral flange and said disinfectant receptacles, and legs provided on the back of some said smaller disinfectant receptacles and adapted to fit securely in the usual holes of a telephone mouthpiece; and

a reticulated cover of disc shape fitting on said container.

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