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[54] **SANITARY TOOTHBRUSH HOLDER**

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[58] **Field of Search** ..... 21/83, 84, 88; 312/31.1, 312/31.2, 206, 31; 206/209; 220/23; 248/205 A

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[57] **ABSTRACT**

A sanitary toothbrush holder intended for holding a plurality of toothbrushes in a container completely enclosing the toothbrushes and providing a dehydrating and sanitizing atmosphere therein along with air circulation therethrough for drying the toothbrushes and holding the same in a sanitary manner, the container adapted to be mounted on a vertical surface, such as a wall, with the handle ends of the toothbrushes received in toothbrush holding recesses formed in the interior bottom of the container, the top of the container being open and adapted to be closed by a swinging horizontal cover having a compartment defined therein which is in communication with the interior of the container and which is intended to hold a plurality of sanitizing and dehydrating pellets which provide the desired atmosphere to the container interior.

2 Claims, 4 Drawing Figures

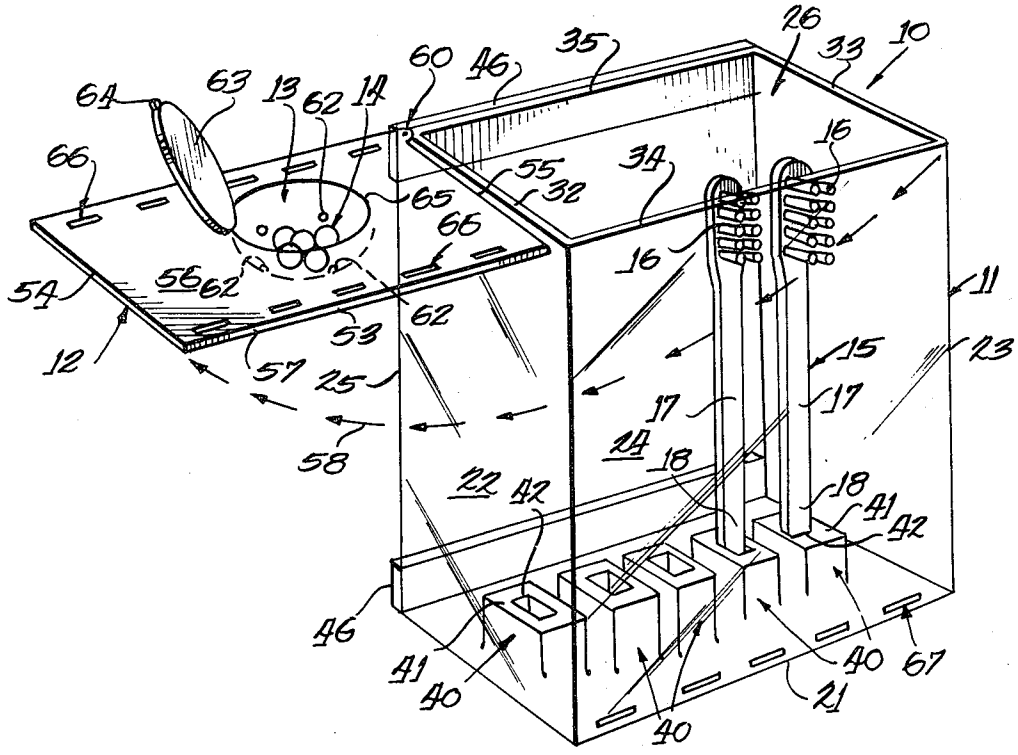


Fig. 2.

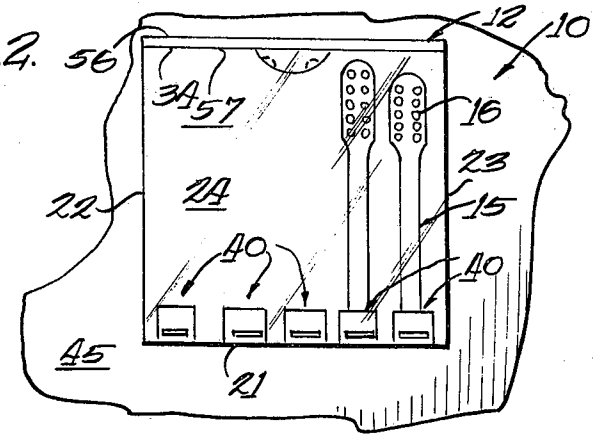


Fig. 1.

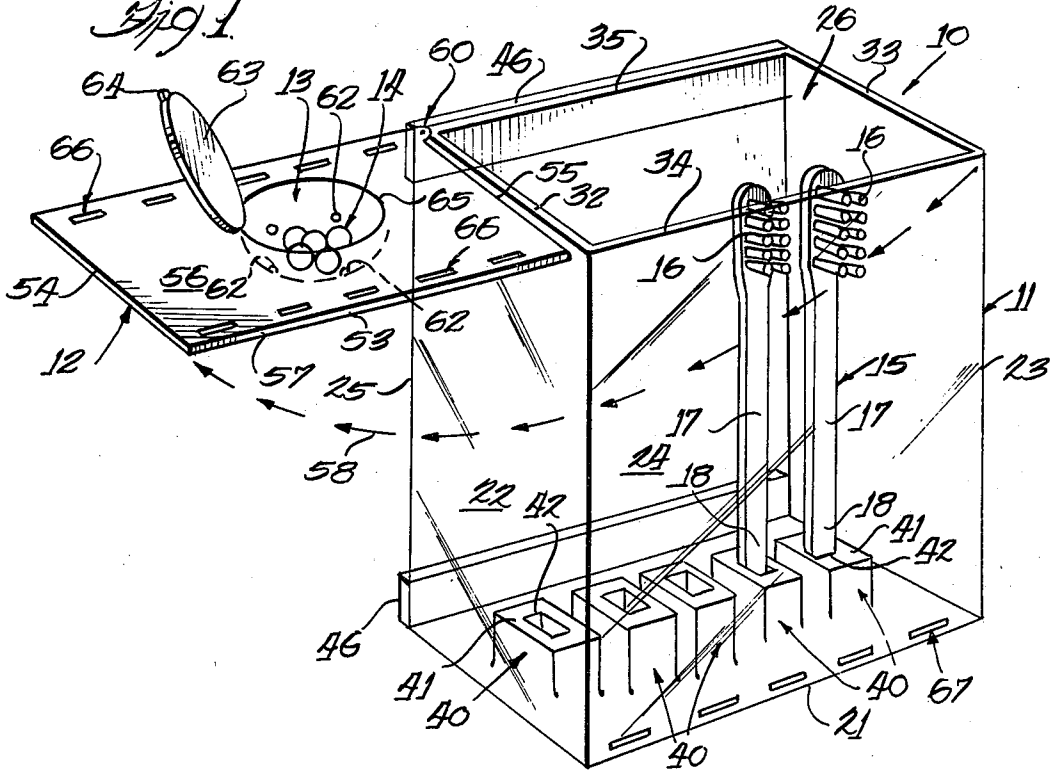


Fig. 3.

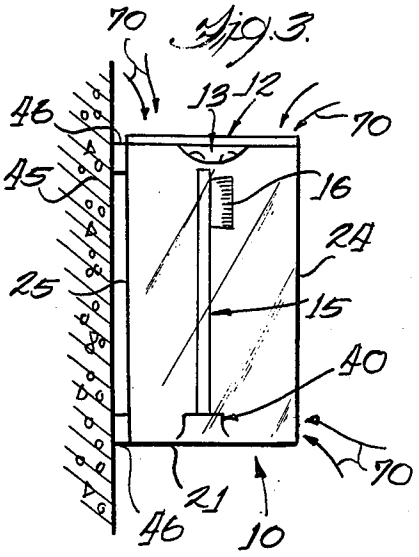
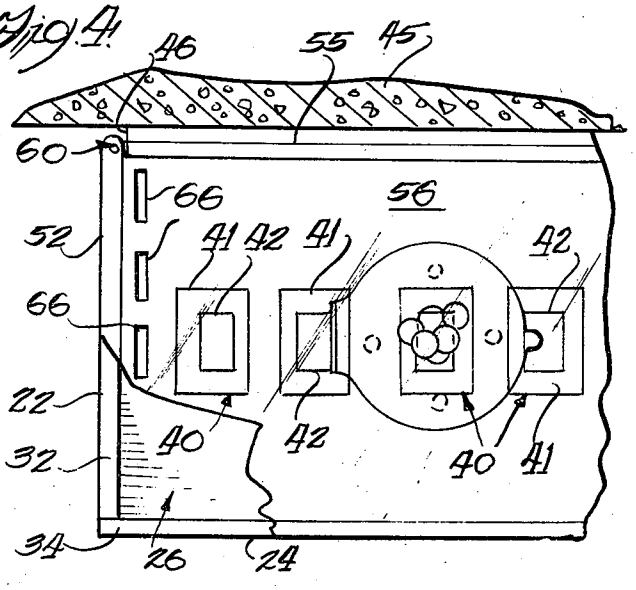


Fig. 4.



SANITARY TOOTHBRUSH HOLDER

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates generally to toothbrush holders and more particularly to a novel and improved toothbrush holder having a container for storing toothbrushes between uses and which provides an atmosphere therein of a sterilizing and dehydrating nature, the compartment being substantially closed to the surrounding atmosphere to prevent dirt and the like from contacting the brushes while in the container.

2. Description of the Prior Art

For storing and holding toothbrushes between times of using the same there are presently two general classes of forms of toothbrush holders available to the individual. The first class of forms comprises those devices where the toothbrushes are suspended or in some way supported in the open air which, while allowing for the proper drying of the toothbrush, also allows the toothbrushes to be contaminated by dirt, dust and other contaminants in the atmosphere so that the toothbrushes are dried and stored in an unsanitary manner. In the other class of storage devices the toothbrushes are suspended or rested in a container or holder which is closed to the atmosphere thus keeping the toothbrushes free from contamination, but such devices suffer the problem of not providing sufficient circulation of air about the toothbrush to dry the same so that the toothbrush soon becomes foul and unsanitary.

While attempts have been made in the prior art to overcome such problems encountered by the two classes of storage devices for toothbrushes, such as by providing powered circulatory means within a closed container and passing the air through chemical substances for drying the same, all of such devices are either complex in structure, expensive to manufacture, bulky and aesthetically displeasing, require constant maintenance on the part of the individual utilizing the same, or suffer other problems and difficulties in attempting to provide a satisfactory solution of the problem of storing toothbrushes in a sanitary manner while still permitting the adequate drying of the same so that the toothbrushes do not become foul.

SUMMARY OF THE INVENTION

The present invention remedies and overcomes all of the foregoing deficiencies and disadvantages of presently available toothbrush storage and holding devices by providing a novel sanitary toothbrush holder intended for separately holding a plurality of toothbrushes in a vertical position in a container with the container protecting such toothbrushes from dust and contaminants in the atmosphere while providing a sanitizing and dehydrating atmosphere within the container for the proper drying of the toothbrushes in a sanitary manner.

It is a feature of the present invention to provide a sanitary toothbrush holder for holding a plurality of toothbrushes in a sanitizing and dehydrating atmosphere while still permitting the toothbrushes to be readily selectively and individually removed from the container and replaced into the container without disturbing or contacting the other toothbrushes therein.

A further feature of the present invention provides a toothbrush container intended for holding a plurality of toothbrushes in a separate manner therein and in which

a compartment is provided for the placing of sanitizing and dehydrating pellets with the fumes thereof being in communication with the container and with such compartment being accessible from exterior of the container for inserting and removing pellets thereinto without having to open the container.

Still a further feature of the present invention provides a toothbrush holding container wherein the toothbrushes are held in vertical positions separate from each other so that they will readily dry in a protected manner.

Still a further feature of the present invention provides a toothbrush holder for retaining a plurality of toothbrushes in an atmosphere generally free from bacteria and viruses which exist in the air, and permitting the toothbrushes to dry in a sanitizing atmosphere.

The provision of a toothbrush holding container for a plurality of toothbrushes, such as briefly outlined above, and possessing the stated advantages, constitutes the principal features of the present invention. The provision of a toothbrush holder which is relatively simple in its construction and which therefore may be readily manufactured at a relatively low cost and by simple manufacturing methods; one which is devoid of moving parts and which therefore is unlikely to get out of order; one which is durably constructed and which therefore may be guaranteed by the manfacturer to withstand many years of intended usage; one which is aesthetically pleasing and refined in appearance; one which holds a plurality of toothbrushes in a compact manner requiring a minimum of mounting space for the holder; and one which, otherwise, is well adapted to perform the services required of it, are further desirable features which have been borne in mind in the production and development of the present invention.

Other features and advantages of this invention will be apparent during the course of the following description.

BRIEF DESCRIPTION OF THE DRAWINGS

In the accompanying drawings forming a part of this specification, and in which like reference characters are employed to designate like parts throughout the same:

FIG. 1 is front perspective view of a sanitary toothbrush holder constructed in accordance with the present invention;

FIG. 2 is a front elevational view of the toothbrush holder mounted on a vertical supporting surface;

FIG. 3 is a side elevational view of the toothbrush holder of FIG. 2; and

FIG. 4 is an enlarged fragmentary top plan view of the toothbrush holder, with the cover partially broken away to show the interior of the container.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to the drawings there is disclosed a sanitary toothbrush holder constructed in accordance with the principles of the present invention and which is designated generally by the reference numeral **10**, the holder being comprised of an open top container **11** having a cover **12** with a compartment **13** disposed centrally thereof for holding a plurality of sanitizing and dehydrating pellets **14** therein. The holder **10** may be manufactured out of metal, wood, hard rubber, plastic, or any other suitable satisfactory material providing an

aesthetically pleasing and refined appearance. The preferred embodiment is fabricated of a high density polyethylene plastic to provide either a transparent toothbrush holder, or by introducing appropriate coloring dyes into the plastic prior to the fabrication of the holder, the holder may be provided in a variety of different colors attractive to the prospective purchaser.

The container **11** is of a hollow box-like shape having a horizontal bottom wall surface **21**, opposed vertically extending side walls **22** and **23**, a vertical front wall surface **24**, and a vertical back wall surface **25**, the walls defining therebetween interiorly thereof an elongated rectangular compartment **26** of suitable depth and width to hold therein a plurality of toothbrushes **15** each having a brush head portion **16** with an elongated shank **17** extending therefrom with the opposite end defining a handle end portion **18**. Each of the wall surfaces **22–25** terminates at top peripheral edges **32–35** respectively with such edges lying substantially coplanar to define a horizontal plane extending parallel to the bottom surface **21** and spaced a distance upwardly therefrom greater than the length of a normal toothbrush **15**.

Disposed centrally of the interior surface of the bottom wall surface **21** and extending therealong in a spaced apart manner is a plurality of boss members **40** each having a rectangular horizontal cross-section and projecting normal to the bottom surface, each boss member having a top horizontal surface **41** with a recess **42** defined interiorly of the boss and opening upwardly and outwardly of the top surface **41**, the recesses being shown in the drawings as rectangular in shape with it being understood that such recesses may be of any size and configuration adapted to supportively receive therein the handle end portion **18** of a toothbrush **15** in a manner retaining the toothbrush supported therein and projecting substantially vertically therefrom. The boss members **40** and recesses **42** are disposed a sufficient distance apart and constructed in a manner to retain the toothbrushes stored separately from each other with the bristles of the brush head **16** spaced apart from the bristles of all other toothbrushes to permit air flow thereabout for drying the same in a sanitary manner.

For mounting the container **11** to a vertical surface, such as a wall or door **45** there is provided a pair of adhesive strips **46** mounted on the exterior surface of the back wall surface **25** and extending along the bottom and top edges thereof, such strips provided with an adhesive material on the exterior surface thereof adapted to firmly adhesively grip the vertical surface upon the strip being placed in adjacent juxtaposition therewith so as to mount the container **11** to such surface.

The cover **12** is substantially flat and is of a size and configuration to completely close the top opening of the compartment **26** in a manner to close the container **11**, the cover including a front edge **54**, a back edge **55**, opposed end edges **52** and **53**, an exterior surface **56**, and an interior surface **57**. The cover is of a rectangular configuration adapted to overlap the container **11** to close the compartment **26** with edges **52–55** overlapping container wall surface peripheral top edges **32–35** respectively.

The cover is hingedly connected at the corner portion interconnecting edges **52** and **55** by a suitable hinge **60** to the container side wall **22** adjacent the top corner thereof nearest the back surface **25** for swinging pivotal movement thereabout in a horizontal plane in the direction of arrows **58** to open and close the container.

Disposed centrally of the cover **12** and projecting downwardly and outwardly therefrom is the compartment **13** formed integrally with the cover, the compartment being of a hemi-spherical shape and having a plurality of openings **62** extending therethrough placing the interior of the cover compartment into communication with the interior of the container compartment **26**. To close the cover compartment **13** there is provided a circular cover **63** having a lip **64** projecting diametrically from one edge thereof and which is adapted to be snugly received in the open top of the compartment **13** with the lip received in a complementary recess **65** formed in the cover **12** such that when in position the cover **63** lies co-planar with the cover **12** to seal the top of the compartment **13**.

The compartment **13** is of a size and configuration adapted to receive therein a plurality of sanitizing pellets **14** which may be manufactured of materials having excellent hygroscopic characteristics to absorb moisture from the atmosphere, such as calcium chloride, silica gel, and the like, with such pellets being treated with an anti-bacterial sanitizing substance such that the fumes provided from the pellets would pass through openings **62** into container compartment **26** to provide a dehydrating and sanitizing atmosphere to the toothbrushes **15** within the container for drying the same in a sanitary manner.

To permit air circulation through the compartment **26** when the cover **12** is in the closed position, the cover is provide with a plurality of air vents **66** extending therethrough with the container front wall surface **24** being similarly provided with a plurality of air vents **67** disposed along the bottom edge thereof adjacent bottom surface **21** and extending therethrough, such vents being of a size and configuration and disposed in the relative surfaces to provide an air flow through the compartment **26** while still protecting the brushes **15** therein from dust, dirt and other air borne contaminants as the air flow therethrough would be of a smooth continuous motion where such contaminants would have already been dropped from the air due to the exceptionally slow motion thereof through the container.

Further, it is to be understood that the hinge **60** permits for the slight upward tilting of the cover **12** relative to the top edges of the container wall surfaces as the cover is swung between the open and closed position so as to permit the downward projecting compartment **13** to pass over the container wall edges.

In operation, the container **11** is either secured to a vertical surface **45** by adhesive strips **46**, or is rested on a horizontal surface in a suitable manner on bottom surface **21**, a supply of pellets **14** are inserted into compartment **13** with the compartment then being sealed by cover **63**, with the individual toothbrushes **15** then being inserted into the compartment **26** with the handle end portions **18** engaged in associated separate recesses **42**. The cover **12** is then placed in the closed position with the toothbrushes now being completely closed within the container and subjected to the dehydrating and sanitizing fumes from the pellets providing a drying and sanitizing atmosphere within the container while permitting a smooth continuous air flow through the air vents **66** and **67**, such as designated by arrows **70**, such air flow being treated by the fumes from the

pellets to maintain the desired atmosphere within the container. To remove a toothbrush from the container, the cover **12** is pivoted about hinge **60** to expose the top of the compartment **26**, the desired toothbrush is removed therefrom, with the cover then being closed until further storage of the toothbrush is required.

There is thus provided a novel toothbrush holding container permitting a plurality of toothbrushes to be separately stored between usages in a manner protected from atmospheric dirt, dust and other contaminants while permitting air flow thereabout to properly dry the toothbrushes after use, such air flow being of a sanitizing nature so as to both sanitize and dry the toothbrushes, after which the sanitary atmosphere within the container retains the sanitary condition of the toothbrush until further use thereof.

It is to be understood that the form of this invention herewith shown and described is to be taken as a preferred example of the same, and that this invention is not to be limited to the exact arrangement of parts shown in the accompanying drawings or described in this specification as various changes in the details of construction as to shape, size, and arrangement of parts may be resorted to without departing from the spirit of the invention, the scope of the novel concepts thereof, or the scope of the sub-joined claims.

Having thus described the invention, what is claimed is:

1. A toothbrush holder intended for the holding of a plurality of toothbrushes in a sanitary manner, the holder comprising, in combination:

a hollow box-like rectangularly shaped container including a horizontal bottom surface, opposed parallel vertical side wall surfaces, a front vertical wall surface, and a back vertical wall surface, said wall surfaces depending upwardly from the peripheral edges of said bottom surface and equal vertical distance with each of said wall surfaces terminating at the top thereof in a horizontally extending top edge portion, said top edge portion of said wall surfaces being co-planar with each other and definging a horizontal plane extending parallel to the container bottom surface and spaced vertically upwardly therefrom a distance greater than the length of a conventional toothbrush to be held in said container;

a compartment defined interiorly of said container surfaces extending upwardly from the interior of said bottom surface and opening out of the top of said container between said top edges of said side wall surfaces;

a plurality of longitudinally spaced apart and aligned rectangularly elongated air vent slots extending horizontally at spaced intervals in said container front wall surface adjacent said bottom surface;

a plurality of rectangularly shaped boss members longitudinally aligned and spaced apart and extending along the longitudinal midline of the interior surface of the bottom surface of said container intermediate said side wall surfaces thereof, each boss member projecting vertically upwardly an equal distance from said container bottom surface and terminating in a horizontally extending top surface;

a plurality of vertically extending rectangularly cross-section recesses, each recess disposed in one of said boss members centrally thereof and projecting vertically upwardly therethrough and opening out of said top surface thereof;

each of said recesses adapted to receive therein the handle end portion of a toothbrush inserted axially thereinto in a manner to supportedly retain the toothbrush in a vertical position projecting outwardly of the recess and into said container compartment;

said recesses of said boss members being spaced longitudinally apart along said bottom surface midline a sufficient distance to assure no possibility of contact between adjacently supported toothbrushes;

a flat rectangularly shaped cover member of a size and shape to completely close the open top end of said container compartment, the cover member having a flat top surface, a flat bottom surface, opposed parallel side edges, and opposed parallel back and front edges;

said cover being of an area configuration such that the edges of said cover member overlap the respective top peripheral edges of the associated container side, front and back wall surfaces;

a vertical pin interconnecting a single corner of said cover defined between a side edge and a back edge thereof to a corner of said container at a top edge thereof wherein said container corner is defined as a corner between said vertical back wall surface and one of said side wall surfaces, said pin forming a hinge providing for swingable movement thereabout of said cover in a substantially horizontal plane between a closed position wherein the cover closes the top end of said container with associated cover edges overlapping and resting on associated container top edges, and an open position wherein said back edge of said cover is disposed adjacentmost to a side wall top edge of said container with said cover extending outwardly of said adjacentmost side wall and substantially parallel to said container bottom surface;

said hinge pin permitting a slight vertical canting of the main portion of said cover thereabout to provide required clearance of said cover over the top edges of said container wall surfaces when said cover is swung between said open and said closed positions about said hinge pin;

said cover providing selective ingress and egress of said container compartment;

a compartment formed integrally with said cover centrally thereof and projecting downwardly therefrom out of the bottom surface thereof, the cover compartment being of an inverted hemi-spherical shaped having the base thereof opening outwardly of said top surface of said cover;

said opening being of a circular cross-sectional configuration;

a plurality of small diameter apertures disposed in spaced apart positions completely over said wall surfaces of said cover compartment to place the interior of said cover compartment in communication with the interior of said container compartment when said cover is in the closed position;

a closure cover of a circular diameter complementary to the diameter of said base opening of said cover compartment hingedly connected to said cover for movement between a closed position lying substantially co-planar with said cover in said

opening and sealing said cover compartment, and an open position apart from said cover compartment opening to permit ready ingress thereinto and ready egress thereoutof;

a pair of transversely spaced apart longitudinally extending slots providing air vents in said cover member, each row of slots disposed adjacent one of the side edges of said cover member and extending longitudinally therealong and spaced slightly inwardly therefrom with the slots being spaced apart from each other, the slots being of an elongated rectangular configuration;

said cover compartment being of a sufficient size to loosely receive therein a plurality of sterilizing and dehydrating pellets of a size preventing the same from passing through said cover compartment apertures and with the fumes therefrom passing freely through said cover compartment apertures to communicate with the interior of said container compartment when said cover member is in the closed position;

said slot forming air vents in said cover member providing with said slot forming air vents in said container front wall surface a smooth slow constant air flow through the container compartment, this air flow mixing with the fumes from the pellet in the cover compartment to provide a sanitizing and dehydrating atmosphere within said container compartment about said toothbrushes stored therein;

a pair of elongated flat rectangular strips spaced vertically apart and extending horizontally across the top and bottom edges respectively of said container back wall surface between opposite side edges thereof; and

a layer of pressure sensitive adhesive disposed on the exterior surface of each of said strips to adhesively grip a vertical surface placed in juxtaposition therewith, such as a wall, door and the like, in a manner to support said container thereon.

2. A toothbrush holder as set forth in claim 1 further characterized by said container and said cover member being manufactured of a high density polyethylene plastic material.

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