A toothbrush holder assembly and method includes a hinged container housing with two hinged halves that cooperate between open and closed conditions. In the open condition, the hinged halves of the container housing are swung open to allow a toothbrush head to be inserted into or removed from the housing. In the closed condition, the housing is adapted to store the toothbrush with the toothbrush head enclosed between the opposing hinged halves and with the neck of the toothbrush extending out from the housing through an opening. The housing is secured to a base that is also coupled to two separated suction cups. The assembly is particularly adapted for vertical storage of a toothbrush when oriented with the suction cups vertically spaced such that the container housing halves open and close horizontally.
FIG. 1
RELEASABLE TOOTHBRUSH HOLDER
CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] Not Applicable

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

[0002] Not Applicable

REFERENCE TO A COMPUTER PROGRAM APPENDIX

[0003] Not Applicable

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BACKGROUND OF THE INVENTION

[0005] 1. Field of the Invention
[0006] This invention is a toothbrush holder assembly and method. More specifically, it is an assembly and method for storing a toothbrush in a readily accessible manner and also allowing for ready release and restoration of the toothbrush to accommodate regular intermittent use.

[0007] 2. Description of the Background Art

BRIEF SUMMARY OF THE INVENTION

[0009] An object of the invention is to provide a toothbrush holder that is readily accessible in a personal hygiene environment, such as a mirrored sink environment.

[0010] Another object of the invention is to provide a toothbrush holder with a container housing that is easily adjusted between a closed storage mode for storing and protecting the toothbrush head between uses and an open access mode that allows the head of the toothbrush to be readily taken from or placed into the container housing.

[0011] Another object of the invention is to provide a toothbrush holder that is readily secured to and useable from a surface associated with a personal hygiene environment, such as a mirror.

[0012] Further objects and advantages of the invention will be brought out in the following portions of the specification, wherein the detailed description is for the purpose of fully disclosing preferred embodiments of the invention without placing limitations thereon.

BRIEF DESCRIPTION OF THE DRAWINGS

[0013] The invention will be more fully understood by reference to the following drawings which are for illustrative purposes only:

[0014] FIG. 1 is a perspective view, taken from front above, of the toothbrush holder assembly of the invention.

[0015] FIG. 2 is a similar perspective view shown in FIG. 1, except showing the assembly in the context of use in holding a toothbrush.

[0016] FIG. 3 is a front view of the assembly shown in FIG. 1.

[0017] FIG. 4 is a back view of the assembly shown in FIG. 1.

[0018] FIG. 5 is a right side view of the assembly shown in FIG. 1, and is substantially a mirror image of a left side view of the assembly (not shown).

[0019] FIG. 6 is a similar right side view of the assembly shown in FIG. 5, except showing in phantom various internal structures associated with various components of the assembly.

[0020] FIG. 7 is a top view of the assembly shown in FIG. 1.

[0021] FIG. 8 is a bottom view of the assembly shown in FIG. 1.

[0022] FIG. 9 is a similar bottom view shown in FIG. 8, except showing in shadow certain internal structures associated with various components of the assembly.

[0023] FIG. 10 is a similar perspective view shown in FIG. 1, except showing the assembly in an open condition versus the closed condition shown in FIG. 1.

[0024] FIG. 11 is a similar perspective view shown in FIG. 10, except showing certain internal structures of the container housing of the assembly in shadow, and also showing the assembly in the open condition in context of a toothbrush also shown in shadow.

[0025] FIG. 12 is a similar perspective view shown in FIG. 11, except showing an exploded view of the open container housing with the toothbrush removed.

[0026] FIG. 13 is an exploded perspective view of the assembly shown in FIG. 1, including two suction cups, a base, and a container housing all shown separated for illustration, and further shows with dashed line the interrelationship between those components in forming the overall assembly.

[0027] FIG. 14 shows an exploded bottom view of the various components of the assembly shown in FIG. 13.
FIGS. 15A-B show top views of two inter-cooperating halves of the container housing of the assembly in separated and interlocking hinged relationships, respectively, related to the closed condition for the container housing.

FIGS. 16A-B show bottom views of the same inter-cooperating halves of the container housing shown in FIGS. 15A-B, respectively, also with respect to the closed condition.

FIGS. 17A-B show similar bottom views of the inter-cooperating halves of the container housing shown in FIGS. 16A-B with respect to the closed condition, except further showing in shadow various internal structures within the housing halves.

FIG. 18 shows a right side view of a hinged container housing that is adapted for use in an overall assembly according to the invention and that is similar to that shown in FIGS. 15A-17B, and shows in shadow certain internal structure within the housing.

FIGS. 19A-B show top views of the inter-cooperating container housing halves separated and in interlocking hinged relationships, respectively, but with respect to the open condition for the container housing.

FIGS. 20A-B show bottom views of the same inter-cooperating halves of the container housing shown in FIGS. 19A-B, respectively, also with respect to the open condition.

FIGS. 21A-B show similar bottom views of the inter-cooperating halves of the container housing shown in FIGS. 20A-B, respectively, and further shows in shadow certain internal structure within the housing.

DETAILED DESCRIPTION OF THE INVENTION

Referring more specifically to the drawings, for illustrative purposes the present invention is embodied in the apparatus generally shown in FIG. 1 through FIG. 21B. It will be appreciated that the apparatus may vary as to configuration and as to details of the parts, and that the method may vary as to the specific steps and sequence, without departing from the basic concepts as disclosed herein.

As generally shown throughout the Figures, the toothbrush holder assembly of the invention includes two suction cups that secure to a base that holds a container housing.

The suction cups in the highly beneficial embodiment shown and described include two individual cups that are positioned in the overall assembly to provide a top suction cup and a bottom suction cup. These cups are secured to the base via two respective grooved openings into annular seats such that a neck extends between the suction cup and an enlargement to provide a mechanical fit. This design allows for easy manufacture, which may include either custom suction cups or off the shelf products for use in the overall assembly. The inclusion of both top and bottom suction cups allows for secure attachment of the assembly to a surface such as a mirror or bathroom tile or wall. The two points of suction attachment allow for robust adhesion during use for toothbrush storage believed to be superior to for example use of only one suction cup if centrally located along the base. However, despite the significant benefit of the two vertically oriented cup embodiment, other variations are also within the intended scope of the invention, in particular with respect to other beneficial features of the assembly and methods for use. For example, one suction cup may be used, or more than two, without departing from the intended scope.

The base of the assembly is adapted to be secured to the suction cups and also to the two interlocking halves of the container housing, and has various beneficial structures shown variously among the Figures for allowing for such intercooperating engagement during normal intended use. In particular, base has a length adapted for robust two-suction cup securement to a surface, and also has structures for receiving and holding the two hinged intercooperating halves of the container housing during open and closed conditions.

The container housing beneficially has two inter-cooperating halves that are adapted to interlock together in a hinged relationship that allow the halves to open and close, thereby allowing toothbrush to be inserted into or taken from the housing (in the open condition), or the toothbrush to be stored with the bristle head protected (in the closed condition). In the various embodiments shown, the container housing includes side vents, shown in a serpentine shape embodiment, on each half of the container housing. Such vents may provide for drying for example of a wet toothbrush stored therein. Accordingly, various different shapes or arrangements of venting may be used other than that shown without departing from the scope of the invention.

The various components may be made according to various known materials and methods as would be apparent to one of ordinary skill based upon this disclosure. In one particular embodiment, each component is constructed of a plastic material, and in particular a rigid polymer may be used for the base in particular and also the housing, though more flexible materials such as elastomers (e.g. rubber or polyurethane elastomer) may be used for the suctioning portions at least of the cups. In another particular embodiment, the container housing is at least partially translucent such that at least a portion of the interior is visible in the closed condition, for example rendering the toothbrush head at least partially visible through the housing.

The hinged halves may be provided separately for assembly together to work within the overall holder system, or may be provided pre-locked in the hinged relationship. In fact, all of these components may be provided pre-assembled, or may be provided separately for later final assembly. In addition, the assembled system may be provided with all components permanently secured to each other, or may be adapted to be disassembled, such as for example in order to remove the container housing from the wall for use as a travel holder.

Accordingly, it should be apparent to one of ordinary skill based upon this disclosure that this invention achieves the various objects of the invention.

Although the description above contains many specificities, these should not be construed as limiting the scope of the invention but as merely providing illustrations of some of the presently preferred embodiments of this
invention. Thus the scope of this invention should be determined by the appended claims and their legal equivalents. Therefore, it will be appreciated that the scope of the present invention fully encompasses other embodiments which may become obvious to those skilled in the art, and that the scope of the present invention is accordingly to be limited by nothing other than the appended claims, in which reference to an element in the singular is not intended to mean “one and only one” unless explicitly so stated, but rather “one or more.” All structural, chemical, and functional equivalents to the elements of the above-described preferred embodiment that are known to those of ordinary skill in the art are expressly incorporated herein by reference and are intended to be encompassed by the present claims. Moreover, it is not necessary for a device or method to address each and every problem sought to be solved by the present invention, for it to be encompassed by the present claims. Furthermore, no element, component, or method step in the present disclosure is intended to be dedicated to the public regardless of whether the element, component, or method step is explicitly recited in the claims. No claim element herein is to be construed under the provisions of 35 U.S.C. 112, sixth paragraph, unless the element is expressly recited using the phrase “means for.”

What is claimed is:

1. A toothbrush holder assembly comprising at least one of the various features, aspects, modes, or embodiments herein shown and described.

2. A base for a toothbrush holder assembly comprising at least one of the various features, aspects, modes, or embodiments herein shown and described, wherein the base is adapted to cooperate with and couple a container housing and at least one suction cup.

3. A container housing for use in a toothbrush holder assembly, comprising at least one of the various features, aspects, modes, or embodiments herein shown or described, wherein the container housing is adapted to cooperate with a base.

4. A method for manufacturing a toothbrush holder assembly, comprising using at least one of the various features, aspects, modes, embodiments, or steps herein shown or described.

5. A method for holding a toothbrush, comprising using at least one of the various features, aspects, modes, or embodiments herein shown or described.

6. An assembly comprising at least one of the various features, aspects, modes, or embodiments herein shown or described.

7. A method comprising using at least one of the features, aspects, modes, embodiments, or steps herein shown or described.