Oct. 24, 1939. O. L. THOMPSON 2,177,504

TOOTH BRUSH HOLDER

Filed Dec. 31, 1937

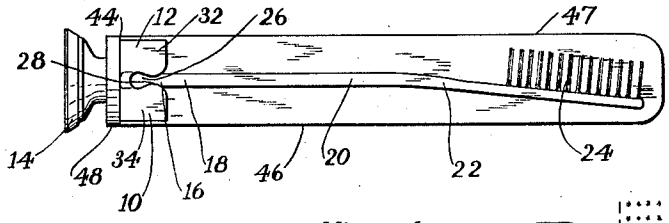


Fig. 1

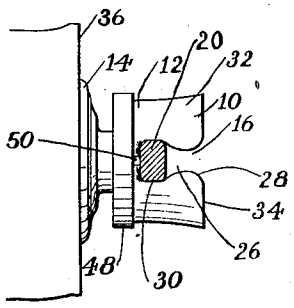


Fig. 4

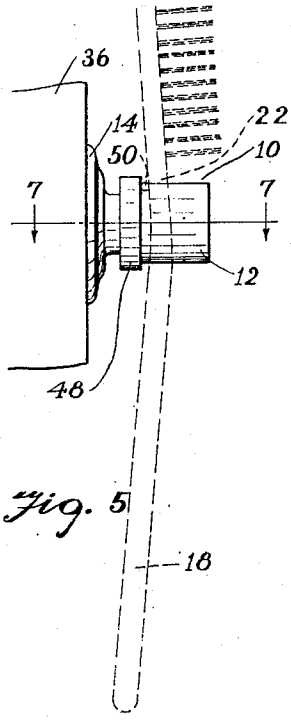


Fig. 5

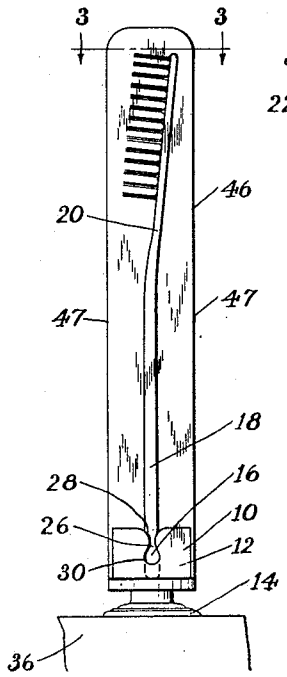


Fig. 2

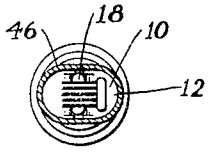


Fig. 3

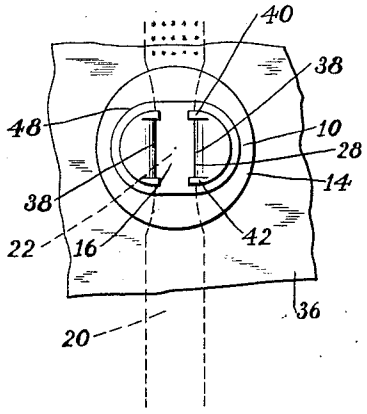


Fig. 6

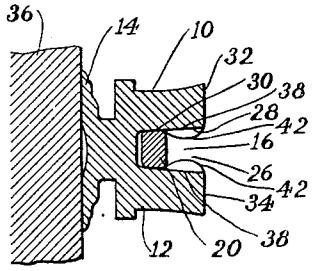


Fig. 7

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TOOTH BRUSH HOLDER

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Application December 31, 1937, Serial No. 182,742

7 Claims. (Cl. 312—112.5)

My invention relates to improvements in tooth brush holders.

An object of my invention is to provide a tooth brush holder constructed of resilient material, comprising a body portion having a vertical slot having a temporarily expansible outer end for receiving the end of a tooth brush therethrough and a laterally enlarged inner portion operable with the contracted outer end thereof to retain a tooth brush neck therein, preferably in combination with a suction vacuum cup integrally secured to the inner end thereof to provide a device which may be constructed or molded as a single unit of rubber or other resilient material and which may be readily stuck on a vertical surface, such as a glass wall or mirror or other nonporous surface at all times in a convenient and accessible position.

A further object of my invention is to provide a device which will conveniently hold the tooth brush away from such a vertical surface so as to permit the complete circulation of air all around the brush for the ready drying of the bristles and thus provide a combination holder and tooth brush drier.

A further object of my invention is to provide a tooth brush holder having a vertical slit therein forming at the outer end thereof resilient laterally expansible and contractible jaws to expand to permit the insertion of a tooth brush neck therein and a laterally enlarged vertically extending portion centrally thereof interior of and connected to the space between said jaws operable with the constricted outer portion thereof formed by said contracted jaws to lessen the vertical slit to less than the width of the tooth brush neck to resiliently retain the tooth brush within.

A further object of my invention is to provide a tooth brush holder with the side walls of such a slot so tapered or curved as to permit of the ready entrance of the tooth brush neck therein.

A further object of my invention is to provide not only a combination tooth brush holder and drier for receiving the neck of the tooth brush therein, but also one, if desired, provided with an expansible longitudinal slot in the outer end thereof for receiving and retaining the end of the tooth brush therein if desired to space the tooth brush even further away from the vertical surface on which it is mounted for more complete circulation of air around the bristles thereof or the suction cup thereof may be mounted on a horizontal surface to project the tooth brush upwards therefrom for advertising or display purposes.

A further object of my invention is to provide alternatively or in combination with the features hitherto described, a combination tooth brush holder and drier capable of holding the end or the neck of the tooth brush and capable of retaining it in a drying position, but also independently, or preferably in combination therewith as in the preferred embodiment shown, a tooth brush container stopper capable of supplementally holding the end of the tooth brush within and spaced from the walls of a standard type of tooth brush container. For this purpose, I preferably provide the inner surface of the walls of the narrow outer portion of the vertical slot with longitudinal channels therein providing lips at the upper and lower edges thereof to provide the expansible longitudinal slot for receiving and retaining the end of the tooth brush within. I also preferably provide a shoulder at the inner end of said body portion so that the open inner end of a suitably shaped tooth brush container may be inserted over said body portion until it abuts said shoulder to compress the jaws thereof together to retain the end of the tooth brush in a position spaced from the side walls of the container and retain it in such position during transit or on display prior to breaking the Cellophane or other seal.

It is thus apparent that by inserting the stopper within the open container end, it operates to resiliently squeeze the jaws thereof together so that the tooth brush may be retained longitudinally within the container and spaced from the walls thereof. If desired I may provide vent means to permit the ready attachment of the stopper within the container. It is obvious that when all features of my device are combined, a combination stopper for stopping the end of a tooth brush container and holder for retaining the brush in position within the container with a suction cup projecting outwardly from the container is provided.

It is thus obvious that the tooth brush and container may then be mounted horizontally on a vertical surface or vertically on a horizontal surface for display purposes and on the mere undoing of the container stopper a combination tooth brush holder and drier is provided adapted to form a convenient device for readily holding a tooth brush in accessible position between its periods of use.

These and such other objects of my invention as may hereinafter appear will be best understood from a description of an embodiment there-

of, such as is shown in the accompanying drawing.

In the drawing, Fig. 1 is a side elevation of my improved tooth brush holder in use as a combination stopper and device for holding a tooth brush longitudinally of a suitable container thereof spaced from the walls thereof.

Fig. 2 is a side elevation of the device shown in Fig. 1 with the suction cup thereof mounted on a horizontal surface to project the combination container and tooth brush holder upwards for display purposes.

Fig. 3 is a cross sectional view taken along the line 3—3 of Fig. 2.

Fig. 4 is a plan view of my improved device with the suction cup thereof attached to a vertical surface in use as a combination holder and drier to retain the brush in a position spaced from said vertical surface, showing the tooth brush in dotted lines.

Fig. 5 is a side elevation of the parts shown in Fig. 4, also showing the tooth brush in dotted lines.

Fig. 6 is a front elevation of my device and adjacent portion of a tooth brush attached to a vertical surface, showing the tooth brush in dotted lines.

Fig. 7 is a transverse sectional view taken along the line 7—7 of Fig. 5.

In the drawing, wherein like characters of reference indicate like parts throughout, 10 generally indicates a tooth brush holder constructed in accordance with my invention. My improved device comprises a holder capable of receiving the neck of a tooth brush and retaining the tooth brush in vertical position therein or capable of receiving the end of a tooth brush for mounting the end of the tooth brush therein and if desired also functioning as a stopper for a tooth brush container to retain the tooth brush in position longitudinally of the container spaced from the walls thereof. My device thus comprises a body portion 12 having a suction vacuum cup 14 integrally secured to the inner end thereof. It is thus obvious that where the suction vacuum cup be employed that the entire device is integral and may be molded out of resilient material as resiliency is required not only in the suction cup thereof, but also in the parts thereof functioning to hold the tooth brush. While my improved device may be constructed of any suitable material, it is preferably molded of rubber.

The body portion 12 is provided with an expansible longitudinal slot 16 for receiving and retaining within, the end 18 of a tooth brush 20 provided with the usual constricted neck 22 and bristles 24 at the opposite end thereof from said end 18. To function as a tooth brush holder for holding a tooth brush in a conveniently accessible position adjacent the bowl or other device over which it is to be used on an adjacent vertical surface, such as a wall or mirror, I provide said holder 12 with the vertical slot 26 having an expansible outer end 28 for receiving the neck 22 of a tooth brush and a laterally enlarged inner end portion 30 operable with the contracted outer portion 28 as shown in Fig. 7 to retain the tooth brush 20 within. While the body portion 12 may be made of any desired shape, in my preferred embodiment, my improved tooth brush holder and container stopper 10 is provided with a body portion 12 of oblate cylindrical shape to completely stop up the open end of the usual type of oblate cylindrical container 46 now on the market for holding tooth brushes. Said body portion 12 is provided with the longitudinally extending vertical slot 26 with the walls thereof so curved as to provide the relatively narrow portion 28 at the outer portion of said body and the relatively enlarged portion 30 at the inner end thereof within said body, said narrow portion 28 separating the outer end of said body portion into relatively resiliently expansible and contractible lip portions of jaws 32 or 34 respectively adapted to be resiliently enlarged or opened by the neck of the tooth brush held in vertical position so that it may be readily inserted within and lie after insertion in a flat position within the laterally enlarged portion 30 at the inner end of said slot 26. As stated the vacuum suction cup 14 is preferably integrally attached to the inner end of said body portion 12 and as shown in Figs. 4–6, it is obvious that the suction cup may be attached to a vertical surface 36 such as a mirror or wall and the flat sides of a tooth brush neck may be inserted laterally through the narrow outer portion 28 of said slot 26, the jaws 32 and 34 temporarily expanding for this purpose and, after insertion through said temporarily expanded portion, on rotation substantially of said neck at right angles the ends of said neck may lie within the laterally enlarged inner portion 30 of said slot with said resiliently contracted outer body lip or jaw portions 32 and 34 contracting to narrow the outer portion 28 of said slot to retain the tooth brush neck 22 within the enlarged inner portion 30 of said slot. The inner end 30 of said slot is so located as to be spaced a substantial distance from the vertical wall 36 to which the suction cup 14 is secured to permit air to circulate completely around the bristles 24 to thoroughly dry them.

As stated hitherto, I also provide a device which may be alternatively or conjunctively capable of retaining the end 18 of a tooth brush within and for this purpose having the longitudinal slot 16. The longitudinal slot 16 is inherently resilient for as stated my improved device is preferably constructed of rubber or other resilient material. While any type of suitable slot 16 may be provided for this purpose, in my preferred embodiment, said longitudinal slot 16 is partially formed by the walls of the outer portion 28 of said vertical slot 26. To provide the upper and lower ends of said slot 16, the walls of the narrow outer portion 28 of the vertical slot 26 are provided with the central opposite longitudinal channels 38 forming the longitudinally extending lips 40 and 42 at the upper and lower edges thereof. After the jaws 32 and 34 have expanded and contracted to receive the end 18 of the tooth brush, said lips 40 and 42 function to sustain said tooth brush end 18 within; said tooth brush end 18 thus being resiliently contained within said slot 16 including the gripping channels 38 of the side walls thereof and the lips 40 and 42 thereof against lateral or longitudinal movement.

As also stated hitherto, the improved body portion 12 of my device is adapted to function as a stopper for the open end 44 of a standard type of tooth brush container 46. Transparent containers of this type are now on the market and are quite commonly used for holding tooth brushes and are preferably transparent being suitably constructed of glass or other suitable synthetic transparent material. Thus the stopper or body portion 12 and cooperating container end 44 are constructed of similar shape, in the embodiment shown being of the usual oblate

cylindrical standard shape. If desired an outwardly projecting circumferential lip 48 may be provided at the inner end of said body portion 12 so that Cellophane, adhesive or other suitable material may be wrapped around the outer surfaces of the inner end 44 of the container and the lip 48 flush therewith for sealing purposes.

It is thus obvious that the inner end 18 of a tooth brush may be inserted within said longitudinal slot 16 and the open end 44 of a hollow tooth brush container may be suitably inserted over said body portion 12, said body portion 12 then functioning as a stopper. It is usually necessary to moisten the rubber stopper so that it may fit within the open container end 44 as is usual for rubber stoppers. As the inner end 44 of said container is inserted over said body portion 12, it is apparent that it will function to compress the jaw portions 32 and 34 thereof to confine the inner end 18 of said tooth brush within to retain said tooth brush 20 within said container 46 spaced from the walls 47 thereof, the expansible slot 16 supplementally being contracted by the insertion of the stopper or body portion 12 within the container to provide a contracted longitudinal slot formed by the lips 40 and 42 and the channel portions 38 of the side walls of the container, the flat sides of the end of the tooth brush being retained in the channels 38 in the side walls of the outer portion 28 of said container, namely, the walls of said contracted jaws 32 and 34, to rigidly retain the tooth brush 20 spaced from the walls 47 of the container 46. To permit the more ready insertion of the stopper or body portion 12 in the open end 44 of the container 46, an outer wall of said body portion may be provided with a channel 50 leading from the inner end of said slot 16 or enlarged portion 30 of the vertical slot 26 to the lip 48 to permit the air to escape from the container as the plug or stopper is being inserted.

It is obvious that I have provided a novel type of device for holding the end of a tooth brush, a novel type of device for holding the neck of a tooth brush in a vertical position, so that said tooth brush may be readily dried and a novel type of stopper or plug for tooth brush containers, preferably in my preferred embodiment constructed to function simultaneously in combination, both as a device for holding the end of a tooth brush and the neck of a tooth brush and also if desired as a stopper for the end of the tooth brush container with the advantages explained above.

It is understood that my invention is not limited to the specific embodiment shown and that various deviations may be made therefrom without departing from the spirit and scope of the appended claims.

What I claim is:

1. A tooth brush holder constructed of resilient material comprising a body portion having a slot extending inwardly from the outer end thereof to a laterally enlarged portion within said body portion having longitudinal channels in the inner surfaces of the walls of the narrow outer portion of said slot and a suction vacuum cup integrally secured to the inner end thereof.

2. A tooth brush holder constructed of resilient material comprising a body portion having a slot extending inwardly from the outer end thereof to a laterally enlarged portion within said body portion having longitudinal channels in the inner surfaces of the walls of the narrow outer portion of said slot.

3. A tooth brush holder constructed of resilient material comprising a body portion having a slot extending inwardly from the outer end thereof having longitudinal channels in the inner surfaces of the walls thereof.

4. A tooth brush holder constructed of resilient material comprising a body portion having spaced resiliently laterally expansible and contractible jaws at the outer end thereof forming an axial channel between them, each having lips on the upper and lower edges thereof forming an axial channel therein, and a laterally enlarged axially extending portion centrally thereof interior of said jaws.

5. A combination tooth brush holder and container stopper constructed of solid rubber, comprising a body portion having a longitudinally extending slot comprising a relatively narrow portion at the outer end of said body and a relatively laterally enlarged portion at the inner end thereof separating the outer end of said body portion into relatively resiliently expansible and contractible spaced jaw portions forming a continuous slot between them whereby a toothbrush neck may be laterally inserted through the narrow temporarily expanded outer portion of said slot and be rotated so that the ends of said tooth brush neck are held within the laterally enlarged inner portion of said slot with said resiliently contracted outer jaw portions retaining the sides of said tooth brush neck within said slot and a vacuum suction cup integrally secured to the inner end of said body portion.

6. A combination tooth brush holder and container stopper constructed of resilient material, comprising a body portion having a longitudinally extending slot separating the outer end of said body portion into relatively resiliently expansible and contractible jaw portions, said slot being also provided with central opposite longitudinal channels forming lips at the top and bottom edges of the walls thereof to firmly retain the end of a tooth brush within the body jaws thereof against lateral or longitudinal movement, whereby the open end of a hollow tooth brush container may be inserted over said body portion to compress said body jaw portions to confine the end of said tooth brush to retain said tooth brush within said container spaced from the walls thereof.

7. A tooth brush holder constructed of resilient material, comprising a body portion having a longitudinally extending slot separating the outer end of said body portion into relatively resiliently expansible and contractible jaw portions, said slot being also provided with central opposite longitudinal channels forming lips at the top and bottom edges of the walls thereof to firmly retain the end of a tooth brush within the body jaws thereof against lateral or longitudinal movement.

OLIVER L. THOMPSON.