Aug. 14, 1951 M. R. FARNHAM 2,564,472

PROTECTIVE TOOTHBRUSH HOLDER

Filed June 11, 1948

FIG. 1.

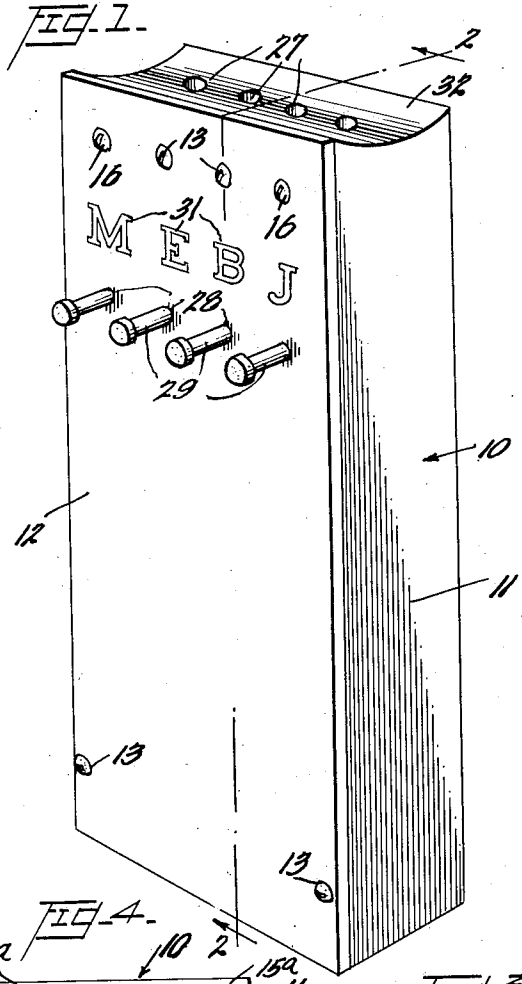


FIG. 2.

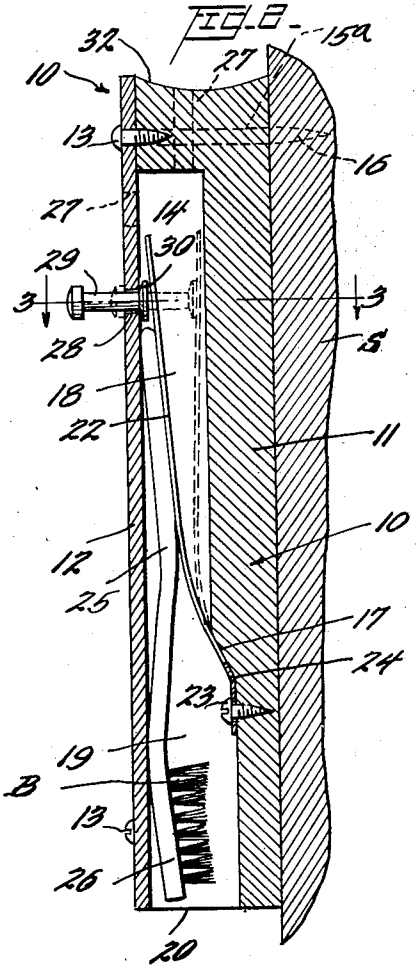


FIG. 4.

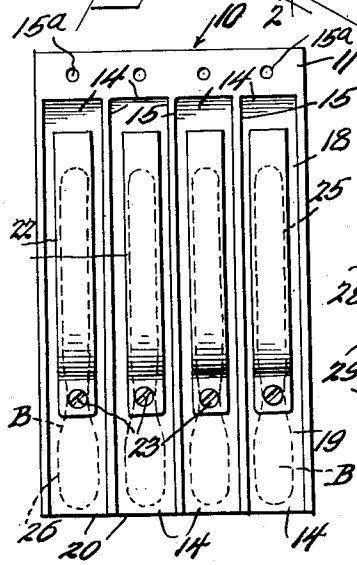


FIG. 5.

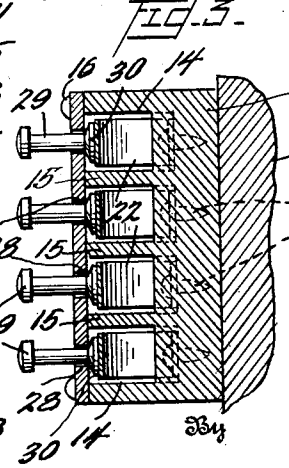
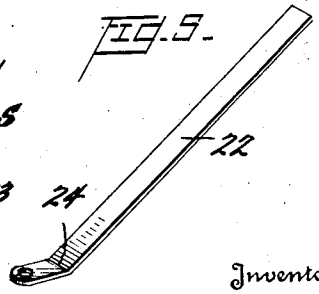


FIG. 6.



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PROTECTIVE TOOTHBRUSH HOLDER

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6 Claims. (Cl. 206—15.1)

1

The invention relates to toothbrush holders or containers and has particular relation to a holder designed for retaining in fully protected position, a plurality of brushes in separate individually designated compartments each designed for use by a single person.

A principal object of the invention is to provide a holder or support of this character which is composed of few parts and which is capable of easy manipulation by a number of persons for conveniently obtaining access to and replacing the brush in his or her individual compartment of the holder or receptacle.

A further object is to provide a brush holder or support wherein the bristle portion of the brush is fully protected and enclosed out of contact with the holder, thereby insuring against brush contamination as well as facilitating rapid drying of the brush bristles.

The brush holder constituting the instant invention is composed of relatively few parts which may be economically manufactured and easily assembled and installed for convenient use by any desired number of different persons, each having an individual toothbrush which is fully enclosed and protected from dust, dirt and bacteria in a separate individual compartment of the holder.

A further object of the invention is to provide a toothbrush holder of the character described wherein provision is made for permitting quick drying of the brush after use, as well as for fully enclosing the same against dust and dirt accumulations when not in use, yet permitting instant access to any particular toothbrush by its owner when desired.

A further object is to provide a toothbrush receptacle which is attractive in appearance and designed for convenient installation in the bathroom so as to present an ornamental appearance as a fixture completely enclosing and concealing from the vision if desired, a plurality of toothbrushes.

Numerous other objects and advantages of the invention will be apparent as it is better understood from the following description, which, taken in connection with the accompanying drawings, discloses a preferred embodiment thereof.

In said drawings:

Fig. 1 is a perspective view of the holder.

Fig. 2 is a vertical section on line 2—2 of Fig. 1.

Fig. 3 is a transverse section on line 3—3 of Fig. 2.

Fig. 4 is a front elevation of the holder with the cover removed and drawn to a smaller scale.

Fig. 5 is a perspective view of one of the resilient brush retaining elements or leaf springs employed in the holder, also drawn on a reduced scale.

2

Referring to the drawings, the holder is illustrated as preferably comprising a housing or casing 10 which may be constructed of any desired and appropriate material, and is preferably of generally rectangular elongated configuration as shown. The housing 10 may be composed if desired of plastic material which has an attractive appearance and lends itself to convenient cleaning and polishing when necessary, or the housing may be constructed of wood or metal.

In the embodiment illustrated the housing includes a substantially solid elongated body portion 11 having a front closure or cover member 12 removably secured thereto as by upper and lower screws 13. The body portion of the holder is preferably provided with a series of any desired number of elongated vertical recesses or toothbrush compartments 14 defined or set off by interposed partition walls 15, which latter may be formed integrally with the body portion 11 of the holder casing 10.

The upper portion of the holder including the cover member 12, is further provided with one or more transverse perforations 15a for the reception of suitable securing members such as screws 16 for securing the holder to any desired convenient and accessible locality of the bathroom wall or cabinet fixture constituting an appropriate wall support indicated at S in Figs. 2 and 3.

As best illustrated in Fig. 2 the inner wall of each brush compartment 14 in the body portion 11, is preferably of offset or stepped configuration as a result of an intermediate inclined or sloped rear wall portion 17, thereby providing upper elongated brush handle receiving sections 18 of relatively narrow depth, and lower smaller brush head receiving compartment sections 19 of greater depth or extent. The said brush compartments 14 are desirably open at their lower ends as indicated at 20 and closed at their upper ends by horizontal wall portions 21, as best seen in Fig. 2.

Each brush compartment 14 is designed to house an elongated vertically disposed leaf spring member 22 formed of sheet metal or any desired resilient material, the lower ends of such spring members being respectively secured as by a screw 23 to the body portion 11 of the holder housing or casing. The opposite ends of the elongated spring elements 22 are free from attachment and project vertically into the upper brush handle receiving compartment sections 18, and each

spring member is bent outwardly as at 24 so as to closely conform to the adjacent inclined intermediate wall portion 17 at the rear of each brush compartment. This construction and arrangement results in the upper free end of each leaf spring being inclined forwardly so as to yieldably rest at its upper end against the front wall or cover member of the holder.

From the foregoing it will be apparent that when the handle portion 25 of a toothbrush B is manually inserted in an upward direction into one of the brush compartments 14, the handle will engage and ride along the free end of the leaf spring 22 in such compartment so as to press or flex the spring rearwardly until the bristle or head portion 26 of the brush is received and confined within the lower compartment portion 19 as illustrated. In this position the outward pressure of the leaf spring against the handle serves to yieldably and removably confine the brush in inverted position within its compartment in fully enclosed and protected position.

When in enclosed projected position it will be noted that the compartments are ventilated for drying the brush through their lower open ends, and additional vent openings or apertures 27 may if desired be provided in the upper portion of the housing to communicate with the brush compartment, thereby affording free air circulation therethrough.

The forward wall or cover member 12 of the housing is provided with spaced horizontally aligned apertures 28 disposed respectively in registry with the brush compartments for the reception therethrough of a series of manually depressible push buttons or pins 29, each having an inner enlarged head 30 normally engaged by the upper free end of its corresponding leaf spring element 22 in the compartment so as to tend to yieldably maintain the pins in outwardly projected position, and against displacement from their respective apertures.

As indicated in Fig. 1 the several brush compartments 14 are designed for the reception of individual toothbrushes owned by different persons or members of a family. These different individuals for example may be represented by corresponding initials generally indicated at 31 and respectively disposed adjacent the individual push buttons or pins 29.

If desired the upper wall surface of the housing 10 may be formed or constructed of inwardly dished or concave configuration as indicated at 32 so as to constitute a convenient retaining support for a tubular tooth paste container of conventional cylindrical shape, for convenient access by the various members of the group or family for whom the holder constituting the present invention is particularly designed.

From the foregoing it will be obvious that each toothbrush B is frictionally retained in fully enclosed position within its proper individual compartment 14 by the mere vertical insertion of the brush with its handle uppermost into the lower open end 20 of the compartment or recess. When thus inserted the frictional resilient engagement of the brush handle 25 between the front wall or cover 12 and adjacent leaf spring 22, is sufficient to hold the brush against its tendency to drop from the holder. When it is desired to obtain access to a particular brush, the owner thereof manually depresses a pin 29 opposite the compartment visually indicated as containing the desired brush. This results in the enlarged inner end of the pin or plunger 29 forcing or flexing the free upper end of the leaf spring 22 inwardly and out of contact with the brush handle 25. When thus released the brush immediately drops by gravity through the open lower end of the compartment and into the hand of the person desirous of using the brush.

It will be obvious from the foregoing that the arrangement and configuration of the relatively few parts of the holder are such as to adapt the same to frictionally retain within the individual brush compartment or compartments, various types of toothbrushes having handles of varying curvature and configuration, without necessitating modifications in spring or compartment structure in order to effectually engage and hold such toothbrush handles desired to be inserted into the receptacle.

From the foregoing it will be observed that the arrangement of parts is such that when the tooth brushes are fully inserted in protected inverted position within the holder, the bristles of the brush head are maintained out of contact with any portion of the holder or compartment walls. This serves as an added insurance against possible contamination of the brush as well as facilitating more rapid drying thereof when not in use.

It is thought that the invention and many of its attendant advantages will be understood from the foregoing description, and it will be apparent that various changes may be made in the form, construction and arrangement of the parts without departing from the spirit and scope of the invention or sacrificing all of its material advantages, the form hereinbefore described being merely a preferred embodiment thereof.

What is claimed is:

1. A toothbrush holder comprising a substantially closed casing open at one end for the reception of a toothbrush therein, a spring member secured at one end to an interior wall surface of said holder and resiliently engageable at its opposite end with a toothbrush inserted within the holder, a portion of said opposite spring member end projecting beyond the spring engaged brush, said holder further including manually movable means projecting from said casing and engageable at its inner end with said projecting end portion of said spring member, inward movement of said movable means engaging the same with and releasing said spring member from its resilient engagement with the enclosed toothbrush to permit the same to be removed from said holder.

2. A toothbrush holder comprising an elongated substantially closed casing open at its bottom end for the reception of a toothbrush therein, a leaf spring member secured at one end to the interior of said holder and resiliently engageable at its opposite free end with a toothbrush inserted within said open bottom end of the holder to yieldably support the toothbrush within said casing, a portion of said opposite spring member end projecting beyond the spring engaged brush, and a push button projecting from said casing and engageable at its inner end with said projecting portion of the free end of said spring member, inward movement of said push button pressing said spring member out of contact and away from its resilient engagement with the enclosed toothbrush to permit the same to drop by gravity from the open bottom end of the holder.

3. A protective toothbrush holder, comprising an elongated substantially closed rectangular housing having an apertured front wall enclos-

ing an individual brush compartment open at its lower end, an elongated leaf spring member secured adjacent its lower end to the rear wall of said compartment, the upper free end of said spring member being inclined forwardly so as to be resiliently engageable with the handle portion of a toothbrush inserted vertically upwardly into said housing through the open lower end of said compartment to normally frictionally press and support the brush handle against the front wall of said housing, a portion of said upper end of said spring member projecting upwardly beyond the supported brush, and an inwardly depressible push button element projecting through the aperture in said housing front wall and engageable at its inner end with the upwardly projecting portion of the free upper end of said spring member so as to be yieldingly maintained thereby in outwardly projected position, manual inward depression of said button element yieldably forcing said spring member inwardly out of contact and holding engagement with a brush handle in said compartment, to permit the toothbrush to drop by gravity through the open lower compartment end and away from enclosed position within the housing.

4. A protective toothbrush holder, comprising an elongated substantially closed rectangular housing having an apertured front wall enclosing a plurality of individual brush compartments open at their lower ends and disposed in horizontally spaced parallel relation, a plurality of elongated leaf spring members respectively secured adjacent their lower ends to rear walls of said compartments, the upper free ends of said spring members being inclined forwardly so as to be respectively resiliently engageable with the handle portions of a plurality of toothbrushes individually inserted vertically upwardly into said housing through the open lower ends of said compartments to normally frictionally press and yieldably support the brush handles against displacement from the front wall of said housing, the upper free end extremities of said spring members extending above the handle portions of said toothbrushes, and a plurality of inwardly depressible push button elements projecting through the apertures in said housing front wall and respectively engageable at their inner ends with said extended extremities of the free upper ends of said spring members above the brush handles to yieldingly maintain said push button elements in outwardly projected position, manual inward depression of a said button element yieldably forcing and flexing its adjacent spring member inwardly out of contact and its normal holding engagement with a brush handle in the associated compartment, to permit the toothbrush to drop by gravity through its open compartment end and out of enclosed position within the housing.

5. A toothbrush holder comprising an elongated substantially closed casing open at its bottom end for the reception of a toothbrush therein, a substantially flat leaf spring member secured at its lower end to an interior wall surface of said holder

and normally resiliently engageable at its opposite free upper end with a toothbrush inserted upwardly within said open bottom end of the holder to support the brush within said casing, a portion of said opposite spring member end projecting beyond the spring engaged brush, and a push button projecting from said casing and engageable at its inner end with said projecting free end portion of said spring member, inward movement of said push button engaging and pressing and flexing said spring member away from contact and resilient engagement with the enclosed toothbrush to permit the same to drop by gravity through the open bottom end of the holder, the interior holder wall surface to which the lower end of said leaf spring member is secured being outwardly inclined and offset so as to project the free upper end of the spring forwardly into engaging relation with said toothbrush and push button.

6. A protective toothbrush holder, comprising an elongated substantially closed rectangular housing having an apertured front wall enclosing a plurality of individual brush compartments open at their lower ends and disposed in horizontally spaced parallel relation, a plurality of substantially flat elongated leaf spring members respectively secured adjacent their lower ends to outwardly inclined offset portions of the rear walls of said compartments, the upper free ends of said spring members being inclined forwardly by said offset wall portions so as to be respectively resiliently engageable with the handle portions of a plurality of toothbrushes individually inserted vertically upwardly into said housing through the open lower ends of said compartments to normally frictionally press and yieldably support and hold the brush handles against the front wall of said housing, the upper free end extremities of said spring members extending above the handle portions of said toothbrushes, and a plurality of inwardly depressible push button elements projecting through the apertures in said housing front wall and respectively engageable at their inner ends with said upper free end extremities of said spring members so as to be yieldingly maintained thereby in outwardly projected position, manual inward depression of a said button element yieldably flexing its adjacent spring member inwardly out of holding engagement with a juxtaposed brush handle in a said compartment, to permit the toothbrush to drop by gravity through the open lower end of its said compartment and out of said housing.

MAURICE R. FARNHAM.

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