E. M. PETERS AND P. VILARDO.

TOOTHBRUSH CONTAINER.

APPLICATION FILED JULY 2, 1920.

1,380,246. Patented May 31, 1921.

Fig. 1.

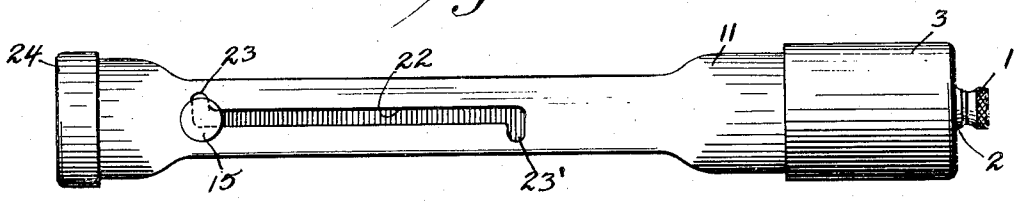


Fig. 2.

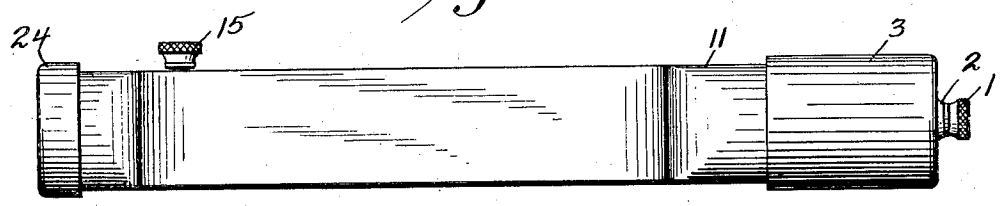


Fig. 3.

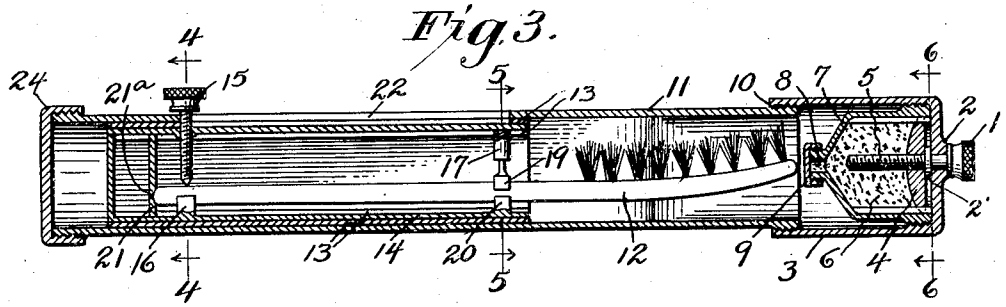


Fig. 4.

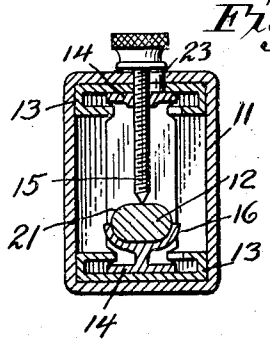


Fig. 5.

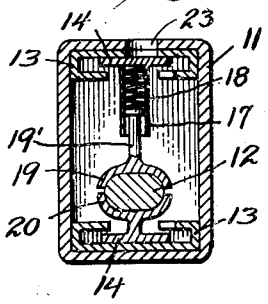
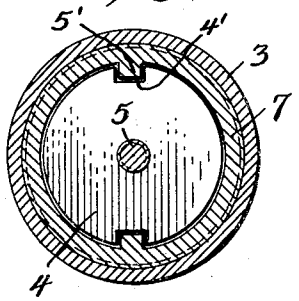


Fig. 6.



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UNITED STATES PATENT OFFICE.

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TOOTHBRUSH-CONTAINER.

1,380,246. Specification of Letters Patent. Patented May 31, 1921.

Application filed July 2, 1920. Serial No. 393,501.

To all whom it may concern:

Be it known that we, EDWARD M. PETERS, of the city of Medford, and PAUL VILARDO, of the city of Somerville, both in the Commonwealth of Massachusetts, citizens of the United States, have jointly invented a certain new and Improved Type of Tooth-brush-Container, of which the following is a specification.

The present invention relates to improvements in tooth brush and cleansing material containers, and has for an object to provide a compact device for containing a tooth brush and paste or other cleansing material which will be peculiarly adapted to be utilized as a part of a traveler's equipment, while at the same time providing a container that will at all times and under all conditions remain sanitary and which will hold the tooth brush normally in a retracted, sealed and covered position, although permitting its ready projection to a position of use.

Another object of the invention is to support the tooth paste or other tooth cleansing material in conjunction with the tooth brush holder and in compact association therewith where it will not be apt to spill over or become otherwise wasted, ready access being at all times had to the material for purposes of use.

A further object of the invention resides in providing an improved tooth brush and cleansing material container of a simple and economical construction adapted to effectively hold a tooth brush for use and to permit of the removal and replacement of the brush whenever required and in a similar way to allow of the substitution of fresh containers of the cleansing material from time to time as previous containers are exhausted.

With the foregoing and other objects in view, the invention will be more fully described hereinafter, and will be more particularly pointed out in the claims appended hereto.

In the drawings, wherein like symbols refer to like or corresponding parts throughout the several views,

Figure 1 is a top plan view of an improved container constructed according to the present invention;

Fig. 2 is a side view of the same;

Fig. 3 is a longitudinal central sectional view taken vertically through the container and shown in Fig. 2;

Fig. 4 is a transverse sectional view taken on the line 4—4 in Fig. 3;

Fig. 5 is a similar view taken on the line 5—5 also in Fig. 3; and

Fig. 6 is a cross sectional view taken on the line 6—6 in Fig. 3.

Referring more particularly to the drawings, 11 designates a container of tubular form preferably having a flattened intermediate portion and being generally of a length and shape to receive a tooth brush 12 shown in Fig. 3 to lie wholly therewithin. The handle of the tooth brush 12 is supported in claws 16 and 20 spaced apart and carried by a bar 14 of substantially I-beam construction in cross section, the lower flanges of the bar being adapted to rest upon the base portion of a slide 13 that fits movably within the tube 11.

At its inner end the handle of the tooth brush 12 fits into a depression 21 made in a plate 21^a which extends vertically between the upper and lower portions of the slide 13 near its inner end. Close to the plate 21^a is a set screw 15 having its pointed end disposed above the claw 16 and acting, when the screw is turned down, to effectively bind the handle of the tooth brush against the claw. The set screw 15 extends upwardly and through a longitudinally extending slot 22 made in the top of the tube 11, the head of the set screw 15 forming an operating handle or part by means of which the slide and the tooth brush carried thereby may be moved back and forth. The slot 22 is provided with offset lateral recesses 23 and 23′ which lie in opposite directions at the ends of the slot and into which the set screw may be turned to secure a locking of the tooth brush either in the inner or the outer positions. At the forward end of the slide, as more particularly shown in Figs. 3 and 5, a coöperating claw 19 is provided in association with the lower claw 20 to bear upon the upper side of the tooth brush at this point. The upper claw 19 is carried upon the lower end of a plunger rod 19′ which fits within a vertically disposed cylinder 17 carried by the upper portion of the framework 14 and having contained therein a coil spring 18, under the influence of which the claw 19 is constantly urged downwardly upon the brush. In this way

the brush is held firmly between the coöperating claws 19 and 20 at its forward part.

The ends of the casing 11 are cylindrical to receive at one end a screw threaded cap 24 which may be removed to give access at this end to the interior of the tube for the purpose of cleaning that the tube may be kept at all times in a sanitary condition, and at the other end a cap 3 of a deeper construction having the screw threads 10 for engaging the tube 11. Internal screw threads are also provided in the cap 3 near its closed end to receive the external threads made upon a receptacle 7 for the paste, powder, or other tooth cleansing material. A discharge nozzle or mouth 8 is made on the receptacle 7, and this mouth or nozzle is normally closed by a threaded or other cap 9. Within the receptacle 7 is a disk or plunger 4 having threaded engagement with a threaded shaft or bolt 5 which passes axially through the receptacle 7 and extends to the outer side of the head 2 of the cap where it is provided with a head or operating part 1. A nut or washer 2′ is secured to the shaft 5 between the head 2 and plunger 4. As more particularly illustrated in Fig. 6, the plunger 4 is provided with slotted edges 4′ preferably made at diametrically opposite points in order to receive the ribs 5′ extending inwardly from the receptacle 7.

In use, the device is assembled in the condition shown in Figs. 1, 2 and 3 with the tooth brush 12 retracted within the tubular holder 11 and with the caps 24 and 3 in place, so that a compact container is had both for the tooth brush and the cleansing material. When the use of this device is required, the cap 3 is unscrewed from the holder 11 and the set screw 15 is pushed along the slot 22 so as to move the slide and the tooth brush 12 outwardly to expose the bristles of the brush for use. In this condition the tubular holder 11 acts as a handle.

The cap 9 is unscrewed from the receptacle 7 and the mouth or discharge opening 8 applied to the bristles. The threaded bolt 5 is thereupon turned by having resort to the head in such a wise as to cause the plunger 4 to progress axially through the tube forcing the paste or other material before it and ejecting the same through the mouth 8 and onto the bristles. The operation of cleansing the teeth may be then begun.

By retracting the set screw 15 the slide and tooth brush are returned to their initial position within the holder 11 where the brush is sealed and protected against dust, germs, and the like. The cap 3 carrying the tooth paste acts as a closure for the end of the tube near the bristles of the brush.

It is noted that the mouth of the paste receptacle 7 extends inwardly of the open end of the cap so that the latter protects the cap from blows on surrounding objects that might cause its rupture or the discharge of its contents. After the plunger 4 has been advanced entirely through the receptacle 7 and its entire contents discharged, the receptacle may be removed by unscrewing it from the cap 3, and another full receptacle substituted, the plunger 4 being, of course, retracted to its original position next the head 2. The rib 5′ avoids rotation of the plunger 4 which otherwise might be carried around with the shaft 5 with a consequent loss of its axial movement.

It is obvious that various changes and modifications may be made in the details of construction and design of the above specifically described embodiment of this invention without departing from the spirit thereof, such changes and modifications being restricted only by the scope of the following claims.

What we claim for our invention is:

1. A cleansable sanitary tooth brush case with sliding inside holder which, while strongly holding the tooth brush in place, readily ejects the same for use, permitting removal and renewal of tooth brush with tooth paste or powder container attached, the entire article being one designed for convenience and traveling kits or for use of persons engaged in traveling.

2. A device of the character described comprising a tubular holder, a slide therein for removably receiving a tooth brush, and means for shifting the slide back and forth to project and retract the brush.

3. A device of the character described comprising an elongated tubular holder, a slide movable axially therein, means moving with said slide for removably attaching a tooth brush, and means on the exterior of the tube for moving said slide.

4. A device of the character described comprising a slotted elongated tube, a slide therein, means connected to the slide and projecting through the slot in the tube for communicating movement to the slide, and means carried by the slide for removably securing a tooth brush thereto.

5. A device of the character described comprising a tooth brush container, a cap therefor, a tooth cleansing material holder removably secured within said cap, and means carried by the cap for expelling the contents of the holder, said means being operable from the exterior of the cap.

6. A device of the character described comprising a container for a tooth brush, a cap for one end thereof removably connected with the container, a holder for tooth paste or the like removably connected within said cap, a plunger within the tooth paste holder for expelling the contents thereof, and means for causing the axial movement of the plunger through the holder, said

means adapted to be actuated from the exterior of said cap.

7. A device of the character described comprising a tubular holder, a slide therein, a tooth brush removably carried by said slide, a cap for the holder, a receptacle to contain tooth paste or the like carried within said cap, and means also carried by the cap for expelling the contents of said receptacle.

8. A device of the character described comprising a tubular holder, a slide within the holder, claws carried by the slide for receiving the handle of a tooth brush, means coöperating with one claw for holding the tooth brush handle therein and also adapted to cause movement of the slide, resilient means associated with the other claw for holding the handle therein, removable caps for the ends of the tube, a receptacle for tooth paste and the like carried within one cap, and means to expel the contents of the receptacle also carried by said cap.

Boston, Massachusetts, May 25th, 1920.

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PAUL VILARDO.

Witness as to Edward M. Peters:
NORMA BURNELL.
Witness as to Paul Vilardo:
H. A. PETERS.