

UNITED STATES PATENT OFFICE.

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COMBINED TOOTH-BRUSH AND DENTIFRICE-RECEPTACLE.

SPECIFICATION forming part of Letters Patent No. 767,469, dated August 16, 1904.

Application filed January 23, 1903. Serial No. 140,242. (No model.)

To all whom it may concern:

Be it known that we, ARTHUR W. ZIEGLER and JOHN W. SLATER, citizens of the United States, residing at Berlin, county of Green Lake, and State of Wisconsin, have invented new and useful Improvements in a Combined Tooth-Brush and Dentifrice-Receptacle, of which the following is a specification.

Our invention relates to improvements in combined tooth-brushes and dentifrice-receptacles, also to the means employed for discharging the contents of the receptacle in and upon the fibers of the brush.

The construction of our invention is explained by reference to the accompanying drawings, in which—

Figure 1 represents the back of the brush and handle. Fig. 2 is a side view of the brush illustrated in Fig. 1. Fig. 3 represents a preferred form of handle removed from the brush with the cap Q removed. Fig. 4 represents a central longitudinal section of the brush shown in Fig. 2. Fig. 5 represents a transverse section of the handle, drawn on line *xx* of Fig. 4. Fig. 6 is a transverse section of the handle, drawn on line *yy* of Fig. 4. Fig. 7 is a transverse section of the preferred form of handle shown in Fig. 3, drawn at any intermediate point between its receptacle ends. Fig. 8 is a perspective of the brush-inclosing case.

Like parts are identified by the same reference-letters throughout the several views.

The handle A of the brush A' is provided with a chamber B for the reception of ordinary dentifrice-matter C. The front end of the handle A is contracted, so as to form a nozzle D for the discharge of the dentifrice.

D' is a ferrule which is exteriorly screw-threaded on the periphery of the nozzle D. The inner wall of the ferrule D' is also provided with a screw-thread for the reception of the thread on the shank E of the brush. In the preferred form the back of the brush A' is provided with a duct or passage F, through which the dentifrice may be discharged among the bristles or fibers of the brush direct from the handle, if desired. When the brush A' is provided with the duct

F, we preferably interpose a stopper G between the shank E and the end of the nozzle D to prevent the discharge of the dentifrice through the duct F when the brush is not in use.

It will of course be understood that in case the discharge-duct F is dispensed with the shank E of the brush will close the mouth of the discharge-nozzle and said stopper G may be dispensed with. To provide for storing the dentifrice C in the chamber B and to enable the user of the brush to readily discharge the dentifrice from said chamber when desirous to use the same, we have constructed the handle of two tubular sleeves H and I, one located within the other and both provided with longitudinal slots J. Located within the inner sleeve H is a piston K, with which the contents of the receptacle is forced therefrom. The piston K is provided with a bracket L, by which the same is pushed forward from the exterior by applying a forward and downward pressure to the protruding arm M of said bracket. The longitudinal slot J of the inner tube H is closed in the preferred form of handle by a narrow strip of sheet-lead, tin, or other soft metallic substance, which is soldered or otherwise secured to the exterior surface of said tube above said slot and serves to prevent the dentifrice from escaping through such slot. The protruding end of the bracket M is provided with a cutting-blade N, which is adapted to sever said material which is employed for closing said slot as the piston is being pushed forward in the act of discharging the dentifrice from the receptacle.

While we preferably employ a thin soft metallic substance for closing the slot J, said slot may, if desired, be covered with paper, cloth, or other non-metallic material, which is secured to the exterior surface of the inner cylinder H by any ordinary adhesive substance, and while we preferably close said slot with a narrow strip of material O, which is secured to the cylinder by an adhesive substance along the margin only of said slot, as indicated in Figs. 3 and 7, said slot may be closed by employing a cylindrical sack formed of thin sheet-

lead, tin, or other soft flexible substance, as indicated in Figs. 4, 5, and 6, in which case an adhesive substance becomes unnecessary.

It will be understood that when forcing the contents from the receptacle the piston is retained at right angles to the walls of said receptacle by a downward pressure upon the projecting arm M and a forward pressure upon the blade N by the hand of the user.

Q is a cap by which the end of the chamber B in rear of the piston is closed.

R is a shield which is adapted to cover the bristles or other fibrous portion of the brush.

When placed upon the brush, the edges S S of the back respectively engage in the respective channels T T of the shield, while the dove-tail-shaped portion U surrounds the bristles and prevents them from contact, whereby the tooth-brush may, if desired, be carried in the pocket without injuring the bristles. The ferrule D' is provided with a flange B', which is adapted to close the joint at the end of the slotted tubular receptacle, as shown in Fig. 4.

Having thus described our invention, we do not claim herein as our joint invention the slotted receptacle for the dentifrice, nor the means for retaining the dentifrice in such receptacle, nor the means employed for forcing the contents therefrom, except as the same is combined and used in connection with a tooth-brush as herein shown and described, as the same forms the subject-matter of a separate patent, for which a separate application, Serial No. 140,243, was duly filed in the United States Patent Office, January 23, 1903, by Arthur W. Ziegler, one of the applicants herein named.

What we do claim as new, and desire to secure by Letters Patent, is—

1. In a tooth-brush, a hollow handle provided with a longitudinal open slot; a tubular cylinder located within said handle provided

with a longitudinal slot adapted to register with the slot of said handle; means for closing the slot of the interior tubular cylinder; a piston located in said interior cylinder and means connected with said piston for communicating movement to the same through the slots of said handle and cylinder from the exterior, substantially as set forth.

2. In a tooth-brush, a hollow handle provided with a longitudinal slot; a tubular cylinder located within said handle provided with a longitudinal slot adapted to register with the slot of said handle; means for closing the slot of the interior tubular cylinder; a piston located in said interior cylinder and a bracket formed integrally with said piston protruding from one side thereof, through the slots of said cylinder and handle, substantially as set forth.

3. In a tooth-brush, a hollow handle provided with a longitudinal slot; a tubular cylinder located within said handle provided with a longitudinal slot adapted to register with the slot of said handle; means for closing the slot of the interior tubular cylinder; a piston located in said interior cylinder and a bracket formed integrally with said piston protruding from one side thereof, through the slots of said cylinder and handle, said handle being provided at one end with an inclosing cap located in the rear of the piston within the inner cylinder and at its opposite end with a discharge-nozzle and a tooth-brush detachably connected with said nozzle, substantially as set forth.

In testimony whereof we affix our signatures in the presence of two witnesses.

ARTHUR W. ZIEGLER.
JOHN W. SLATER.

Witnesses:

C. A. PECK,
L. C. PECK.