No. 610,775. Patented Sept. 13, 1898.

W. S. THOMPSON, JR.

TOOTH POWDER RECEPTACLE.

(Application filed Jan. 15, 1898.)

(No Model.)

Fig. 1.

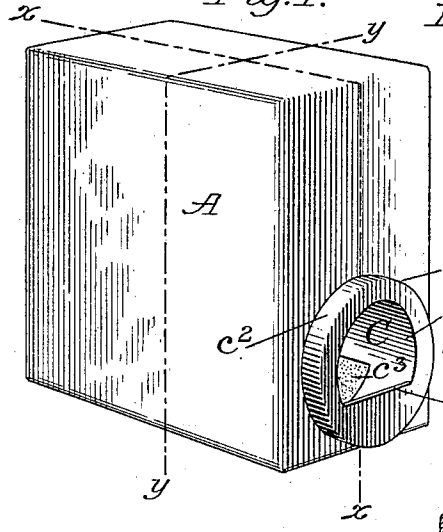


Fig. 2.

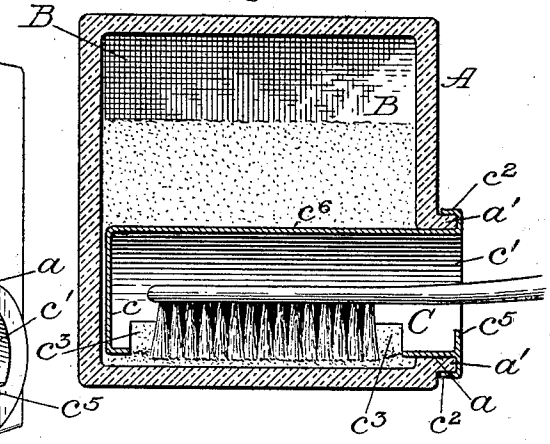


Fig. 3.

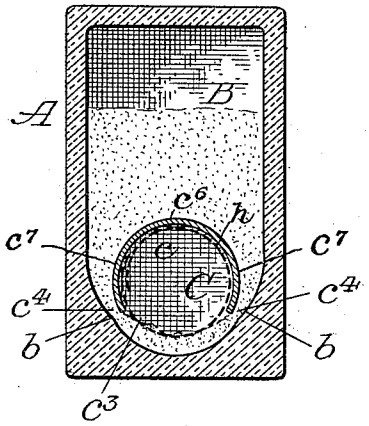


Fig. 6.

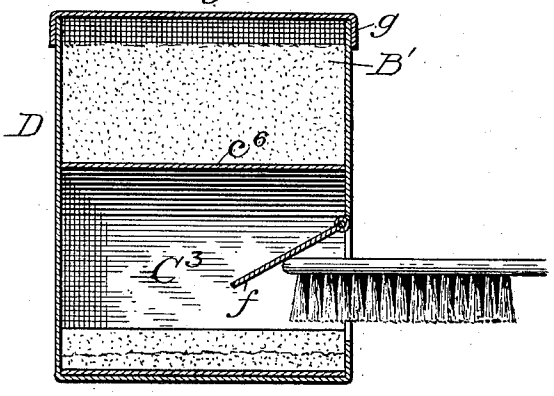


Fig. 4.

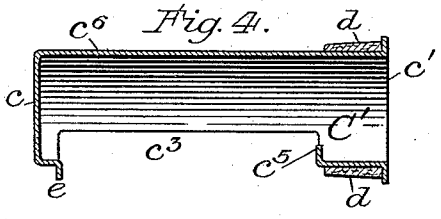


Fig. 7.

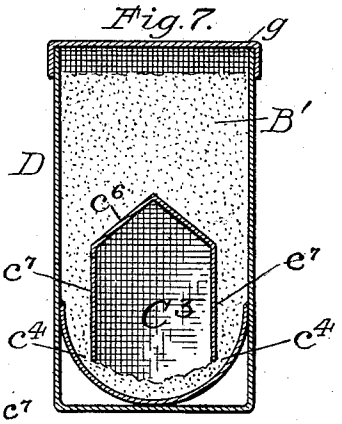
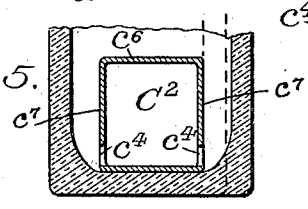


Fig. 5.



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UNITED STATES PATENT OFFICE.

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TOOTH-POWDER RECEPTACLE.

SPECIFICATION forming part of Letters Patent No. 610,775, dated September 13, 1898.

Application filed January 15, 1898. Serial No. 666,791. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. THOMPSON, Jr., a citizen of the United States, residing at Woodside, in the county of Montgomery and State of Maryland, have invented new and useful Improvements in Tooth-Powder Receptacles, of which the following is a specification.

My invention relates to that class of tooth-powder receptacles in which provision is made for separating a small quantity of powder from the main bulk of that contained in the receptacle, sufficient for one cleansing of the teeth, in order to prevent waste and to keep the main bulk of powder protected from the air and from being injured by moisture from a wet tooth-brush, as when dipped into powder contained in ordinary boxes.

In all prior receptacles of the class referred to to which my knowledge extends some special manipulation of the receptacle or some part thereof is requisite before the desired quantity can be separated from the main bulk of powder, and the necessary handling of the receptacle increases liability of injury and breakage, especially if it be composed of glass or its parts be delicate and easily injured by being dropped upon the floor.

The object sought by me is to provide a tooth-powder receptacle of the class referred to in which a small quantity of powder will always be presented ready for use without manipulation of the receptacle or any of its parts, the main bulk of powder being protected from the air, as well as against waste, and free from injury.

My invention consists in providing in connection with a powder-supply chamber a brush-charging chamber accessible for the insertion of a tooth-brush, the said charging-chamber being formed by a partition or wall within the supply-chamber, which permits a free descent of powder to the bottom of the supply-chamber, but affords a space within the mass of powder into which a tooth-brush may be inserted for receiving a charge of powder, as will be hereinafter more particularly described.

After a detail description of my invention the features deemed novel will be specified in the claims hereunto annexed.

Referring to the drawings, Figure 1 is a perspective view of a tooth-powder receptacle embodying my invention. Figs. 2 and 3 are sectional views of the same, respectively, on lines $x\ x$ and $y\ y$ of Fig. 1. Fig. 4 is a sectional view of another form of brush-charging chamber detached from the powder-receptacle. Fig. 5 is a cross-sectional view of the lower portion of a receptacle having a still different form of brush-charging chamber. Fig. 6 is a vertical longitudinal section of another form of tooth-powder receptacle having a hinged cover at the mouth or entrance of the brush-charging chamber. Fig. 7 is a vertical cross-section of the receptacle of Fig. 6.

Tooth-powder receptacles embodying my invention are provided with a main powder-supply chamber and a chamber from which a tooth-brush receives its charge of powder.

The brush-charging chamber may be a part of and integral with the structure composing the supply-chamber or it may be a separate structure detachable from the supply-chamber.

In the receptacle A of Figs. 1, 2, and 3 the structure forming the powder-supply chamber B is preferably composed of glass, and in its front wall and near the bottom thereof it is provided with an opening a, having a flange a'. The brush-charging chamber C is located at the bottom of the chamber B and is here shown as a detachable tubular structure composed of sheet metal having a closed inner end c and an open outer end c', the whole being inserted within the opening a of the supply-chamber and forming a partition c^6 above said opening, having depending portions c^7, which, together with the side walls of the receptacle, form powder-passages $c^4\ c^4$ to the brush-charging chamber. The tubular structure is retained in place by means of a flange c^2, which encircles and tightly grasps the flange a' around the opening a in the supply-chamber. The bottom of the tubular structure is cut away, as at c^3, and is slightly elevated above the bottom of the supply-chamber to permit powder to pass beneath the opening c^3, as clearly shown in Figs. 2 and 3.

The receptacle is charged with powder through the opening a, the brush-charging chamber being first removed. The receptacle is then held in an inverted position for

inserting the charging-chamber, after which it is turned right side up and is ready for use. It will now be seen that powder in the supply-chamber B will pass through the passage-ways c^4 c^4 until the quantity beneath the charging-chamber is sufficient to block further descent, and that a removal of powder by way of the charging-chamber will immediately be replaced by a fresh supply.

In order that the entire contents of the powder-chamber may be utilized in the manner described, its bottom b b inclines from each side toward the passage-ways c^4 c^4, as indicated in Fig. 3; and in order to prevent the powder from being dragged out and spilled while withdrawing a tooth-brush from the charging-chamber I provide a guard, as shown at c^5, Figs. 1 and 2.

In the use of my receptacles, as in all others of this general class, it is desirable that the brush be moistened and that all excess of water be first shaken from the brush before charging it with powder; and to guard against a clogging of the openings or passage-ways by moisture from the brush the bottom of the brush-charging chamber should be a little below the powder-entrances thereto and preferably inclined downwardly from each side toward the center thereof, as illustrated in Fig. 3.

In Fig. 4 I have illustrated a brush-charging chamber C′, which differs from the one last described in that instead of having a flange for securing it in place within the supply-chamber it is provided with a thin layer of cork d around its outer end for contact with the interior of the opening, in which it is to be inserted after the manner of an ordinary stopper. With this form of charging-chamber it is necessary to provide means for keeping its inner end elevated from the bottom of the supply-chamber, and for this purpose I provide a lug e, which is cut from the metal removed from the under side to provide the opening c^3 and is bent as shown. A guard c^5, before referred to, is similarly formed at the front end of the opening c^3.

In Fig. 5 I show a brush-charging chamber C^2 rectangular in cross-section, to be inserted within a rectangular opening in a supply-chamber, and instead of having the lower portion cut away it is provided with openings c^4 c^4 at each side, through which powder passes from the supply-chamber. It will be obvious that powder may enter the charging-chamber at one side only, in which case it should be located at one side of the supply-chamber, as indicated in dotted lines in Fig. 5.

To protect the interior of the brush-charging chamber from dust and dirt, I sometimes provide its mouth or entrance with a hinged cover, as illustrated in the receptacle D of Fig. 6. The brush-charging chamber C^3 here shown has a cover f, hinged at its top and kept in its closed position by gravity. This cover swings inward and offers no obstruction to the insertion or withdrawal of a tooth-brush, it being pushed back by the brush in entering the chamber, and closes of its own weight when the brush is withdrawn.

The receptacle D of Figs. 6 and 7 is composed wholly of sheet metal. Its supply-chamber B′, brush-charging chamber C^3, and passage-ways c^4 c^4 are the same in operation as before described; but, as here shown, the two chambers B′ and C^3 form one integral structure, the walls or partition c^6 extending from end to end of the supply-chamber, but sufficiently removed from the side walls thereof to afford the passage-ways c^4 c^4 for the passage of powder to the bottom of the receptacle. The supply-chamber B′ is charged with powder at its top, which is provided with a cover g, as clearly shown.

Tooth-powder receptacles embodying my invention may be cheaply constructed, and they are designed to be sold with the powder. It is therefore necessary that the mouth or entrance to the brush-charging chamber should be temporarily but tightly closed by the manufacturer after the receptacle has been filled with powder, and any means may be employed suitable to the particular form of receptacle. For instance, a temporary cap may be employed with the receptacle illustrated in Fig. 1, while a paper label may be pasted over the opening of the receptacle of Fig. 6; but it will be readily seen that frequent handling of the receptacles or packages containing the same will cause the powder to sift through the passage-ways between the supply-chamber and the charging-chamber and completely fill the latter, which would have to be emptied before the receptacle could be used in the manner intended. In order to prevent this, a small piece of paper of proper size is made into a roll and inserted within the charging-chamber before it is closed, as indicated in dotted lines at h, Fig. 3, the roll spreading sufficiently to close the passage-ways into the charging-chamber, as will be readily understood.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A tooth-powder receptacle provided with a brush-charging chamber at the bottom thereof, an opening into said chamber through the front wall of the receptacle and a partition above said opening, and a space between said partition and one or both of the side walls of the receptacle for the passage of powder to the brush-charging chamber, substantially as described.

2. A tooth-powder receptacle provided with a brush-charging chamber at the bottom thereof, an opening into said chamber through the front wall of the receptacle, and a partition above said opening provided with depending portions which together with the side walls of the receptacle form powder-passages to said brush-charging chamber, substantially as described.

3. A tooth-powder receptacle provided with a brush-charging chamber at the bottom thereof, an opening into said chamber through the front wall of the receptacle, and a partition above said opening having depending portions which together with the side walls of the receptacle form powder-passages to said chamber, the said passages communicating with the charging-chamber at a point above the bottom thereof, substantially as described.

4. In a tooth-powder receptacle the combination of a powder-supply chamber and a brush-charging chamber having one or more openings communicating with the supply-chamber and an opening for the insertion of a tooth-brush, the latter having a cover hinged at its top and adapted to be swung open by a brush on entering the chamber and close of its own weight after removal of the brush therefrom, substantially as described.

5. A tooth-powder receptacle provided with an opening in its front wall at or near the bottom thereof, and a tubular structure inserted within said opening, having an open outer end for the insertion of a tooth-brush and an opening or openings at or near the under side thereof communicating with the interior of the receptacle, the sides of the tubular structure and the side walls of the receptacle forming powder-passages leading to the opening or openings at or near the bottom of the tubular structure, substantially as described.

6. A tooth-powder receptacle provided with a brush-charging chamber at the bottom thereof, an opening into said chamber through the front wall of the receptacle and a partition above said opening provided with depending portions which together with the side walls of the receptacle form powder-passages to said chamber, the side walls of the receptacle being curved or inclined for directing powder beneath said partition, substantially as described.

7. A tooth-powder receptacle provided with a brush-charging chamber at the bottom thereof, an opening into said chamber through the front wall of the receptacle, and a partition above said opening provided with depending portions which together with the side walls of the receptacle form powder-passages to said chamber, the bottom of the latter being curved or inclined downwardly from the sides of the chamber to the center thereof, substantially as described.

8. A tooth-powder receptacle provided with an opening in its front wall at or near the bottom thereof, a tubular structure inserted within said opening having an open outer end for the insertion of a tooth-brush, and an opening or openings at or near the bottom or under side thereof communicating with the interior of the receptacle and means for supporting said structure slightly above the bottom of the receptacle, the side walls of the tubular structure and the side walls of the receptacle forming powder-passages leading to the opening or openings at or near the bottom of said tubular structure, substantially as described.

9. A tooth-powder receptacle provided with an opening in its front wall at or near the bottom thereof, and a tubular structure inserted within said opening, having an open outer end and an opening or openings at or near the bottom or under side thereof communicating with the interior of the receptacle, the side walls of said structure and the side walls of the receptacle together forming powder-passages communicating with the interior of the tubular structure, the latter being provided with a guard at or near the mouth or entrance thereto, substantially as described.

10. A tooth-powder receptacle having a main powder-supply chamber and a brush-charging chamber communicating therewith by way of one or more openings, a tube of paper or other material inserted within the brush-charging chamber for temporarily closing the openings leading from the supply-chamber, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WILLIAM S. THOMPSON, JR.

Witnesses:
HOWELL BARTLE,
PHILIP F. LARNER.