No. 649,178. Patented May 8, 1900.

# F. RICHARDSON.

## TOP FOR TOOTH POWDER RECEPTACLES.

(Application filed Nov. 6, 1899.)

(No Model.)

Fig. 1.

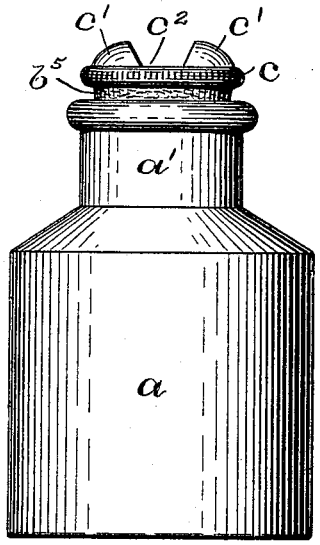



Fig. 3.

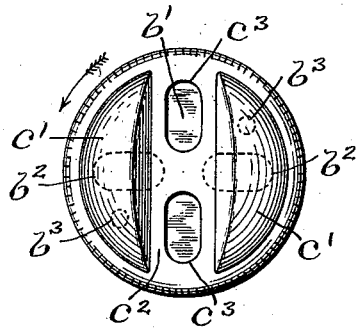



Fig. 4.

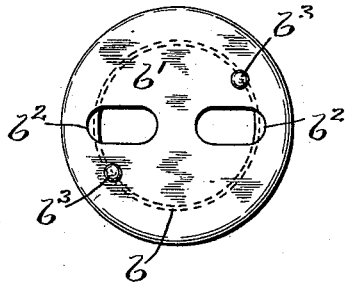



Fig. 2.

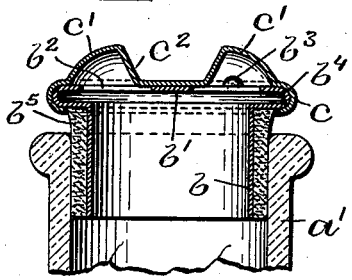



Fig. 5.

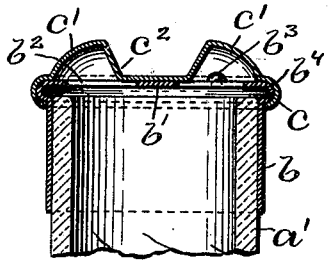
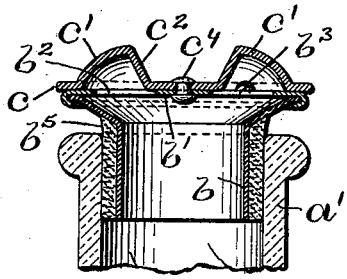



Fig. 6.




WITNESSES:

Chas. H. Luther Jr

A. E. Hagerty

INVENTOR:

Frederick Richardson

by Joseph A. Miller & Co.

Attys.

# UNITED STATES PATENT OFFICE.

FREDERICK RICHARDSON, OF PROVIDENCE, RHODE ISLAND.

## TOP FOR TOOTH-POWDER RECEPTACLES.

SPECIFICATION forming part of Letters Patent No. 649,178, dated May 8, 1900.

Application filed November 6, 1899. Serial No. 735,917. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK RICHARDSON, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Tops for Tooth-Powder Receptacles, of which the following is a specification.

My invention relates to caps or stopples for tooth-powder receptacles.

The object of the invention is to facilitate the distribution of the powder.

Tooth-powder is usually sold in bottles and requires to be distributed on the tooth-brush. The bottle or other receptacle must have a comparatively-large opening for filling the same with powder. When the powder is discharged from this opening to be used on the tooth-brush, a great deal of the powder is wasted.

The invention consists in the peculiar and novel construction of the device whereby the receptacle is closed and the distribution of the powder is facilitated.

Figure 1 is a side view of a powder-receptacle provided with my improved powder-distributing top. Fig. 2 is a vertical sectional view of the powder-distributing top, showing the same constructed to form the stopple for a tooth-powder bottle. Fig. 3 is a plan view of the rotatable top. Fig. 4 is a plan view of the end of the sleeve on which the top is rotatably secured. Fig. 5 is a vertical sectional view of the top, showing the sleeve extending over the neck of the bottle or other receptacle. Fig. 6 is a vertical sectional view of a modified form of the top.

In the drawings, $a$ indicates a bottle or other receptacle adapted to contain tooth-powder; $a'$, the neck of the receptacle; $b$, a tubular sleeve open at its lower end and closed by the plate $b'$ at its upper end. The plate $b'$ is perforated by the openings $b^2$ $b^2$ and provided with the stops $b^3$ $b^3$. In the preferred form the upper end of the sleeve $b$ is provided with the bead $b^4$, extending around the upper edge of the sleeve.

When the top is to be secured within the neck of the receptacle, the annular tube $b^5$ of cork or other suitable material is placed on the sleeve $b$. When the sleeve incloses the neck, as is shown in Fig. 5, the annular tube $b^5$ is omitted and the sleeve secured to the neck in any usual manner. The cap $c$, preferably stamped up from a piece of sheet metal, has the raised ridges $c'$ $c'$ on each side of the groove $c^2$ extending across the width of the cap $c$. The material of the cap $c$, forming the bottom of the groove $c^2$, is perforated by the openings $c^3$ $c^3$, corresponding with the openings $b^2$ $b^2$ in the plate $b'$. The margin of the cap $c$ is bent over the bead $b^4$ on the upper end of the sleeve $b$ in the preferred form, and thereby rotatably connected with the sleeve $b$ and with the surface of the cap around the openings $c^3$ $c^3$ in contact with the plate $b'$. The stops $b^3$ $b^3$ extend into the raised ridges $c'$ $c'$ and are located so as to limit the rotation of the cap $c$ at the point when the openings $c^3$ $c^3$ are over the openings $b^2$ $b^2$ and when they are at or nearly at right angles to the same, as is shown in Fig. 3, where the openings $b^2$ $b^2$ are indicated in broken lines.

In the modified form shown in Fig. 6 the cap $c$ is secured to the plate $b'$ by the central pivotal rivet $c^4$. The outer edge of the cap $c$ may be milled, as indicated in Figs. 1 and 3.

In using my improved device for distributing the tooth-powder the cap $c$ is rotated to bring the openings $c^3$ $c^3$ over the openings $b^2$ $b^2$. This is facilitated by the stops $b^3$. The bristle-face of the tooth-brush is now placed between the inclined sides of the ridges $c'$ $c'$, which are on each side of the groove $c^2$, thereby bringing the bristles on the edge of the tooth-brush in closer contact with the rest of the bristles and preventing the tooth-powder from passing between the same. The receptacle is now reversed, so that the powder will reach the brush, and by slightly moving the brush longitudinally in the groove the powder is evenly distributed on the brush. A partial rotation of the cap $c$ closes the openings, and the removal of the device leaves a large opening for filling the receptacle.

The device is durable, of attractive appearance, clean, and convenient in use, and, as it consists practically of only two parts, readily made with suitable dies.

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

1. In a powder-distributing device, in combination, a tubular sleeve, a perforated plate at one end of and integral with the tubular sleeve, a stop on the perforated plate, a perforated cap, raised ridges on the cap, inclined sides on the ridges forming the sides of a central groove, and means for securing the cap rotatably on the perforated plate; whereby the rotation of the cap controls the opening and closing of the perforations and the distribution of the powder, as described.

2. In a powder-distributing device, the combination with the tubular sleeve $b$, the plate $b'$ integral with the tubular sleeve $b$, the openings $b^2\,b^2$ in the plate, and the beaded edge $b^4$ of the sleeve, of the cap $c$, the raised ridges $c'$ $c'$ on the opposite sides of the central groove $c^2$, the openings $c^3\,c^3$, and the marginal groove extending over the beaded edge $b^4$, whereby the cap is rotatably secured, as described.

3. In a powder-distributing device, the combination with the tubular sleeve $b$, the plate $b'$ secured to one end of the tubular sleeve, and the openings $b^2\,b^2$ in the plate, of the cap $c$, the raised ridges $c'$ $c'$ on the sides of the central groove, a stop on the plate $b'$ coöperating with one of the raised ridges $c'$, and the pivotal rivet $c^4$, whereby the cap is rotatably secured to the plate, as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FREDERICK RICHARDSON.

Witnesses:
J. A. MILLER, Jr.,
A. E. HAGERTY.