No. 867,017. PATENTED SEPT. 24, 1907.

H. L. DE MOND.

TOOTH POWDER RECEPTACLE.

APPLICATION FILED MAY 5, 1906.

Fig. 1.

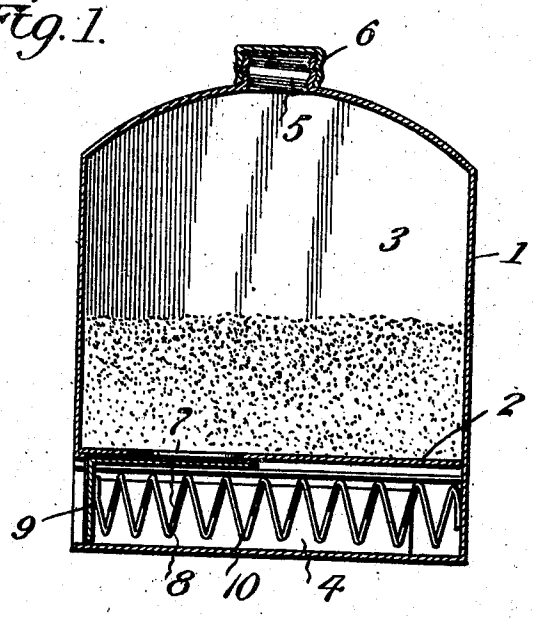


Fig. 2.

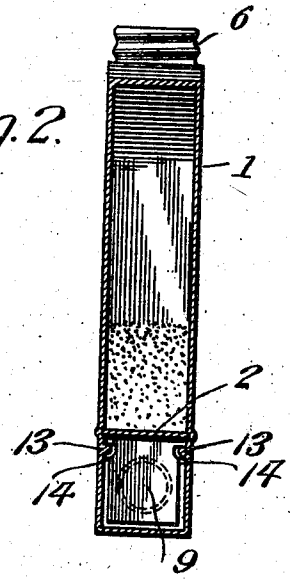


Fig. 3.

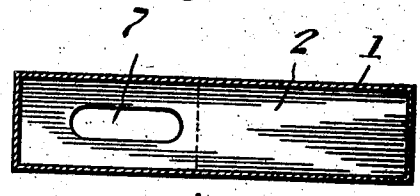
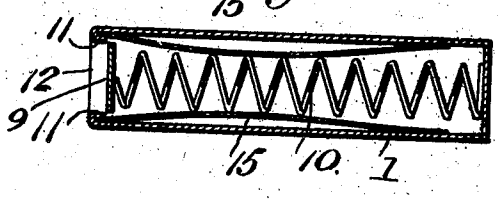


Fig. 4.



Witnesses

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TOOTH-POWDER RECEPTACLE.

No. 867,017. Specification of Letters Patent. Patented Sept. 24, 1907.

Application filed May 5, 1906. Serial No. 315,438.

To all whom it may concern:

Be it known that I, HERMAN L. DE MOND, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Tooth-Powder Receptacles, of which the following is a specification.

This invention relates to tooth powder receptacles, the object of the invention being to provide a simple, convenient and economical receptacle for containing tooth powder or the like and delivering the same in the proper quantity to a tooth brush, the receptacle embodying means for cutting off the supply of tooth powder and delivering the tooth powder to the central portion of a brush, the mechanism embodying means which insures the delivery of the powder to the central portion of a brush of any size, the brush operating to actuate the valve or cut-off and being simultaneously acted upon by a centering device which holds the bristles of the brush directly under the discharge opening controlled directly by the valve or cut-off.

With the above and other objects in view, the nature of which will more fully appear as the description proceeds, the invention consists in the novel construction, combination and arrangement of parts hereinafter more fully described, illustrated and claimed.

In the accompanying drawings, Figure 1 is a vertical longitudinal section through a receptacle embodying the present invention, showing the cut-off in its closed position. Fig. 2 is a vertical transverse section through the same. Fig. 3 is a horizontal section through the receptacle, showing the discharge opening. Fig. 4 is a horizontal section taken through the lower portion of the receptacle, showing the construction and operation of the cut-off and the centering device.

Referring to the drawings, 1 designates a powder receptacle which may be made of any suitable size and which is sufficiently wide to receive any ordinary tooth brush in the lower portion thereof.

The receptacle as a whole is divided by means of a horizontal wall or diaphragm 2 into an upper powder-receiving chamber 3 and a lower valve or cut-off chamber 4, the chamber 3 being provided with an inlet nozzle 5 and a sealing cap or closure 6 by means of which the powder may be introduced into the chamber 3.

The dividing wall or diaphragm 2 is provided with a slot or discharge opening 7 of suitable size to deliver the requisite amount of powder to a brush held beneath the same with the bristles extending upward so as to lie directly under the opening 7. Arranged to slide beneath the wall 2 and the opening 7 is a valve or cut-off 8 in the form of a plate having at one end thereof a spring seat 9 which also forms an abutment or pushing shoulder in connection with the butt end of a tooth brush which operates to push the cut-off or valve 8 inward to uncover the discharge opening 7.

Arranged behind the abutment 9 is an expansive spring 10, one end of which bears against the abutment 9 and the other end against the opposite wall of the receptacle, as clearly shown in Figs. 1 and 4, the tension of said spring being exerted to hold the valve or cut-off 8 closed, as shown in Figs. 1 and 4, suitable stop shoulders 11 being provided near the open end of the valve chamber to arrest the outward movement of the abutment 9 as it is forced outward by the spring 10. It will be understood that the casing is left open at the point 12 to admit the head of the tooth brush so that when said brush is inserted through the opening 12 and pressed inward, it acts upon the abutment plate 9, pushing the same inward against the tension of the spring 10 until the discharge opening 7 is uncovered, thereby allowing a quantity of the powder to gravitate through said opening upon and through the bristles of the brush, the bristles being held upward to receive the powder.

In order to insure the proper working and guiding of the cut-off 8, parallel guides 13 are provided at opposite sides of the cut-off or valve chamber 4, as shown in Fig. 2, and the abutment plate 9 is notched, as shown at 14, to fit said guides and, in this way, the cut-off plate is held up snugly against the bottom of the dividing wall 2, and the lower edge of the abutment 9 is lifted out of contact with the bottom of the receptacle, thus insuring the free sliding movement of the cut-off or valve.

In order to provide for centering brushes of different sizes directly beneath the discharge opening 7, oppositely arranged and reversely bowed or curved springs 15 are located within the valve chamber 4, as shown in Fig. 4, the said springs gradually converging from the entrance opening 12, rearward to the center of the valve chamber, and thus, as the brush is pushed inward to open the cut-off 8, it is engaged on opposite sides by the centering springs 15 and forced to occupy a position centrally beneath the discharge opening 7 which insures the delivery of the powder directly upon the bristles of the brush. As the brush is withdrawn, after receiving its supply of powder, the spring 10 acts to close the valve or cut-off and prevent

the further discharge of powder from the powder-holding chamber 3.

I claim:

A powder receptacle provided with an upper powder receiving chamber and a lower valve or cut-off chamber, a bottom forming a partition between said chambers, said bottom having a discharge opening therein, in combination with a spring closed cut-off operating beneath said discharge opening, said cut-off comprising a valve and a right angular end forming an abutment for the brush, and means for centering the brush in the cut-off chamber, said means comprising oppositely disposed bowed springs which converge inwardly toward the center of the chamber to center the brush beneath the discharge opening, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

HERMAN L. DE MOND.

Witnesses:
EDWARD CRICKER,
JACOB BATES.