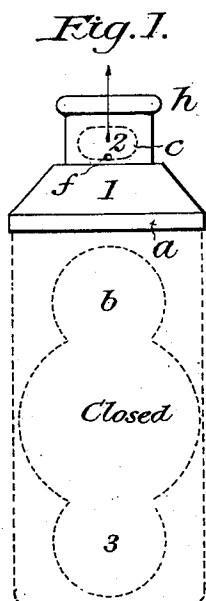
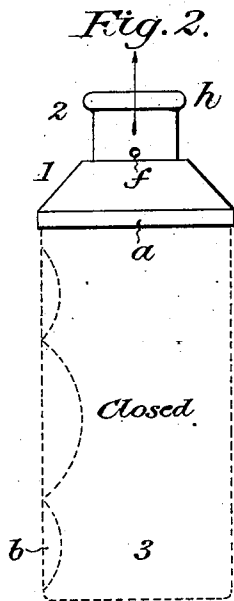
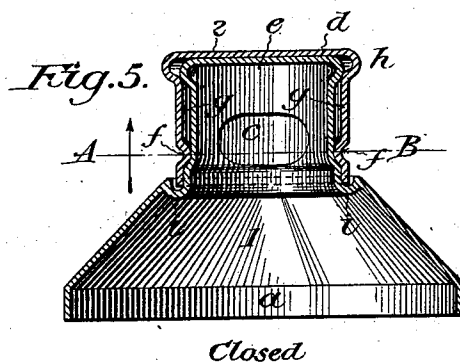
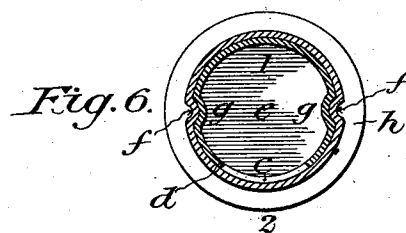
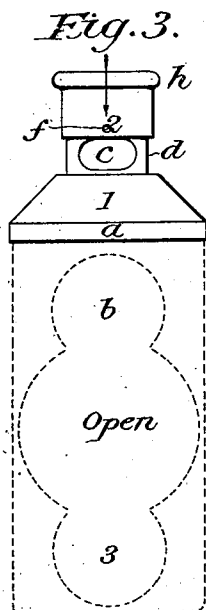
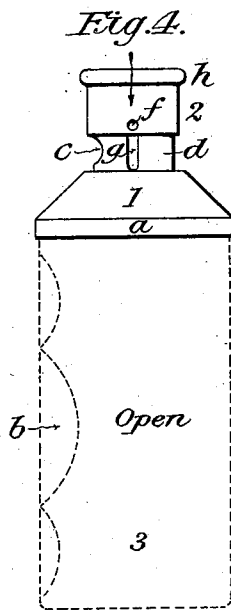
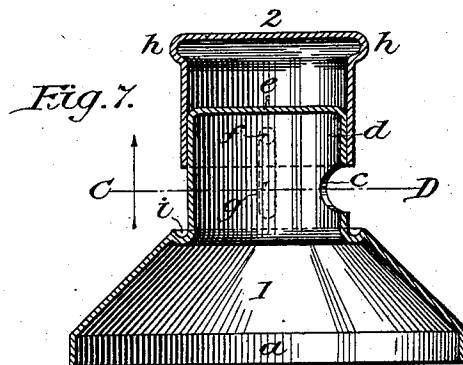
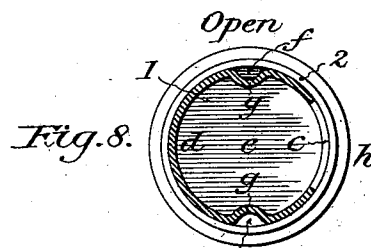


No. 722,699.

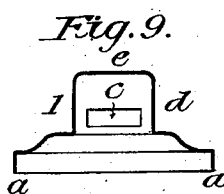
PATENTED MAR. 17, 1903.

W. H. HALL.
TOOTH POWDER BOX.
APPLICATION FILED NOV. 22, 1901.

NO MODEL.



Witnesses:
A. M. Long
C. K. Berryman



Inventor.
William Henry Hall
by his attorney
W. L. Swin.

UNITED STATES PATENT OFFICE.

WILLIAM HENRY HALL, OF NEW YORK, N. Y.

TOOTH-POWDER BOX.

SPECIFICATION forming part of Letters Patent No. 722,699, dated March 17, 1903.

Application filed November 22, 1901. Serial No. 83,258. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HENRY HALL, a citizen of the United States of America, and a resident of the city of New York, in the State of New York, have invented a new and useful Improvement in Tooth-Powder Boxes, of which the following is a specification.

This invention relates to the caps or closures of those tooth-powder boxes or receptacles that are adapted both for shipping and storing purposes and for dispensing the powder; and it consists in a pull-opened closure of improved construction, composed of two inseparable sheet-metal parts, both of which are adapted to be inexpensively made by means of dies and without milling, so as to render the closure uniformly powder-tight when closed and at the same time easy to open even with moist fingers.

A sheet of drawings accompanies this specification as part thereof.

Figures 1 and 2 are respectively front and side views of the improved box-closure closed, and Figs. 3 and 4 like views of the same open, showing it applied to an ordinary box-body, which is represented by dotted outlines. Fig. 5 represents an axial section through the closed device on a larger scale; and Fig. 6, a cross-section on the line A B, Fig. 5. Fig. 7 represents an axial section through the opened closure on the same scale as Figs. 5 and 6; and Fig. 8, a cross-section on the lines C D, Fig. 7. Fig. 9 represents an axial section through the fixed cap of a modified closure, as hereinafter described.

Like letters and numbers refer to like parts in all the figures.

The improved box-closure is composed of two parts 1 and 2, forming, respectively, a "fixed cap" 1 and a "sliding cap" 2, as they are hereinafter termed. The fixed cap 1 is adapted by a marginal flange *a* to be permanently attached to the top of a box-body 3, of sheet metal, glass, or other suitable material, before or after the same is filled with tooth-powder in such a manner as to prevent refilling the box, and thus to confine the use of the box to the brand of powder indicated by its label *b*, Figs. 1 and 3. In line with the label *b*, so as to be unmistakably located when the box is closed, Figs. 1 and 2, the fixed cap

1 is constructed with an outlet *c*, Fig. 3 and Figs. 5 to 8, which is cut in the front of a cylindrical neck *d*, having a solid or imperforate upper end *e*. Apart from said outlet *c* both parts of the improved closure are preferably and conveniently without any opening whatever, so that it is only necessary to adequately guard said outlet in order to render the closure absolutely powder-tight when closed. The sliding cap 2 is snugly fitted to said neck *d*, which it embraces, and is inseparately attached to the fixed cap 1 by pairs of stop projections *f* and grooves *g*, formed in the respective parts, the grooves being longitudinal and preferably and conveniently located at the sides of the closure, Figs. 2 and 4. They are thus so placed as to distribute the strain when the sliding cap 2 is pulled open, and thus to prevent separating or loosening the sliding cap by such strain. A circumferential enlargement forms a head *h* on the sliding cap 2 by which to pull the closure open, as represented by the arrows in Figs. 1 and 2. The head *h* requires no milling and is otherwise adapted to be formed without interfering with the necessary powder-tight fit of the parts.

The box is closed by a downward push on the sliding cap 2, as represented by the arrows in Figs. 3 and 4, and is kept closed by the frictional contact of the two parts of the closure with each other.

An annular groove in the fixed cap 1 to coact with the lower edge of the sliding cap 2 when the box is closed is shown at *i* in Figs. 5 and 7. Such groove *i* is not considered necessary and may be omitted, and the shape of the fixed cap 1, including that of the outlet *c*, may be changed as different makers or users may prefer, as represented by Fig. 9, and other like modifications will suggest themselves to those skilled in the art.

Having thus described said improvement, I claim as my invention and desire to patent under this specification—

1. An improved pull-opened box-closure composed of two sheet-metal parts, one of which is a fixed cap having a neck with an outlet in its front and a closed upper end, and the other part is a sliding cap embracing said neck and said closed upper end and provided with a head by which to pull it length-

wise to open the box; the respective parts having stop devices indented therein to limit the longitudinal movement of said sliding cap.

2. An improved pull-opened box-closure
5 composed of two sheet-metal parts, one of which is a fixed cap having a neck with an outlet in its front and a closed upper end, and the other part is an imperforate sliding cap embracing said neck and said closed upper
10 end and provided with a head by which to pull it lengthwise to open the box; the respective parts having indented therein diametrically opposite pairs of stop projections and longitudinal stop-grooves, to limit the
15 longitudinal movement of said sliding cap and to distribute the pulling strain.

3. An improved pull-opened box-closure

composed of two sheet-metal parts, one of which is a fixed cap having a neck with an outlet in its front and a closed upper end, and
20 the other part is an imperforate sliding cap embracing said neck and said closed upper end and provided with a head by which to pull it lengthwise to open the box; the respective parts having stop devices indented
25 therein to limit the opening movement of said sliding cap, and said fixed cap having an annular groove to receive the lower edge of the sliding cap when the box is closed, substantially as hereinbefore specified.

WM. HENRY HALL.

Witnesses:

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