(No Model.)

J. P. HENDRICK, Jr.

TOOTH POWDER BOX.

No. 567,942. Patented Sept. 15, 1896.

Fig. 1.

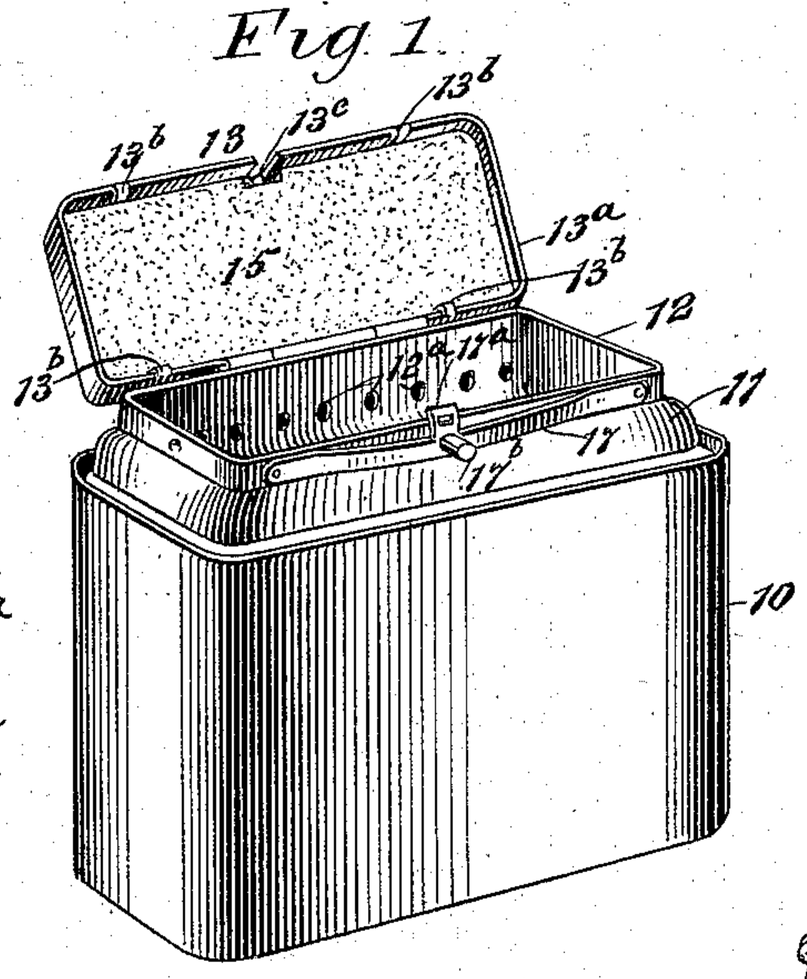


Fig. 7.

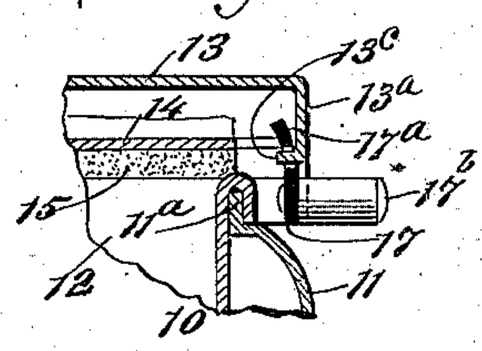


Fig. 6.

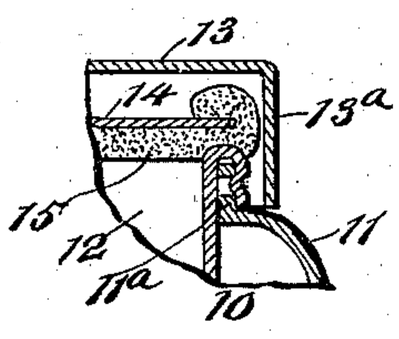


Fig. 5.

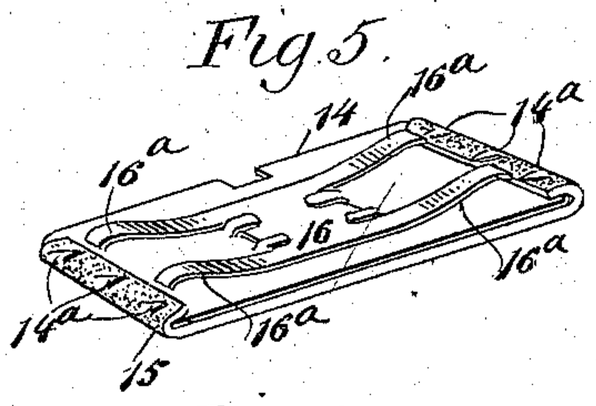
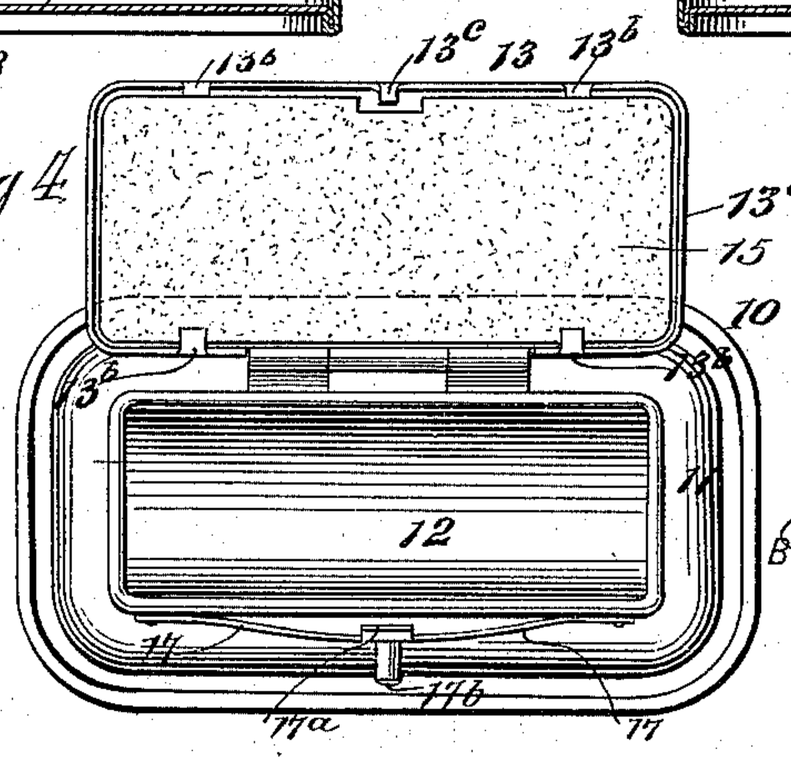


Fig. 2.

Fig. 3.

Fig 4



WITNESSES:

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JAMES PAUL HENDRICK, JR., OF FLEMINGSBURG, KENTUCKY.

TOOTH-POWDER BOX.

SPECIFICATION forming part of Letters Patent No. 567,942, dated September 15, 1896.

Application filed February 11, 1895. Serial No. 537,933. (No model.)

To all whom it may concern:

Be it known that I, JAMES PAUL HENDRICK, Jr., of Flemingsburg, in the county of Fleming and State of Kentucky, have invented a new and Improved Tooth-Powder Box, of which the following is a full, clear, and exact description.

This invention relates to improvements in tooth-powder boxes of a kind in which provision is made for preserving the contents of the box from spilling or becoming damaged by an exposure of the bulk of the tooth-powder in the box to the open air while a portion of the powder is being removed for use.

One object of the invention is to provide novel details of construction for a tooth-powder box of the indicated type which will adapt the otherwise sealed receptacle for a quick and complete separation of a small part of the tooth-powder from the main portion in the box and present said small amount in a trough-like holder that is furnished with a hermetically-sealing lid which, when opened, will freely expose the tooth-powder held in the trough for the convenient application of a tooth-brush to remove the powder for use, the construction of the trough adapting it to prevent water from the tooth-brush entering the main portion of the box to injure its contents.

A further object is to provide a novel spring throw-up for the lid of the trough, which spring throw-up also serves to press a sealing-joint piece which is within the lid closely on the edge of the powder-holding trough, so as to effectually seal the trough and main receptacle from air or escape of contents of the box if the lid is closed.

To these ends my invention consists in the construction and combinations of parts, as is hereinafter described, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of the improved tooth-powder box with the lid of the powder-holding trough elevated. Fig. 2 is a longitudinal sectional view substantially on the line 2 2 in Fig. 3. Fig. 3 is a transverse sectional view essentially on the line 3 3 in Fig. 2. Fig. 4 is a plan view with the trough-lid in open adjustment. Fig. 5 is a detached perspective view of the sealing-plate of the lid, showing its normally-concealed side and the throw-up spring attached thereto. Fig. 6 is an enlarged longitudinal sectional view of an end portion of the trough-lid and parts within said lid, looking in direction of arrow 7 in Fig. 3; and Fig. 7 is an enlarged transverse sectional view of one end of the lid and the parts contained therein, looking in direction of arrow 6 in Fig. 2.

The main receptacle 10 for the tooth-powder may be of any desired form, but preferably is made substantially rectangular with the corners of its body rounded, as indicated in Figs. 1 and 4.

The receptacle 10 is provided with a bottom 10^a, secured at its edge to the base of the receptacle, preferably by folding these edges together and producing what is technically known as a "double seam" between the bottom and base.

The top 11 is secured to the upper end of the receptacle by double-seaming the edges together or by any other available means, and, as shown, this top is bulged upwardly, so as to elevate part of the same from a point near the sides and ends of the receptacle, but this feature may be omitted if it is found expedient to do so and the top 11 be made entirely flat. The top 11 is centrally apertured of a shape to correspond with the margin thereof, providing the receptacle 10 is substantially rectangular, whereby the aperture in the top is adapted to receive the elongated trough 12.

As shown, the trough 12 is preferably given a nearly-rectangular contour and has vertical walls, the integral bottom of the trough being downwardly depressed or curved, as clearly shown in Fig. 3, and to prevent the lodgment of powder at the corners between the upright walls of the trough and the bottom said corners are all slightly rounded.

The side walls of the trough 12 are closely fitted into the aperture in the top 11, and provision is made for securing the trough, so that it will be immovable after the receptacle 10 has been filled with tooth-powder, as one object of the improvement is to produce a box for containing and supplying a high

grade of tooth-powder to consumers and prevent a subsequent use of the box after its contents have been removed.

While it is feasible to attach the trough to the receptacle by soldering or riveting it in place, a convenient and preferred plan for fastening said parts together is shown in Figs. 1, 2, and 6, and consists in puncturing at different points a flange 11^a, that is turned upwardly around the aperture in the top 11 to facilitate the formation of the interlocking connection, the trough having a depending flange bent outwardly and downwardly at its edge, so as to produce a neat finish on the latter, and in said depending flange indentations are formed opposite the perforations in the flange 11^a, so that the indentations may enter said perforations and lock the trough fast to the top 11.

The side walls of the trough 12 are perforated in series at 12^a, as shown in Figs. 2 and 3, but the end walls of the trough may be imperforate. The perforations 12^a in the side walls, being of comparatively small diameter, are advantageously located, if arranged in the same horizontal plane, a short distance from the upper edge of the trough and below the connection of the trough with the top 11.

The lid 13 of the trough 12 is furnished with a depending flange 13^a at its edge, and is of such dimensions and marginal form that the edge of the lid will be adapted to fit loosely over the projecting edge of the trough and its depending flange nearly seat on the bulged portion of the top 11 when the lid is closed. The lid 13 is hinged to the upper projecting edge of the trough 12 in a manner which will allow it to fold down over said edge and produce a crevice between the flange 13^a and the edge of the trough for the accommodation of another part of the device which is to occupy the lid and overlap the top edge of the trough that it seats upon when the lid is closed.

The part which is introduced within the cavity of the lid 13 comprises a flat presser-plate 14, of metal or other suitable material, of a size and shape which permits its easy insertion within the lid and also permits the application of a fibrous, felted, or other slightly-yielding packing 15 to the plate 14 on its under side, the edge of the packing being folded over the edge of the presser-plate and held therein by clips 14^a, that are produced on the plate and bent so as to press on the folded edge of the packing, as shown in Fig. 5, or any other equally good means for attaching the parts 14 15 together may be employed.

Between the inner surface of the lid 13 and the presser-plate 14 an elliptic spring 16 is secured on the presser-plate by clips bent from the latter, or by other means, the spring being preferably formed with four fingers 16^a, that are extended in pairs from each end of the central portion of the spring, the four fingers being so bent and spaced apart that they will have contact with the lid at four points near its corners.

The presser-plate 14 and packing 15 are loosely secured in the recess of the lid 13 by a suitable number of lipped projections 13^b, formed on the edge of the flange 13^a and turned inwardly, so as to have their free ends projected slightly over the packing, or, if preferred, studs may be projected through the flange 13^a at proper points and slightly extend over the packing, the studs being attached to or formed on the flange, and as the studs are the equivalents of the lips 13^b it is not considered necessary to show them in the drawings.

To retain the lid closed and the packing 15 pressed against the edge of the trough 12, so as to prevent air from entering the box 10 through the perforations in the trough, and also seal the trough to prevent any escape of tooth-powder therefrom, a spring-catch, such as shown in Figs. 1 and 4, is preferably employed. This catch consists of an elastic strip 17, having a proper length to afford effective service and attached at or near its ends to the outside of the trough 12, as clearly shown in Figs. 1 and 4, the spring-plate having an upwardly and inwardly bent projection 17^a formed on its upper edge at or near its longitudinal center, and the lip or projection has a perforation produced in it above a push-button 17^b, affixed to the plate 17 near its center and projecting outwardly therefrom, as shown in Figs. 3, 4, and 7.

A latch-toe 13^c is formed or secured on the depending flange 13^a of the lid 13, which toe projects inwardly from the upper edge of a notch cut in said flange in position to receive the push-button 17^b when the lid is closed, the proportion of parts being such that the toe 13^b will have a latching engagement with the perforation of the lip 17^a when the lid is completely closed and a hermetic sealing of the trough 12 be effected, the push-button having a sufficient length to project exteriorly of the closed lid for convenient manipulation when it is desired to open the lid and afford access to the trough.

The trough 12 is not secured in place until the receptacle 10 is filled with the tooth-powder that is to be vended exclusively with the box, and after a quantity of boxes have been filled the troughs are then properly affixed in place by the specified means or any other method that may be preferred.

It will be seen that from the position given to the perforations in the upright side walls of the trough water or other foreign matter that may enter the trough from above its perforations cannot in ordinary usage pass into the receptacle.

To use the tooth-powder, it is only necessary that the receptacle be partly or entirely inverted and slightly jarred, which will cause a small amount of the tooth-powder to pass through the perforations of the trough, and

rest on its concave bottom when the complete device is turned upright, access to the tooth-powder being afforded by opening the lid, which is effected by pressing upon the push-button, so as to release the toe 13ᶜ, when the resilience of the heretofore-compressed fingers on the elliptic plate-spring 16 will throw up the lid in an obvious manner.

The provision of the spring 16 and its location between the lid and presser-plate 14, as described, adapts said spring to serve as a means for enforcing a tight contact between the packing 15 and the edge of the trough 12, and also as a throw-up spring, as just explained, which is one important feature of the invention.

The elongated trough 12, from its peculiar formation, permits the free insertion of a tooth-brush, which, if moistened, will take up the tooth-powder from the bottom of the trough, and if proper care is had in the sifting of powder from the receptacle into the trough just a sufficient amount may be so transferred for once using of the powder, so that economy in consumption of the tooth-powder and its preservation from dampness or other deterioration are afforded by use of the improved tooth-powder box.

In case more tooth-powder than is needed for immediate use is carelessly thrown into the trough its contamination from contact with the tooth-brush or from moisture received therefrom will not affect the main bulk of the powder that is in the receptacle 10, and it may also be readily removed, so as to leave the trough in a clean condition.

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

1. A box for tooth-powder and the like having a trough-shape closure at its upper end, said closure having vertical side walls perforated at intervals elongated on straight lines, and spaced apart from the sides of the box whereby when the box is inverted the powder may be accumulated in the space between said perforated sides, and the box and may be retained in said space when the box has been again partially reverted to facilitate sifting into the trough substantially as set forth.

2. The combination with a box-body, a cover, and a perforated trough hung from and in an aperture of the cover, of a hinged lid a spring-pressed sealing-plate therein, a facing-piece on the plate and a catch for the lid substantially as described.

3. The combination with a box having an aperture in its upper end and an elongated trough secured in the aperture of the box and closing it and projecting above the top of said box, the said trough having apertured vertical side walls, of a recessed lid hinged to fold over the free edge of the trough a flat presser-plate in the recess of the lid a pliable packing secured on the presser-plate, both the plate and the packing being loosely held in the recess of the lid, a spring intervening the presser-plate and the lid and holding the packing against the free edge of the trough when the lid is closed, and a spring-catch adapted to retain the lid closed against the stress of the spring in the lid substantially as described.

4. In a tooth-powder box substantially as described the combination with the box, and a trough inserted and secured in the upper end of said box and projected at its free edge above the box, of a recessed lid hinged to the trough and adapted when closed to inclose the free edge of the trough, a flat presser-plate, a pliable packing affixed to the presser-plate, both the presser-plate and packing being loosely held in the recess of the lid, an elliptic spring secured to the presser-plate and having fingers engaging the lid, and a spring-catch to hold the lid closed against the stress of the elliptical spring as specified.

5. A box for tooth-powder or the like having a trough-shape closure provided with a bottom and with vertical sides and having apertures in said sides, such apertures being entirely above the bottom and the lid carried by said trough and provided with a yielding packing to close the same substantially as shown and described.

6. A box for tooth-powder or the like provided with a projecting neck surrounding its opening and the trough-shape closure for such opening provided with an external depending flange fitting over and clamped to said neck substantially as set forth.

7. A box for tooth-powder or the like provided with a projecting neck surrounding its opening and the trough-shape closure for such opening provided with an external depending flange fitted and moved down over said neck substantially as set forth.

8. In a box for tooth-powder and the like a trough-like closure having apertures and provided with a lid hinged to and carried by said trough and a spring secured at its ends to the trough and having between its ends a push portion and a catch to secure the lid, the latter being provided with a depending flange lapping down over and inclosing the spring in the closed position of the lid substantially as and for the purposes set forth.

9. A tooth-powder box having in its top an aperture of less width than the box whereby to afford a space between the side of the box and the aperture a trough-shape closure for said aperture projecting above the top of the box and a hinged lid for said closure having a catch provided with a push portion lying within the angle formed between the top of the lid and the side of the box whereby such portion is protected from being accidentally pushed in packing and storing substantially as described.

10. A tooth-powder box provided at its upper end with an aperture, a trough-shape

closure having perforated walls said closure having a cover and being permanently and securely fastened in said aperture thereby preventing the emptying or refilling of the box except by slow degrees substantially as set forth.

11. A tooth-powder box having the top and bottom securely and permanently fastened to the side walls of the box, the top having an aperture, a trough-like closure for said aperture having perforate walls opening between the main receptacle and the trough and a lid to close said trough, substantially as set forth.

12. The combination with a permanently-closed box, of a transverse laterally-perforated trough permanently hung from the fixed cover of the box within it and a device to detachably seal the trough, substantially as described.

JAS. PAUL HENDRICK, JR.

Witnesses:
JNO. M. RITTER,
WM. P. PATTON.