(No Model.)

W. H. BAYLES.

TOOTH POWDER BOTTLE.

No. 435,912. Patented Sept. 9, 1890.

Fig. 1.

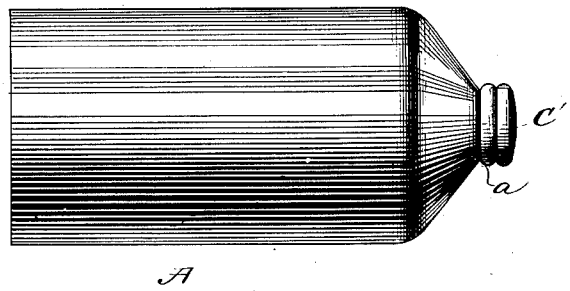


Fig. 2.

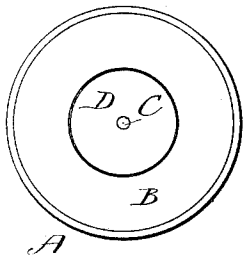


Fig. 3.

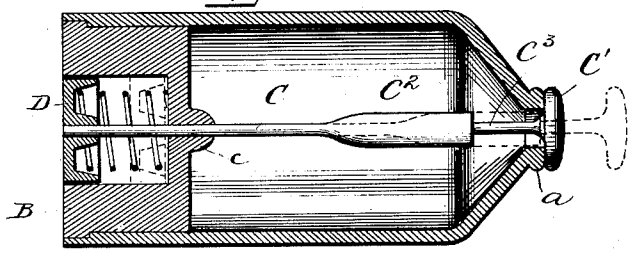


Fig. 5.

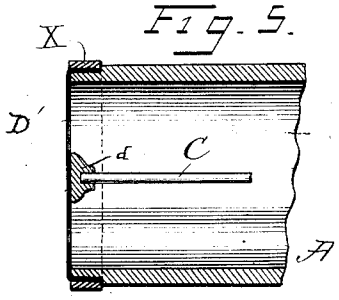


Fig. 4.

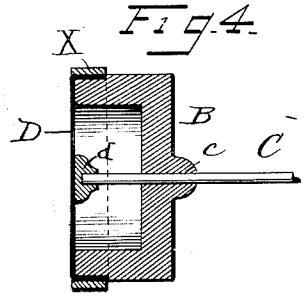
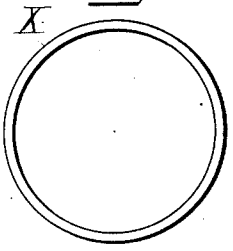


Fig. 6.



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WILLIAM H. BAYLES, OF MONTCLAIR, NEW JERSEY.

TOOTH-POWDER BOTTLE.

SPECIFICATION forming part of Letters Patent No. 435,912, dated September 9, 1890.

Application filed June 12, 1890. Serial No. 355,122. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. BAYLES, a citizen of the United States, residing at Montclair, county of Essex, and State of New Jersey, have invented certain new and useful Improvements in Bottles or Packages for Tooth-Powder and for Similar Purposes, of which the following is a specification.

The object of my invention is to produce a tooth-powder bottle from which a definite quantity of powder may be positively discharged and the discharge-opening automatically closed, and at the same time to avoid the use of any part or parts projecting from the wall of the bottle for the manipulation of the discharge devices.

In the accompanying drawings, Figure 1 is a side elevation of my improved bottle; Fig. 2, an elevation of the bottom thereof; Fig. 3, a longitudinal section, and Figs. 4, 5, and 6 views illustrating modified constructions.

The bottle A, which may be made of any suitable material—for instance, glass, paper, or wood turned to the desired shape—is at the top contracted and formed with a discharge-opening *a* and is left with the bottom open.

Within the open bottom is seated a cup-shaped plug B, centrally bored to form a bearing for the powder-discharge spindle C. At this bearing the cup is formed with an enlargement *c*, extending inwardly, the purpose being to provide a longer bearing for the spindle, and also to provide the curved surface, as shown, which tends to deflect the powder from the bearing when the bottle is stood upon end, and for this reason, as well as because of the elongated bearing, there is less danger of the powder sifting through the bearing.

The bottom end of the spindle is seated in and connected with a push-button D, flush with the bottom of the bottle, or countersunk. This button is provided with an annular depression on its inner faces, in which rests a coiled spring, the opposite end of which bears upon the bottom of the cup-shaped plug B. The push-button D is held in normal position against the pressure of the spring by the head C′ of the spindle, which then closes the discharge-opening *a* of the bottle. The spindle C is formed with an elongated enlarged portion C^2, that fits the discharge-opening *a*, and between the end or shoulder of the enlarged part C^2 and the face of the head C′ the spindle is quite slender, as shown, and forms a core for the charge of powder to be ejected. By pressing upon the button D the spindle C is pressed forward, the end of the part C^2 pushing the powder around the portion C^3 of the cylinder ahead of it and discharging it through the opening *a;* but when the end of the part C^2 reaches the opening *a* it closes it and prevents any more than a definite quantity of powder from being discharged. This position is shown by the dotted lines in Fig. 3. As will be obvious, as soon as the head C′ is pushed away from the opening *a* there is a perfectly free discharge of the powder that is pushed forward by the part C^2, so that it will fall freely, but in a compact body, and without the necessity of any shaking of the bottle directly upon the tooth-brush or wherever desired. The spindle, including the head C′ and the enlarged part C^2, may all be in one piece and formed of a single wood-turning, or the head may be attached to the part C^3, or the part C^3 may he attached to the part C^2. The plug B, as well as the button D, may also be turned from wood or made of any other suitable material. In the modification shown in Fig. 4 the spring and button D are replaced by an elastic diaphragm D′, stretched across and clamped upon the end of the plug by means of a ring X, and having upon its inner surface a button *d*, in which the end of the spindle is seated.

In Fig. 5 an elastic diaphragm D′ is shown stretched across and clamped by a ring X directly to the end of the bottle A. In bottles of this construction the elastic diaphragm constitutes a push-button, and by its elasticity serves to automatically return the spindle to the normal position to close the bottle after a discharge of the powder.

I claim as my invention—

1. The combination, substantially as set forth, of the bottle A, having a discharge-opening *a*, a powder-discharging spindle C working therein, and an elastically-reacting push-button or device connected with the spindle, countersunk in and flush with the wall of the bottle, by means of which it may be pressed for-

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ward to discharge the powder and automatically returned to the normal position to close the bottle.

2. The combination, substantially as set forth, of the bottle A, having a discharge-opening *a*, the spindle of less diameter than the opening working therein, and having a head C′ for closing the opening, and an elongated enlarged portion C^2, fitting the opening and adapted to press forward through the opening a definite quantity of powder, and an elastically-reacting button or device for forcing the spindle forward to discharge the powder and automatically returning it to the normal position to close the bottle.

3. The combination, substantially as set forth, of the bottle having a discharge-opening, the spindle of less diameter than said opening and working therein, and having a head C′ for closing the opening, and the enlarged portion C^2 for discharging the powder through the opening, the cup-shaped plug in the bottom of the bottle, in which the spindle has its bearing, and a spring and push-button with which the spindle is connected arranged within said cup-shaped plug, the button being flush with the bottom of the bottle.

4. The combination, substantially as set forth, of the bottle A, having a discharge-opening *a*, a powder-discharging spindle working therein, and an elastically-reacting push-button or device in the bottom of the bottle and flush therewith or countersunk therein and connected with the spindle, by means of which it may be pressed forward to discharge the powder from the mouth or opening and automatically returned to the normal position to close the bottle.

In testimony whereof I have hereunto subscribed my name.

WILLIAM H. BAYLES.

Witnesses:

EDWARD C. DAVIDSON,

FRANK S. OBER.