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TOOTH POWDER DISPENSER

2,315,244

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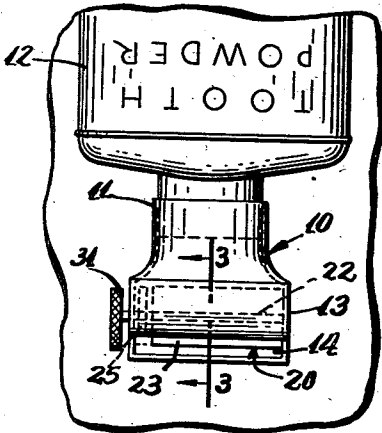


Fig. 1.

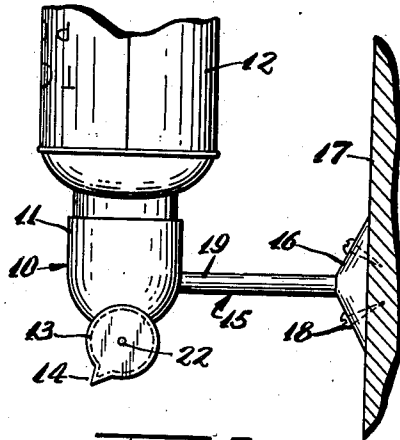


Fig. 2.

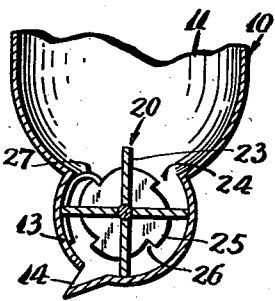


Fig. 3.

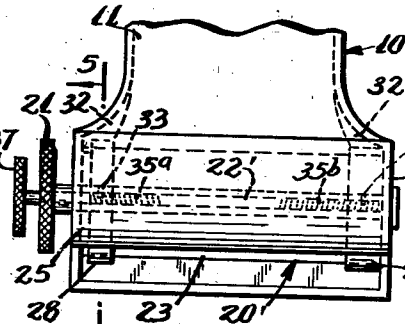


Fig. 4.

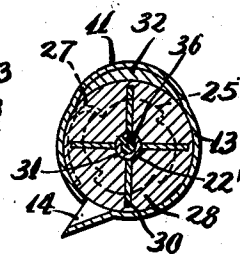


Fig. 5.

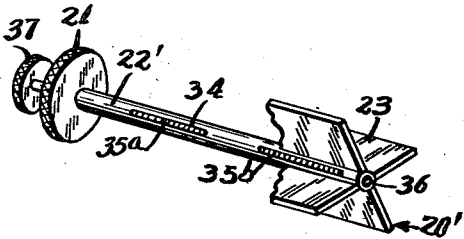


Fig. 6.

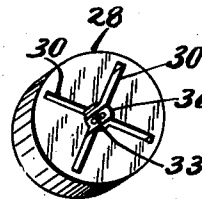


Fig. 7.

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## UNITED STATES PATENT OFFICE

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## TOOTH POWDER DISPENSER

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6 Claims. (Cl. 221-107)

This invention relates to new and useful improvements in a tooth powder dispenser.

More specifically, the invention proposes a powder dispenser which is characterized by a casing having a top neck for receiving and supporting a receptacle of powder, and also having a horizontal cylindrical portion with a bottom discharge chute, and certain mechanism within said cylindrical portion for controlling the discharge of a predetermined quantity of powder.

More specifically, the invention proposes to arrange a measuring pocket member within the cylindrical portion operable in a certain way.

Still further the invention proposes an arrangement by which the pockets of the measuring pocket member may be varied to control the amount of discharged powder.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawing, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawing forming a material part of this disclosure:

Fig. 1 is a fragmentary front elevational view of a receptacle of powder mounted on a tooth powder dispenser constructed in accordance with this invention.

Fig. 2 is a side elevational view of Fig. 1.

Fig. 3 is a fragmentary enlarged vertical sectional view taken on the line 3-3 of Fig. 1.

Fig. 4 is a fragmentary enlarged elevational view similar to a portion of Fig. 1 but disclosing a tooth powder dispenser constructed in accordance with a modified form of this invention.

Fig. 5 is a transverse vertical sectional view taken on the line 5-5 of Fig. 4.

Fig. 6 is a fragmentary perspective view of a portion of the measuring pocket member used in Fig. 4.

Fig. 7 is a perspective view of one of the shutters used in Fig. 4.

The tooth powder dispenser, in accordance with this invention, includes a casing 10 having a top neck 11 for receiving and supporting a receptacle of powder 12, such as tooth powder or other powder. The casing 10 is also provided with a horizontal cylindrical portion 13 having a bottom discharge chute 14. The casing 10 is on a bracket 15 by which it is supported. The bracket 15 has a base section 16 secured to a wall 17 or other support by fastening elements 18. The bracket 15 is also provided with a stem section 19 connected with the back of the casing 10.

A measuring pocket member 20 is turnably axially mounted through the cylindrical portion 13 of the casing 10 and is connected with a pro-

jecting portion in the form of an external knob 21 by which it may be turned. The measuring pocket member 20 essentially comprises a rod 22 mounted axially in the cylindrical portion 13.

The rod 22 is mounted on the end walls of said cylindrical portion 13. One end of the rod 22 projects, and this projecting end is provided with the said knob 21 by which it may be turned. In addition to the rod 22 the measuring pocket includes a plurality of radial vanes 23 mounted on and projecting from the rod 22. These vanes divide off a plurality of measuring pockets 24. As illustrated in Fig. 3 there are four vanes 23 dividing off four of the pockets 24.

Means is provided for assisting in selectively aligning the pockets 24 of the measuring pocket member 20 with the said discharge chute 14. This means comprises a ratchet 25 mounted on the rod 22 and having a notch 26 for each vane 23. A pawl 27 is mounted on the wall of the cylindrical portion 13 and engages the ratchet 25 so as to assist in selectively turning the pocket member. As illustrated in Fig. 3 the rod 22 should be turned counter-clockwise until one feels and hears the pawl 27 snap into the next notch 26. In the new position, a new one of the pockets 24 will have been aligned with the discharge chute 14.

In Figs. 4 to 7 inclusive a modified form of the invention has been disclosed which is similar to the prior form but distinguishes in the fact that a pair of shutters 28 are slidably mounted on the pocket member 20' and are associated with means by which the shutters 28 may be moved to reduce the capacity of the pockets. More specifically, the measuring pocket member 20' comprises a tube 22' coaxially turnably mounted through the cylindrical portion 13 and having one end projecting from one end wall of said portion. This projecting end is provided with the knob 21 by which the tube 22' may be readily turned. A plurality of vanes 23 is mounted radially on the tube 22' and form the various pockets of the pocket member.

The shutters 28 are in the nature of relatively wide discs having a plurality of slots 30 and a central opening 31 for receiving the vanes 23 and the tube 22'. More specifically, the shutters 28 are mounted on the end portions of the measuring pocket member 20'. Small crescent shaped filler members 32 (see Figs. 4 and 5) are mounted within the casing 10 and extend over the top portions of the shutters 28 to prevent powder from entering the compass occupied by these parts. Each shutter 28 has an internal pin 33 which extends through elongated slots 34 formed in the tube 22' and engage between threads 35<sup>a</sup> and 35<sup>b</sup> formed on the rod 36 rotatively mounted through the tube 22'.

The rod 36 has a projecting end provided

with a knob 37 by which it may be turned. The threads 35<sup>a</sup> and 35<sup>b</sup> are of different hand, that is, one is right hand and one is left hand. The arrangement is such that when the knob 37 is turned the pins 33 will be moved together or apart to correspondingly move the shutters 28. Thus the shutters 28 may be moved together and so reduce the compass of the pockets between the vanes 23. They will then receive a smaller quantity of powder. In other respects this form of the invention operates as in the previous form.

The knob 21 must be turned to rotate the measuring pocket member 20' together with the shutters 28 and so successively place different ones of the pockets in communication with the discharge chute 14. Thus the powder is discharged. The tube 22' is provided with a ratchet 25 immediately adjacent an end wall of the cylindrical portion 13. This ratchet 25 is engaged by a pawl 27. The pawl and ratchet assists in selectively aligning the pockets of the measuring pocket member with the discharge chute 14 as previously described.

While I have illustrated and described the preferred embodiments of my invention, it is to be understood that I do not limit myself to the precise constructions herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claims.

Having thus described my invention, what I claim as new, and desire to secure by United States Letters Patent is:

1. A tooth powder dispenser, comprising a casing having a top neck for receiving and supporting a receptacle of powder and also having a horizontal cylindrical portion with a bottom discharge chute, a measuring pocket member turnably mounted axially through said cylindrical portion and having a projecting portion by which it may be turned, means for assisting in selectively aligning the pockets of said member with said discharge chute, shutters slidably mounted on said pocket member, and means for moving said shutters into the pockets of said member for reducing their capacities, said shutters comprising relatively wide discs having portions extending into said pockets, said means for moving said shutter comprising pins on the shutters and engaging spaced right and left hand thread sections formed on a rotative rod which may be turned to move the shutters together or apart.

2. A tooth powder dispenser having a horizontal cylindrical portion with a bottom discharge chute, a tube rotatively extended coaxially through said cylindrical portion, spaced radially extending vanes mounted on said tube forming pockets adapted to communicate with said chute in certain turned positions of said tube, spaced shutters slidably mounted on said tube, pins formed on said shutters and extended into said tube through spaced elongated slots formed in said tube, and a rod projected through said tube and formed with spaced threaded sections engaged by said pins for moving said shutters when said rod is turned relative to said tube for controlling the capacity of said pockets.

3. A tooth powder dispenser having a horizontal cylindrical portion with a bottom discharge chute, a tube rotatively extended coaxially through said cylindrical portion, spaced radially extending vanes mounted on said tube forming pockets adapted to communicate with

said chute in certain turned positions of said tube, spaced shutters slidably mounted on said tube, pins formed on said shutters and extended into said tube through spaced elongated slots formed in said tube, and a rod projected through said tube and formed with spaced threaded sections engaged by said pins for moving said shutters when said rod is turned relative to said tube for controlling the capacity of said pockets, one of said threaded sections being left handed and the other right handed causing said shutters to be moved towards and away from each other depending upon the direction in which said rod is turned.

4. A tooth powder dispenser having a horizontal cylindrical portion with a bottom discharge chute, a tube rotatively extended coaxially through said cylindrical portion, spaced radially extending vanes mounted on said tube forming pockets adapted to communicate with said chute in certain turned positions of said tube, spaced shutters slidably mounted on said tube, and means for moving said shutters together and apart along the length of said tube for controlling the capacity of said pockets, comprising a rod rotatively extended through said tube, said rod being formed with spaced right and left hand threads in aligned positions with spaced longitudinally extending elongated slots formed in said tube, and pins mounted on said shutters and projected through said slots and engaging said threads.

5. A tooth powder dispenser having a horizontal cylindrical portion with a bottom discharge chute, a tube rotatively extended coaxially through said cylindrical portion, spaced radially extending vanes mounted on said tube forming pockets adapted to communicate with said chute in certain turned positions of said tube, spaced shutters slidably mounted on said tube, and means for moving said shutters together and apart along the length of said tube for controlling the capacity of said pockets, comprising a rod rotatively extended through said tube, said rod being formed with spaced right and left hand threads in aligned positions with spaced longitudinally extending elongated slots formed in said tube, and pins mounted on said shutters and projected through said slots and engaging said threads, and means facilitating the rotation of said rod independently of said tube.

6. A tooth powder dispenser having a horizontal cylindrical portion with a bottom discharge chute, a tube rotatively extended coaxially through said cylindrical portion, spaced radially extending vanes mounted on said tube forming pockets adapted to communicate with said chute in certain turned positions of said tube, spaced shutters slidably mounted on said tube, and means for moving said shutters together and apart along the length of said tube for controlling the capacity of said pockets, comprising a rod rotatively extended through said tube, said rod being formed with spaced right and left hand threads in aligned positions with spaced longitudinally extending elongated slots formed in said tube, and pins mounted on said shutters and projected through said slots and engaging said threads, and means facilitating the rotation of said rod independently of said tube, comprising a knob mounted upon one end of said rod projected beyond one end of said tube.