This invention relates broadly to dispensing devices and has particular reference to a device for dispensing tooth powder or the like directly to the bristles of a tooth brush.

The invention contemplates a construction whereby the bristle portion of a tooth brush may be inserted into the dispenser for direct application of the powder to the bristles, after which the brush is withdrawn, carrying with it the required amount of powder.

An object of the present invention is the provision of an improved container for tooth powder or the like that is constructed in a manner whereby the powder may be directly applied to the bristles of a brush in a sanitary manner that avoids sifting or spilling excess powder, with the dispenser so constructed as to provide a guide for the brush whereby it is held in correct position against accidental displacement during the application of the powder and whereby after the application of the powder, the brush is withdrawn, removing excess powder from the bristles and further, during the application of the powder, to prevent the powder from falling upon and accumulating upon the handle portion of the brush.

The invention further contemplates a very simple and novel construction of dispensing applicator that readily lends itself to a cheap and ornamental construction of varying shapes and sizes and is highly efficient in use.

Other obvious features of novelty and advantage will be readily apparent during the course of the following description, reference being had to the accompanying drawings, wherein has been illustrated a preferred example of the invention and wherein like characters of reference are employed to designate like parts throughout.

In the drawings:

Figure 1 is a perspective view illustrating the device in the closed position.

Figure 2 is an enlarged fragmentary side elevation in the fully open position for insertion of a brush.

Figure 3 is a similar view with the brush in position and the closure cap partially closed for embracing the brush handle.

Figure 4 is a horizontal section on line 4--4 of Figure 2.

Figure 5 is a fragmentary perspective view of the upper end of the container body with the closure cap removed.

Figure 6 is a vertical section on line 6--6 of Figure 2.

Figure 7 is a similar view on line 7--7 of Figure 3 and

Figure 8 is a section at right angles to Figure 7, taken on line 8--8 of Figure 4.

Referring specifically to the drawings, the numeral 5 designates a preferably cylindrical container, formed of any desirable material common to containers of this character. The container 5 is closed at its lower end and open at its top, as shown. The side wall of the container adjacent its upper end is provided with a rectangular opening 6, providing access to the container. Surrounding the opening 6 and flush therewith, is a flat walled frame 7. The frame 7 may be welded, soldered or otherwise secured to the inner wall of the container as a permanent rectangular passegway. The bottom wall 8 of the frame is extended horizontally across the container with its opposite end soldered or welded to the opposite side wall of the device. Inwardly of the frame 7, the wall 8 is bent to form a pair of opposed channel guides 9 for frictionally gripping the longitudinal edges of a tooth brush head. The channel guides are continued upwardly to form a pair of outwardly flaring side wall 10. The guides 9 and walls 10 are parallel and in direct alignment with the opening of the frame 7. It is preferable that the frame 7, guide channels and walls 10 be slamped or pressed from a single piece of suitable metal having enough flexibility to permit the guides to grip the brush and adapt the device to brush heads having varying widths. It is contemplated that the frame 7 and associated elements shall be preformed and then assembled in the container. The container 5 is grooved circumferentially to provide a seat for a rolled edge of a closure cap, to be described, the groove being indicated at 11.

Means are provided to close the upper end of the container and for alternately exposing and closing the opening 6, comprising a cylindrical cap 12, the upper end of which is closed by a domed wall 13. The lower open end of the cap is provided with a rolled edge 14 adapted to be snapped into the groove 11 for rotative movement of the cap with respect to the container. One side wall of the cap is provided with a rectangular opening 15, corresponding in shape and size to the opening 6 and adapted to alternately register therewith when the cap is rotated. At its lower end, the opening 15 is laterally extended to provide a relatively narrow opening 16, for alternately embracing the handle of a conventional tooth brush 17, having a head portion 18 provided with bristles, as is customary. The container 5 is adapted to be filled to a predetermined point with conventional tooth cleansing powder 19.
In the use of the device, the cap 12 is rotated to bring the openings 6 and 15 into registry. The tooth brush head 18 is then inserted through the openings with its bristles upward, as shown, with the longitudinal edges of the head frictionally engaging the guides 9 until the forward end of the brush abuts the opposite side wall of the container. In this position, the brush is ready for an application of powder. However, to prevent accidental spilling of the powder through the frame 7 and openings 6 and 15, the cap 12 is rotated to cause the opening 18 to embrace the extended handle of the brush, thus substantially closing the openings 6 and 15, as clearly shown in Figure 3. The container is then inverted, causing the powder 18 to fall into the dome 13. Restoring the container to its upright position, causes the powder 18 to again fall downwardly, with a quantity being trapped upon the bristles. The frame 7 and walls 10 prevent the accumulation of excess powder upon the handle 17 and head 18 of the brush that obviously would be withdrawn with the brush and wasted creating a messy situation. After the container has been placed in the upright position, the cap 12 is rotated to bring the openings 6 and 15 into registry, at which time the brush head may be withdrawn. Any excess powder that may have piled upon the bristles will be scraped off by the upper wall of the frame 7. After the brush has been withdrawn, the cap is rotated to fully cover the opening 6 against contamination of the powder or absorption of moisture.

While the container 5 and cap 12 have been illustrated as being cylindrical, it follows, that an oval shape may be employed, in which case, the cap would have an axial sliding movement with respect to the container for the alternate covering and uncovering of the openings. The cylindrical form is preferable due to cost of manufacture, since the oval form would necessitate a much longer cap to provide adequate movement for the covering and uncovering of the openings. The brush head guides and the frame would be identical in construction and operation however. Other designs may be employed, where particular stress is placed upon an ornamental container, such as rectangular, octagonal or square, in each case however, the cap would slide instead of rotate.

It will be apparent from the foregoing that a very novel device has been provided for the direct application of powder to the bristles of a tooth brush. The structure is simple in form and economical to manufacture and results in considerable saving in powder that is usually wasted by spilling when an attempt is made to direct the powder to the bristles in the old conventional manner. The structure lends itself to many highly ornamental designs of containers and is most efficient in its operation. The dome 13 may assume various contours should it be found desirable to concentrate the powder directly over the bristles, although the structure shown has proven highly effective.

It is to be understood, that the invention is not limited to the precise form shown, but that it includes within its purview, whatever changes fairly come within either the terms or the spirit of the appended claims.

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

1. A device for the direct application of powder to the bristles of a toothbrush that comprises a cylindrical container for the powder that is open at its top and provided with a passage opening on its sidewall, a cylindrical closure cap for the container for rotative engagement over the container, means for preventing axial movement of the cap, the cap provided with an opening in one side corresponding to the opening of the container and adapted to alternately register there with for forming a passageway for the passage of the head of a toothbrush, the opening of the cap having a lateral extension for alternate engagement over an extended handle portion of the toothbrush when the cap is rotated to close the container opening, guide members inwardly of the container opening for parallel engagement with the outer rows of bristles formed on the head of a toothbrush, the opening of the cap being adapted to be inverted and to engage alternate shift of the powder from side to side, the shifting of a powder deposit to a deposit of powder to be positioned upon the bristles, means for preventing the accumulation of powder on the head of the brush and means for removing excess powder from the bristles when the toothbrush is withdrawn.

2. A dispensing container for the direct application of a cleansing powder to the bristles of a toothbrush, that comprises a cylindrical container open at its top and provided with an opening in one side wall, means in the container for resiliently clamping the head of a toothbrush in gripping relation to the container with its bristles positioned up, the resilient means forming guide channels for the opposite longitudinal edges of the toothbrush head, a closure cap for the upper open end of the container that includes a cylindrical body rotatively positioned over the upper end of the container, the cap having a domed end wall, the cap provided with an opening in its cylindrical body of a size corresponding to the opening in the container and adapted to alternately register therewith, the openings when in alignment providing a passage for the insertion of the toothbrush head to the resilient means, a lateral extension to the opening of the cap for engagement over and extended handle of the toothbrush when the cap is rotated to close the container opening after the brush has been inserted, the container adapted to be inverted end to end for depositing powder upon the bristles of the brush, means for preventing a powder deposit upon the head of the brush and means inwardly of the container opening serving to prevent a deposit of powder upon the brush handle and to remove excess powder from the bristles when the brush is withdrawn.

3. An applicator for the direct deposit of tooth powder to the bristles of a toothbrush that comprises a cylindrical container open at its top, the container having a rectangular opening formed in its side wall, a frame surrounding the opening inwardly of the container and having a bottom wall spanning the container, channel guides formed upon opposite sides of the bottom wall for frictionally gripping the edges of a toothbrush head inserted therein, flaring side walls formed on the guides for parallel engagement with the outer rows of bristles formed on the brush, the guides and flaring walls being parallel and flexible, a cap for closing the open end of the container that comprises a cylindrical body of a size to be rotatively mounted over the upper end of the container, the cap having a domed closed end, the lower edge of the body being rolled to form a bead for rotative engagement of the bead formed in the body of the container, a rectangular opening formed in the side of the body of a corresponding size to the opening of the con-
tainer and adapted to alternately register there-
with when the cap is rotated for providing a
passage for the insertion of the brush head to a
position spanning the container with the handle
of the brush extended outwardly, the cap open-
ing provided with a narrow extension of a length
to embrace the extended handle of the brush
when the cap is rotated to close the container
opening with the brush in position, the container
and its cap adapted to be bodily inverted end to
end for shifting powder in the container from
end to end for alternate collection in the dome,
the subsequent positioning of the container in
upright position causing the powder to drop
downwardly for depositing a quantity upon the
bristles of the brush, the flaring walls and the
frame protecting the head of the brush and the
immediate handle portion from a powder deposit,
the said cap when rotated to bring the openings
in registry permitting the withdrawal of the
brush, the withdrawal of the brush causing ex-
cess powder on the bristles to be scraped off by
the frame.

CHARLES EDISON POYER.

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