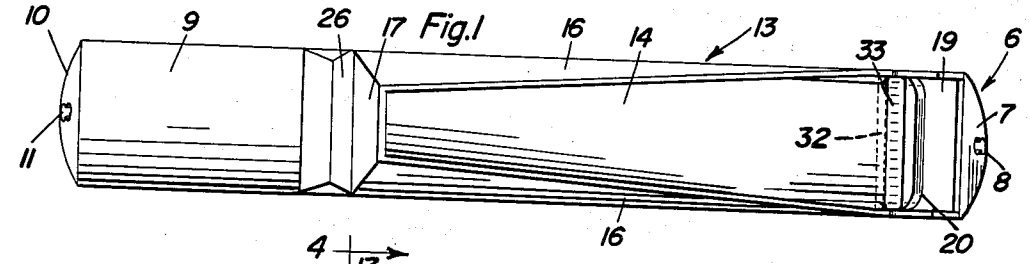
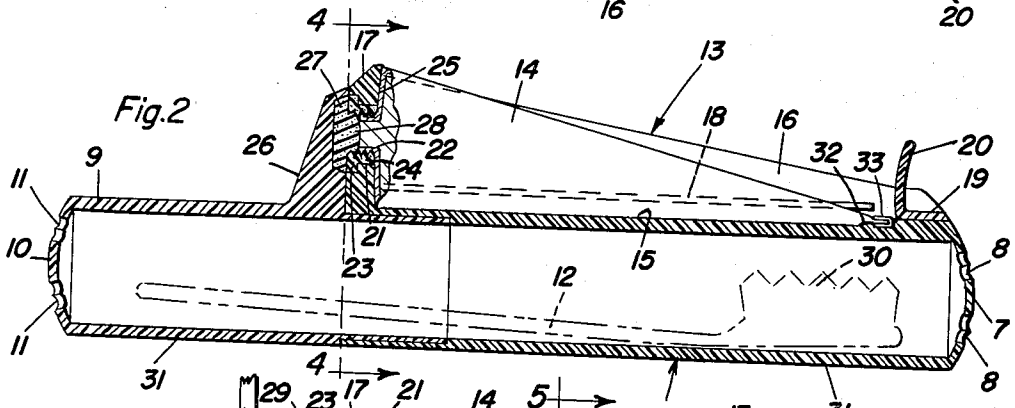
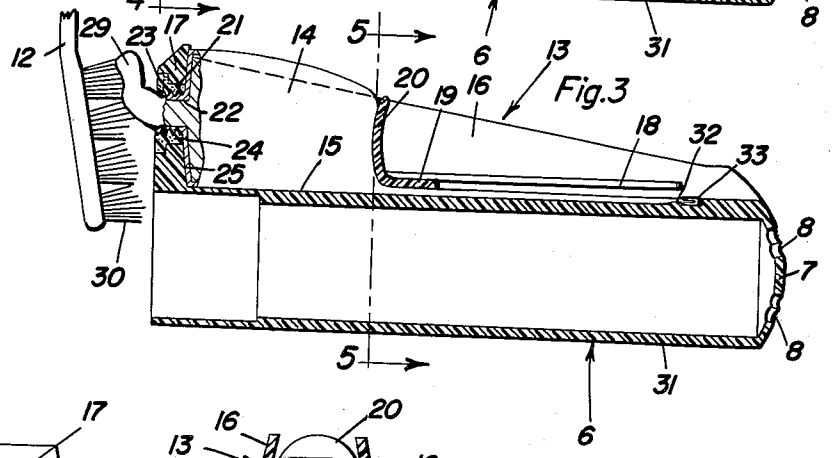
Nov. 15, 1960 G. FRANCOLINO 2,960,092

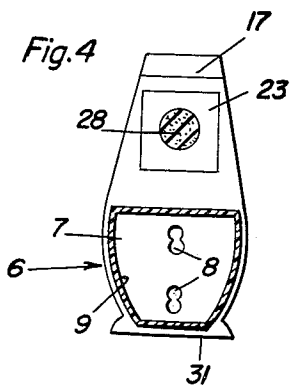
DENTAL KIT

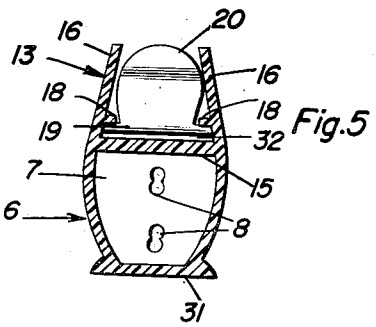
Filed April 27, 1959











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2,960,092

DENTAL KIT

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4 Claims. (Cl. 132—84)

This invention relates to new and useful improvements in dental kits of a generally similar nature to that constituting the subject matter of my U.S. Patent No. 2,856,971, issued October 21, 1958.

The primary object of the present invention is to provide, in a dental kit of the aforementioned character comprising a toothbrush case or container comprising a closure cap and toothpaste dispensing means mounted on said container, novel means for automatically opening and closing said dispensing means when said cap is removed and replaced.

Another important object of the invention is to provide an improved dental kit of the character described comprising a unique construction and arrangement of parts whereby the dentifrice may be conveniently applied to the bristles of the toothbrush after said brush is removed from the container.

Still another important object of this invention is to provide a dental kit of the character set forth which is adapted to accommodate a conventional collapsible toothpaste tube.

Other objects of the invention are to provide an improved dental kit which will be of relatively simple construction, strong, durable, compact, attractive in appearance, of light weight, sanitary and which may be produced at reasonable cost.

All of the foregoing and still further objects and advantages of the invention will become apparent from a study of the following specification, taken in connection with the accompanying drawing wherein like reference numerals refer to corresponding parts throughout the several views, and wherein:

Figure 1 is a top plan view of an improved dental kit constructed in accordance with the present invention;

Figure 2 is a view in vertical longitudinal section through the device;

Figure 3 is a vertical longitudinal sectional view, showing the dentifrice being applied to the toothbrush;

Figure 4 is a view in transverse section, taken substantially on the line 4—4 of Figure 2; and

Figure 5 is a view in transverse section, taken substantially on the line 5—5 of Figure 3, but with the collapsible tube omitted.

Referring now to the drawing in detail, it will be seen that the embodiment of the present invention which has been illustrated comprises a tubular case or container of suitable material and dimensions which is designated generally by reference character **6**. The container **6**, which is open at its forward end, comprises a closed inner or rear end **7** having ventilating openings **8** therein. The forward end of the container **6** is closed by an elongated removable cap **9**. The cap **9** is slidably inserted in the container **6**. The closed forward end **10** of the cap **9** is provided with ventilating openings **11**. The container **6** and the cap **9** are adapted to receive a conventional toothbrush **12**.

Formed integrally with the top portion of the container **6** is a longitudinal trough **13** for the reception of a conventional collapsible toothpaste tube **14**. The trough **13**, which is open at its rear end, comprises a substantially flat bottom **15**, upwardly convergent, rearwardly inclined side walls **16** and a front wall **17**. Formed integrally with the side walls **16**, in the lower portion of the trough **13**, is a pair of longitudinally extending guide flanges or ribs **18**. Slidably longitudinally in the lower portion of the trough **13** beneath the guide flanges or ribs **18** is an ejector **19** for extruding the paste from the collapsible tube **14** as needed. The ejector **19** comprises an upstanding thumb-piece **20** providing an operating handle.

The end wall **17** of the trough **13** has formed therein an opening **21** for the reception of the usual threaded discharge neck **22** of the tube **14**. Embedded in the front of the end wall **17** and flush therewith is a rubber pad **23** having formed integrally therewith an internally threaded bushing **24** which is engaged in the opening **21** and which threadedly receives the tube neck **22**. The end wall **17** of the trough **13** further includes a substantially concave rear or inner face **25** providing a seat for the correspondingly shaped top of the collapsible tube **14**.

Formed integrally with the cap **9** is an upstanding abutment **26** which is engageable with the end wall **17** of the trough **13**. Embedded in the abutment **26** and flush with the rear face thereof is a rubber pad **27** which is engageable with the pad **23**. The pad **27** comprises an integral plug or stopper **28** which is engageable with the discharge neck **22** of the collapsible tube **14** in the bushing **24** for closing and sealing said tube.

It is believed that the use of the improved kit will be readily apparent from a consideraiton of the foregoing. The conventional collapsible toothpaste tube **14** is positioned longitudinally in the trough **13** and secured by threading the discharge neck **22** of said tube into the bushing **24**. Of course, the usual screw cap is first removed from the tube **14** and may be discarded. When the collapsible tube **14** is thus inserted in the trough **13**, the ejector **19** is in retracted position as shown in Figure 2 of the drawing. When the toothbrush **12** is to be used, the cap **9** is removed from the container **6**, thus disengaging the plug **28** from the discharge neck **22** of the collapsible tube **14**. The toothbrush **12** is removed from the container **6** and held substantially in the position indicated in Figure 3 of the drawing. The ejector **19** is then moved forwardly in the trough **13** for collapsing the tube **14** and extruding therefrom in an obvious manner the desired quantity of paste, as indicated at **29**, onto the bristles **30** of the brush **12**. After being used, the brush **12** is cleaned and replaced in the container **6**. The cap **9** is then replaced and when pushed home in the container **6** the plug **28** again closes and seals the discharge neck **22** of the collapsible tube **14**. The container **6** and the cap **9** are formed to provide flat base portions **31** to prevent the device from rolling when placed on a suitable supporting surface. Extending transversely across the bottom **15** of the trough **13**, in the rear or inner end portion of said trough, is an anchoring rib **32** behind which the usual clip on the bottom or lower end of the collapsible tube **14** is engageable.

It is believed that the many advantages of an improved dental kit constructed in accordance with the present invention will be readily understood and although a preferred embodiment of said kit is as illustrated and described, it is to be understood that changes in the details of construction and in the combination and arrangement of parts may be resorted to which will fall within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A dental kit comprising an elongated hollow container of non-circular cross-section open at one end for the reception of a toothbrush, a trough formed on the

outer walls of said container for the reception of a collapsible dentifrice tube, said trough extending longitudinally of said container and including a laterally extending end wall adjacent the open end thereof, an opening formed through said end wall for the reception of the discharge neck of a dentifrice tube, a closure cap for said container having a portion complementary to and slidably received in said open end of said container, a laterally extending abutment formed on said cap abuttingly engaging the surface of said end wall remote from said trough and sealing means on said abutment projecting laterally therefrom toward said trough and into said opening for providing a closure therefor.

2. The combination of claim 1 including a resilient sleeve secured through said opening and adapted for threadingly receiving the threaded neck of said dentrifice tube.

3. The combination of claim 2 wherein the surface of said wall adjacent said trough is concave for providing a seat for the convex top of said dentifrice tube disposed about the neck thereof.

4. The combination of claim 3 including a resilient pad recessed in the surface of said abutment abutting said wall and registered with said opening, said sealing means including a laterally projecting stopper formed integrally with said pad received in said sleeve and adapted to abut the end of the neck of a dentrifrice tube secured in said sleeve.

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