Oct. 31, 1950 D. LAMONDE 2,527,741

PASTE DISPENSING MEANS FOR TOOTHBRUSHES

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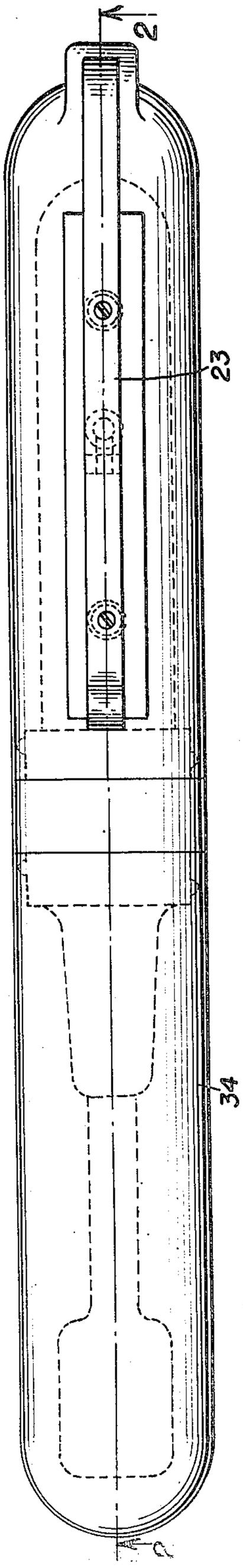

Fig. 1.

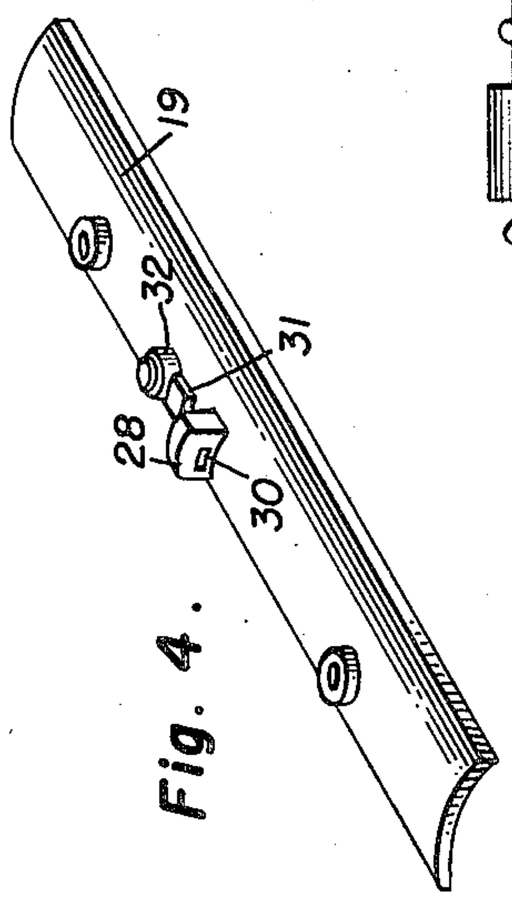

Fig. 4.

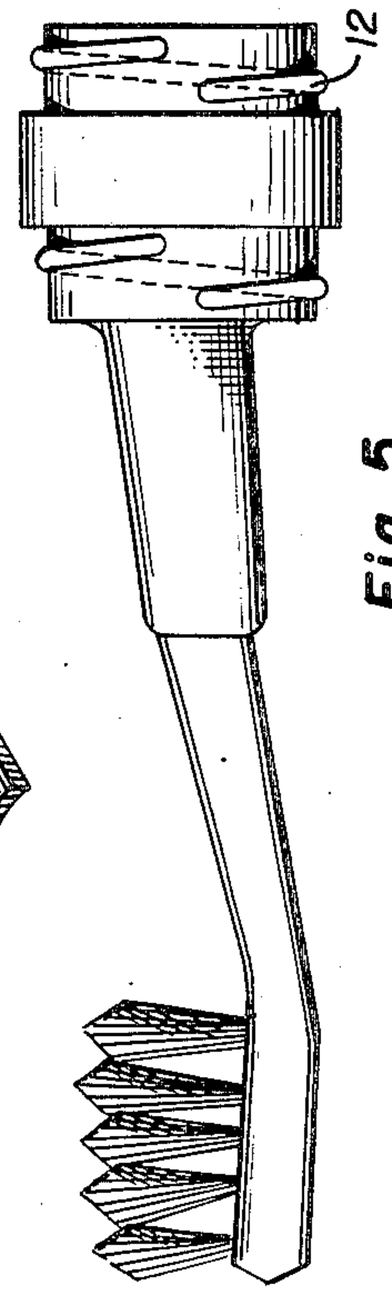

Fig. 5.

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PASTE DISPENSING MEANS FOR TOOTHBRUSHES

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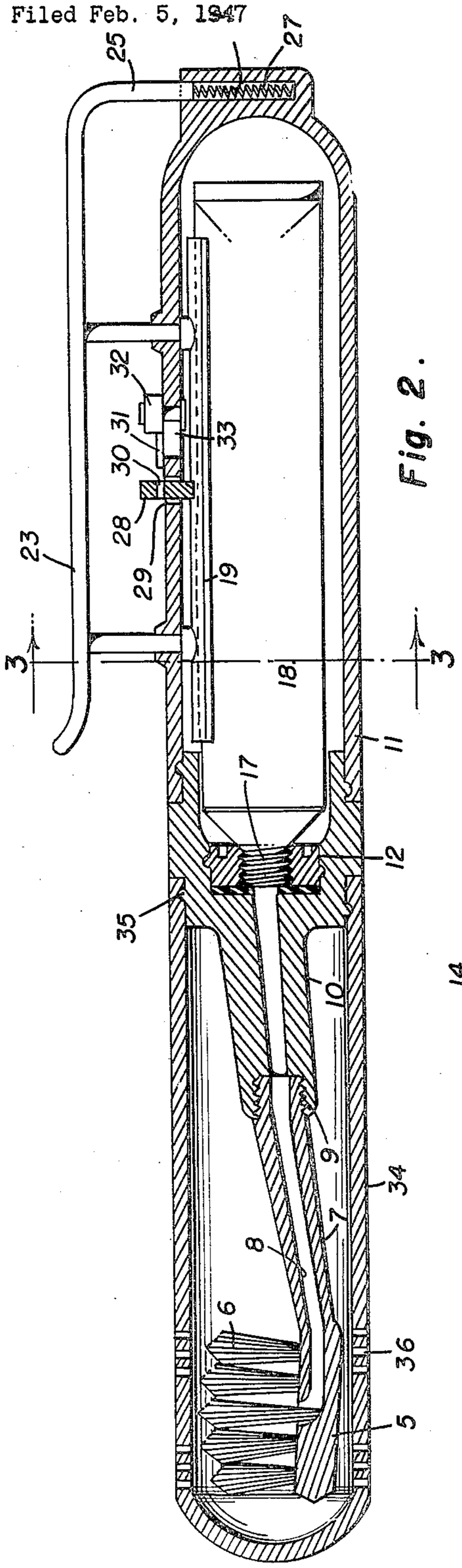

Fig. 2.

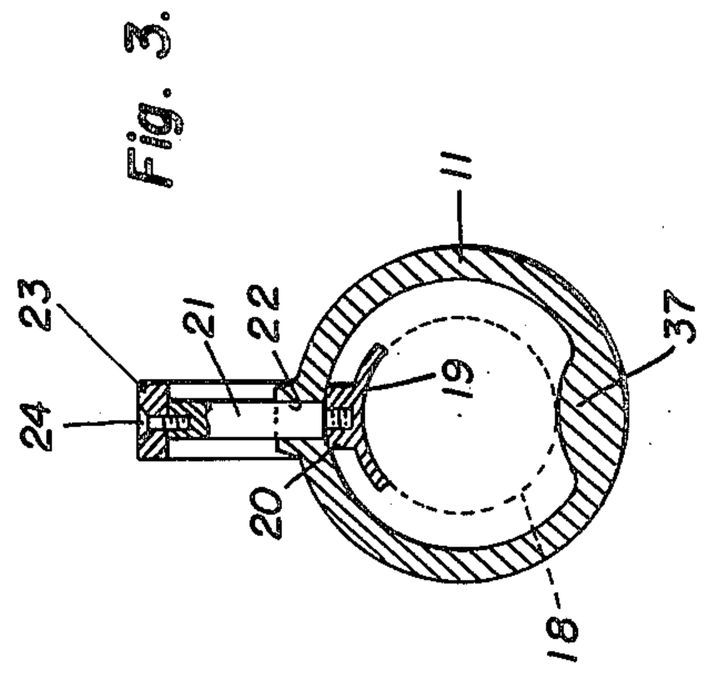

Fig. 3.

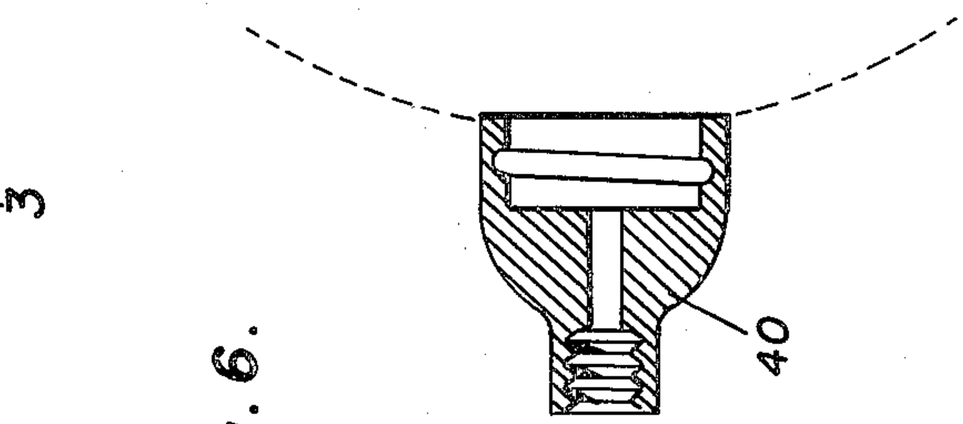

Fig. 6.

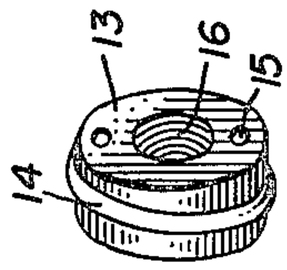

Fig. 4.

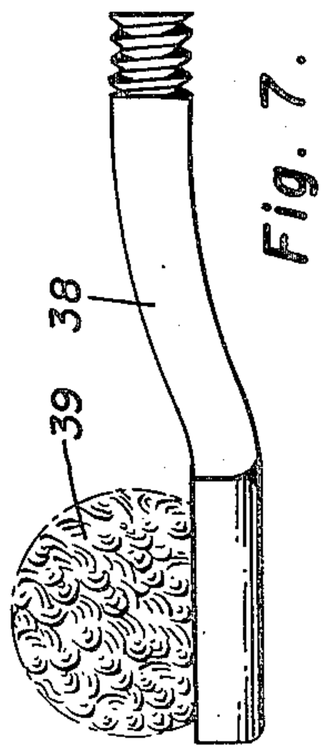

Fig. 7.

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UNITED STATES PATENT OFFICE

2,527,741

PASTE DISPENSING MEANS FOR TOOTHBRUSHES

Delphis Lamonde, Fall River, Mass.

Application February 5, 1947, Serial No. 726,629

3 Claims. (Cl. 222—95)

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The present invention relates to new and useful improvements in tooth brushes and more particularly to a tooth brush in which the handle constitutes a holder for a tube of toothpaste together with means whereby the contents of the tube may be supplied directly to the bristles of the brush in such quantities and at such time as the same is required.

A further object of the invention is to provide a tooth brush in which a tube of toothpaste may be removably connected thereto for supplying the bristles of the brush with the contents of the tube and including an adapter by means of which tubes having various types of threaded necks may be interchangeably connected to the brush.

A further object of the invention is to provide a tooth brush including a hollow handle for receiving a tube of tooth-paste together with a pressure plate mounted in the handle and a lever positioned outwardly thereof for extruding the contents of the tube into the bristles of the brush and also providing means for locking the lever against dispensing movement thereof when not in use.

A still further object of the invention is to provide a device of this character of simple and practical construction, which is neat and attractive in appearance, efficient and reliable in operation, and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a top plan view.

Figure 2 is a longitudinal sectional view taken on a line 2—2 of Figure 1.

Figure 3 is a transverse sectional view taken on a line 3—3 of Figure 2.

Figure 4 is a perspective view of the pressure plate for dispensing the contents of the tube.

Figure 5 is a side elevational view of the brush head and hollow stem for connecting the same to the hollow handle.

Figure 6 is a perspective view of the adapter for connecting the neck of the tube to the stem of the brush, and

Figure 7 is a side elevational view of a tooth massager adapted for interchangeably connecting to the handle.

Referring now to the drawings in detail, wherein for the purpose of illustration I have disclosed a preferred embodiment of the present invention,

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the numeral 5 designates a brush head having bristles 6 suitably carried at one side thereof, the brush head having a hollow shaft 7 extending rearwardly therefrom and formed with a longitudinally extending bore 8 which communicates with the bristles at its front end. The rear end of the stem 7 is externally threaded as shown at 9 for connecting to the front end of a hollow connector 10 which is detachably connected to the front end of a hollow handle 11 by means of interrupted threads 12 constructed to effect a quick connecting and disconnecting engagement of the handle.

The rear end of the connector 10 is recessed as shown at 12 and internally threaded for threadedly receiving an adapter 13 by the quick threads 14, the rear end of the adapter being formed with recesses 15 for receiving a conventional tool for facilitating threading of the adapter into the connector and removing the same therefrom. The adapter 13 is internally threaded as shown at 16 for receiving the threaded neck 17 of a collapsible tooth-paste tube 18.

Adapters having various types of threads 16 may be provided to accommodate various types of threaded necks on the tubes.

The tube 18 extends longitudinally in the handle 11 and engaging one side of the tube is an elongated transversely curved pressure plate 19 having internally threaded bosses 20 formed adjacent its front and rear ends and in which the inner ends of rods 21 are engaged. The rods project outwardly through openings 22 in the sides of the handle 11 for sliding movement therein. A longitudinally extending lever 23 is connected to the outer ends of the rods 21 by screws or the like 24.

The rear end of the lever 23 is bent laterally inwardly as shown at 25 and received in a recess 26 at the rear end of the handle. Positioned in the recess behind the rear end 25 of the lever is a coil spring 27 for projecting the lever 23 outwardly to relieve pressure of the plate 19 against the side of the tube.

The plate 19 is also formed with a locking lug 28 which projects outwardly through the handle 11 by way of an opening 29. The lug 28 is formed with an opening 30 adapted to receive a locking bolt 31 carried by a slide 32 working in a longitudinally extending slot 33 of the handle. By moving the bolt 31 forwardly to engagement in the opening 30 in the lug 28, the pressure plate 19 is secured against movement by the lever 23 when the device is not in use.

In the operation of the device, with the parts

assembled in the position as shown in Figure 2 of the drawings and the lock bolt 31 retracted, the tube 18 may be collapsed by an inward pressure exerted on the lever 23 whereby to dispense the toothpaste into the bristles 6 of the brush.

The brush head 5 and bristles 6 may be enclosed in a cover 34 when not in use, the cover being detachably connected to the front end of the connector 10 by means of quick threads 35. The cover is formed with vent openings 36 to provide circulation of air in the cover to dry the brush.

The bottom of the handle is formed with a rounded longitudinally extending rib 37 conforming to the curvature of plate 19 whereby to completely collapse the tube over substantially its entire transverse area to extrude substantially all of the contents therefrom.

In Figure 7, I have shown a gum massager 39 embodying the principles of the invention, the massager being mounted on a hollow stem 38 attached to a connector 40 which may be connected to a dentifrice bottle (not shown) in place of the paste tube.

In view of the foregoing description taken in conjunction with the accompanying drawings it is believed that a clear understanding of the construction, operation and advantages of the device will be qiute apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though there is herein shown and described a preferred embodiment of the invention the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and the scope of the appended claims.

I claim:

1. A tooth paste dispenser including a hollow handle for holding a collapsible tube and having outlet means at the forward end, a pressure plate positioned in the handle longitudinally of the tube, an L-shaped lever positioned longitudinally at the outside of the handle, rigid bars slidable in one side of the handle and connecting the lever to the pressure plate, a lateral guide at the rear end of the handle slidably supporting the rear end of the lever, and spring means normally holding the lever spaced from the handle and with the pressure plate released from the tube.

2. A tooth paste dispenser including a hollow handle for holding a collapsible tube and having outlet means at the forward end, a pressure plate positioned in the handle longitudinally of the tube, an L-shaped lever positioned longitudinally at the outside of the handle, rigid bars slidable in one side of the handle and connecting the lever to the pressure plate, a lateral guide at the rear end of the handle slidably supporting the rear end of the lever, and spring means normally holding the lever spaced from the handle and with the pressure plate released from the tube, and locking means carried by the handle and locking the lever against tube compressing movement.

3. A tooth paste dispenser including a hollow handle for holding a collapsible tube and having outlet means at the forward end, a pressure plate positioned in the handle longitudinally of the tube, an L-shaped lever positioned longitudinally at the outside of the handle, rigid bars slidable in one side of the handle and connecting the lever to the pressure plate, a lateral guide at the rear end of the handle slidably supporting the rear end of the lever, spring means normally holding the lever spaced from the handle and with the pressure plate released from the tube, and locking means carried by the handle and locking the lever against tube compressing movement, said locking means being shielded by the lever.

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