

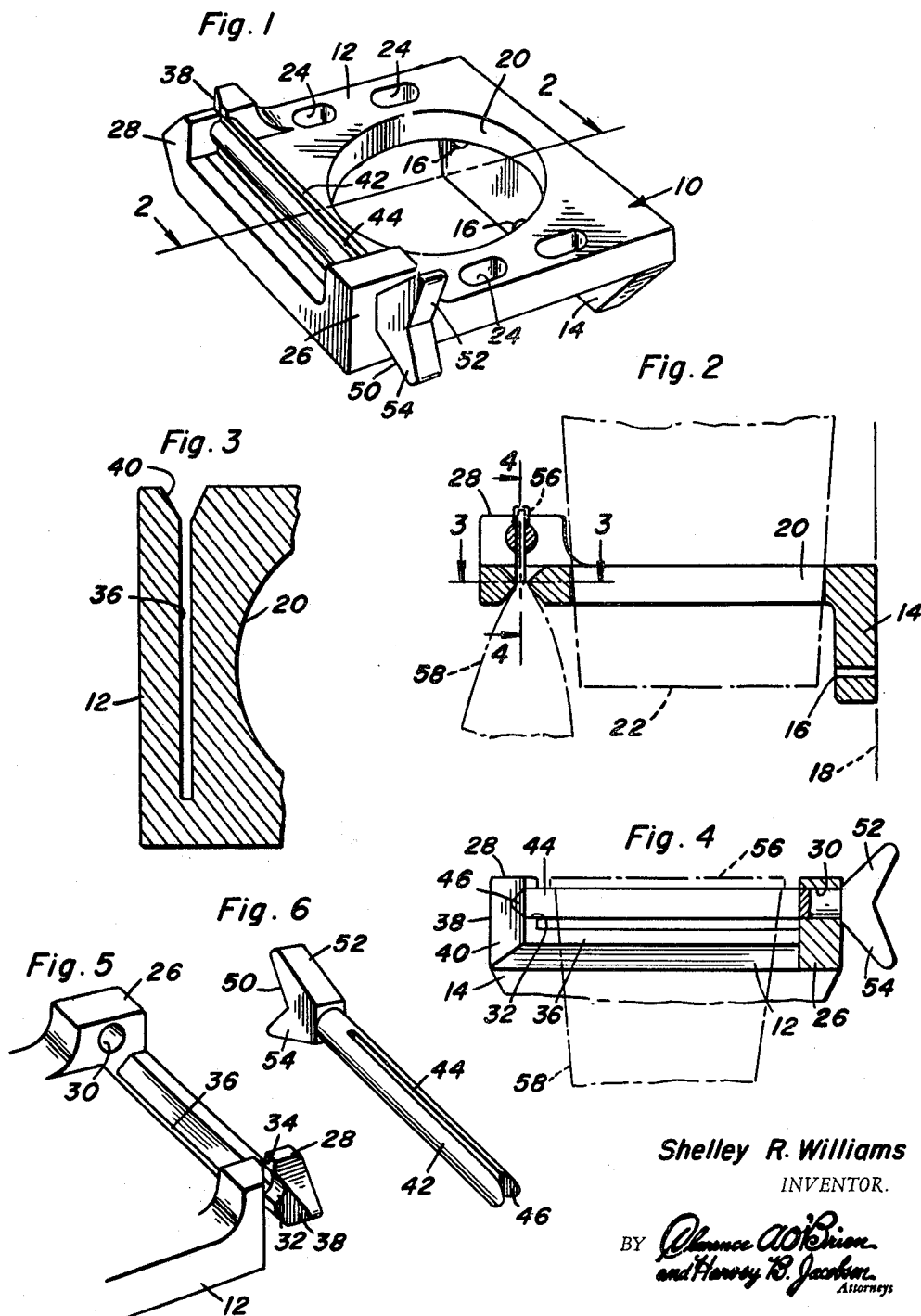
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S. R. WILLIAMS

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TOOTHPASTE DISPENSER

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## TOOTHPASTE DISPENSER

Shelley R. Williams, 128 S. D St., Hamilton, Ohio

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10 Claims. (Cl. 222-93)

This invention relates to a novel and useful toothpaste dispenser and more specifically to a dispenser primarily designed to support a collapsible tube of toothpaste in a fully exposed position and to be operable for progressively stripping the toothpaste from the base end of the tube after toothpaste has been manually dispensed from the tube in the usual manner by squeezing the neck end of the tube, the stripping of toothpaste from the base end of the tube serving to maintain the neck end of the tube full for subsequent manual dispensing of toothpaste.

The toothpaste dispenser of the instant invention includes mechanical means for rolling the base end of a collapsible tube in a coil so as to strip the toothpaste therefrom as toothpaste is dispensed from the tube. As the toothpaste is squeezed from the neck end of a collapsible tube in the conventional manner, the neck end of the tube is partially collapsed and after two or three dispensings of toothpaste the toothpaste dispenser rolling mechanism is actuated in order to wind a portion of the base end of the tube about the rolling mechanism and to strip toothpaste from that portion of the tube whereby it will be displaced into the partially collapsed neck end of the tube to again fill the latter.

The toothpaste dispenser of the instant invention is constructed in a manner whereby the fully collapsed tube may be readily withdrawn therefrom by merely shifting the tube laterally of its longitudinal axis and a new tube of toothpaste may be reinsterted in the dispenser upon similar movement of the new tube of toothpaste.

The main object of this invention is to provide a toothpaste dispenser including means for supporting a collapsible tube of toothpaste in a substantially fully exposed state and yet by means of a rolling mechanism secured to the base end of the tube in order that the base end of the tube may be intermittently rolled and have the toothpaste stripped therefrom. In this manner toothpaste dispensed from the neck end of the tube may be intermittently replaced until such time as there remains only enough toothpaste in the tube to fill the neck end of the latter.

Another object of this invention, in accordance with the preceding object, is to provide a toothpaste dispenser constructed in a manner whereby a fully rolled toothpaste tube may be readily removed therefrom and a new collapsible tube of toothpaste may be readily engaged thereby for support thereby.

Yet another object of this invention is to provide a toothpaste dispenser constructed in a manner whereby the basic assemblies thereof may be readily modified during manufacture so as to enable the dispenser to be constructed so as to function as portable unit or in a manner adapting the dispenser to be fixedly supported to an upstanding surface such as a wall and additionally utilized to support various toilet articles such as tumblers and toothbrushes, etc.

A final object of this invention to be specifically enumerated herein is to provide a toothpaste dispenser which will conform to conventional fields of manufacture, be of simple construction and easy to use so as to provide a device that will be economically feasible, long lasting and relatively trouble-free in operation.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accom-

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panying drawing forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a perspective view of the toothpaste dispenser of the instant invention;

FIGURE 2 is a vertical sectional view taken substantially upon the plane indicated by the section line 2—2 of FIGURE 1;

FIGURE 3 is an enlarged fragmentary horizontal sectional view taken substantially upon a plane indicated by the section line 3—3 of FIGURE 2;

FIGURE 4 is a fragmentary vertical sectional view taken substantially upon the plane indicated by the section line 4—4 of FIGURE 2;

FIGURE 5 is a fragmentary perspective view of the base portion of the toothpaste dispenser; and

FIGURE 6 is a perspective view of the tube rolling shaft of the dispenser.

Referring now more specifically to the drawing the numeral 10 generally designates the toothpaste dispenser of the instant invention. The dispenser 10 includes a base plate 12 having a depending flange 14 which is apertured as at 16 and adapted to constitute a means by which the dispenser 10 may be secured to a vertical supporting surface such as a wall 18 by means of fasteners (not shown) secured through the apertures 16.

The plate 12 is provided with a centrally disposed opening 20 for supporting a tumbler 22 and a plurality of oblong openings 24 which may be utilized to support toothbrushes.

With attention invited more specifically to FIGURES 5 and 6 of the drawings it may be seen that the base or plate 12 includes a pair of journals 26 and 28 which define a pair of axially aligned and spaced bores 30 and 32, respectively. The bores 30 and 32 are spaced above the upper surface of the plate 12 and the journal 28 has a generally diametric slot formed therein which extends axially throughout the full length thereof. In addition, the base or plate 12 has a slot 36 formed therein which is aligned with the slot 34 formed in the journal 28. The slots 34 and 36 open at corresponding ends outwardly of one edge of the plate 12. The corresponding open ends of the slots 34 and 36 are outwardly flared as at 38 and 40, respectively.

A tube winding shaft 42 having a longitudinally extending and generally diametric slot 44 formed therein is rotatably journaled in the bores 30 and 32. The slot 44 opens outwardly through one end of the shaft 42 and is outwardly flared as at 46. The flared end of the shaft 42 is journaled by means of the journal 28 and the flared surfaces of the shaft 46 form continuations of the flared surfaces 38 and 40 when the slot 44 is registered with the slots 34 and 36.

The opposite sides of the slots 36 are V-shaped in cross-section and are disposed with their apex portions closely adjacent and opposing each other. In this manner, with attention now invited more specifically to FIGURE 2 of the drawings, as a collapsible tube is rolled about the shaft 42 it may be seen that the inclined surfaces defining the sides of the slot 36 may serve to strip the toothpaste from within the tube portions immediately adjacent the shaft 42.

The end of the shaft 42 remote from the open end of the slot 44 is provided with a diametrically enlarged head portion 50 including a pair of ears 52 and 54 which are adapted to be engaged by the thumb and forefinger of a person utilizing the dispenser 10 in order to effect rotation of the shaft 42 in a direction to wind the base end of the associated collapsible tube thereon.

With attention again invited more specifically to FIGURES 1, 2 and 5 of the drawings, it may be seen that one portion of the journal 28 is supported from the other journal 26 only by means of the portion of the plate

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12 extending between the journals 26 and 28. However, if it is desired, the height of the journal 28 could be increased so as to provide sufficient material therein to provide the slot 34 with a closed upper end while still providing clearance for the closed beaded end 56 of the collapsible tube 58. In this manner the upper end of the slot 34 could be closed without altering the operation of the dispenser 10 and yet enable the two halves of the journal 34 to be more rigidly interconnected.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A toothpaste dispenser comprising a base including a pair of journals defined by a pair of axially aligned and spaced bores, one of said journals having a generally radial slot formed therein extending axially thereof throughout its entire length and opening at its radially outermost end outwardly of said one journal, a tube winding shaft having a longitudinally extending and generally diametric slot formed therein opening through one end of said shaft and closed at the other end, said shaft being journaled in said journals and spaced from said base with said one end of said shaft adjacent said one journal, the other radial end of the first-mentioned slot extending generally radially into and through the corresponding bore and to a point spaced at least slightly outwardly of said corresponding bore.

2. The combination of claim 1 wherein said other radial end of the first-mentioned slot also opens radially outwardly of said one journal.

3. A toothpaste dispenser comprising a base including a pair of journals defined by a pair of axially aligned and spaced bores, one of said journals having a generally radial slot formed therein extending axially thereof throughout its entire length and opening at its radially outermost end outwardly of said one journal, a tube winding shaft having a longitudinally extending and generally diametric slot formed therein opening through one end of said shaft and closed at the other end, said shaft being journaled in said journals and spaced from said base with said one end of said shaft adjacent said one journal, the other radial end of the first-mentioned slot extending generally radially into and through the corresponding bore and to a point spaced at least slightly outwardly of said corresponding bore, said base having a slot formed therein extending between said journals, said radial slot forming a continuation of the slot in said base and being registrable therewith.

4. The combination of claim 3 wherein the opposite sides of said slot in said shaft are outwardly flared at said one end of said shaft.

5. The combination of claim 1 wherein said other radial end of the first-mentioned slot also opens radially outwardly of said one journal, said base having a slot formed therein extending between said journals and said radial slot forming a continuation of the slot in said base, the opposite sides of said slot in said base each being generally V-shaped in cross-section and disposed with their apex portions closely adjacent and opposing each other.

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6. A toothpaste dispenser comprising a base including a pair of journals defined by a pair of axially aligned and spaced bores, one of said journals having a generally radial slot formed therein extending axially thereof throughout its entire length and opening at its radially outermost end outwardly of said one journal, a tube winding shaft having a longitudinally extending and generally diametric slot formed therein opening through one end of said shaft and closed at the other end, said shaft being journaled in said journals and spaced from said base with said one end of said shaft adjacent said one journal, the other radial end of the first-mentioned slot extending generally radially into and through the corresponding bore and to a point spaced at least slightly outwardly of said corresponding bore, said base having a slot formed therein extending between said journals, said radial slot forming a continuation of the slot in said base and being registrable therewith, the opposite sides of said slot in said shaft being outwardly flared at said one end of said shaft and the end of said slot in said one journal remote from the other journal also being outwardly flared.

7. The combination of claim 6 wherein the flared end of said shaft slot is registrable with the flared end of the slot in said one journal.

8. The combination of claim 1 wherein said base includes means adapted to support said base from a vertical wall surface.

9. The combination of claim 1 wherein said base has article holding openings formed therethrough adapted to support a tumbler and a plurality of toothbrushes.

10. A toothbrush dispenser comprising a base including a pair of journals defined by a pair of axially aligned and spaced bores, one of said journals having a generally radial slot formed therein extending axially thereof throughout its entire length and opening at its radially outermost end outwardly above said one journal, a tube winding shaft having a longitudinally extending slot formed therein opening radially outwardly through at least one side of said shaft and through one end of said shaft and closed at the other end of said shaft, said shaft being journaled in said journals, said one end of said shaft being adjacent said one journal, said base having a slot formed therein extending between said journals, said radial slot forming a continuation of the slot in said base and being registrable therewith, the other radial end of the first-mentioned slot extending generally radially into and through the corresponding bore and to a point spaced at least slightly outwardly of said corresponding bore, the end of said slot in said one journal remote from the other journal being outwardly flared.

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LOUIS J. DEMBO, *Primary Examiner.*

HADD S. LANE, *Examiner.*