Oct. 8, 1957 J. FARROW 2,808,963

HOLDER AND ROLLER OF COLLAPSIBLE TUBES

Filed April 27, 1956

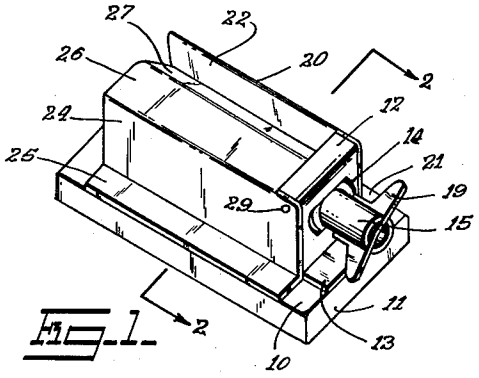


Fig. 1

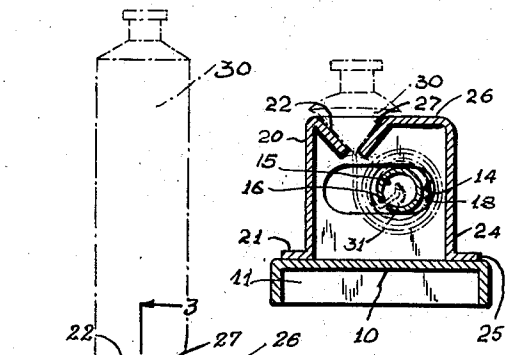


Fig. 6

Fig. 2

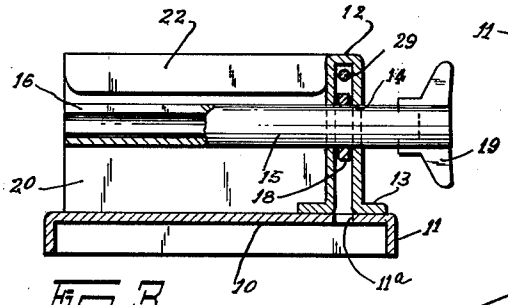


Fig. 3

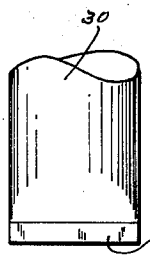


Fig. 5

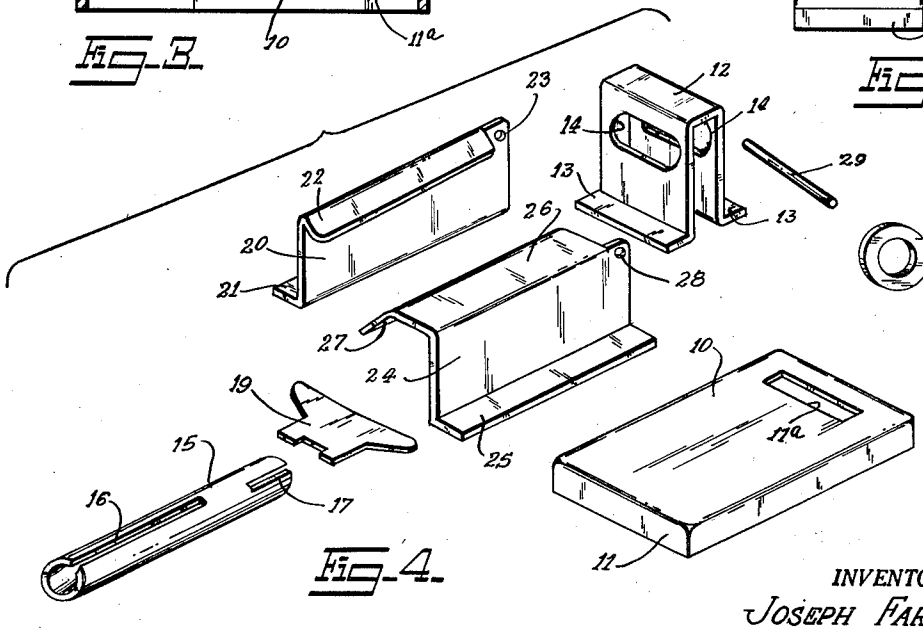


Fig. 4

INVENTOR.
JOSEPH FARROW
BY
Zoltan Holachek
ATTORNEY

United States Patent Office

2,808,963

Patented Oct. 8, 1957

2,808,963

HOLDER AND ROLLER OF COLLAPSIBLE TUBES

Joseph Farrow, New York, N. Y.

Application April 27, 1956, Serial No. 581,215

7 Claims. (Cl. 222—100)

This invention relates to devices for holding and rolling collapsible tubes.

It is an object of the present invention to provide a device for holding and rolling collapsible tubes whereby the tube will be held in an upright position on a base and the tube automatically rolled and compressed to expel its contents without removing it therefrom.

It is another object of the present invention to provide a device of the above type wherein a sliding action against the tube is applied as the same is rolled and compressed to insure the complete expelling of the contents from the collapsible tube at all times.

A further object is to provide a device of this type wherein the tube is protected against puncture when in supported position.

Other objects of the present invention are to provide a device for holding and rolling collapsible tubes bearing the above objects in mind which is of simple construction, inexpensive to manufacture, is characterized by a minimum number of parts, is easy to use and efficient in operation.

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

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

Fig. 1 is a perspective view of a device for holding and rolling collapsible tubes embodying the features of the present invention.

Fig. 2 is a transverse sectional view thereof taken along the line 2—2 of Fig. 1, showing a fully loaded tube in supported position in dash-dot lines.

Fig. 3 is a side elevational view thereof, shown partly in section, and partly broken away, taken on line 3—3 of Fig. 2.

Fig. 4 is an exploded perspective view of the parts comprising the invention.

Fig. 5 is a fragmentary side elevational view of a collapsible tube adapted to be used with the present invention.

Fig. 6 is a view similar to Fig. 2 but showing the position of the parts when the supply or substance in this collapsible tube is completely exhausted.

Referring now more in detail to the drawings, the device includes a rectangular base **10** integrally formed around its periphery with a downwardly extending flange **11**, forming a pedestal for the device. The base portion **10** near one end is provided with a transverse rectangular slot **11a** for a purpose which will hereinafter become clear. A bearing bracket **12** of substantially inverted U-shaped cross section is integrally formed along its lower free edges with flanges **13** by means of which it is suitably secured to the top of the base **10** on each side of the slot **11a**, the bracket **12** being provided with aligned rectangular openings **14** having rounded corners and ends.

A hollow cylindrical tube **15** adapted to pass through the aligned openings **14** is provided at one end with an inwardly extending longitudinal slot **16** and at the other end with an inwardly extending slot **17**. A collar **18** is mounted on the solid portion of the tube **15** intermediate the inner ends of the slots **16** and **17**, said collar **18** being positioned for rotational movement with the tube **15** within the bracket **12**. The collar **18**, it will be apparent, will prevent longitudinal displacement of the tube **15** relative to the bracket **12** (Fig. 3). A wing-shaped handle **19** is suitably secured within the slot **17** whereby to facilitate turning of the tube **15**, as will be obvious.

The device is also provided with a longitudinal side wall **20** formed along its lower edge with a flange **21** by means of which the wall is secured in any suitable manner to one longitudinal side of base **10** (Fig. 2). The upper edge of the wall **20** is integrally formed with an inwardly and downwardly directed guiding lip **22** extending therealong. It will be noted that the guiding lip does not extend the entire length of the wall **20**, but terminates short of one end thereof, the upper corner of said end being provided with an opening **23**. A side wall **24** is provided on the opposite side of the device and integrally formed along its lower edge with a flange **25** by means of which it is suitably secured to the top of base **10** along one longitudinal edge thereof, the upper edge of the wall **24** being integrally formed with a horizontal portion **26** which terminates in an inwardly and downwardly extending guide lip **27**. It will be noted that the horizontal portion **26** and the guide lip **27** do not extend the entire length of the wall **24**, but terminate short of one upper corner thereof, which corner is provided with an opening **28** aligned with opening **23**. A pin **29** passes through the top of the bracket **12** and has the ends thereof received within the openings **23** and **28**, tying the walls together and imparting greater rigidity to the side walls **20** and **24**.

The walls form a hollow casing through which the tube **15** extends, with its slot **16** in line with the opening or space provided between the extreme inner ends of lips **22** and **27**. The end of the casing opposite bracket **12** is open.

It will be noted that the slanting formation of the lips **22** and **27** provide a hopper-like passage and guide for inserting the bottom tapered end of a collapsible tube of toothpaste or the like **30** into the interior of the device when the opening between the guide lips **22** and **27** is aligned with the slot **16**, the bottom closure **31** of the tube being received within the slot **16** of tube **15**, as shown in Fig. 2. Upon rotation of the handle **19** in a clockwise direction, the tube **30** will be drawn downwardly, compressed between the lips **22** and **27** and wound around the tube **15**. Due to the loose mounting of the tube **15** in elongated slot **14** as the tube **30** is wound therearound, the tube **30** is forced laterally to the right hand end of the slot as shown in Fig. 6. When the entire tube has been thus compressed and emptied, it is only necessary to slide it laterally out through the open end of the device.

The tube **15** may be disassembled by withdrawing it longitudinally through the openings **14** of the bracket **12**, after which the collar **18** drops through the slot **11a**.

The device may be cast or molded as an alternate form of construction. It may also be made in various colors to increase the attractiveness of the same, preferably by spraying and baking.

While I have illustrated and described the preferred embodiment of my invention, it is to be understood that I do not limit myself to the precise construction herein disclosed and that various changes and modifications may

be made 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. In a holder for collapsible tubes, the combination of, a base, oppositely disposed, longitudinal side walls provided on said base, the upper edge of one of said side walls having an inwardly and downwardly extending guide lip, the upper longitudinal edge of the other of said side walls having a laterally extending portion, a downwardly and inwardly extending guide lip formed along the inner edge of said horizontally extending portion adapted to cooperate with said first guide lip whereby to provide a hopper-like opening, a hollow elongated tube having an inwardly extending slot extending substantially the length thereof, bearing means for rotatably mounting said tube below said hopper-like opening with the longitudinal axis of said tube displaced laterally from said hopper-like opening, and means for turning said tube, said bearing means comprising a double-end wall mounted on said base, said double-end wall having longitudinally aligned, elongated openings therein adapted to receive said tube therethrough.

2. In a holder for collapsible tubes, the combination of, a base, oppositely disposed, longitudinal side walls provided on said base, the upper edge of one of said side walls having an inwardly and downwardly extending guide lip, the upper longitudinal edge of the other of said side walls having a laterally extending portion, a downwardly and inwardly extending guide lip formed along the inner edge of said horizontally extending portion adapted to cooperate with said first guide lip whereby to provide a hopper-like opening, a hollow elongated tube having an inwardly extending slot extending substantially the length thereof, bearing means for rotatably mounting said tube below said hopper-like opening with the longitudinal axis of said tube displaced laterally from said hopper-like opening, and means for turning said tube, said bearing means comprising a double-end wall mounted on said base, said double-end wall having longitudinally aligned, elongated openings therein adapted to receive said tube therethrough, said first and second guide lips terminating short of the ends of said side walls adjacent said double-end wall providing a clearance to receive said double-end wall therebetween, and a pin passing between said double-end wall and connected at opposite ends to said side walls.

3. In a holder for collapsible tubes, the combination of, a base, oppositely disposed, longitudinal side walls provided on said base, the upper edge of one of said side walls having an inwardly and downwardly extending guide lip, the upper longitudinal edge of the other of said side walls having a laterally extending portion, a downwardly and inwardly extending guide lip formed along the inner edge of said horizontally extending portion adapted to cooperate with said first guide lip whereby to provide a hopper-like opening, a hollow elongated tube having an inwardly extending slot extending substantially the length thereof, bearing means for rotatably mounting said tube below said hopper-like opening with the longitudinal axis of said tube displaced laterally from said hopper-like opening, and means for turning said tube, said bearing means comprising a double-end wall mounted on said base, said double-end wall having longitudinally aligned, elongated openings therein adapted to receive said tube therethrough, said means for rotatively mounting said tube including a collar mounted on said tube intermediate said double-end walls.

4. In a holder for collapsible tubes, the combination of, a base, oppositely disposed, longitudinal side walls provided on said base, the upper edge of one of said side walls having an inwardly and downwardly extending guide lip, the upper longitudinal edge of the other of said side walls having a laterally extending portion, a downwardly and inwardly extending guide lip formed along the inner edge of said horizontally extending portion adapted to cooperate with said first guide lip whereby to provide a hopper-like opening, a hollow elongated tube having an inwardly extending slot extending substantially the length thereof, bearing means for rotatably mounting said tube below said hopper-like opening with the longitudinal axis of said tube displaced laterally from said hopper-like opening, and means for turning said tube, said bearing means comprising a double-end wall mounted on said base, said double-end wall having longitudinally aligned, elongated openings therein adapted to receive said tube therethrough, said means for rotatably mounting said tube including a collar mounted on said tube in the space intermediate the wall elements of said double-end wall, said base having a rectangular slot aligned with the space between the elements of said double-end wall to facilitate dismounting of said collar from said tube.

5. In a holder for collapsible tubes, the combination of, a base, oppositely disposed, longitudinal side walls provided on said base, the upper edge of one of said side walls having an inwardly and downwardly extending guide lip, the upper longitudinal edge of the other of said side walls having a laterally extending portion, a downwardly and inwardly extending guide lip formed along the inner edge of said horizontally extending portion adapted to cooperate with said first guide lip whereby to provide a hopper-like opening, a hollow elongated tube having an inwardly extending slot extending substantially the length thereof, bearing means for rotatably mounting said tube below said hopper-like opening with the longitudinal axis of said tube displaced laterally from said hopper-like opening, and means for turning said tube, said bearing means comprising a double-end wall mounted on said base, said double-end wall having longitudinally aligned, elongated openings therein adapted to receive said tube therethrough, said means for turning said tube comprising said tube at its end adjacent said bearing means having an inwardly extending slot, and a substantially wing-shaped handle secured within said slot.

6. In a holder for collapsible tubes, the combination of, a base, oppositely disposed, longitudinal side walls provided on said base, the upper edge of one of said side walls having an inwardly and downwardly extending guide lip, the upper longitudinal edge of the other of said side walls having a laterally extending portion, a downwardly and inwardly extending guide lip formed along the inner edge of said horizontally extending portion adapted to cooperate with said first guide lip whereby to provide a hopper-like opening, a hollow elongated tube having an inwardly extending slot extending substantially the length thereof, bearing means for rotatably mounting said tube below said hopper-like opening with the longitudinal axis of said tube displaced laterally from said hopper-like opening, and means for turning said tube, said bearing means comprising a double-end wall mounted on said base, said double-end wall having longitudinally aligned, elongated openings therein adapted to receive said tube therethrough, said means for turning said tube comprising said tube at its end adjacent said bearing means having an inwardly extending slot, and a substantially wing-shaped handle secured within said slot, said base around its periphery being integrally formed with a downwardly extending wall whereby to provide a pedestal, said side walls at their lower longitudinal edges being integrally formed with laterally extending flanges secured to the top of said base, said double-end wall comprising a substantially inverted U-shaped bracket integrally formed along its lower free edges with laterally extending flanges adapted to be secured to the upper face of said base.

7. In a holder for collapsible tubes, the combination of, a base, a pair of longitudinal side walls on said base having their upper edges inwardly and downwardly bent whereby to provide a hopper-like opening, a bearing

bracket on the base spanning the space between said side walls at one end thereof, said bracket having an elongated opening disposed transversely of said space, a hollow tube rotatably supported by said bracket and extending through the opening therein into the space between said side walls, said hollow tube having an elongated slot extending the length of said hopper-like opening adapted to receive the closed end of a collapsible supply tube, and means for turning said tube, the longitudinal axis of said hollow tube being offset laterally from the hopper-like opening whereby upon winding of the collapsible supply tube around the hollow tube said hollow tube moves along the opening in the bracket.

References Cited in the file of this patent

UNITED STATES PATENTS

2,643,028 Clark ..... June 23, 1953

FOREIGN PATENTS

724,963 France ..... Feb. 5, 1932