May 26, 1936. R. C. HITZLER 2,042,098

DISPENSING DEVICE

Filed July 10, 1935 2 Sheets-Sheet 1

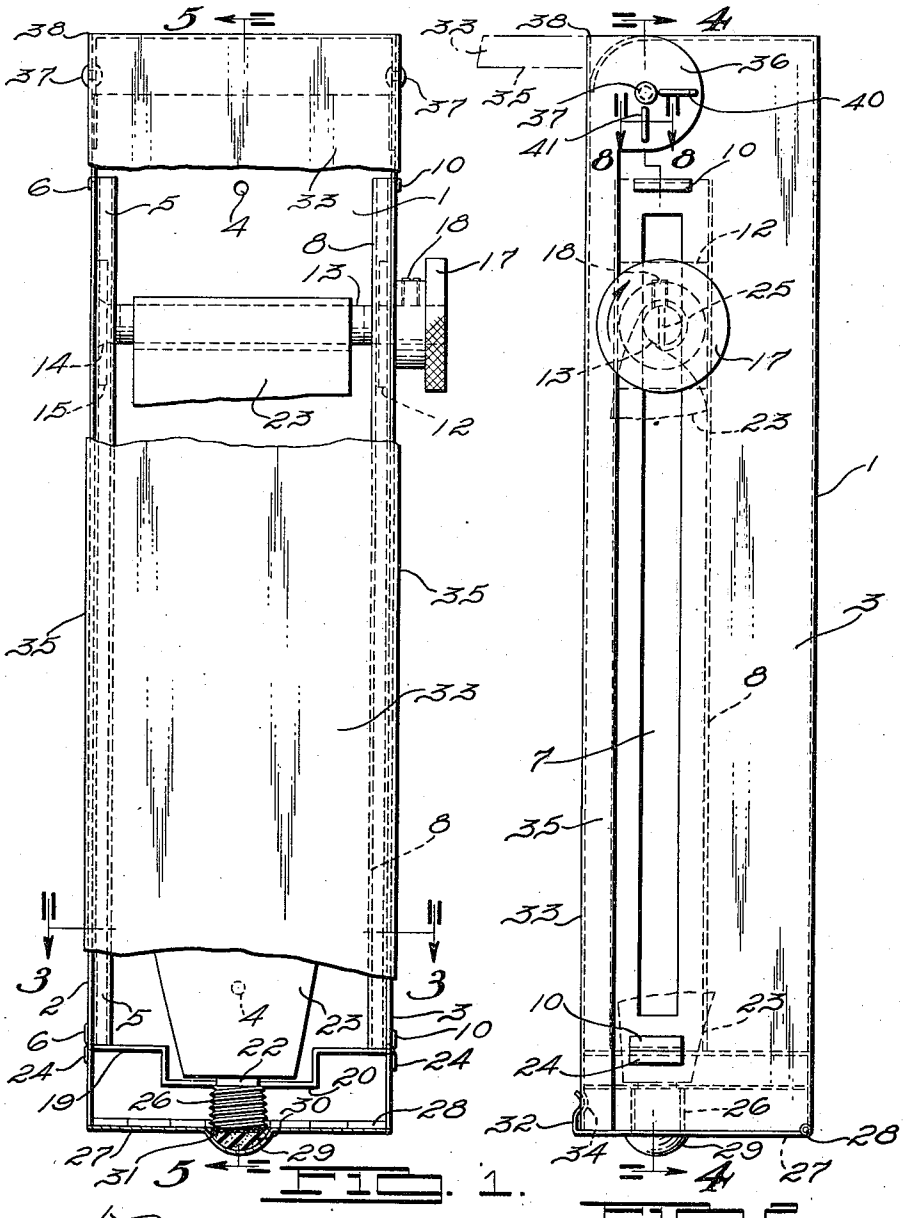


FIG. 1.

FIG. 2.

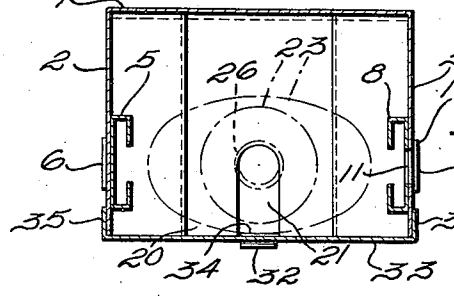


FIG. 3.

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DISPENSING DEVICE

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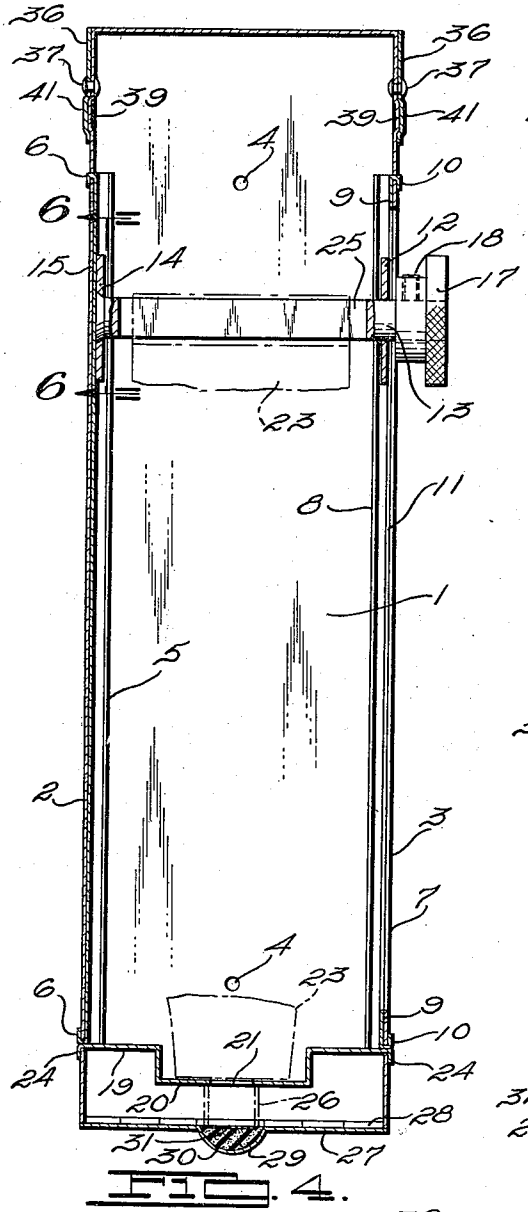


FIG. 4.

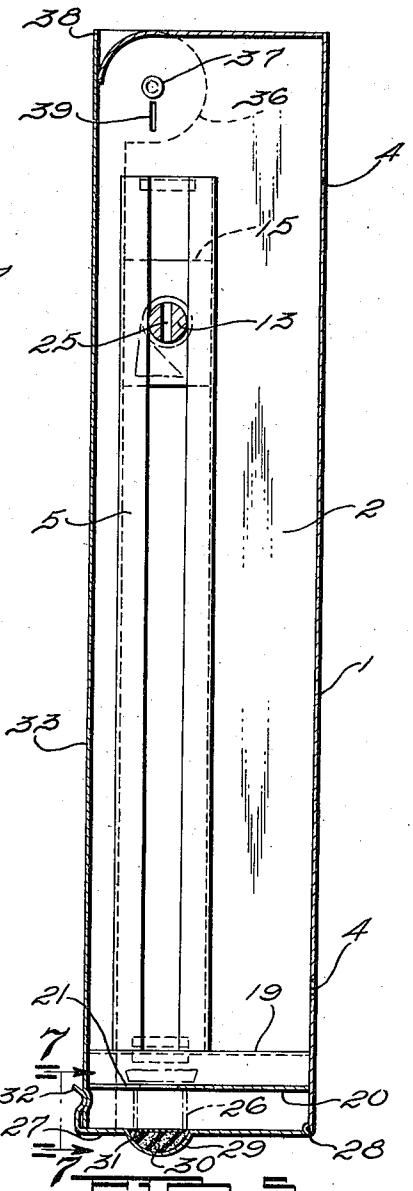


FIG. 5.

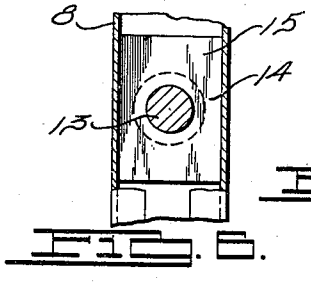


FIG. 6.

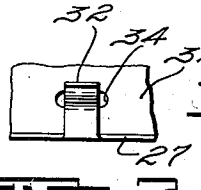


FIG. 7.

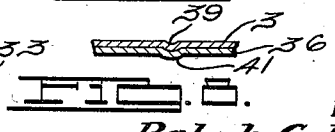


FIG. 8.

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Patented May 26, 1936

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UNITED STATES PATENT OFFICE

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DISPENSING DEVICE

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Application July 10, 1935, Serial No. 30,721

3 Claims. (Cl. 221—60)

This invention relates to dispensing devices and the object of the invention is to provide a device for dispensing the contents from a tube so that it is only necessary to turn a knob extending from the dispenser casing to discharge the contents through the discharge nozzle.

Another object of the invention is to provide a dispensing device of the character described in which various sized tubes may be used and in which the tubes may be readily removed or replaced.

A further object of the invention is to provide a dispensing device in which the discharge end of the tube is firmly held in position and in which the opposite end of the tube may be rolled up on a shaft to discharge the contents of the tube through the nozzle, the shaft being slidably mounted in vertically moving support members so that the shaft may move in position as the contents are discharged from the tube.

Another object of the invention is to provide a means for sealing the tube nozzle and enclosing the same to keep insects away from the nozzle.

A further object of the invention is to provide a dispensing device which may be readily attached to a wall and from which the used tube may be removed and replaced by a full tube.

These objects and the several novel features of the invention are hereinafter more fully described and claimed and the preferred form of construction by which these objects are attained is shown in the accompanying drawings in which—

Fig. 1 is a front elevation of the dispensing device with the parts broken away to show the construction.

Fig. 2 is a side elevation of the dispensing tube.

Fig. 3 is a section taken on line 3—3 of Fig. 1.

Fig. 4 is a section taken on line 4—4 of Fig. 2.

Fig. 5 is a section taken on line 5—5 of Fig. 1.

Fig. 6 is an enlarged section taken on line 6—6 of Fig. 4.

Fig. 7 is an enlarged view taken from line 7—7 of Fig. 5 and showing the latch for the closure member.

Fig. 8 is a section taken on line 8—8 of Fig. 2 showing the cover lock.

The casing is shown more particularly in Fig. 3 and comprises a back plate 1 having side plates 2 and 3 which are formed of sheet metal integrally with the back plate 1. This back plate 1 as shown in Fig. 5 is provided with screw apertures 4 by means of which the device may be attached to a wall by inserting screws through these apertures. A channel member 5 is provided, as shown in Figs. 3, 4 and 5, and lugs 6 at the top and bottom of this channel member 5 are inserted through apertures in the side 2 of the dispenser casing to secure the channel 5 in position. The side 3 of the casing is provided with a slot 7, as shown in Figs. 2, 3 and 4, and a channel member 8 is provided having a cross piece 9 at the top and bottom and a lug 10 extending from the cross piece 9 through an aperture provided in the wall 3 as shown in Figs. 2 and 4. This channel member 8 is provided with a slot 11 registering with the slot 7 in the wall 3. A plate 12 is slidably mounted in the channel 8 and is provided with an aperture through which the shaft 13 extends. The opposite end of the shaft is provided with a flared end 14 and a plate 15 is positioned over the shaft and has a countersunk aperture shown in Figs. 4 and 6 fitting over the flared end 14. A knob 17 is secured to the outer end of the shaft by means of a set screw 18 and by means of the plates 12 and 15, the shaft may be moved upwardly or downwardly vertically of the cabinet and will remain in a horizontal position.

At the bottom of the casing is a partition 19 having a depressed portion 20 shown in Figs. 3, 4 and 5 and this portion 20 is provided with a slot 21 into which the neck 22 of the tube 23 may be fitted. When so engaged in this plate, the tube cannot be moved vertically and the ends 24 of the plate 19 extend through apertures provided in the opposite walls of the casing as will be understood from Figs. 1, 2 and 4. The end of the tube opposite the nozzle is slipped through the slot 25 in the shaft 13 shown in Fig. 5 and as this shaft is rotated by turning the knob 17 the tube is rolled up about the shaft 13 to discharge the contents through the threaded nozzle 26 of the tube shown in Fig. 1. In order to seal this nozzle, a sheet metal closure member 27 is hinged to the back of the casing on the hinge 28 shown in Figs. 1, 2, 4 and 5. This closure member 27 is provided with a depression 29 in the center and this depression is filled with a sponge rubber packing 30 and with a cork gasket 31 which fits against the end of the discharge nozzle. The side of the closure member 27 opposite the hinge 28 is provided with a spring latch 32 shown in Figs. 2, 5 and 7 and the cover member 33 is provided with a depression 34 into which the spring latch 32 engages to hold the cork gasket in contact with the end face of the nozzle.

This cover member 33 is shown more particularly in Figs. 1, 2 and 5 and is provided with flange edges 35 engaging over the sides 2 and 3 of the casings and at the upper end of the cover member is provided with a semi-circular enlargement 36 on each side. A rivet 37 is inserted through each enlargement on each side of the casing as shown at the top of Fig. 4 and the upper edge of each enlargement comes out to a square corner 38 as shown in Figs. 2 and 5.

As shown in Fig. 5 each side wall is provided with a radial depression 39 extending toward the rivet 37 and each enlargement 36 is provided with two depressions 40 and 41 adapted to engage in the depression 39 of the side walls. In the position shown in Fig. 2 the depression 41 is engaged in the depression 39 shown in Fig. 5 to hold the cover 33 in the closed position. By dis-engaging the latch 32 and dropping the closure member 27 on its hinge the cover 33 may then be swung upwardly on the rivets 37 as a pivot to the position shown in dotted lines in Fig. 2. When in this dotted position, the depression 40 in each enlargement 36 engages in the respective depression 39 of the side wall to support the cover 33 in the raised or dotted position. In this position, a used tube may be removed from the device and a fresh tube inserted, at which time, the cover may be returned to the position shown in full lines and the closure member 27 may be swung upwardly to engage the spring latch 32 in the depression 34 of the cover 33. At this time the device is ready for use. To use the same, the latch 32 is disengaged to allow the closure member 27 to swing downwardly on the hinge 28. With one hand the operator then turns the knob 17 to rotate the shaft 13 and force the contents out of the tube nozzle. If the contents happen to be tooth paste the user with his free hand places the tooth brush under the discharge nozzle. In the case of shaving cream a shaving brush is held under the nozzle and if hand lotion is used the hand is held under the nozzle while the lotion or cream is discharged into the hand.

When the desired amount has been dispensed the closure member 27 may be swung upwardly to the position shown in full lines in Figs. 2 and 5, at which time, the device is ready for further use and at the same time the contents of the tube are sealed. It will be noted that the nozzle end of the tube is anchored and as the shaft 13 is rotated it will move downwardly in the channels 5 and 8 until the contents are entirely discharged from the tube. The guide plates 12 and 15 act to keep the shaft in proper alignment so that it will move freely vertically of the casing; and closure member 27, besides sealing the tube, prevents insects from having access to the contents of the tube or to the nozzle.

From the foregoing description it becomes evident that the device is very simple and efficient in operation, is composed of sheet metal parts and is of consequent low manufacturing cost, will not easily get out of order and provides a device which accomplishes the objects described.

Having thus fully described my invention, its utility and mode of operation, what I claim and desire to secure by Letters Patent of the United States is—

1. In a dispensing device, a three-sided casing, a transverse partition adjacent one end of the casing and having an opening therein, the casing being arranged to receive a collapsible tube having a discharge nozzle and the opening in the transverse partition being arranged to receive said nozzle, a guide extending longitudinally of each side of the casing, a plate slidably mounted in each guide, a shaft rotatably mounted in the plates, the shaft being provided with a slot to receive the end of the collapsible tube opposite the discharge nozzle, the casing being provided with a slot in one side and the end of the shaft extending through the slot, a knob secured to the extending end of the shaft, a cover pivotally mounted on the casing and closing the open side of the casing, the cover member being provided with a notch at the bottom, a closure member hingedly connected to the bottom of the casing, the closure member being provided with a clip adapted for engagement in the notch of the cover member to hold the cover member and closure member in the closed position, a depression formed in the closure member and a resilient packing in the depression, the arrangement being such that as the clip of the closure member is engaged in the notch of the cover member the resilient packing is brought into engagement with the end of the discharge nozzle.

2. In a dispensing device, a casing, a partition adjacent one end of the casing, the casing being arranged to receive a collapsible tube having a discharge nozzle adapted to be detachably secured to said partition, a pair of guides extending longitudinally of the casing, a plate slidably mounted in each guide, a shaft rotatably mounted in the plates, the shaft being provided with a slot to receive the end of the collapsible tube opposite the discharge nozzle, a cover pivotally mounted on the casing and enclosing the collapsible tube and a closure member hingedly connected to the bottom of the casing, a clip extending from the closure member and adapted for engagement over the cover member, a depression formed in the closure member and a resilient packing mounted in the depression and engaging the discharge nozzle when the closure member is in the closed position.

3. In a dispensing device, a casing, a partition adjacent one end of the casing, the casing being arranged to receive a collapsible tube having a discharge nozzle and the partition being so arranged that the discharge nozzle may be detachably secured thereto, a pair of guides extending longitudinally of the casing, a rotatable shaft movable longitudinally of the guides, the casing being provided with a slot and one end of the shaft extending through the slot, a knob secured to the extending end of the shaft and the shaft being provided with a slot to receive the end of the collapsible tube opposite the nozzle, the arrangement being such that the shaft may be rotated to wind the collapsible tube about the shaft and as the shaft is rotated it may move longitudinally of the casing toward the nozzle of the collapsible tube.

RALPH C. HITZLER.