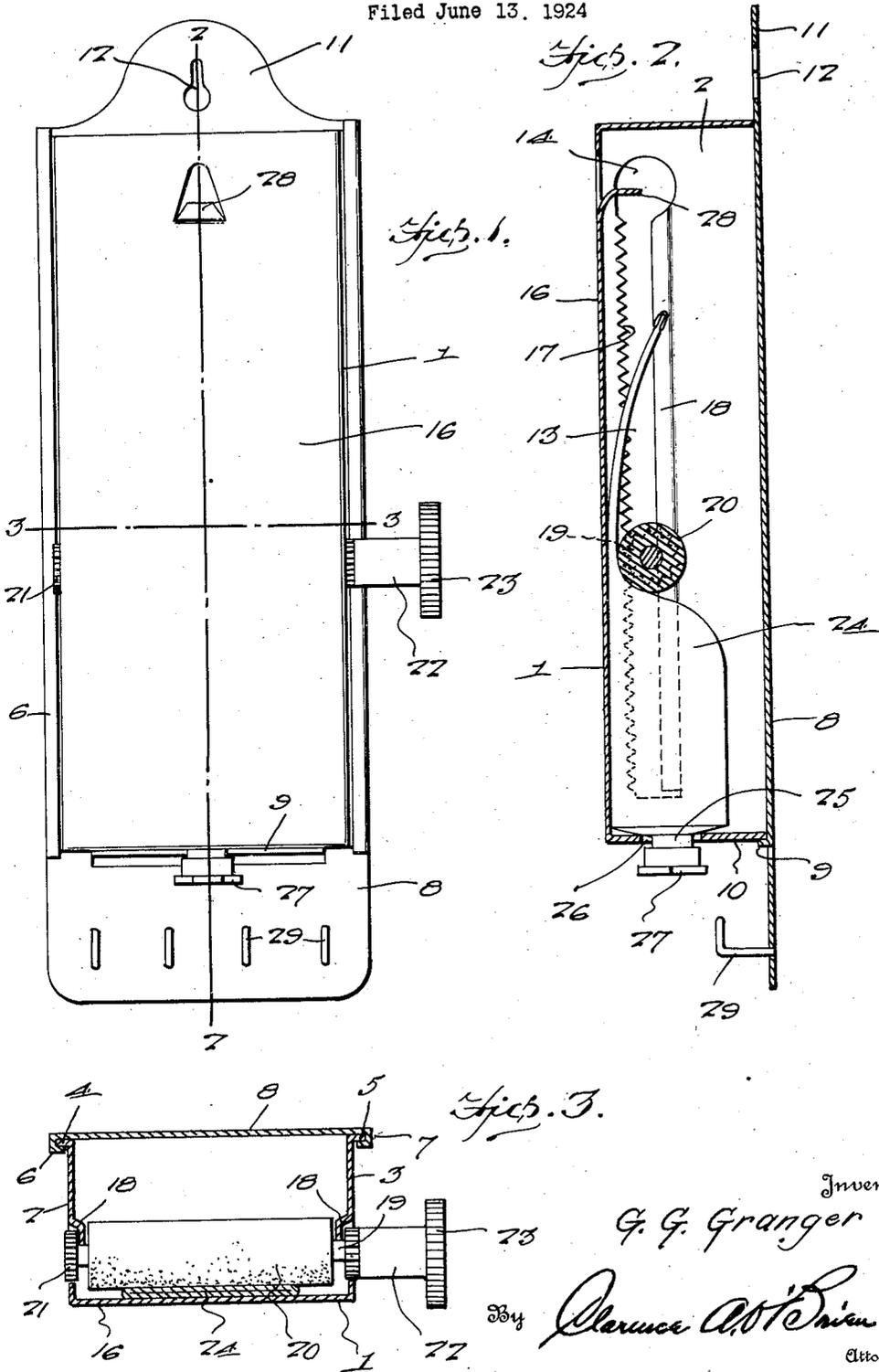


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DISPENSING DEVICE

Filed June 13, 1924



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# UNITED STATES PATENT OFFICE.

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## DISPENSING DEVICE.

Application filed June 13, 1924. Serial No. 719,836.

*To all whom it may concern:*

Be it known that I, GEORGE G. GRANGER, a citizen of the United States, residing at Moosup, in the county of Windham and State of Connecticut, have invented certain new and useful Improvements in a Dispensing Device, of which the following is a specification.

This invention relates to new and useful improvements in dispensing devices and is more particularly adapted to a means for dispensing paste such as tooth paste, shaving cream or the like and which is put up in collapsible containers or tubes.

One of the important objects of the present invention is to provide a dispensing device of the above mentioned character, wherein mechanically operated means is provided for extruding the paste from the container in a simple and efficient manner and without necessitating the handling of the paste container.

A further object of the invention is to provide a dispensing device of the above mentioned character, wherein the same is of such a construction as to enable the parts to be readily disassembled for replacing an empty tube with a new one whenever necessary.

A further object is to provide a dispensing device of the above mentioned character, which is simple in construction, inexpensive, strong and durable and furthermore adapted for the purposes for which it is designed.

Other objects and advantages of this invention will become apparent during the course of the following description.

In the accompanying drawing forming a part of this specification and in which like numerals designate like parts throughout the same:

Figure 1 is a front elevation of my improved dispensing device.

Figure 2 is a vertical sectional view taken approximately on line 2—2 of Figure 1, and

Figure 3 is a transverse section taken approximately on line 3—3 of Figure 1.

In the drawing wherein for the purpose of illustration is shown the preferred embodiment of my invention, the numeral 1 designates a substantially rectangular shaped casing, the rear face of which is open in the manner as clearly illustrated in Figures 2 and 3 of the drawing. The sides 2 and 3 respectively of the casing have their

outer edges provided with the outwardly extending flanges 4 and 5 respectively and the same provide a means for slidable engagement with the vertically extending guides 6 and 7 respectively formed on the outer side edges of the supporting plate or bracket 8, the latter providing a closure for the rear open face of the casing in the manner clearly illustrated in the drawing.

Extending laterally from the supporting plate or bracket 8 adjacent the lower end thereof and at a point adjacent the lower ends of the vertical guides 6 and 7 is the supporting flange 9 which is adapted to be engaged by the base or bottom 10 of the casing in the manner as clearly illustrated in Figures 1 and 2 of the drawing. The lateral flange 9 provides a means for limiting the downward sliding movement of the casing. The upper portion of the supporting plate 8 is provided with an extension 11 in which is formed a key hole slot 12 to provide a means for attachment to a nail or the like driven into the wall or any other suitable place where the dispensing device is to be supported.

Arranged in the sides of the casing adjacent the front face thereof are the vertically extending slots 13, the upper ends thereof being enlarged as illustrated at 14. The longitudinal edge of each slot adjacent the front face 16 of the casing is provided with the teeth 17 whereby a pair of racks is formed for the purposes to be presently described. The opposite longitudinal edges of the slots are offset for their entire length in a plane substantially parallel to the plane of the sides in the manner clearly illustrated at 18 in Figure 3 of the drawing.

Extending through the slots 13 in the sides of the casing is the spindle 19 and carried thereby and adapted for operation in the casing 1 is the roller 20. Also carried by the spindles 19 adjacent the ends of the rollers 20 and adapted for rotation therewith are the pinions 21, the same being adapted for engagement with the rack 17 formed on the longitudinal edges of the slots 13 adjacent the front face 16 of the casing. The offset portions 18 formed by the opposite edges of the slots are disposed between the ends of the roller 20 and the pinions 21 and provide a means for holding the spindle and roller in proper position so that the pinions will at all times mesh with the racks. Secured to the projecting end of

the spindle 19 is the sleeve 22 and formed on the outer end thereof is the knurled knob 23 which provides a means for actuating the spindle and the roller as well as the pinions carried thereby.

Adapted to be supported in the casing 1 is the paste containing collapsible tube 24 and the same has its discharge nozzle 25 supported in a suitable opening 26 provided in the bottom 10 of the casing 1. The collapsible paste container is supported in an inverted position against the front face 16 of the casing so that the roller 20 will engage the opposite side of the tube in the manner more clearly illustrated in Figures 2 and 3 of the drawing. The discharge nozzle 25 of the paste tube 24 is normally closed by means of the threaded closure 27 usually provided therefor. For the purpose of limiting the upward movement of the roller 20 in the casing, a tongue 28 is struck from the upper portion of the front face 16 of the casing and the same is disposed inwardly so as to be arranged in the path of travel of the roller.

The lower portion of the supporting bracket 8 has arranged thereon the hooks 29, any number of which may be provided and the same provide a means for supporting in a suspended position tooth brushes or the like.

The operation of my dispensing device may be briefly stated as follows: The threaded cap or closure 27 is removed from the discharge nozzle 25 of the paste tube and a brush is disposed below the discharge opening so that the paste from the tube which is discharged therefrom will be deposited onto the brush. The means for extruding the paste from the tube consists in rotating the knob 23 so that the roller 20 moves downwardly against the paste tube and will progressively squeeze the paste in the tube from its closed end to its discharge end. After the desired amount of paste has been discharged from the tube onto the brush, the threaded cap 27 is again placed over the discharge nozzle of the tube and will prevent any further discharge of the paste from the tube.

Whenever it is desired to remove the casing from its support for replacing an empty tube with a full one, it is only necessary to slide the casing upwardly between the guides 6 and 7 and with the cap 27 removed from the discharge nozzle of the tube the same may be removed and a new one inserted.

The provision of a dispensing device of the above mentioned character, will render the handling of tooth paste, shaving cream, or the like sanitary and will prevent unnecessary waste as well as save considerable time and obviate the necessity of having to handle the paste tube in discharging the paste therefrom on to the bristles of a brush.

Furthermore the simplicity of my device enables the part to be readily and easily disassembled. Any suitable material may be used in constructing the dispensing device embodied in the present invention and I do not wish to limit myself to the particular kind of material which is to be used.

While I have shown the preferred embodiment of my invention, it is to be understood that various changes in the size, shape and arrangement of parts may be resorted to without departing from the spirit of the invention and the scope of the appended claims.

Having thus described the invention, what I claim is:—

1. A dispensing device of the class described for squeezing collapsible paste tubes and the like including a casing adapted to receive the collapsible tube and provided with an opening for receiving the discharge ends of the paste tube and having its rear face open, a closure for the rear face of the casing providing a supporting bracket for the casing, the side walls of the casing having vertical slots arranged therein, one of the longitudinal edges of each slot having teeth provided therein forming a rack, a spindle extending through said slots, a roller carried by the spindle and adapted for engagement with the collapsible tube, pinions on said spindle adjacent the ends of the roller and meshing with said racks and means on the outer end of the spindle for rotating the same for effecting a progressive squeezing action on the tube from its closed end to its discharge end.

2. A dispensing device of the class described for squeezing collapsible paste tubes and the like including a casing adapted to receive the collapsible tube and having an opening in its bottom for receiving the discharge end of the collapsible tube and having its rear face open, a closure for the rear face of the casing providing a supporting bracket for the casing, the side walls of the casing having vertical slots arranged therein, one of the longitudinal edges of each slot having teeth provided therein, said side edges with the teeth forming a pair of racks, a spindle extending through said slots, a roller carried by the spindle and adapted for engagement with the collapsible tube, pinions on said spindle adjacent the ends of the roller and meshing with said racks, the opposite longitudinal edges of said slots being offset to form flanges arranged in parallel planes to the side walls of the casing, said flanges being disposed between the pinions and the ends of the roller for holding the pinions in mesh with the racks, and means on the outer end of the spindle for rotating the same for effecting a progressive squeezing action on the tube from its closed end to its discharge end.

3. A dispensing device of the class described for squeezing collapsible paste tubes and the like including a casing adapted to receive a collapsible tube and having its opposite side walls provided with parallel slots, one of the longitudinal edges of each slot, having teeth provided therein, said edges of the slot provided with teeth forming a pair of racks, a spindle extending through said slots, a roller carried by said spindle and adapted for engagement with the collapsible tube in the casing, pinions on said

spindle adjacent the ends of the roller meshing with said racks, the opposite longitudinal edges of said slots being offset to form flanges arranged in parallel planes to the side walls of the casing, said flanges being disposed between the pinions and the ends of the roller for holding the pinions in mesh with the racks, and means for rotating the spindle.

In testimony whereof I affix my signature.

GEORGE G. GRANGER.