May 2, 1933. A. J. BROCHU 1,906,837

TOOTH PASTE DISPENSER

Filed May 25, 1931 2 Sheets-Sheet 1

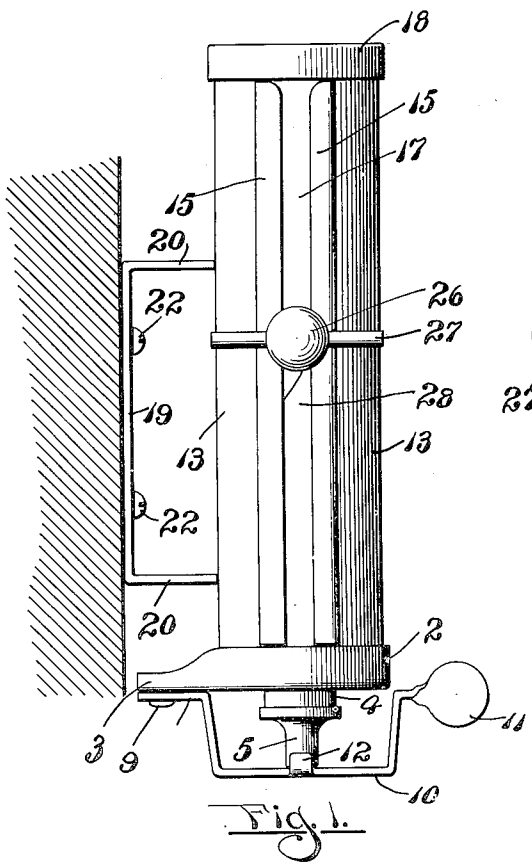


Fig. 1.

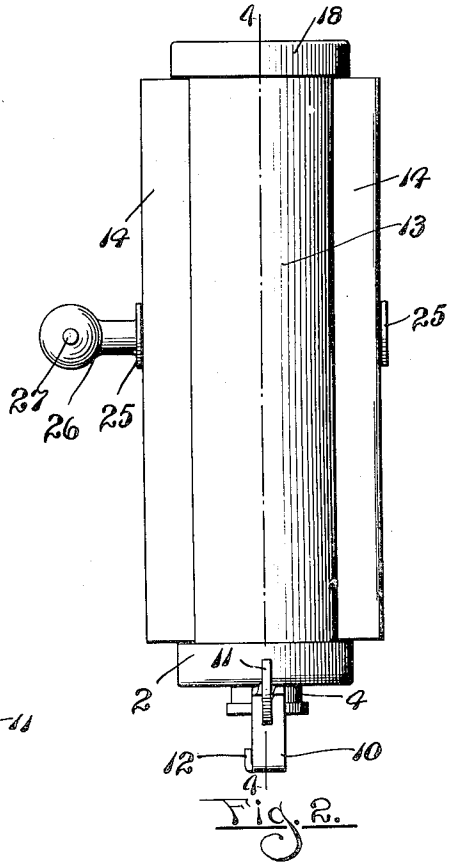


Fig. 2.

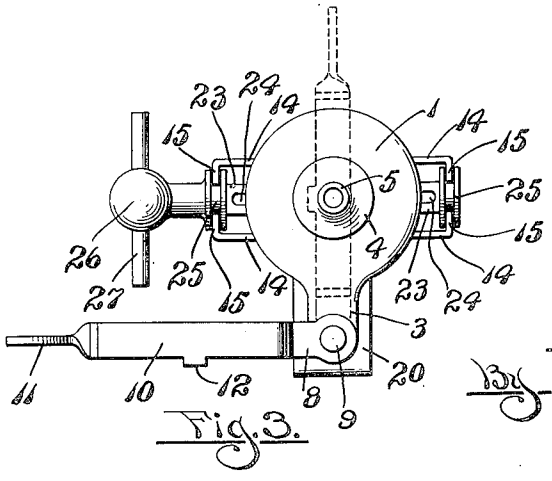


Fig. 3.

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TOOTH PASTE DISPENSER

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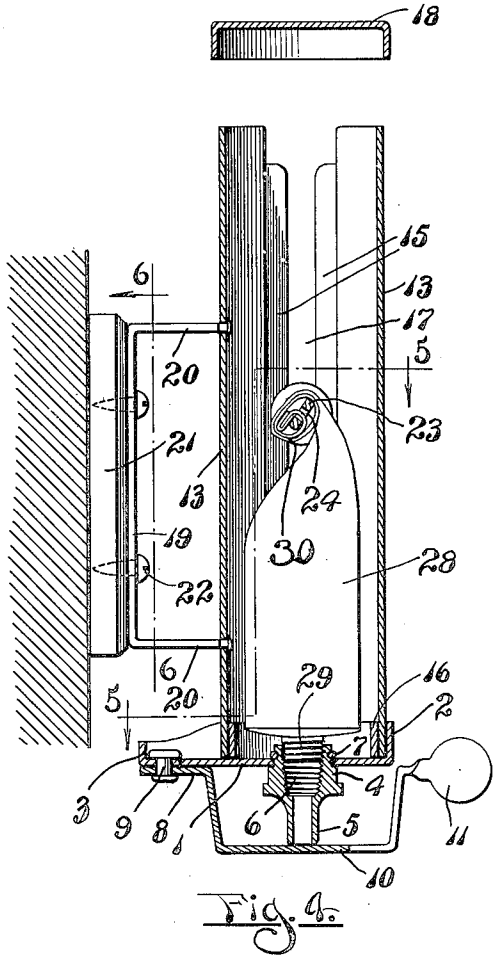


Fig. 4.

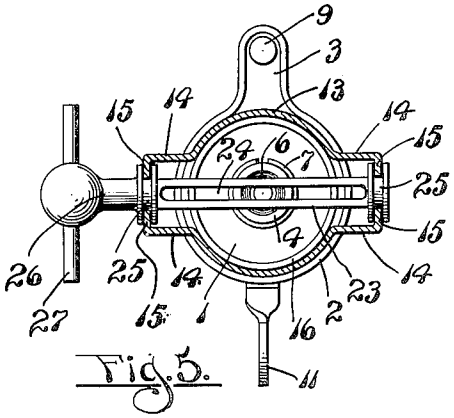


Fig. 5.

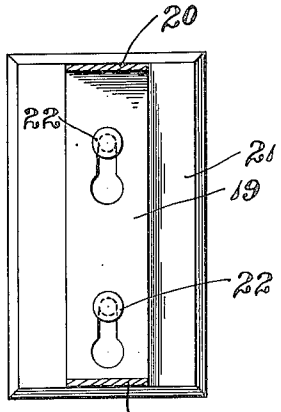


Fig. 6.

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UNITED STATES PATENT OFFICE

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TOOTH PASTE DISPENSER

Application filed May 25, 1931. Serial No. 539,652.

This invention relates to dispensing apparatus, being particularly designed for the dispensing of paste from tubes, one well known type of paste or cream which is carried in tubes of a flexible collapsible nature being tooth paste; and the present invention is particularly useful in connection with the dispensing of tooth paste from tubes. It is of course to be understood that other kinds of pastes carried in a similar manner may be dispensed equally well.

It is an object and purpose of the present invention to provide a paste or cream dispensing device which may be mounted conveniently on a wall or other support and the tube which holds the paste housed within the same and connected at its open screw threaded end with the bottom of the device, the paste or cream being forced outwardly from the tube through a suitable nozzle therefor onto the brush or other implement to which it is to be delivered.

A further feature of the invention is to provide a very practical and useful means for squeezing or collapsing the tube from its closed end toward its screw threaded open end to force the paste therefrom as it is needed, the device which holds the tube of paste operating as a guide for the squeezing or collapsing member.

A still further object of the invention is to provide movable closure means for the delivery nozzle of the device which may be readily moved out of the way when paste is to be obtained and moved back to a position to positively close the lower end of the outlet nozzle, thereby keeping the paste from oozing from the nozzle or from dropping therefrom with a result of economy in the amount used.

Many other objects and purposes than those stated will be apparent as an understanding of the invention is had from the following description, taken in connection with the accompanying drawing, in which,

Fig. 1 is a side elevation of the dispensing device of my invention.

Fig. 2 is a front elevation thereof.

Fig. 3 is an under plan view.

Fig. 4 is a fragmentary vertical section through the appliance showing the same as it is used.

Fig. 5 is a fragmentary horizontal section substantially on the plane of line 5—5 of Fig. 4, and

Fig. 6 is a vertical section on the plane of line 6—6 of Fig. 4, looking in the direction indicated by the arrows.

Like reference characters refer to like parts in the different figures of the drawing.

In the construction of the dispensing device or appliance, a bottom member of flat metal is formed having a horizontal lower side 1 with an annular upwardly extending flange 2 around the same and extending laterally at one side so as to make a reinforced arm 3, as shown in Figs. 1 and 5. In the center of the lower side 1 an opening is made through which an outlet nozzle 4 may be partly inserted from below. Said nozzle has a vertical opening or passage therethrough and terminates at its lower end in a reduced delivery section 5, while the upper portion of the opening through the nozzle is interiorly threaded and tapers from its upper to its lower portion inwardly, as indicated at 6. The delivery nozzle is retained in place by a spring ring 7 which passes around the upper end of the nozzle above the bottom 1, seating in a suitable annular groove around the nozzle.

A closure member formed from a bar 8 of flat metal is located below this lower member of the appliance and is pivotally mounted at one end at 9 to the arm 3 previously described. The central portion of the bar is formed into U-shape, as indicated at 10, and its free end terminates in a flat vertically positioned finger engaging part 11, as shown. A stop lip 12 is turned upwardly from one edge of the middle portion of the closure member and is so located that when the same is turned to bring the lower part of the intermediate portion 10 below the lower end of the nozzle, said lip engages against the nozzle and keeps the closure member in proper position to close said opening through said nozzle.

The appliance includes two vertically extending sheet metal housing members formed

at their middle portions preferably into curved sections 13 from the vertical edges of which wings 14 extend in opposite directions and terminate in inturned flanges 15. The wings 14 and flanges 15 do not extend to the upper and lower ends of the curved portions 13 but terminate a short distance therefrom.

Two of these members are located with their lower ends received within the annular flange 2 and are permanently secured in place by means of a ring 16 of metal which is located within the curved portions 13 and driven or pressed into place very tightly and snugly, thereby permanently securing the parts together, as shown in Fig. 4, and with the adjacent edges of the inturned flanges 15 separated from each other thereby providing opposite vertical parallel slots 17 in the sides of the device. Said device is completed at its upper end by a cup-like cap 18 of sheet metal which may be removably placed over the upper ends of the two housing members described. It is to be understood that while the sections 13 are described as of curved form the same may be of other shapes and forms without departing from the invention in any respect.

One of the vertical housing members carries an attaching means illustrated as in the form of a U-shaped stirrup, having a vertical intermediate portion 19 with legs 20 extending therefrom to the housing member, the ends of the legs being riveted or otherwise permanently secured thereto. The vertical part 19 may be located directly against a wall or may be detachably connected with a block 21 which in turn may be secured in any suitable manner as by cementing or otherwise to the wall, the block or the wall as the case may be having spaced apart headed screws 22 threaded therein, and the vertical member 19 of the attaching means having keyhole slots, as shown in Fig. 6, to detachably engage with the headed screws.

A tube squeezing or collapsing member is designed to be received across and guided in the slots 17 of the housing described. Said member comprises a flat bar 23 having a longitudinal slot 24 therein and provided with spaced apart pairs of circular guide flanges 25 which are located so as to engage with the inturned flanges 15 at each side of the slots 17. This member is equipped with an outwardly extending shank 26 at one end through which a rod 27 passes whereby the same may be manually turned.

In using the dispensing appliance the cap 18 is removed and a tube 28 of the tooth or other paste or cream is inserted in the housing, the cap at its screw threaded end having first been removed. The screw threaded end 29 of the tube may be engaged with the interior threads 6 of the nozzle, and by turning the tube about a vertical axis such engagement may be made secure so that the threaded end portion 29 of the tube will remain connected. The tapered construction at 6 of the dispensing nozzle permits this engagement of any of the tooth paste tubes manufactured therewith.

After the tube has been inserted and connected, the squeezing or collapsing member of the device is located between the sides of the housing, the circular guide flanges 25 engaging with the guide flanges 15 of the housing. The upper end of the tube is inserted through the slot 24 and bent to one side; whereupon by turning this member the metal of the tube may be collapsed and wound around the squeezing or collapsing member and thus force paste outwardly from the lower end of the tube through the nozzle 4, from which it may pass to a brush or other implement which is to receive it. After the desired amount of the paste has been forced out the closure member is turned from its open position shown in full lines in Fig. 3 to the closed position shown in dotted lines in the same figure.

The construction described has proved very practical. It is of an attractive appearance and with it the entire contents of the tube of paste or cream may be utilized. The construction of the squeezing or collapsible member 23 as a flat bar with a longitudinal slot therein acts to permit the winding of the collapsed metal of the tube thereon without rupture of the thin sheet metal from which the tube is made and at the same time force all of the contents of the tube therefrom.

The invention is defined in the appended claims and is to be considered comprehensive of all forms of structure coming within their scope.

I claim:

1. A device of the class described comprising, a vertical housing of sheet metal having two members each formed with an intermediate outwardly extending portion, outwardly extending wings at the edges of said intermediate portions and inwardly turned flanges at the outer edges of said wings, said flanges on the members being spaced from each other, a member closing the lower end of the housing comprising a horizontal bottom and an upturned flange in which the lower ends of said housing members are received, means for permanently securing said housing members and closing member together, a nozzle having a vertical opening therethrough connected to and extending downwardly from the closing member, a bar pivotally mounted on said closing member having an intermediate portion bent downwardly to pass underneath the lower end of the nozzle when moved to one position, said nozzle being adapted to receive the end of a sheet metal tube therein, a second bar having a longitudinal slot therein and provided at each end with pairs of spaced apart vertical flanges extending across said housing with

the inturned flanges on the housing members seated between the flanges of the pairs of flanges on said last named bar, the upper closed end of the tube passing through said slot in said last named bar and connected therewith whereby on turning the bar the tube is squeezed and collapsed and wound around the bar, and manually operable means at one end of said last named bar for turning the same.

2. A construction containing the elements in combination defined in claim 1, said first named bar having an upwardly extending lug at one edge thereof at its intermediate portion to engage against a side of the nozzle and thereby stop said bar in nozzle closing position.

3. A construction containing the elements in combination defined in claim 1, combined with a bracket secured to one of the vertical housing members, said bracket having a vertical part spaced from the housing adapted to be attached to a vertical support.

4. In combination, a substantially cylindrical housing having an end closure therefor, and a nozzle, having an opening therethrough, revolubly mounted in said end closure, said housing being adapted to receive a collapsible tube of the character described therein with the threaded neck of the tube adjacent said nozzle, said nozzle being tapered and screw threaded to receive the neck therein by rotation of said nozzle member.

5. A dispensing article of the class described comprising, a vertical housing of sheet metal having two members each formed with an intermediate outwardly extending portion and inwardly extending edges, a member closing the lower end of the housing comprising a horizontal bottom in which the lower ends of said housing members are received, means for rigidly securing said housing members to said horizontal bottom whereby the housing members are held in spaced relationship with their vertical edges spaced from each other to form slots therebetween, a nozzle extending through said bottom, said nozzle having an opening therethrough, said opening being tapered outwardly and upwardly and being adapted to receive the straight threaded end of a collapsible tube therein, and a bar having a slot therein extending through the slots in the housing and guided thereby.

6. In an article of the type described, a substantially cylindrical housing having an end closure therefor, and a nozzle, having an opening therethrough, revolubly mounted in said end closure, said housing being adapted to receive a collapsible tube of the character described therein with the straight threaded neck of the tube adjacent said nozzle, said nozzle being tapered and screw threaded to receive the straight threaded neck therein by rotation of said nozzle member.

7. In combination, a bottom member of flat metal having an annular upwardly extending flange around the same and extending laterally to form an arm, two vertically located sheet metal housing members formed at their middle portions into curved sections adapted to fit inside of said flange, a ring member permanently located inside of said housing members in the same plane as the said flange whereby the three previously mentioned members are held in fixed relationship to one another, a dispensing nozzle connected with said bottom member and extending below the same, means mounted on the arm of said bottom member for preventing operation of said nozzle member and a tube squeezing and collapsing member comprising a slotted bar extending across the said housing members for the purpose described.

In testimony whereof I affix my signature.

ARTHUR J. BROCHU.