

July 19, 1949.

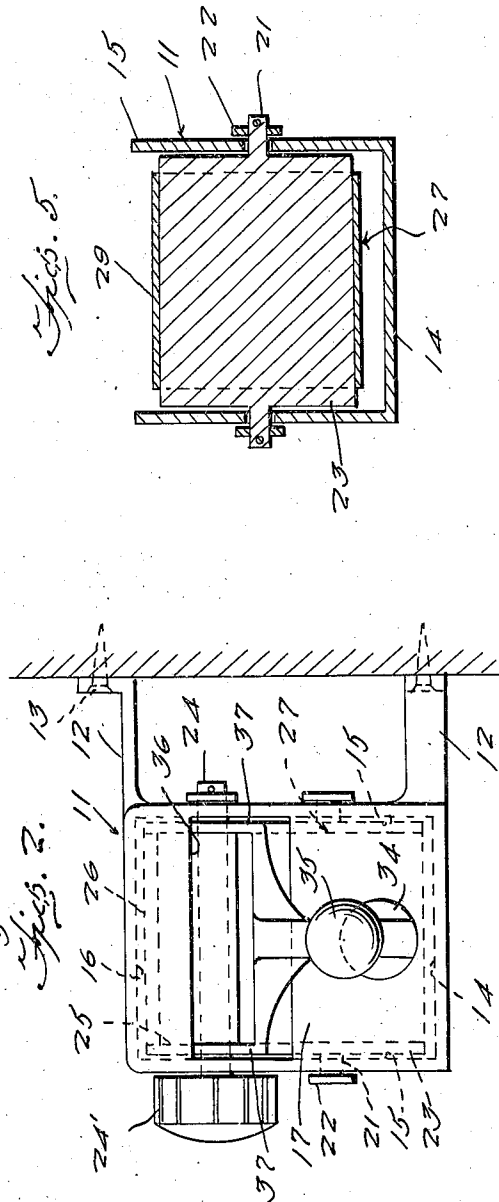
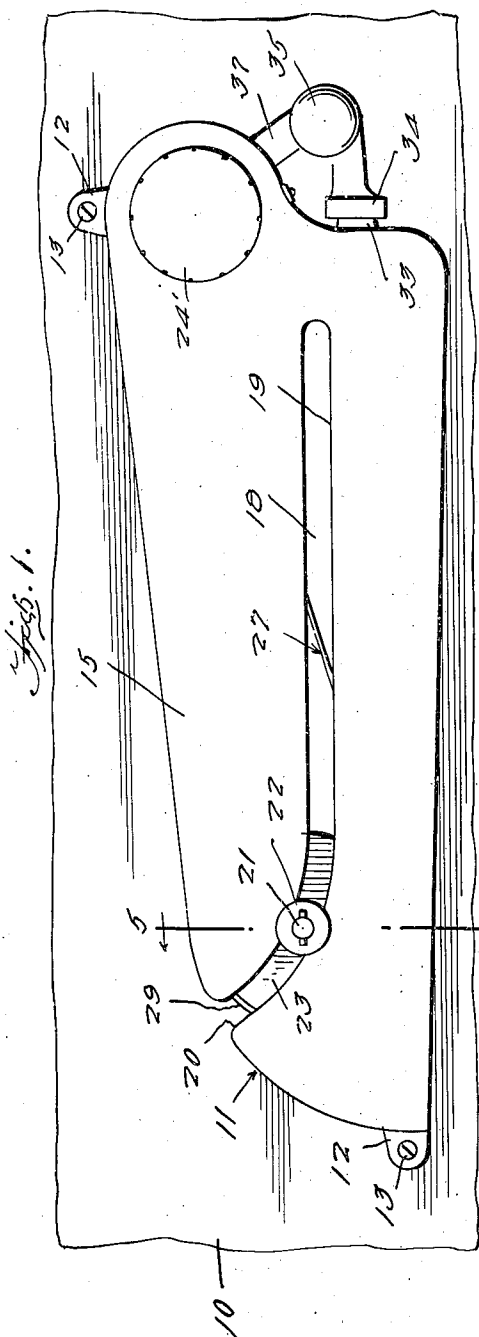
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2,476,346

DISPENSING MOUNT FOR COLLAPSIBLE TUBES

Filed June 4, 1948

2 Sheets-Sheet 1



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2,476,346

DISPENSING MOUNT FOR COLLAPSIBLE TUBES

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Application June 4, 1948, Serial No. 31,085

6 Claims. (Cl. 222-96)

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My invention relates to dispensing mounts for collapsible tubes, such as tooth paste tubes, shaving cream tubes, and the like. As was readily demonstrated in the recent war, the material comprising such tubes is of a critical nature, whereby all users were requested to salvage the old tubes and turn them in for scrap.

Accordingly, it is the prime object of the present invention to devise a dispensing mount for collapsible tubes wherein the tube is so collapsed as to be undamaged and capable of being refilled and re-used without the necessity for any substantial alteration other than the refilling of the same.

A further object is to provide such a dispensing mount for collapsible tubes which includes means mounting the tube in a dispensing position against a flat surface and rollable means adapted to be progressively rolled over the tube to dispense the contents thereof.

A further object is to provide in a dispensing mount for collapsible tubes such as that last described improved means for actuating the rollable means as aforesaid.

Other objects and advantages reside in the particular structure of the device, combination and arrangement of the several parts thereof, and will be readily understood by those skilled in the art upon reference to the attached drawing in connection with the following specification, wherein the invention is shown, described and claimed.

In the drawing:

Figure 1 is an elevational view showing the mount according to the invention mounted on a support;

Figure 2 is an end elevation thereof looking from the right of Figure 1;

Figure 3 is a plan view thereof;

Figure 4 is a longitudinal vertical sectional view taken substantially on the plane of the line 4-4 of Figure 3;

Figure 5 is a transverse vertical sectional view taken substantially on the plane of the line 5-5 of Figure 1.

Referring specifically to the drawing, wherein like reference characters have been used throughout the several views to designate like parts, 10 designates any suitable vertical support, such as a bathroom wall, to which is secured the mount 11 according to the invention. The mount 11 is secured to the support 10 by any suitable bracket legs 12 and detachable fasteners 13. The mount 11 is substantially rectangular in plan and end elevation and comprises a flat floor 14 which is preferably slightly downwardly inclined from the rear to the front end. A pair of parallel side walls

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15 extend upwardly from the floor and are connected at at least the forward portions of their upper edges by a stop wall 16 which is preferably upwardly slopped from the rear to the front. A curved front wall 17 connects the upper wall 16 and the floor or bottom wall 14. The rear end of the mount 11 is open to provide for the insertion of a collapsible tube 18 therein and the removal of an empty tube therefrom. The top wall 16 terminates forwardly of the rear edge of the floor 14, whereby the latter is uncovered at the rear part of its length and the rear edges of the side wall 15 are unconnected. Such rear and upper edges of the side walls 15 are rearwardly and downwardly curved from the termination of the top wall 16.

The side walls 15 have formed therein a pair of longitudinally - extended and laterally - aligned slots 19. The major portions of the slots 19 are parallel to the floor 14 in vertically-spaced relation thereto. However, the rear portions 20 of such slots are rearwardly and upwardly directed and open through the unconnected rear edges of the side walls 15.

A spindle 21 is rollably mounted in the slots 19 and may be withdrawn therefrom through the open rear ends 20 thereof. Washer or like heads 22 are secured to the outer ends of the spindle 21 to prevent lateral displacement of the same relative to the mount 11. A relatively heavy solid roller 23 is formed integrally with the spindle 21 preferably. Obviously, alternatively, the roller could be separate from the spindle. To actuate the roller 23, the forward upward end of the mount 11 is provided with a transverse spindle 24 which is journaled in the side walls 15 adjacent the upper forward ends thereof. A pair of arms 37 are journaled on spindle 24 just inwardly of side walls 15 and include upwardly-directed lever arms 25 connected by a cross-piece 26 for a purpose to be described later. The ends of the spindle 24 extend radially outwardly of the side walls 15 and a winding knob 24' is fixed on one of such ends. One end 28 of an apron 27 is secured in any suitable manner to the front wall 17 in vertically-spaced relation to the floor 14 so as to overlie the collapsible tube 18. The apron 27 is of any smooth flexible material, whereby it may be utilized by the roller 23 to flatten the tube without marring the surface thereof.

The apron 27 extends rearwardly over the tube 18 and includes a bight portion 29 which is looped about the roller 23. Thereafter, an upper run 30 of the apron 27 extends forwardly just below the top wall 16 and over a cross-piece 26

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to be described. Such upper run 30 of the apron terminates in a free end which is secured around the spindle 24 in any suitable manner, as shown. Obviously, when the winding knob 24' is turned in a clockwise direction, Figure 1, the upper run 30 of the apron 27 is wound upon the spindle, whereby the roller 23 is drawn forwardly over the tube 18 in squeezing relation thereto by means of the bight portion 29 of the apron. In this connection, it should be noted that the lower forward part of the forward wall 17 is provided with an aperture 32 through which the neck 33 of the tube 18 is adapted to extend. When the entire contents of the tube 18 have been dispensed, the roller 23 is obviously in position closely adjacent the dispensing neck 33 of the tube, and the body portion of the tube is pressed flat against the floor 14 by the action of the roller 23 on the apron 27. By virtue of the smooth character of the wall 14 and the apron 27, the exterior of the tube 18 is not marred, even though the same is flattened whereby the tube is re-usable merely by refilling the same with suitable contents.

When it is desired to replace the tube 18 after the same has been entirely dispensed, the ends of the spindle 21 for the roller 23 are grasped and the roller is retracted along the slots 19 and outwardly thereof through the open rear ends 20 to the broken line position, Figure 4. This operation opens the rear end of the mount 11 and permits the flattened tube 18 to be withdrawn and replaced by a full tube.

In normal use of the device, the normal threaded cap for the neck 33 of the tube is discarded as a closure cap 34 is utilized instead. Such closure cap 34 includes a counterweight 35 whereby the cap is loaded to a position to close the neck 33 of the tube. The cap 34 includes a pair of rearwardly-directed arms which are journaled on the spindle 24. Such arms 37 extend through an opening, or openings, 36 in the forward wall 17 of the housing. Thus, the counterweight 35 loads the closure cap 34 in a position to close the tube. Preferably, the arrangement of the arms 37 with the spindle 24 is such that as winding pressure is exerted on the knob 24', the cap 34 is automatically moved to a position uncovering the dispensing neck 33 of the tube 18. The arms 37 terminate in upwardly-directed arms 25 connected by a cross-piece 26 over which the upper run 30 of the apron 27 extends. Inasmuch as the arms 37 are freely pivotally mounted on the spindle 24, winding pressure on the knob 24' causes the upwardly-directed arms 25 and cross-piece 26 to be depressed to the chain-dot position, Figure 4, whereby the closure cap 34 is elevated out of engagement with the dispensing neck 33 of the tube. Upon the release of winding pressure, the counterweight 35 is sufficiently heavy to move the parts back to the tube-closing position.

While I have shown and described what is now thought to be a preferred embodiment of the invention, it is to be understood that the same is susceptible of other forms and expressions. Consequently, I do not limit myself to the precise structures shown and described hereinabove except as hereinafter claimed.

I claim:

1. A dispensing mount for collapsible tubes, comprising a hollow casing including a front end wall, parallel side walls, a top wall and a bottom wall, said casing being formed with an open rear end for the insertion of a collapsible tube therein, said front wall being formed with an aperture

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for the projection therethrough of the neck of a collapsible tube, said side walls being formed with laterally-aligned and longitudinally-extending cam slots, a dispensing roller including an axial spindle rollable in said slots, a spool journaled across said casing inwardly thereof adjacent said front wall and in vertically-spaced relation to said bottom wall, a dispensing apron adapted to overlie said collapsible tube and including an end fixed to said front wall above said aperture, said apron being looped about said roller, said apron including a second end fixed to said spool, and means for rotating said spool, whereby to wind said apron thereon and move said roller toward said front wall to force said apron into dispensing engagement with said tube.

2. A dispensing mount for collapsible tubes, comprising a hollow casing including a front end wall, parallel side walls, a top wall and a bottom wall, said casing being formed with an open rear end for the insertion of a collapsible tube therein, said front wall being formed with an aperture for the projection therethrough of the neck of a collapsible tube, said side walls being formed with laterally - aligned and longitudinally - extending cam slots, a dispensing roller including an axial spindle rollable in said slots, said slots being formed with upwardly and rearwardly-directed open rear ends providing means for withdrawing said roller and spindle from said casing rearwardly thereof, a spool journaled across said casing inwardly thereof adjacent said front wall and in vertically-spaced relation to said bottom wall, a dispensing apron adapted to overlie said collapsible tube and including an end fixed to said front wall above said aperture, said apron being looped about said roller, said apron including a second end fixed to said spool, and means for rotating said spool, whereby to wind said apron thereon and move said roller toward said front wall to force said apron into dispensing engagement with said tube.

3. In a dispensing mount for collapsible tubes, including means mounting said tube in a dispensing position against a stationary surface, and rollable means for squeezing said tube against said surface, the improvement comprising a flexible apron interposed between said rollable means and said tube, said apron including an end fixed to said first-named means, a spool, means rotatably mounting said spool above said tube and forwardly thereof, said apron including a portion looped around said rollable means, said portion terminating in an end fixed to said spool for winding thereon upon rotation of said spool in one direction, whereby to move said rollable means progressively along said tube in squeezing relation thereto.

4. In a dispensing mount for collapsible tubes, including means mounting said tube in a dispensing position against a stationary surface, and rollable means for squeezing said tube against said surface, the improvement comprising a flexible apron interposed between said rollable means and said tube, said apron including an end fixed to said first-named means, a spool, means rotatably mounting said spool above said tube and forwardly thereof, said apron including a portion looped around said rollable means, said portion terminating in an end fixed to said spool for winding thereon upon rotation of said spool in one direction, whereby to move said rollable means progressively along said tube in squeezing relation thereto, a closure for said tube, means mounting said closure for movement into and out

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of a tube-closing position, said closure including a portion operatively associated with said spool and apron, and said portion being movable by said apron upon winding movement of said spool to move said closure out of said tube-closing position.

5. In a dispensing mount for collapsible tubes, including means mounting said tube in a dispensing position against a stationary surface, and rollable means for squeezing said tube against said surface, the improvement comprising a flexible apron interposed between said rollable means and said tube, said apron including an end fixed to said first-named means, a spool, said apron including a portion looped around said rollable means, said portion terminating in an end fixed to said spool for winding thereon upon rotation of said spool in one direction, whereby to move said rollable means progressively along said tube in squeezing relation thereto, said spool including a spindle rotatably mounting the same, at least one two-armed lever journaled on said spindle intermediate the arms of said lever, one arm of said lever including a closure cap engageable with said tube to close the same, the other arm of said lever including a cross-piece disposed parallel to said spool in superjacent relation thereto, said cross-piece being disposed below and in engagement with said apron rearwardly of said spool whereby said cross-piece is depressed to pivot said lever in a tube-opening direction upon movement of said spool in an apron-winding direction, and means for rotating said spool.

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6. In a dispensing mount for collapsible tubes, including means mounting said tube in a dispensing position against a stationary surface, and rollable means for squeezing said tube against said surface, the improvement comprising a flexible apron interposed between said rollable means and said tube, said apron including an end fixed to said first-named means, a spool, said apron including a portion looped around said rollable means, said portion terminating in an end fixed to said spool for winding thereupon upon rotation of said spool in one direction, whereby to move said rollable means progressively along said tube in squeezing relation thereto, said spool including a spindle rotatably mounting the same, at least one two-armed lever journaled on said spindle intermediate the arms of said lever, one arm of said lever including a closure cap engageable with said tube to close the same, the other arm of said lever including a cross-piece disposed parallel to said spool in superjacent relation thereto, said cross-piece being disposed below and in engagement with said apron rearwardly of said spool whereby said cross-piece is depressed to pivot said lever in a tube-opening direction upon movement of said spool in an apron-winding direction, means for rotating said spool, and means loading said lever for movement in a tube-closing direction.

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No references cited.