Sept. 18, 1956 F. BURAS, JR 2,763,401

PASTE TUBE DISPENSING HOLDER

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Fig. 1

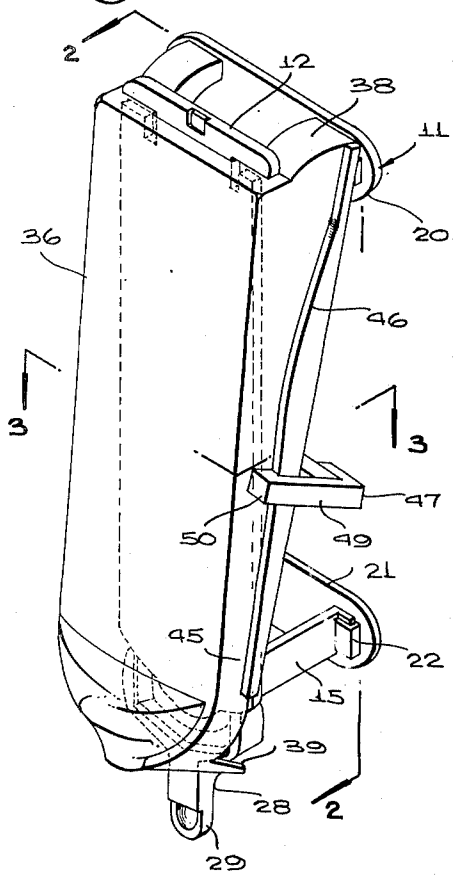


Fig. 2

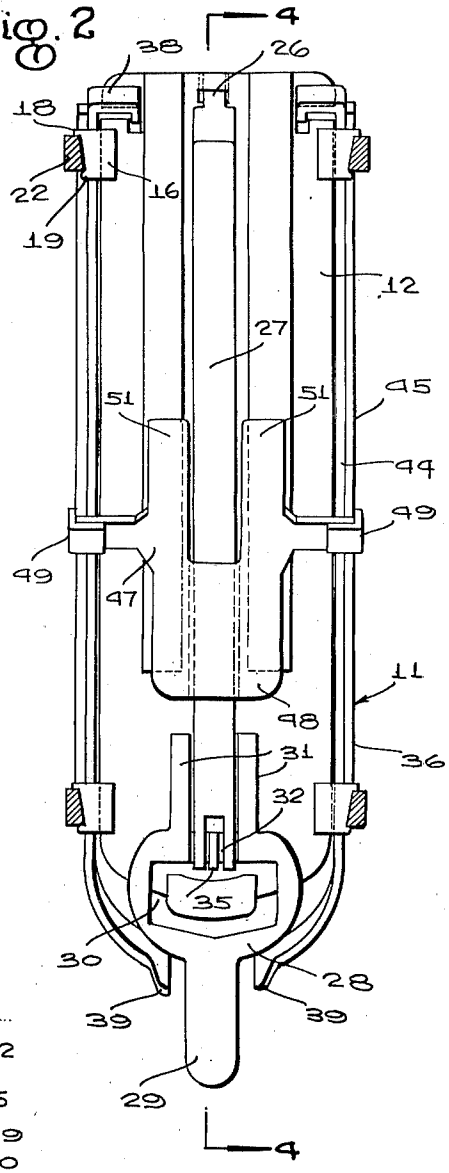
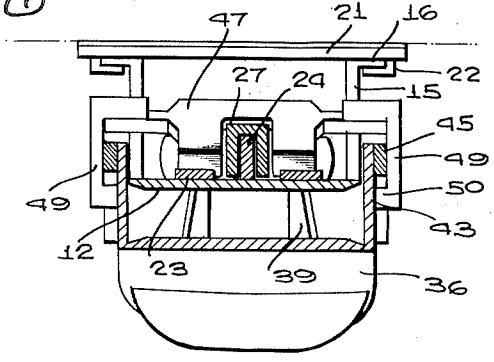


Fig. 3



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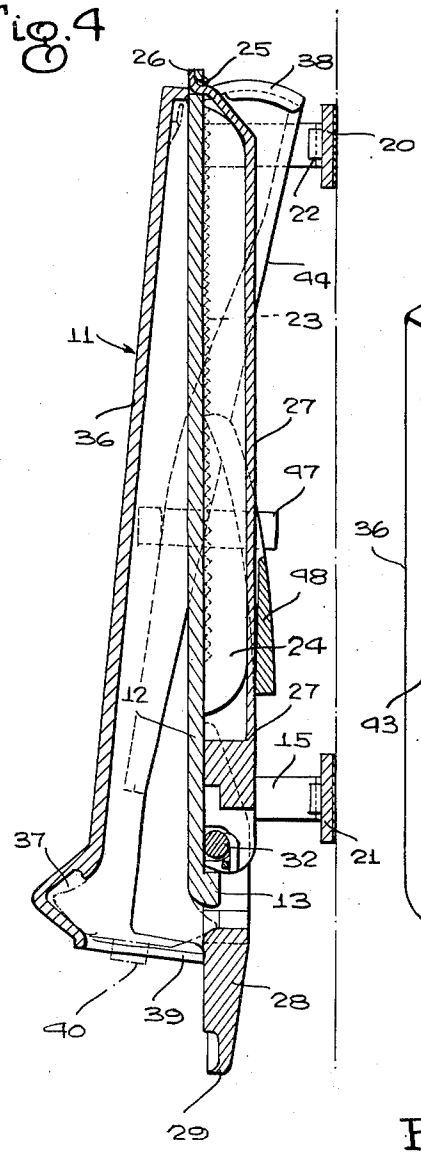
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Fig. 4



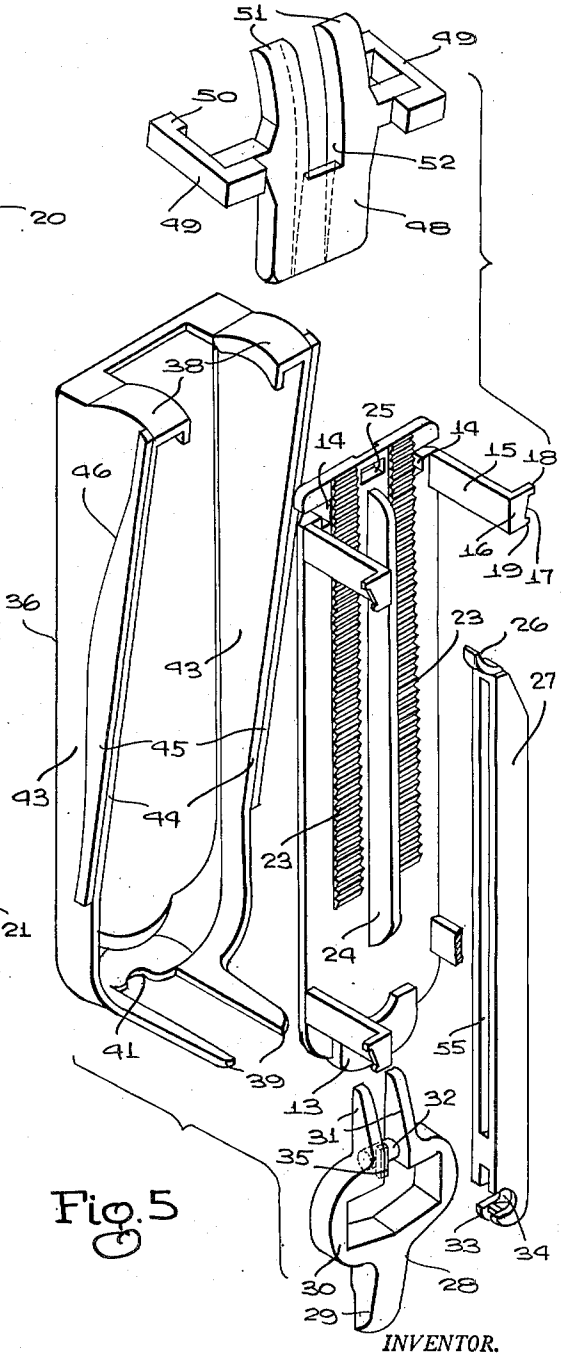


Fig. 5

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Fig. 6

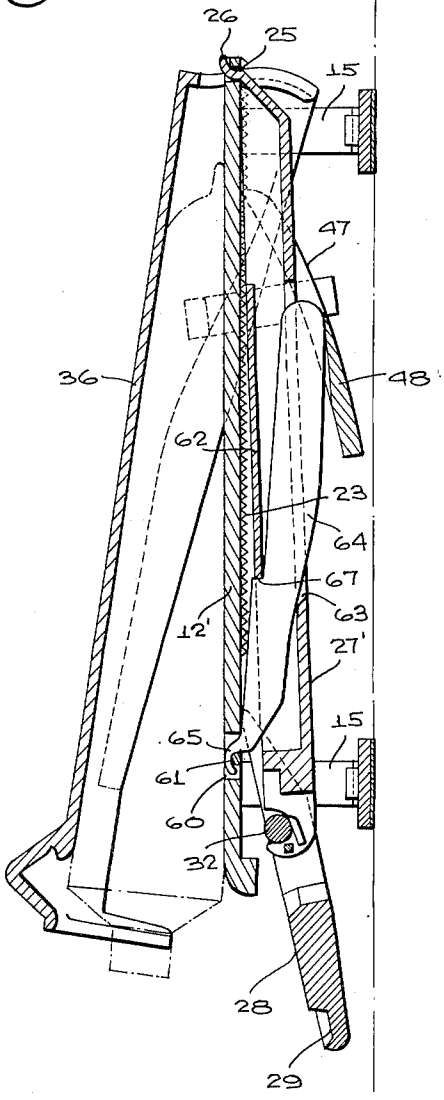
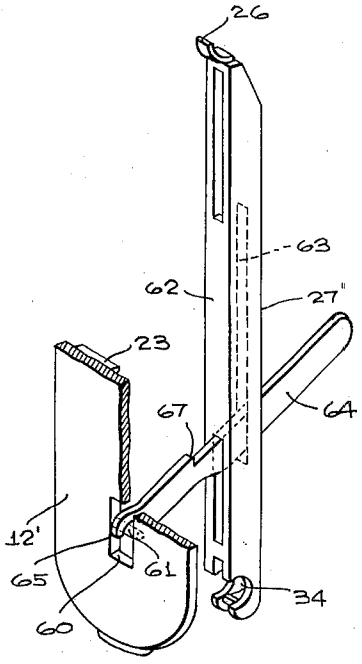


Fig. 7



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2,763,401

PASTE TUBE DISPENSING HOLDER

Frederick Buras, Jr., Gretna, La.

Application August 13, 1954, Serial No. 449,699

3 Claims. (Cl. 222—103)

This invention relates to paste tube dispensers, and more particularly to an improved paste tube dispensing holder of the type adapted to automatically dispense a predetermined quantity of paste material therefrom in response to movement of a dispensing lever provided on the holder.

The main object of the invention is to provide a novel and improved paste tube dispensing holder which is simple in construction, which is easy to install, and which is easy to take apart for cleaning and for replacement of the paste tube therein.

A further object of the invention is to provide an improved paste tube dispenser which is inexpensive to fabricate, which is neat in appearance, which is durable in construction, and which is easy to keep in a sanitary condition.

Further objects and advantages of the invention will become apparent from the following description and claims, and from the accompanying drawings, wherein:

Figure 1 is a perspective view of an assembled paste tube dispensing holder constructed in accordance with the present invention.

Figure 2 is an enlarged vertical cross sectional view taken on the line 2—2 of Figure 1.

Figure 3 is an enlarged horizontal cross sectional view taken on the line 3—3 of Figure 1.

Figure 4 is a vertical cross sectional view taken on the line 4—4 of Figure 2.

Figure 5 is a perspective view of the holder of Figures 1 to 4 with the parts thereof in separated position.

Figure 6 is a vertical cross sectional view similar to Figure 4, but showing a modified form of paste tube dispensing holder according to the present invention.

Figure 7 is a fragmentary perspective view showing the cooperating tube-squeezing lever elements employed in the form of the invention of Figure 6.

Referring to the drawings, the holder is designated generally at 11 and comprises a substantially straight main body 12 which is generally rectangular in shape, as shown in Figure 5, and which is formed at its lower end with the thickened portion 13. The upper corner portions of the body 12 are formed with the respective laterally opening L-shaped notches 14, 14. Rigidly secured to the respective corner portions of the straight main body 12 are the respective supporting legs 15, said legs being formed at their ends with the flanges 16 having the downwardly and inwardly inclined side edges 17, respective lugs 18 and 19 being provided at the top and bottom ends of the side edges 17. Designated at 20 and 21 are respective brackets adapted to be fixed to a wall in any suitable manner, said brackets being provided with the respective recessed lugs 22 adjacent their opposite ends to receive the respective flanges 16 of the respective legs 15, said flanges 16 being lockingly engaged in the members 22 to support the main body 12 in a vertical position parallel to the adjacent wall. However, if so desired, the flanges 16 may be disengaged from the receiving elements 22 by exerting upward force on the main body 12, allowing said main body to be removed from the brackets 20 and 21, as when the device is to be cleaned.

The rear surface of the main body 12 is formed with the respective vertical, horizontally serrated rib elements 23, 23 arranged on opposite sides of a vertical rib 24. The top portion of the main body is formed with a horizontal slot 25 which is adapted to pivotally receive the curved arcuate lug 26 provided on the top end of a lever member 27 which is engageable with the vertical rib 24. Designated at 28 is an actuating lever having the depending portion 29 and having the apertured intermediate body portion 30 which is engageable over the thickened element 13 at the lower end of the main body 12. The lever member 28 is formed at its upper end with the spaced parallel fingers 31, 31 which are connected by a pivot pin element 32, said pivot pin element being engageable with a pivot notch 33 formed in the lower end of the lever 27, the lower end portion of said lever being received between the fingers 31, 31. The lower portion of the lever 27 is formed with a guide recess 34 to receive a guide lug 35 secured transversely to the pivot pin 32. The ends of the finger elements 31, 31 are adapted to bear against the back surface of the main body 12, so that when the lever member 28 is rotated counterclockwise, as viewed in Figure 4, the pivot pin 32 will be moved rearwardly, causing the lever 27 to be rotated counterclockwise around the pivot notch 33.

Designated at 36 is a housing member shaped to receive a collapsible tube 37, the housing member being provided at its top end with the flanges 38, 38 each of which is L-shaped in cross section and which are adapted to be slidably engaged in the L-shaped notches 14, 14 of the main body 12 and being formed at its bottom end with the parallel fingers 39, 39 spaced apart to receive the thickened bottom element 13 of the main body 12. The long legs of the flanges 38, 38 are arcuate in shape and by virtue of such shape serve to pivotally connect the housing member 36 to the straight main body 12.

The neck portion 40 of the collapsible paste tube 37 is adapted to extend between the fingers 39, 39 as is shown in Figure 4. The inner edge of the notch thus defined in the bottom of the housing member 36 is arcuately cut away, as shown at 41, to provide a relatively close fit with the end portion of the paste tube 37, arranged in an inverted position in the housing member 36.

The housing member 36 includes the respective side walls 43, 43 which are formed with the inclined edges 44, 44, said edges being inclined downwardly and forwardly, as is clearly shown in Figure 5. The side walls 43 are formed adjacent the edges 44 with the ribs 45, said ribs being provided with the arcuately curved widened intermediate portions 46. Designated at 47 is a yoke member having the main body portion 48 adapted to engage against the rear surface of lever 27, said yoke member being formed with the respective yoke arms 49, 49 having the inwardly directed end lugs 50. The arms 49, 49 are engageable around the side edges of the main body 12 and over the ribs 45, the lugs 50 engaging the forward edges of said ribs to support the yoke. The main body of the yoke is formed with the upwardly and inwardly extending arcuate fingers 51, 51 whose ends are lockingly engageable with the serrated ribs 23, 23, the ends of the fingers 51 and the serrated ribs 23 coacting as pawl and ratchet means arranged to allow the yoke member to gravitate downwardly along the main body 12 but limiting upward movement of the yoke member on said main body, as will be presently described.

The main body 48 is thus formed with a notch 52, defined between the arcuate fingers 51, 51, which receives the lever 27.

In assembling the device, the housing member 36 is engaged on the main body 12 by engaging the arcuate shaped

long legs of the flanges 38, 38 through the L-shaped notches 14, 14. The arcuate flange 26 of the lever member 27 is then engaged through the slot 25 and the arcuate pivot notch 34 of the lower end of lever 27 is then engaged on the pivot pin 32, the member 28 being then arranged so that its apertured intermediate body portion 30 is engaged over the thickened lower portion 13 of the main body 12. The yoke member 47 is then engaged over the main body 12 with the arms 49, 49 of said yoke member extending past the top portions of the ribs 45, 45, the lugs 50 engaging the forward surfaces of said ribs. In this position, the main portion of the yoke member bears against the rear surface of lever 27 with the ends of the fingers 51, 51 engaging the serrations on the ribs 23, 23.

When the parts are arranged as above described, the flanges 16 on the ends of the legs 15 may then be engaged in the receiving elements 22 on the brackets 20 and 21, whereby the device is ready for use. The paste tube 37 may then be placed in inverted position in the housing member 36, with the neck of the tube projecting between the fingers 39, 39, as above described. When it is desired to dispense paste material, the user rotates the depending lever element 29 rearwardly, namely, counterclockwise around the pin element 32, as by pushing against the element 29 with his totoh brush. This causes the paste material to be extruded from the neck of the tube onto the tooth brush placed subjacent thereto.

When removing an evacuated paste tube to replace same with a new tube, the yoke member 47 is raised to its upermost position wherein arms 49 engage the lower edges of upper legs 15. The lower end of housing member 36 is swung outwardly away from main body 12 until the arcuate shaped long legs of the flanges 38, 38 substantially engage the top edges of upper legs 15. The the housing member 36 is moved away from main body 12, until lugs 50 are engaged by the forward edges of the ribs 45. The evacuated tube may be then removed and replaced by a new tube.

It will be understood that the main body 12 is sufficiently narrow in width to be received within the housing member 36, namely, between the side walls 43, 43 of said housing member and that the arcuate shaped long legs of the flanges 38, 38 are rotatable as well as slidable in the L-shaped grooves 14, 14. The main body member 12 is formed with the vertical rib 24 between the vertical serrated ribs 23, 23, said vertical rib 24 being receivable in a vertical grove 55 formed in the lever 27. When the lever member 28 is rotated counterclockwise around the pivot element 32, the lever 27 is rotated counterclockwise around its pivot point, namely, around the slot 25, as viewed in Figure 4, acting against the yoke member 48, and causing the yoke member to transmit a force on the housing 36 tending to rotate said housing counterclockwise, as viewed in Figure 4. The housing member 36 is thus rotated toward the main body 12, applying squeezing force to the paste tube 37, and causing the contents of the tube to be extruded from its neck 40. When a sufficient quantity of paste material has been discharged from the tube to cause the tube to fit loosely in the housing member 36, the yoke member 47 gravitates downwardly, said downward movement being allowed by the pawl and ratchet cooperation between the fingers 51, 51 and the serrations on the rib 23.

With a full tube in the housing member 36, the flat surfaces of housing member 36 and main body 12, which transmit pressure to the collapsible tube, are nearly parallel. Therefore, when force is transmited from yoke member 47 to housing member 36, housing member 36 first tends to rotate in a clockwise direction, until the upper extremity thereof engages the upper portion of main body 12. The housing member thereafter tends to rotate in a counterclockwise direction, as above described.

The rib 24 on the back of the main body 12 is of substantial height, and cooperates with the groove 55 in the lever 27 to maintain the lever in proper working position at all times. The main body portion 48 of the yoke member acts against the rear surface of the lever 27 to urge the lever toward the main body 12 and to maintain the pivot notch 33 at the lower end of the lever in engagement with the pivot pin 32.

In the modified form of the invention shown in Figures 6 and 7, the main body member of the device, shown at 12', is formed in its lower portion with a slot 60 in which a transverse pivot pin 61 is secured. The hollow lever member, shown at 27', has a forward transverse wall portion 62 and is formed in its rear wall opposite wall portion 62 with a longitudinal slot 63. An auxiliary lever bar 64 is provided, said lever bar 64 being formed at its lower end with an arcuate bearing lug 65 received in slot 60 and pivotally engaging around pin 61, as shown. Auxiliary lever bar 64 extends upwardly through the hollow lever member 27' and is engaged through the slot 63. A pivot shoulder 67 is provided on the forward edge of lever bar 64 which is pivotally engageable with the lower edge of transverse wall portion 62. The upper rear edge portion of lever bar 64 is engageable with the main body portion 48 of yoke member 47, as shown in Figure 6.

Normally, the auxiliary lever bar 64 is substantially fully housed in the hollow lever member 27'. When the depending lever element 28 is swung rearwardly around the pivot member 32, the hollow lever 27' is rotated counterclockwise around its pivot connection 25, 26, applying a force to auxiliary lever 64 at shoulder 67 which rotates lever 64 clockwise, as viewed in Figure 6, around its pivotal connection 65, 61. The upper end of lever 64 thus acts against the main body 48 of yoke member 47 to rotate said yoke member rearwardly and to cause squeezing force to be applied to the paste tube. This action occurs when the tube is full or has a substantial amount of its original contents. As the contents of the tube is reduced, the yoke member 47 descends, and eventually reaches a position wherein lever 27' directly engages the body 48 of the yoke member when lever 27' is rotated counterclockwise by lever 28.

Thus, the squeezing force is applied mainly to the upper portion of the paste tube when said tube is full or nearly full, allowing the paste material to be discharged from said upper portion toward its lower portion. When the paste material has been substantially discharged from the upper portion of the tube by the action of the auxiliary lever member 64 above described, the remainder of the paste material is discharged by the more direct action of the lever 27', so that complete utilization of the contents of the paste tube is assured.

It will be noted that the housing member 36 is arranged to receive a paste tube nearly as long as the housing member itself, and full and round almost to the end of the tube, the device being arranged so that the surfaces which apply squeezing pressure on the tube are nearly parallel. This is accomplished by the provision of the arcuate shaped legs of the flanges 38, 38 at the top end of the housing member which are slidably engaged in the L-shaped notches 14, 14 in the upper portion of the main body 12.

While certain specific embodiments of an improved paste tube dispensing holder has been disclosed in the foregoing description, it will be understood that various modifications within the spirit of the invention may occur to those skilled in the art. Therefore, it is intended that no limitations be placed on the invention except as defined by the scope of the appended claims.

What is claimed is:

1. A paste tube dispensing holder comprising a substantially straight main body, means arranged to secure said main body in spaced relation to a support, a housing member pivotally supported on the top portion of said main body and depending therefrom on the outer side of said main body, said housing member being arranged to receive an inverted paste tube with the neck of the tube

exposed at the bottom of said housing member, a horizontal yoke member slidably engaged with said housing member and extending around said main body, lever means connected to said main body and projecting therebelow, said lever means being engaged between said yoke member and said main body and being arranged to exert tube-squeezing force on the housing member responsive to the rotation of said lever means, and cooperating means on the yoke member and main body for allowing the yoke member to gravitate downwardly along the main body, but limiting upward movement of the yoke member on said main body.

2. A paste tube dispensing holder comprising a substantially straight main body, means arranged to secure said main body in spaced relation to a support, a housing member pivotally supported on the top portion of said main body and depending therefrom on the outer side of said main body, said housing member being arranged to receive an inverted paste tube with the neck of the tube exposed at the bottom of said housing member, a horizontal yoke member slidably engaged with said housing member and extending around said main body, lever means connected to said main body and projecting therebelow, said lever means being engaged between said yoke member and said main body and being arranged to exert tube-squeezing force on the housing member

responsive to the rotation of said lever means, and cooperating pawl and ratchet means on the yoke member and main body arranged to allow the yoke member to gravitate downwardly along said main body but limiting upward movement of the yoke member on said main body.

3. A paste tube dispensing holder comprising a substantially straight main body formed with L-shaped notches at its opposite upper side edge portions, means arranged to secure said main body in spaced relation to a support, a housing member, respective flanges each L-shaped in cross section at the upper portion of said housing member, the long legs of said flanges being arcuate in shape and being slidably engaged in said L-shaped notches to pivotally connect the housing member to the main body member, said housing member being arranged to receive an inverted paste tube with the neck of the tube exposed at the bottom of said housing member, and lever means connected to said main body and housing member and projecting below said main body, said lever means being arranged to exert tube-squeezing force on the housing member responsive to the rotation of said lever means.

References Cited in the file of this patent

UNITED STATES PATENTS

2,678,755 Buras ---------- May 18, 1954