Jan. 4, 1966 R. L. TESSIN 3,227,324

SLIDING DISPENSER

Filed April 22, 1963 3 Sheets-Sheet 1

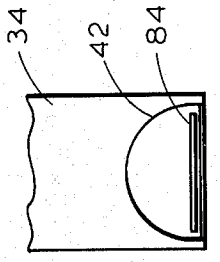

FIG. 3

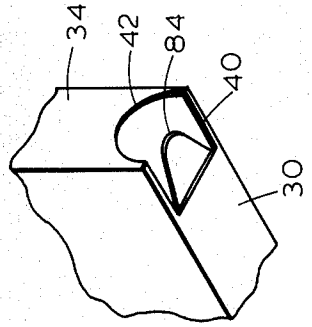

FIG. 2

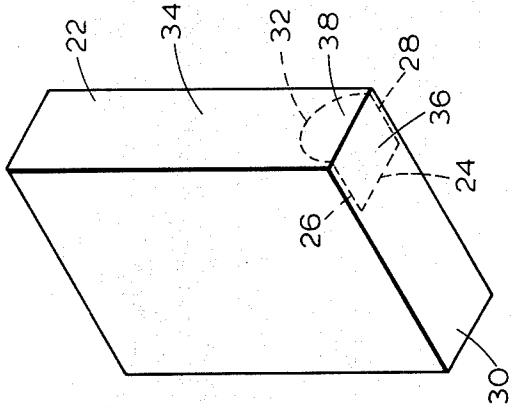

FIG. 1

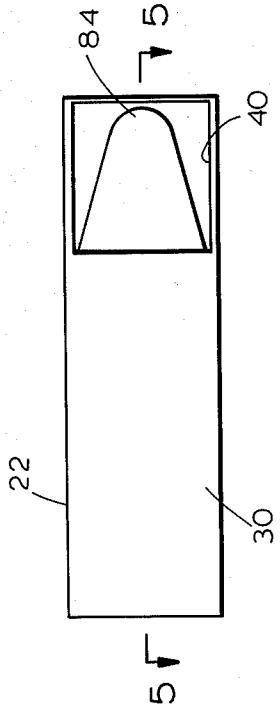

FIG. 4

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Jan. 4, 1966 R. L. TESSIN 3,227,324

SLIDING DISPENSER

Filed April 22, 1963 3 Sheets-Sheet 2

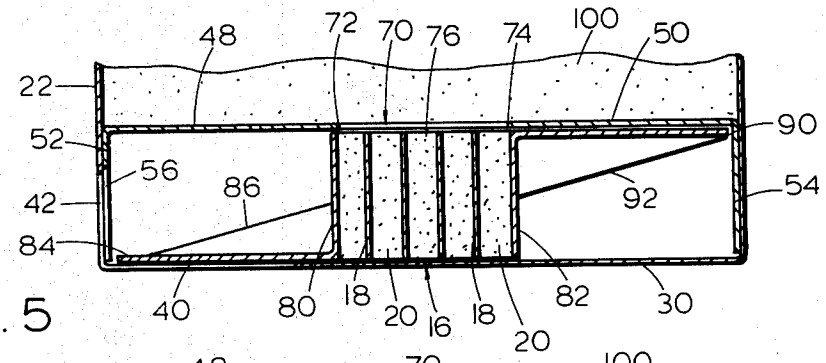

FIG. 5

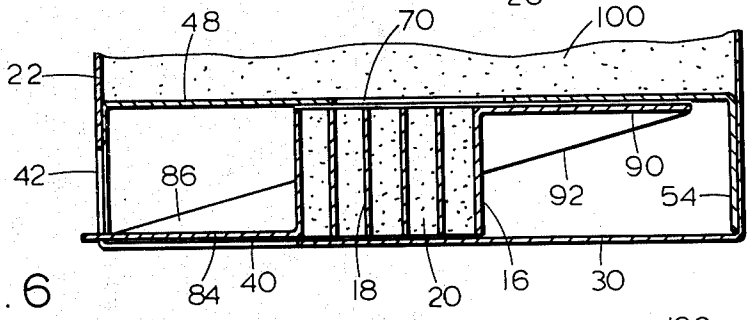

FIG. 6

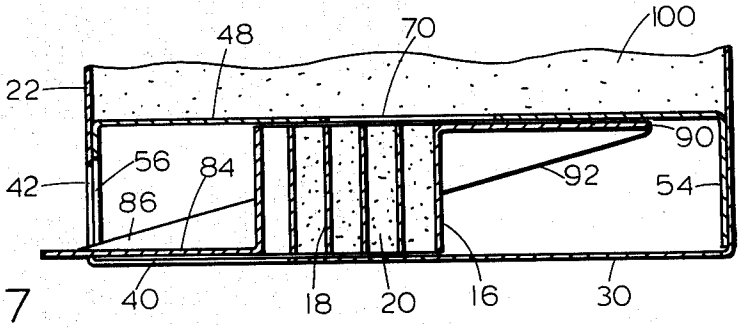

FIG. 7

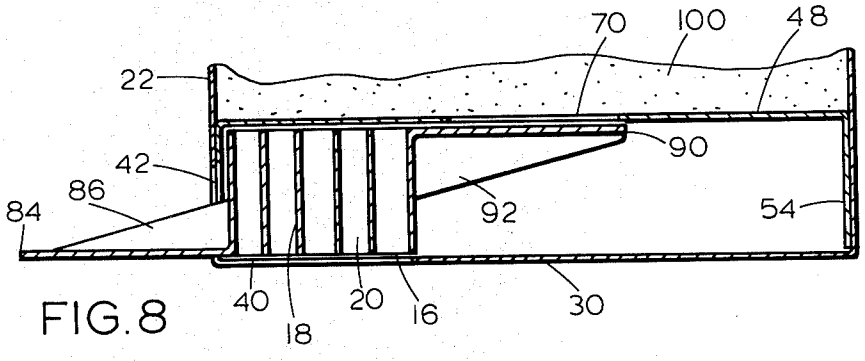

FIG. 8

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Jan. 4, 1966 R. L. TESSIN 3,227,324

SLIDING DISPENSER

Filed April 22, 1963 3 Sheets-Sheet 3

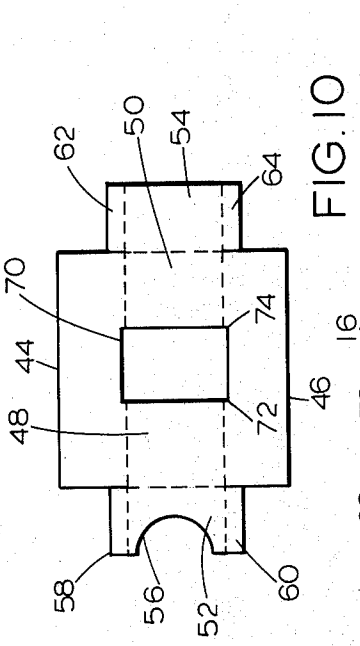

FIG. 10

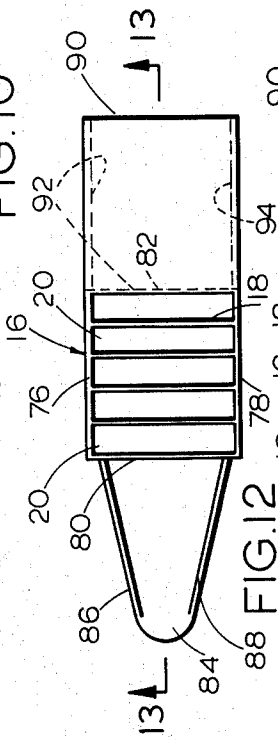

FIG. 12

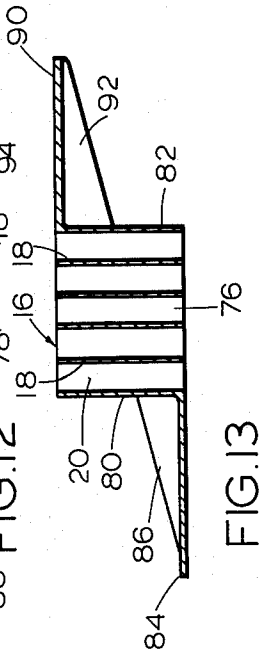

FIG. 13

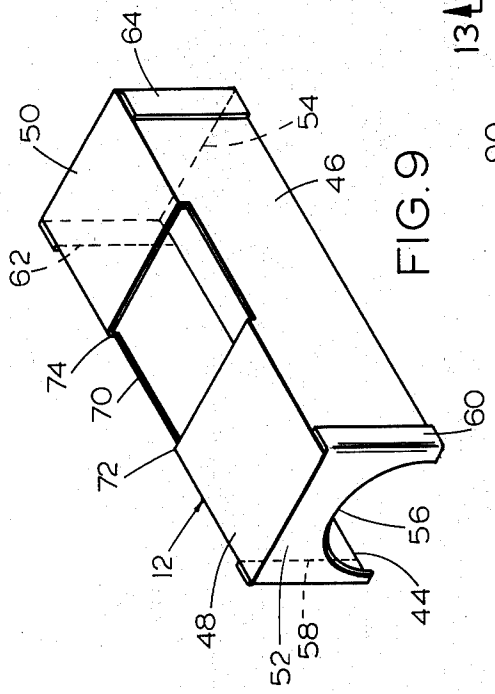

FIG. 9

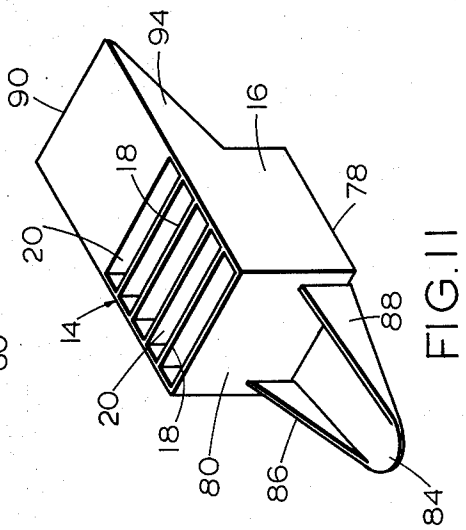

FIG. 11

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United States Patent Office 3,227,324 Patented Jan. 4, 1966

3,227,324

SLIDING DISPENSER

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Filed Apr. 22, 1963, Ser. No. 274,520
1 Claim. (Cl. 222—284)

The present invention relates to dispensing containers of the type having a slider with a partitioned compartment therein, wherein with the slider in one end of the container material, such as granulated soap, flows from the upper part of the container into the compartments, and with the slider in the opposite end of the container the material flows from the compartments and is dispensed through the bottom of the container.

The purpose of this invention is to provide a dispensing element or sliding gate that is designed to be incorporated in the bottom of a container.

Hinged flaps and other types of closures have been provided for containers for granular and other products. However, such closures do not seal outlet openings and air passing through the openings causes deterioration of some products and, particularly where the containers are used for cereals, insects pass through the openings and contaminate the products.

With this thought in mind this invention contemplates a sliding closure snugly fitted in a compartment in the lower end of a container whereby direct passage through the wall and into the container is substantially impossible.

The object of this invention is, therefore, to provide a sliding closure for a container in which a passage through the closure is offset so that the passage is loaded with material in one position and unloaded in another position.

Another object of the invention is to provide a slider for a container dispenser in which a passage through the intermediate part of the slider is provided with spaced partitions, whereby portions of the material may be dispensed independently.

Another important object of the invention is to provide a dispensing slider for a container in which the slider is actuated through an opening in one end of the container.

A further object of the invention is to provide a dispensing slider for a container in which the slider is free to travel independently in a compartment in the bottom of the container.

A still further object is to provide a dispensing container having a slider therein in which the intermediate part of the slider is provided with separated compartments.

Other and further objects and advantages of the present invention will be apparent from the following detailed description, drawings and claims, the scope of the invention not being limited to the drawings themselves as the drawings are only for the purpose of illustrating a method by which the principles of this invention can be applied.

Other embodiments of the invention utilizing the same or equivalent principles may be used and structural changes may be made as desired by those skilled in the art without departing from the present invention and the purview of the appended claim.

In the drawings:

FIGURE 1 is a perspective view of a container with scored lines indicating openings in the base and one end of the container.

FIGURE 2 is a perspective view of a lower corner of the container, similar to that shown in FIGURE 1, with parts providing closures of the openings removed.

FIGURE 3 is an end elevational view of the lower part of one end of the container with the parts shown on an enlarged scale and showing a finger receiving opening through which a slider is actuated.

FIGURE 4 is a view looking upwardly toward the lower end of the container with a tongue of a slider showing through a dispensing opening in the bottom of the container.

FIGURE 5 is a longitudinal section through a dispensing compartment in the lower end of a container, taken on line 5—5 of FIGURE 4, with a slider therein in the closed position.

FIGURE 6 is a section similar to that shown in FIGURE 5 with the slider actuated through the first step of the opening movement.

FIGURE 7 is a section similar to that shown in FIGURES 5 and 6 with the slider moved to the first step in the dispensing position wherein material is free to flow from the first section of the slider.

FIGURE 8 is a section similar to that shown in FIGURES 5, 6 and 7, with the slider actuated to a full open position.

FIGURE 9 is a perspective view showing a dispensing element designed to be positioned in the lower end of a container, the slider being removed.

FIGURE 10 is a view showing a blank from which the element shown in FIGURE 9 is formed.

FIGURE 11 is a perspective view of the slider.

FIGURE 12 is a plan view of the slider.

FIGURE 13 is a longitudinal section through the slider taken on line 13—13 of FIGURE 12.

While one embodiment of the invention is illustrated in the above-referred-to drawings, it is to be understood that they are merely for the purpose of illustration and that various changes in construction may be resorted to in the course of manufacture in order that the invention may be utilized to the best advantage according to circumstances which may arise, without in any manner departing from the spirit and intention of the device, which is to be limited only in accordance with the appended claim. And while there is stated the primary field of utility of the invention it remains obvious that it may be employed in any other capacity wherein it may be found applicable.

In the accompanying drawings, and in the following specification, the same reference characters are used to designate the same parts and elements throughout, and in which the numeral **10** refers to the invention in its entirety, numeral **12** indicating a dispensing insert for a container, and numeral **14** indicating a slider positioned in the insert and having an intermediate compartment **16** with spaced vertical transversely disposed partitions **18** therein. The partitions **18** divide the compartment **16** into smaller compartments or sections **20** which extend vertically through the slider.

A conventional container **22** is provided with score lines **24**, **26** and **28** in an end **30**, and an arcuate score line **32** in a side **34**, and with the material broken on the score line tabs **36** and **38** may be removed providing an opening **40** in the end **30** and also an opening **42** in the side **34**.

The dispensing insert **12**, which is positioned in the lower end of a container, as shown in FIGURES 5 to 8, inclusive, is provided with side walls **44** and **46**, upper panels **48** and **50**, and end walls **52** and **54**, the end wall **52** having an arcuate or semicircular opening **56** therein. The side walls **44** and **46** fold downwardly on the lines **58** and **60** and flaps **62** and **64** extended from the ends of the end wall **52** overlap the ends of the side walls and are secured, by adhesive, thereto. Flaps **66** and **68** extended from ends of the end wall **54** also fold over ends of the side walls and these flaps are secured to the side walls by adhesive or the like. With the parts, as shown in FIGURE 10, an opening **70**, which extends from the point **72** to the point **74** provides a passage through which material passes from the container to the compartments **20**.

The compartment **16** of the slider **14** is provided with side walls **76** and **78** and end walls **80** and **82**, and, as shown in FIGURES 11, 12 and 13 a tongue **84** having wings **86** and **88** extends forwardly from the end wall **80**, and a panel **90** having wings **92** and **94** at the sides extends rearwardly from the wall **82**.

Operation

The dispenser insert **12**, shown particularly in FIGURE 9, is placed in the lower end of a container, as shown in FIGURES 5 to 8, inclusive, and the slider **14** is positioned in the insert. With the parts positioned as shown in FIGURE 5, and with the flaps **36** and **38** integral with corresponding parts of the container, the container or carton is sealed. With the slider **14** moved to the left, as shown in FIGURE 6, the container is still sealed, and with the slider moved to the position shown in FIGURE 7 the first section of the compartment **16** is in registry with the opening **40** in the base **30** of the container, whereby material in the first section may be dispensed through the opening **40**. With further travel of the slider to the end of the container the lower ends of all of the sections **20** are open and all material in the slider may be dispensed. In this operation the panel **90** closes the lower ends of the sections **20**, as shown in FIGURE 8.

The slider is then returned to the position shown in FIGURE 5 and material **100** drops into the compartments **20**, filling the dispenser, and consequently the material may be stored without being exposed to the atmosphere, or to insects and the like.

The insert and slider may be made of cardboard, plastic, or other suitable material, and, as shown in FIGURE 9, the insert, or casing **12** is U-shaped in cross section including the side walls **44** and **46**, the upper edges of which are connected by the panels **48** and **50**, and the ends of which are connected by the end walls **52** and **54**.

From the foregoing description it is thought to be obvious that a sliding dispenser constructed in accordance with my invention is particularly well adapted for use by reason of the convenience and facility with which it may be assembled and operated, and it will also be obvious that my invention is susceptible of some change and modification without departing from the principles and

spirit thereof, and for this reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice, except as claimed.

What is claimed is:

In a dispensing device, the combination which comprises a rectangular box having four side walls, a top wall and a bottom wall, said bottom wall having an opening therein, a downwardly open rectangular shaped insert having four side walls dimensioned to fit snugly in said box, with each side wall thereof adjacent a corresponding side wall of the box and with all its side walls resting on the bottom wall of the box, and said insert having a top wall, said box having an opening in one side wall , said insert having an opening in its top wall horizontally offset from the opening in the bottom wall of the box and another opening in a side wall which is adjacent said one side wall of the box, registering with said side wall opening, a slider positioned in said insert with a snug fit permitting it to move only in a linear direction toward and away from said registering box and insert side wall openings, said slider having a vertically disposed compartment intermediate its ends, said slider compartment having an upper opening and a lower opening to register, respectively, with the opening in the top wall of the insert and the opening in the bottom of the box, said compartment having a vertical divider intermediate its ends and disposed transversely of its direction of movement, said slider having a blocking portion horizontally offset from said compartment upper opening adapted to block the opening in the top wall in the insert when said compartment bottom opening is in registry with the opening in the bottom of the box.

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LOUIS J. DEMBO, *Examiner.*