Oct. 27, 1959 C. E. FOREMAN 2,910,213

MEASURING DISPENSER FOR GRANULAR SUBSTANCES

Filed July 23, 1958 2 Sheets-Sheet 1

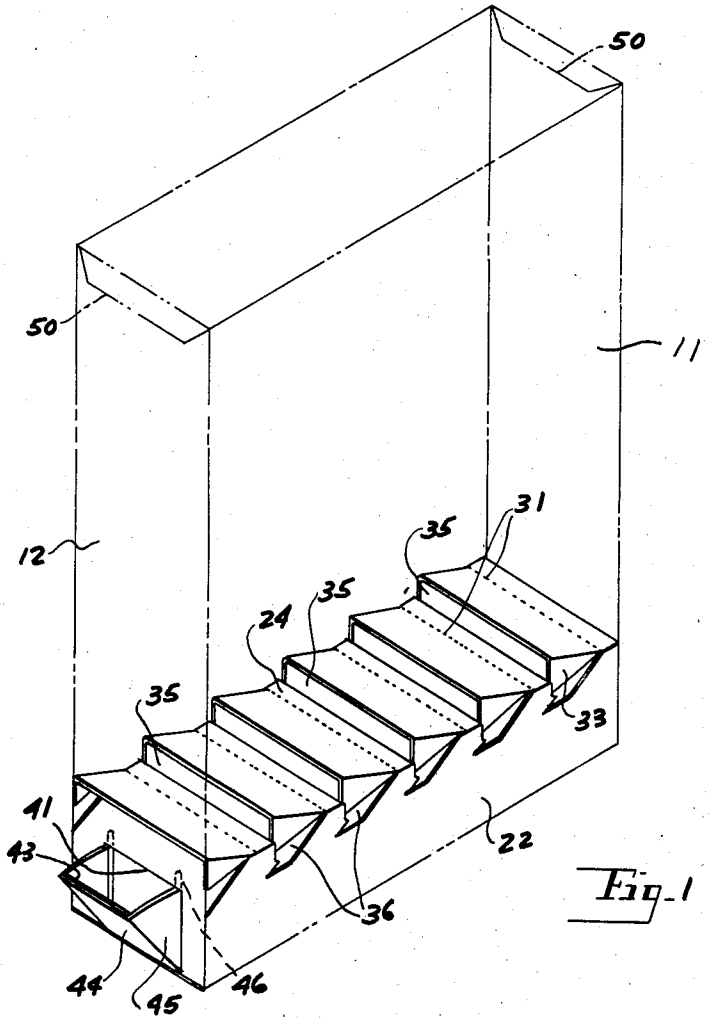


Fig. 1

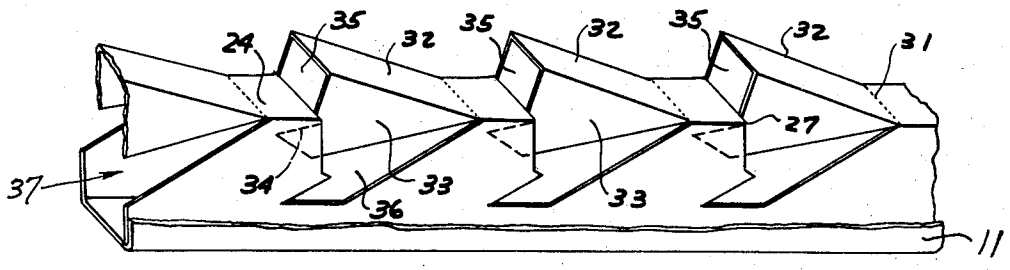


Fig. 5

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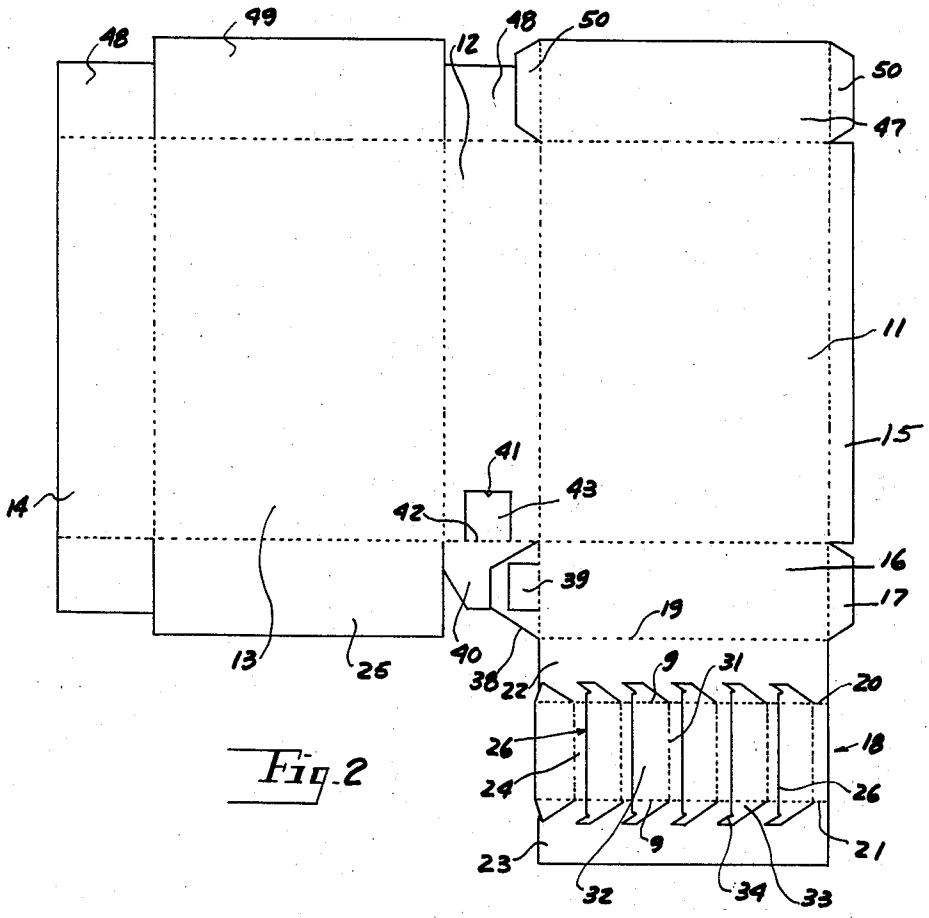


Fig. 2

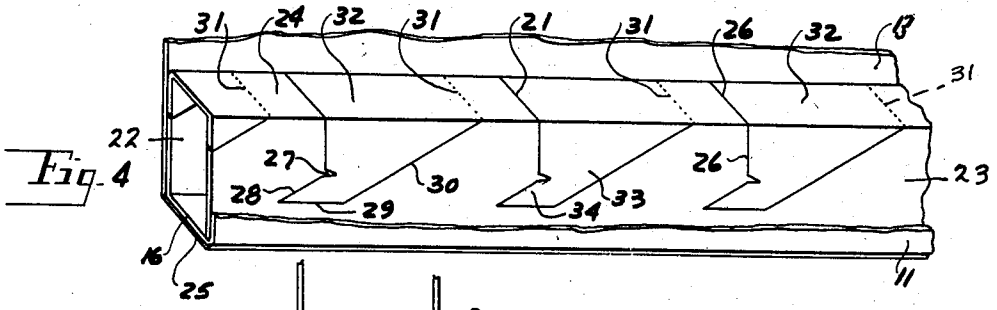


Fig. 4

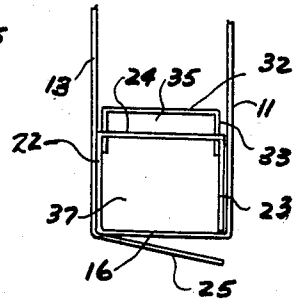


Fig. 3

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MEASURING DISPENSER FOR GRANULAR SUBSTANCES

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Application July 23, 1958, Serial No. 750,343

3 Claims. (Cl. 222—456)

This invention relates to a measuring dispenser for dry granular substances and more particularly to a measuring dispenser in conjunction with a closed carton containing granular substances.

Heretofore without the use of a measuring cup or other device it is some times difficult for the user to estimate exactly how much granular substances has been poured from the carton as for example detergents, soap chips, etc.

It is the object of the present invention to provide in a carton enclosing a granular substance, a measuring chamber at one end thereof and associated with an outlet spout whereby said spout will deliver upon tipping of the carton only the contents of the measuring chamber.

It is another object of the invention herein to provide upon the interior of the carton a partition spaced above the bottom wall defining therebetween a measure chamber of predetermined volume, together with a series of angularly inclined inlet defining tabs opening into said chamber whereby with the carton in upright position, the chamber will automatically fill and further wherein upon tipping of the carton for pouring and emptying of the measuring chamber through the spout communication between the measuring chamber and the interior of the carton is cut off.

These and other objects will be seen from the following specification and claims in conjunction with the appended drawing in which:

Fig. 1 is a perspective schematic view of a carton illustrating the measuring dispenser therefor.

Fig. 2 is a layout pattern scored and slit adapted for forming into the present carton and measuring device.

Fig. 3 is a diagrammatic fragmentary end view of the assembled carton illustrating the construction of the measuring chamber.

Fig. 4 is a schematic fragmentary perspective view of the folded portion of the carton blank as scored and slit before formation of the inlet defining tabs to the measuring chamber.

Fig. 5 is a similar view illustrating the tabs as formed and folded into series of inlets.

It will be understood that the above drawing illustrates merely preferred embodiment of the invention and that other embodiments are contemplated within the scope of the claims hereafter set forth.

Referred to the drawing, the assembled carton of Fig. 1 is formed from the flat pattern blank, Fig. 2, which has been slit and scored in a conventional manner and which upon proper folding defines the side, end, top and bottom walls of the carton shown in Fig. 1.

The blank includes side wall **11**, end wall **12**, side wall **13** and end wall **14** with the additional securing flap **15** for completing the carton structure in a conventional and well-known manner.

Adjacent side wall **11** and defined by suitable scoring is bottom wall **16** with assembly tab **17** at one end, and beyond the horizontal score or fold line **19** is the extension generally indicated at **18** and from which the measure chamber and inlet tabs therefor are formed.

Referring to Fig. 3, upon initial assembly of the walls **11, 12, 13** and **14**, the extension **18** is first folded along the line **19** so that the member **22** defines a side wall extension engageable with the interior of wall **13**.

This extension terminates in the partition **24** which extends between walls **11—13** and is spaced above bottom wall **16** so as to define therewith the measure chamber **37** of predetermined volume.

Partition **24** as indicated in Figs. 1 and 3 terminates in the depending wall element **23** which bears against and is suitably secured to the interior of wall **11**. The assembly is further completed by folding of bottom wall **25** against the undersurface of bottom wall **16** and securing thereto in a conventional manner.

The blank shown in Fig. 2 is slit along solid line portions which extend into the interior of the blank.

Referring to Figs. 2, 4 and 5, extension **18** has formed therethrough a series of parallel slits **26** which extend across the top of partition **24** and into portions of side wall elements **22—23** which are adapted to be folded along the score or fold lines **9**.

Slits **26** at their opposite ends terminate in the notches **27**, and the latter terminate in the forwardly extending slits **28**. The latter slits terminate in the rearwardly extending slits **29** and the outwardly extending slits **30** which end respectively at opposite sides of partition **24** adjacent the series of parallel spaced fold lines **31**.

This series of slits within extension **18**, upon folding of said extension as indicated in Figs. 4 and 5 and upon proper folding of portions defined by said slits define a series of inverted U-shaped tabs **32** whose downwardly depending ends **33** terminate in forward extensions **34** adapted to underlie and retainingly engage partition **24** when the individual tabs **32** have been folded to the position shown in Fig. 5.

At that position the respective notches **27** effectively interlock with free edge portions of partition **24** for fixedly securing the respective angular tabs **32** in the position shown in Figs. 1 and 5.

The upwardly extending tab top walls **32** while integral with partition **24** are pivotally hinged thereto at **31** and extend upwardly at an acute angle.

The forward ends of said tabs in cooperation with members **33**, and of course, the side walls **11** and **13** define a series of substantially upright elongated rectangular inlets **35** in communication with measure chamber **37**. By this construction the measure chamber **37** will be filled by the gravitational movement of granular substances from the interior of the carton.

As shown in Fig. 5, the formation of the inverted U-shaped inlet defining tabs **32—33** leaves within side wall elements **22—23** the apertures **36** which, however, are suitably closed by the adjacent carton walls **11—13**.

Bottom wall **16** has at one end a conventional tab **38** centrally apertured at **39** defining part of the outlet for measuring chamber **37**. Upon assembly of the carton slit tab **40** underlies bottom wall **16**, and the end wall **12** registers with upright tab **38**. Wall **12** is slit along the line **41** and defines with fold line **42**, the hinged tab **43** which provides a closure for the other part to the outlet for the measure chamber in registry with aperture **39**.

A suitable wedge-shaped dispenser spout **44**, shown in Fig. 1, is mounted upon the lower end of wall **12**, with its wedge shaped sides **45** projecting through the opening in wall **12** defined by the slit **41** and through the aperture **39**.

The upright enlargements **46** at opposite ends to the spout retainingly engage interior surface portions of tab **38** and wall **12** for outward limiting swinging movement

to the position shown in Fig. 1. The hinged tab **43** is suitably secured to the interior surface of spout **44** and swings open with respect to the apertures **39** and **41** upon manual opening movement of spout **44**.

The blank shown in Fig. 2 is additionally cut and scored and slit so as to define a conventional top wall construction which includes top wall **47** with sealing end tabs **50**, the end wall tabs **48**, and the additional top wall **49** to complete the closure of the present carton. Said carton is normally filled with dry granular substances, such as soap chips, detergents, cleaning powders, or any like granular substances such as rice, barley, sugar, etc.

Initially the interior of the carton as well as the measuring chamber is filled with the dry granular substance. In view of the fact that the carton is in upright position the granular substances will gravitate through the inlets **35** into the measuring chamber **37** until such chamber is filled. In use with spout **44** open, as shown in Fig. 1, the carton is tilted in a conventional manner up to 90 degrees for emptying measuring chamber **37**.

It will be noted that the inlets **35** which are substantially upright in Fig. 1 will have been rotated into a substantially horizontal position. Accordingly closing off the measuring chamber **37** from the remaining contents of the carton. This means that upon said tilting action, there will be dispensed from the carton only the predetermined measured content from chamber **37**. Just as soon, however, as the carton is returned to its normal upright position, additional substances will again gravitate filling chamber **37** through inlets **35**.

Having described my invention, reference should now be had to the following claims.

I claim:

1. In a measuring dispenser for dry granular substances, a closed carton having side, end, top and bottom walls, a partition extending between said side and end walls and spaced above said bottom wall defining therewith a measure chamber having a predetermined volume, there being an outlet formed through one end wall communicating with said chamber, a normally closed openable spout registering with said outlet, and a series of parallel spaced tabs between said side walls extending angularly upward from said partition, with the forward elevated edges of said tabs respectively defining with said partition a series of substantially upright elongated inlets whereby granular substances from the interior of said carton automatically fill said measure chamber with said carton in upright position, said tabs each being of inverted U-shape, the opposing depending ends of said tabs extending forwardly to retainingly engage the interior undersurface of said partition limiting the tab inclination relative to said partition.

2. In a measuring dispenser for dry granular substances, a closed carton having side, end, top and bottom walls, a partition extending between said side and end walls and spaced above said bottom wall defining therewith a measure chamber having a predetermined volume, there being an outlet formed through one end wall communicating with said chamber, a normally closed openable spout registering with said outlet, and a series of parallel spaced tabs between said side walls extending angularly upward from said partition, with the forward elevated edges of said tabs respectively defining with said partition a series of substantially upright elongated inlets whereby granular substances from the interior of said carton automatically fill said measure chamber with said carton in upright position, said tabs each being of inverted U-shape, the opposing depending ends of said tabs extending forwardly to retainingly engage the interior undersurface of said partition limiting the tab inclination relative to said partition, intermediate portions of said tab extensions being notched to interlock with said partition.

3. In a measuring dispenser for dry granular substances, a closed carton having side, end, top and bottom walls, a partition extending between said side and end walls and spaced above said bottom wall defining therewith a measure chamber having a predetermined volume, there being an outlet formed through one end wall communicating with said chamber, a normally closed openable spout registering with said outlet, and a series of parallel spaced tabs between said side walls extending angularly upward from said partition, with the forward elevated edges of said tabs respectively defining with said partition a series of substantially upright elongated inlets whereby granular substances from the interior of said carton automatically fill said measure chamber with said carton in upright position, said partition having depending side wall members engaging said side walls, said tabs each being of inverted U-shape, the opposing depending ends of said tabs extending throughout the length of said tabs, said tabs and ends being cut out from the body of said partition and its depending side wall members, the rear ends of said tabs being hinged to said partition as a part thereof.

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