Sept. 21, 1965 R. J. HENNESSEY 3,207,380

DISPENSER CARTONS

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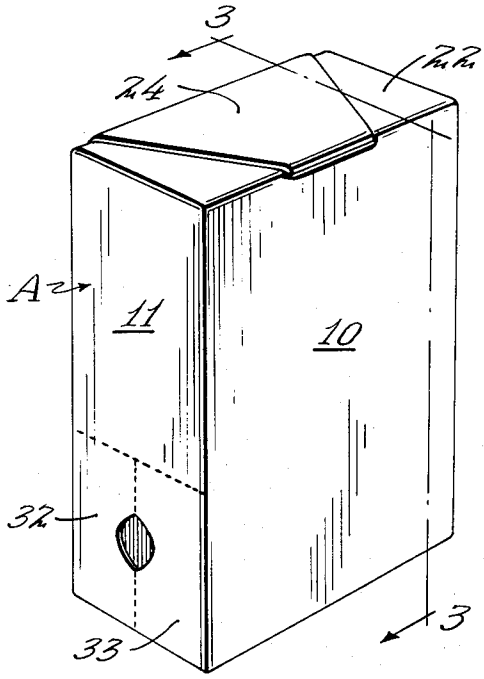


FIG. 1

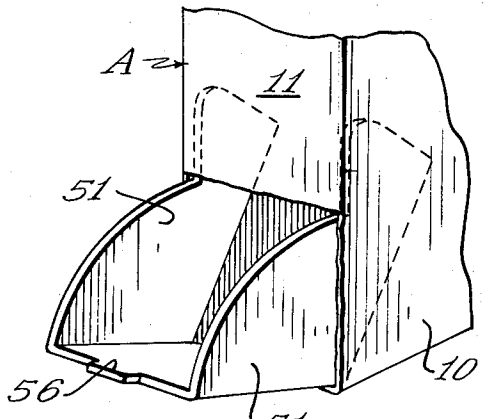


FIG. 2

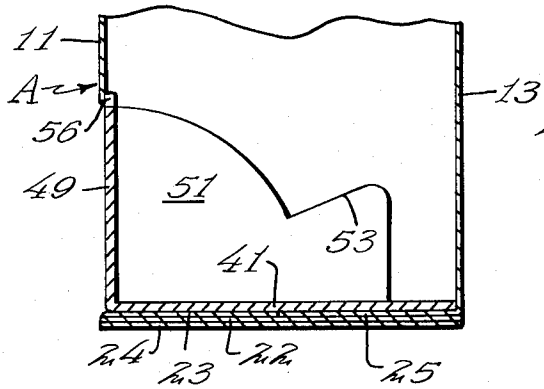


FIG. 4

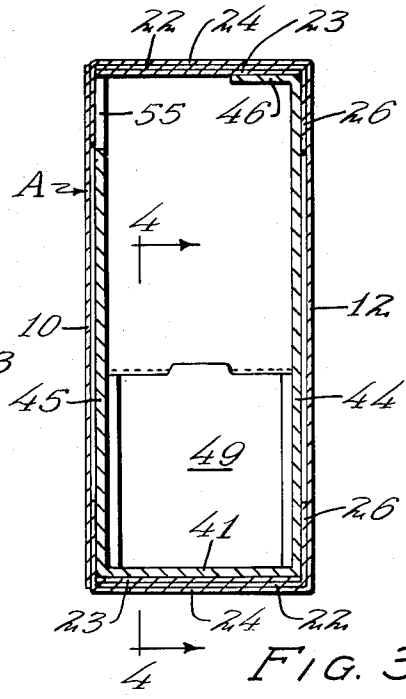


FIG. 3

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DISPENSER CARTONS

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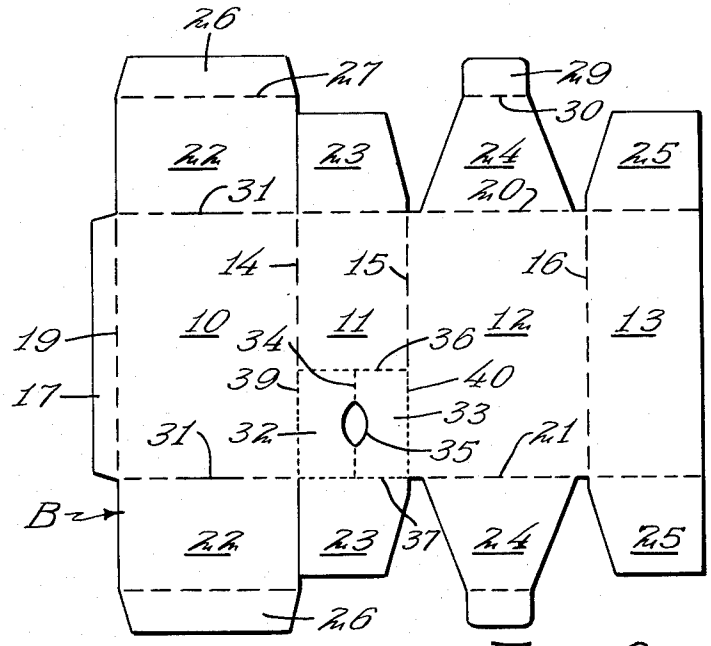


FIG. 6

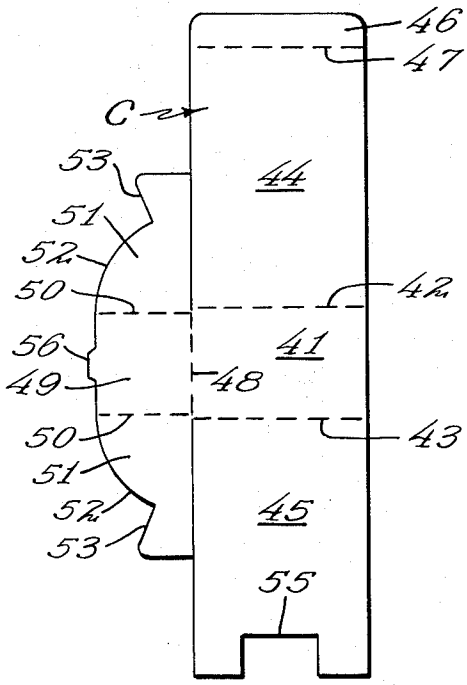


FIG. 7

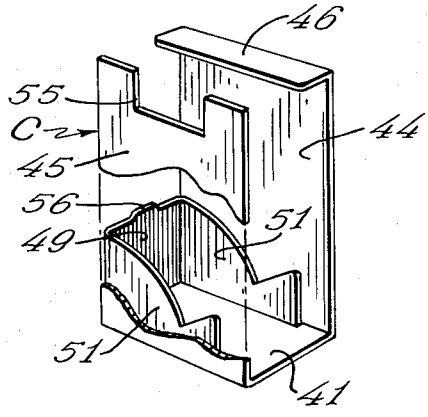


FIG. 5

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DISPENSER CARTONS

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4 Claims. (Cl. 222—183)

This invention relates to an improvement in dispenser cartons and deals particularly with a carton to which may be used as a shipping carton for bulk parts and the like and which may be opened up to permit the parts to be removed one at a time.

Many large manufacturing plants have assembly areas where each individual adds a few standard parts to an assembly or subassembly. These parts are often supplied in cartons of one type or another which may be arranged so that the top may be removed or opened up and the enclosed parts removed one at a time through the open top of the box. In other instances, the parts are dumped into open topped trays from which they may be removed. This arrangement has the advantage that the parts may be more easily removed. However, it also has the disadvantage of requiring additional equipment and also has the disadvantage that once the parts have been placed in the trays, they are also open to dust and dirt which may be in the air. Furthermore, with this arrangement it is somewhat easier to mix up the parts by accidentally dropping some of the parts into the wrong tray as they are being removed. It is the object of the present invention to provide a carton which permits the dispensing of the goods from the bottom of the carton so that the parts are readily accessible and which may be reclosed if desired to protect the contents.

A feature of the present invention resides in the provision in an outer carton which is of generally conventional form but which is provided with a removable section capable of being torn away. Within this outer carton, I provide a partial liner which includes a spout of channel shaped section which lies inwardly of the removable section of the outer container. By removing the removable portion of the outer carton, the spout may be engaged and folded forwardly to an inclined position from the bottom of the carton. Certain of the carton contents will drop into this spout from which they may be readily removed. As the parts are removed, more of the parts will continually drop into the spout until the carton is virtually empty.

A feature of the invention lies in the fact that the spout may be reclosed whenever desired to protect the parts from dust and dirt. This arrangement is also useful in conjunction with parts which are not continually used, as the cartons may be returned to storage between periods of use.

These and other objects and novel features of the present invention will be more clearly and fully set forth in the following specification and claims.

In the drawings forming a part of the specification:

FIGURE 1 is a perspective view of the carton as it is supplied.

FIGURE 2 is a perspective view of the lower portion of the carton showing the spout in dispensing.

FIGURE 3 is a transverse sectional view through the carton, the position of the section being indicated by the line 3—3 of FIGURE 1.

FIGURE 4 is a sectional view on a plane at right angle to that of FIGURE 3, the position of the section being indicated by the line 4—4 of FIGURE 3.

FIGURE 5 is a perspective view of the carton liner in folded condition, a portion of the structure being broken away to better illustrate the parts.

FIGURE 6 is a diagrammatic view of the blank from which the outer carton is formed.

FIGURE 7 is a diagrammatic view of the blank from which the carton liner is formed.

The dispensing package A is made up of the outer carton B and the carton liner C, these parts being best illustrated in FIGURES 6 and 7 of the drawing respectively. The outer carton B includes a side wall **10**, an end wall **11**, a side wall **12**, and an end wall **13** connected by fold lines **14**, **15**, and **16** respectively. A glue flap **17** is connected to an end panel of the series, such as the side wall **10**, by a fold line **19**. The fold lines which have been described are parallel.

The upper edges of the respective walls are defined by a fold line **20** while the lower edges of the walls are defined by a parallel fold line **21**, the fold lines **20** and **21** intersecting the previously described fold lines at right angles. Closing flaps **22**, **23**, **24**, and **25** are hinged to the upper and lower edges of the wall panel **10**, **11**, **12** and **13** respectively along the fold lines **20** and **21**. The flaps **23** and **25** at each end of the carton are designed to fold into a common plane, and the flaps **22** are arranged to fold over the inner flaps **23** and **25**. A tuck flap **26** is foldably connected to each flap **22** along a fold line **27**, the tuck flaps being designed to extend between the edges of the first folded flaps **23** and **25** and the side wall **12**. The flaps **24** are of trapezoidal shape with the wide parallel side of the trapezoid hinged to the panel **12**. A locking tongue **29** is hinged to the end of each flap **24** along a fold line **30**, and the locking tongues **29** are designed to extend through slots **31** which extend along the fold lines **20** and **21** between the side wall **10** and the closing flaps **22**.

The lower portion of the end wall **11** includes a pair of removable panels **32** and **33** which are separated by a perforated line **34** interrupted intermediate its ends with a finger aperture **35**. A perforated line **36** forms the upper edge of the removable portions **33** and a perforated line **37** which extends along the fold **21** defines the lower edge thereof. The ends of the transverse perforated lines **36** and **37** are connected by perforated lines **39** and **40** which extend along the fold lines **14** and **15**.

The carton liner C includes a bottom panel **41** hingedly connected along parallel fold lines **42** and **43** to wall liner panels **44** and **45** respectively. The upper edge of the panel **44** is provided with a flange **46** hingedly connected thereto along the fold line **47**. The wall panels **44** and **45** are of approximately the same height as the wall panels **10** to **13** previously described, and are also of substantially the same width as the side wall panels **10** and **12**. The bottom wall **41** is hingedly connected to a spout base **49** along a fold line **48** at right angles to the fold lines **42** and **43**. The sides of the spout base **49** are hingedly connected along a pair of parallel fold lines **50** to spout wings **51**. The wings **51** include arcuate edge sections **52**, the center of arcuation being substantially at the junction between the fold lines **48** and **50**. At the ends of the arcuate portions **52**, the spout wings project to form abutment shoulders **53** which extend radially from the center of arcuation of the arcuate edges **52**.

The carton liner C is folded as is best indicated in FIGURE 5 of the drawings. The spout base **49** is folded upwardly from the base panel **41** and the spout wings **51** are folded along the fold lines **50** to overlie the side edges of the base panel **41**. The walls **44** and **45** are folded upwardly into parallel relation and the flange **46** is bent into right angular relation to the wall **44**. When in this position, it may be inserted into the carton B.

The carton B is closed in the same manner at each end, the flaps **23** and **25** being folded into a common plane, and the flap **22** folded to overlie the flaps **23** and **25**, the tuck flaps **26** being inserted between the edges of the flaps

23 and 25 and the wall. These flaps 26 also tuck between the panel 44 of the carton liner and the wall 12, the flange 46 forming a rounded edge over which the upper of the two flanges may pass. The locking tongue 29 of the last closing flap 24 is tucked through a corresponding slot 31, the lower tongue extending between the wall 45 and the carton wall 12 and the upper locking tongue 29 extending into the notch 55 formed in the upper edge of the wall 45. The notch 55 is provided to prevent interference between the tongue and the liner.

When it is desired to use the carton contents, a fingernail or a flat blade is inserted through the aperture 35 to engage one of the removable portions 32 and 33. These portions are pulled outwardly, first tearing along the perforated lines 36 and 37, and then tearing along the other perforated lines 39 and 40. The upper edge of the base portion 49 of the scoop or spout is generally aligned with the perforated line 36 but a short ear 56 projects upwardly to slightly overlap the upper of the end wall 11. By inserting a fingernail or blade between the upper portion of the base 49 of the spout and pulling outwardly, the paperboard will flex sufficiently to permit the spout to be hinged into the position illustrated in FIGURE 2. Certain of the contents of the carton will fall into the spout from which they can be easily removed. The ear 56 forms a locking tab if the carton is reclosed as indicated in FIGURE 4 of the drawings.

In accordance with the patent statutes, I have described the principles of construction and operation of my dispensing carton; and while I have endeavored to set forth the best embodiments thereof, I desire to have it understood that obvious changes may be made within the scope of the following claims without departing from the spirit of my invention.

I claim:

1. A dispensing carton including an outer enclosure including four rectangularly arranged connected wall panels, and top and bottom closures,

one said wall panel including a removable area defined by rectangularly arranged weakened lines of separation extending the full width thereof and only partial the height thereof adjoining the bottom closure,

a carton liner including a bottom panel substantially coextensive with said bottom closure, parallel liner wall panels hinged to said bottom panel and lying in face contact with two opposed wall panels of said outer enclosure adjoining said one wall panel,

said liner wall panels being substantially coextensive with the wall panels they contact,

a spout structure including a base panel hinged to said bottom panel and lying inwardly of, and substantially coextensive with, said removable area of said one wall panel of said outer enclosure,

side wings hinged to the parallel side edges of said base panel and lying inwardly of said two opposed wall panels of said outer enclosure,

said side wings having arcuate edge portions having their centers of arcuation substantially at the line of hinge connecting said base panel to said bottom panel,

said side wings having abutment shoulders extending radially outwardly from said arcuate edges to engage said one wall panel of said outer enclosure upon outward swinging of said base panel,

one of said liner wall panels includes a flange hinged to the upper edge thereof underlying said top closure,

said top closure includes a pair of flaps hinged to said one wall panel and the opposite wall panel and folded into a common plane,

a closure flap hinged to one of said two opposed wall panels and including a tuck flap extending between said one liner wall panel and the adjacent wall panel of the outer enclosure,

a closure flap on the other of said two opposed wall panels including a locking tongue, and

a slot adjoining the juncture of one of said two opposed wall panels and the closure flap secured thereto through which said locking tongue may extend.

2. A dispensing carton including a generally rectangular outer carton including side and end walls and top and bottom closures,

one of said walls including a removable area extending the full width of said one wall adjoining the bottom closure and being defined by weakened lines of separation,

said removable area including four rectangularly arranged connected weakened lines of separation, a fifth weakened line connecting two opposed of said four rectangularly arranged weakened lines of separation, and said area including a finger aperture intersecting said fifth weakened line,

a liner within said carton including a bottom panel overlying said bottom closure, and a spout structure hingedly connected to said bottom panel along an edge thereof,

said spout structure including a base panel hinged along one edge to said bottom panel, and side wings hinged to opposite edges of said base panel along lines at substantially right angles to said one edge thereof,

said base panel being substantially coextensive with, and inwardly of, said removable area, and means on said side wings limiting outward pivotal movement of said base panel.

3. A dispensing carton including an outer enclosure including four rectangularly arranged connected wall panels, and top and bottom closures,

one said wall panel including a removable area defined by rectangularly arranged weakened lines of separation extending the full width thereof and only partial the height thereof adjoining the bottom closure,

a carton liner including a bottom panel substantially coextensive with said bottom closure, parallel liner wall panels hinged to said bottom panel and lying in face contact with two opposed wall panels of said outer enclosure adjoining said one wall panel,

said liner wall panels being substantially coextensive with the wall panels they contact,

the upper edges of said liner panels engageing said top closure and holding said bottom panel against said bottom closure,

a spout structure including a base panel hinged to said bottom panel and lying inwardly of, and substantially coextensive with, said removable area of said one wall panel of said outer enclosure,

side wings hinged to the parallel side adges of said base panel and lying inwardly of said two opposed wall panels of said outer enclosure,

said side wings having arcuate edge portions having their centers of arcuation substantially at the line of hinge connecting said base panel to said bottom panel,

said side wings having abutment shoulders extending radially outwardly from said arcuate edges to engage said one wall panel of said outer enclosure upon outward swinging of said base panel.

4. A dispensing carton including an outer enclosure including four rectangularly arranged connected wall panels, and top and bottom closures,

one said wall panel including a removable area defined by rectangularly arranged weakened lines of separation extending the full width thereof and only partial the height thereof adjoining the bottom closure,

said removable area also including a fifth weakened line of separation extending between two opposed of said rectangularly arranged weakened lines of separation, and said area including a finger aperture intersecting said fifth weakened line,

a carton liner including a bottom panel substantially coextensive with said bottom closure, parallel liner wall panels hinged to said bottom panel and lying

in face contact with two opposed wall panels of said outer enclosure adjoining said one wall panel,

said liner wall panels being substantially coextensive with the wall panels they contact,

a spout structure including a base panel hinged to said bottom panel and lying inwardly of, and substantially coextensive with, said removable area of said one wall panel of said outer enclosure,

side wings hinged to the parallel side edges of said base panel and lying inwardly of said two opposed wall panels of said outer enclosure,

said side wings having arcuate edge portions having their centers of arcuation substantially at the line of hinge connecting said base panel to said bottom panel,

said side wings having abutment shoulders extending radially outwardly from said arcuate edges to engage said one wall panel of said outer enclosure upon outward swinging of said base panel.

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