Sept. 21, 1965 J. P. FICARO 3,207,413

CARTON WITH POURING SPOUT

Filed March 13, 1964

Fig. 1.

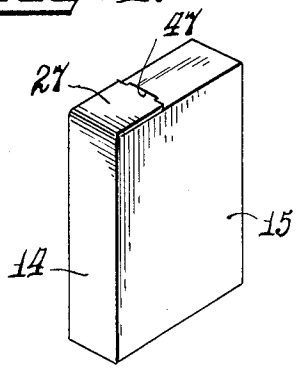


Fig. 2.

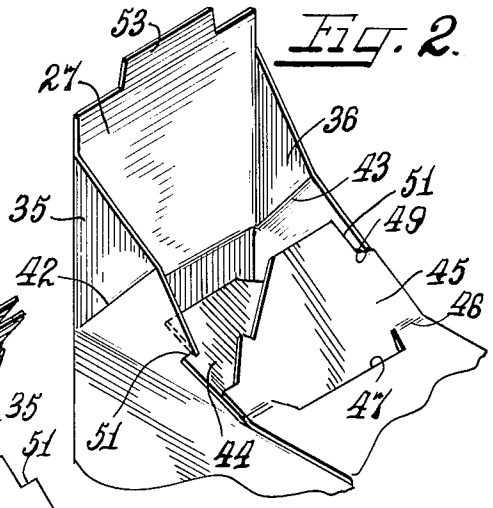


Fig. 3.

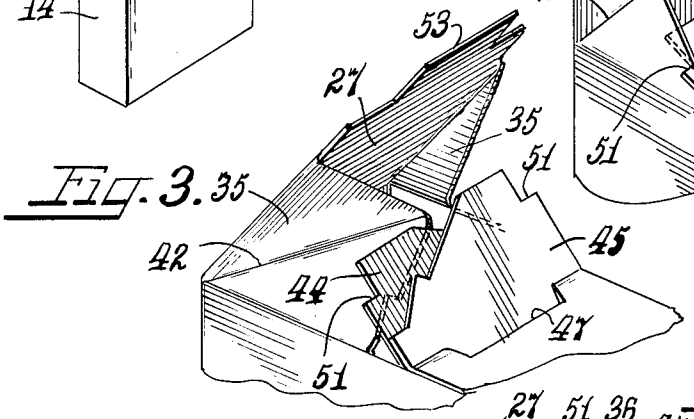
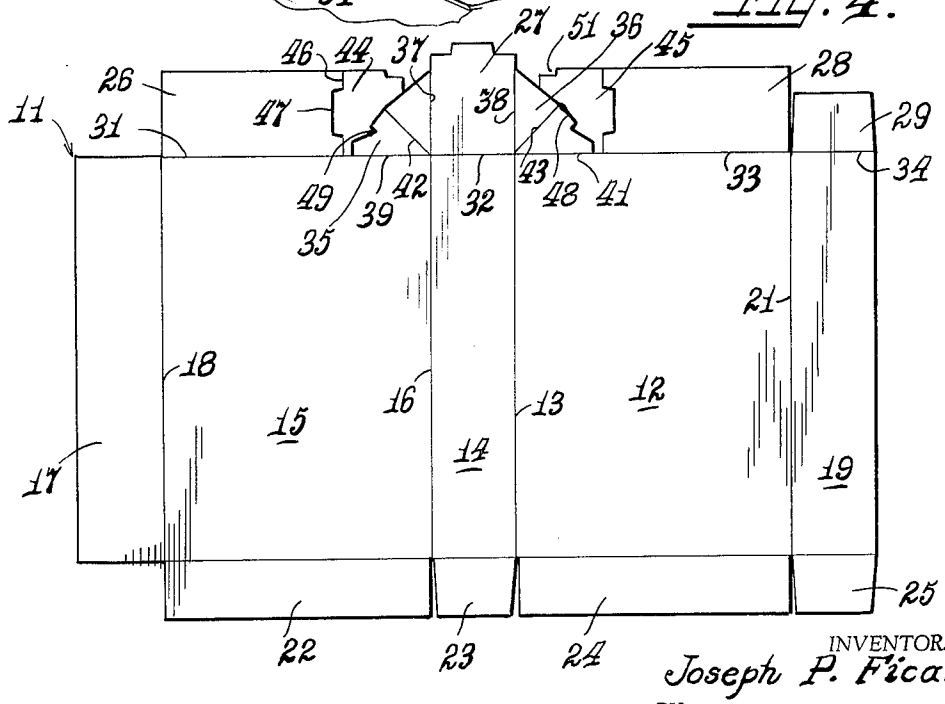


Fig. 4.



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CARTON WITH POURING SPOUT

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5 Claims. (Cl. 229—17)

This invention relates to improvements in cartons and is particularly concerned with the novel construction and assembly of an integral pouring spout.

An object of the invention is to provide a carton with an integral pouring spout which may be readily locked in closed position.

Another object is to provide a pouring spout that may be locked in open position.

Another object is to provide a carton with a pouring spout and related locking means which functions, when the spout is in closed position, to seal the carton.

Another object is to provide a carton and pouring spout of the character described which is not expensive to manufacture, is easy to assemble and which is very efficient in use.

The structure by means of which the above noted and other advantages of the invention are attained will be described in the following specification, taken in conjunction with the accompanying drawings, showing a preferred illustrative embodiment of the invention, in which:

FIG. 1 is a perspective view of the closed carton.

FIG. 2 is a perspective view of a portion of the carton, showing the pouring spout in open position.

FIG. 3 is a perspective view similar to FIG. 2, showing the pouring spout partly closed.

FIG. 4 is a plan view of the carton blank.

Referring to the disclosure of the exemplary structure shown in the accompanying drawings, the carton is formed from a blank **11** (FIG. 4) having four panels disposed in side by side relation and adapted to form the walls thereof. A front wall panel **12** is connected along a fold line **13** to a first side wall panel **14**. A back wall panel **15** is connected along a fold line **16** to the side wall panel **14** and is connected at its opposite edge to an inside side wall panel **17** along a fold line **18**. An outside side wall panel **19** is connected along a fold line **21** to the edge of panel **12**.

Lower end flaps **22**, **23**, **24** and **25** are connected to the bottom edges of wall panels **15**, **14**, **12** and **19** respectively, along fold lines so as to be folded one over the other in a convenional manner when the carton is assembled in a tubular structure.

Upper flaps **26**, **27**, **28** and **29** are connected to the top edges of wall panels **15**, **14**, **12** and **19** respectively, along fold lines **31**, **32**, **33** and **34** respectively. The flap **27**, which constitutes the spout flap, has triangular side wings **35**, **36**, one connected along each side edge of the flap **27**, along fold lines **37**, **38** respectively, and which side wings are connected respectively to the wall panels **15** and **12** along fold lines **39**, **41** respectively. Each side wing **35**, **36** has a diagonal fold line **42**, **43** respectively.

Upper flaps **26**, **28** each have, at their end adjacent to side wings **35**, **36**, a lock tab **44**, **45** of irregular outline. These are identical and the description of one will serve to describe the other. As shown, the tab **44** or **45** is connected to the respective upper end flap **26**, **28** along fold lines **46** which terminate short of the medial portions of the tab and merge into a slot **47**, the purpose of which will be described presently.

The free edge of each tab **44** or **45** is severed from the adjacent side wing **35** or **36** along a cut **48** which is irregular so as to provide a shouldered notch **49** on the edge of the side wing **35**, **36**. Its free edge, opposite

to the notched edge, is cut away, as at **51**, to define a corner notch.

In assembly, with the wall panels disposed to form a tubular structure, the upper end flap **29** is folded inwardly and the side wall flaps **26**, **28** are folded inwardly thereover and one over the other and adhesively secured over their entire areas except the areas of the attached tabs **44**, **45**. The side wings **35**, **36** are collapsed inwardy along their diagonal fold lines **42**, **43** so as to locate the spout flap **27** substantially in the plane of the top of the carton. This flap **27** has a tongue **53** on its free edge which is tucked into the slits **47** to secure the spout flap in the closed position shown in FIG. 1. When in this position, the tabs **44**, **45** lie over one another and overlie the inwardly folded side wings **35**, **36**, as illustrated in FIG. 3, so as to effectively seal the opening beneath spout flap **27**. It should be noted that the angularly cut edges of the tabs afford clearance for the folded areas of the side wings in the area of the diagonal folds **42**, **43**.

In order to open the spout flap, said flap **27** is disengaged from slit **47** and pulled outwardly upwardly, it hinging about fold line **32**. This pulls out and substantially straightens the collapsed side wings **35**, **36** and, at the same time, lifts the tabs **44**, **45** which fold along lines **46** sufficiently to cause their recessed edge of cut backs **51** to drop into the notches **49** and be engaged by the shoulders thereof to resist collapse of the open spout flap. This is best shown in FIG. 2.

In order to close the spout flap, it is only necessary to raise the tabs **44**, **45** sufficiently to disengage them from the notch-shoulders **49** whereupon the side wings can be collapsed inwardly and the spout flap thereupon folds down over the tabs and its tongue **53** may be engaged in the slit **47** thus tightly closing and sealing the carton.

Although I have described a preferred embodiment of my invention in considerable detail, it will be understood that the description thereof is intended to be illustrative rather than restrictive, as many details of the structure disclosed may be modified or changed without departing from the spirit or scope of the invention. Accordingly, I do not desire to be restricted to the exact construction described.

I claim:

1. A carton comprising front and back panels joined at their respective side edges by side panels to form a tubular structure, an inwardly foldable spout flap pivotally joined to one of the side panels along one edge thereof at the top end of the tubular structure, collapsible side wings at each side of said spout flap connected to said spout flap and to the front and back panels by fold lines so that said side wings can collapse and open as said spout flap is pivoted into closed and open positions, top wall flaps on said front and back panels folded one over the other and secured one to the other, tabs on said top flaps overlying each other and lying adjacent to the spout flap, said tabs being adapted to overlie at least a portion of the side wings when said side wings are in collapsed position, and a notch on the free edge of each side wing, said notches being engageable by the flaps when the spout flap is in open position so as to prevent its collapse.

2. The carton recited in claim **1**, in which a tongue is provided on the free edge of the spout flap and a slit is provided in the top wall flaps to receive said tongue for locking the spout flap in closed position.

3. A carton comprising front and back panels joined at their respective side edges by side panels to form a tubular structure, an inwardly foldable spout flap pivotally joined to one of the side panels along one edge thereof at the top end of the tubular structure, collapsible side wings at each side of said spout flap connected to

said spout flap and to the front and back panels by fold lines so that said side wings can collapse and open as said spout flap is pivoted into closed and open positions, top wall flaps on said front and back panels folded one over the other and secured one to the other, tabs on said top flaps overlying each other and lying adjacent to the spout flap, and a notch on the free edge of each side wing, said notches being engageable by the flaps when the spout is in open position so as to prevent its collapse.

4. The carton recited in claim **3**, in which a tongue is provided on the spout flap and a slit is provided in the top wall flaps to receive said tongue for locking the spout flap in closed position.

5. A carton comprising front and back panels joined at their respective side edges by side panels to form a tubular structure, an inwardly foldable spout flap joined to one of the panels along one edge thereof at the top end of the tubular structure, collapsible side wings connected one to each side edge of said spout flap and to the adjacent panels by fold lines so that said side wings can collapse and open as said spout flap is pivoted into

closed and open positions, top wall flaps on said adjacent panels folded one over the other and secured one to the other, tabs on said top flaps overlying each other and lying adjacent to the spout flap, said tabs being adapted to overlie at least a portion of the side wings when said side wings are in collapsed position, and a notch on the free edge of each side wing, said notches being engageable by the flaps when the spout is in open position so as to prevent its collapse.

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