Oct. 12, 1943. F. L. BROEREN 2,331,651

DISPENSING CARTON

Filed Nov. 9, 1942

FIG.1.

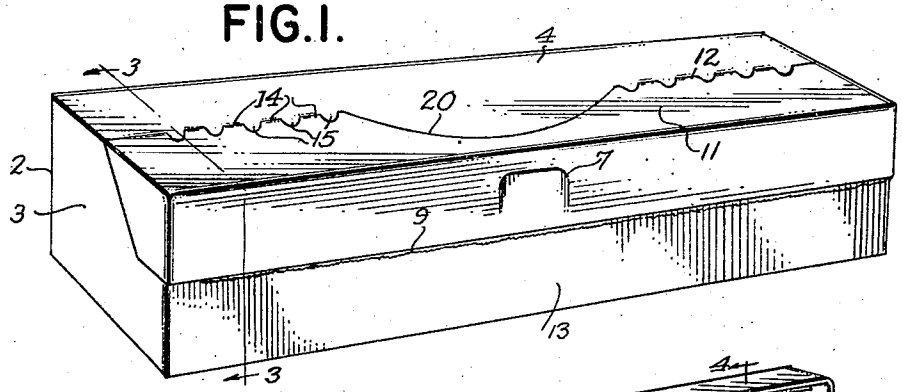


FIG.2.

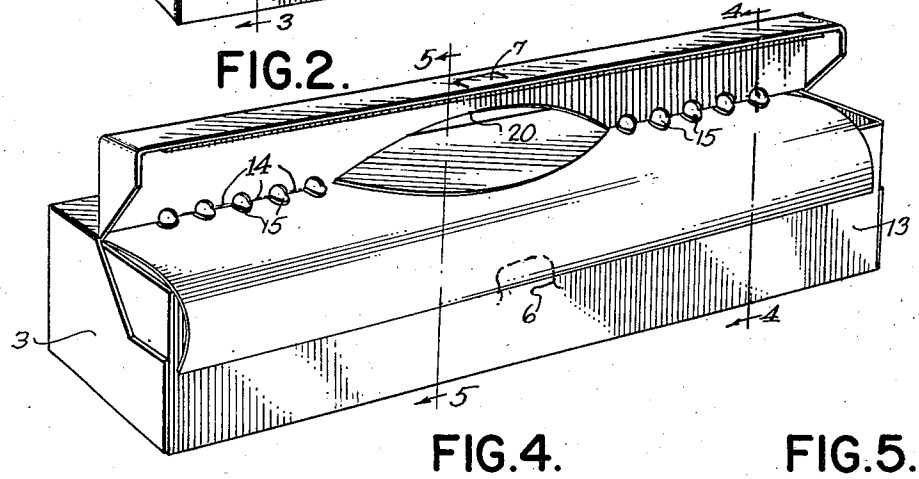


FIG.4.

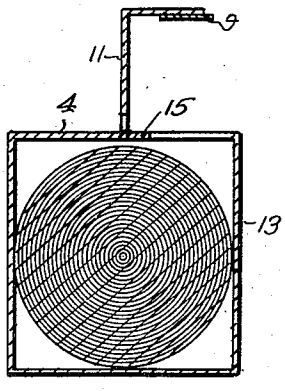


FIG.5.

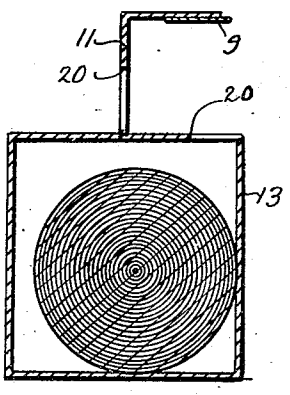
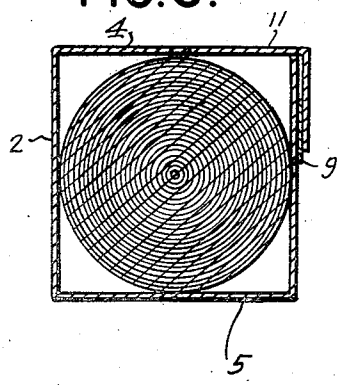


FIG.3.



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DISPENSING CARTON

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Application November 9, 1942, Serial No. 464,977

4 Claims. (Cl. 206—57)

This invention relates to a dispensing carton having a hinged cover formed from an integral blank of cardboard and the like. More specifically, this invention relates to a dispensing carton for containing a roll of waxed paper from which the paper is dispensed in web form and torn off in suitable lengths as needed.

Generally speaking, the present invention contemplates a carton construction for dispensing or removing any article contained therein which can be grasped by the fingers by opening a hinged cover. The carton is preferably formed from an integral blank which is suitably cut and scored to provide a container having front, rear, bottom and end walls and a cover integrally hinged to the container along a hinge of a novel construction. By virtue of this construction, the hinge is extremely flexible and facilitates easy opening of the cover. Also when the cover is released it has a tendency to fall back to closed position. To obtain this flexibility, the hinge is formed of a relatively long curved cut score line having extending therefrom at each end a series of alternately scored and cut score lines of the same construction as disclosed in copending application Serial No. 390,846, filed April 28, 1941, Patent No. 2,303,253. The hinge disclosed in this application is an improvement of said previous construction.

Other further details of the invention will be apparent from the following specification and appended drawing.

Referring to the drawing:

Figure 1 is a perspective view of the dispensing carton,

Figure 2 is a perspective view of the carton showing the cover open and the end of a rib of paper projecting therefrom,

Figure 3 is a transverse sectional view taken on lines 3—3 of Figure 1,

Figure 4 is a transverse sectional view taken on lines 4—4 of Figure 2, and

Figure 5 is a transverse sectional view taken on lines 5—5 of Figure 2.

Referring to the drawing, the carton 10 is preferably made from a single integral blank of cardboard and the like which is suitably cut, scored and glued to provide a front wall 13, a rear wall 2, end walls 3, a bottom wall 5 and a top panel 4. A cover 11 is integrally hinged to the top panel 4 along the hinge designated by numeral 12. The cover may be provided with a suitable cutting blade 9 affixed to the free edge thereof for facilitating tearing the free end of a web 20 from a roll of paper contained within the carton. The front wall of the carton may be provided with an inverted U-shaped cut line 6. The cover is provided with a cut score line 7 which forms a tongue portion that is insertable through the cut score line 6 into locking engagement as illustrated in Figure 1, thereby locking the cover when the carton is not in use.

The important feature of the present invention resides in providing a hinge 12 for the cover of a novel construction which consists in forming the hinge with a relatively long cut score line having at each end a series of alternate cut and creased portions which are connected to each other. Referring to Figures 1 and 2 the hinge is provided with a relatively long curved cut line 20 which is concavely curved toward the free edge of the cover 11 and having at each end a series of spaced semi-circular, curvilinear, triangular, or other suitably contoured cut portions indicated by numeral 15, so that an area or tongue portion is outlined extending beyond the hinge line defined by the straight creased score lines as shown in Figures 2 and 4. These cut portions are connected by the spaced creased score lines 14 which in the conventional hinge would be a continuous score line. Each of cut lines 15 intersects the creased lines 14 along convergent lines and at an acute angle to the creased lines so as to form cut tongue portions extending beyond the creased lines, whereby upon hinging the cover open the fibers of the carton will be instantly separated without substantial frictional engagement at the cut portions. The alternate cut and creased portions of the hinge may be of any desired ratio of lengths so as to decrease the length of the creased portion of the hinge.

In the previous construction of the carton disclosed in Patent No. 2,303,253 it was found that a certain amount of bulging of the cover occurred adjacent the middle portion of the hinge which prevented easy opening of the cover by a simple manual manipulation, especially when a relatively long carton is involved of about 12 inches or more. By providing the relatively long curved cut 20 in approximately the middle portion of the hinge this undesirable bulging is prevented. Furthermore, by concavely curving this cut line 20 toward the free edge of the cover, the fibers of the carton will instantly separate as soon as the cover is hinged open without any frictional engagement of the fibers at this cut line. The series of alternate cut and creased score lines at each end of the curved cut line ensure further easy hinging of the cover. Preferably it is advantageous to have the curved cut line 20 extent about one-third of the total hinge line length

at the medial portion of the hinge and to have the series of alternate cut and score lines at each end of the cut line extend about one-third each of the total hinge line.

According to the present construction the total length of the creased score portion on which hinging of the cover takes place is greatly reduced so that the resistance to flexing of the carton stock is greatly reduced, thereby providing greater flexibility in hinging the cover. Furthermore, the present hinge construction permits the opened cover upon release to fall back readily into closed position as compared with the previous full line creased hinge which after opening resists closing because the fibers at the hinge must be reversely bent to their former position.

Various modifications may be made in actual carton constructions utilizing the present concept. The invention is not limited to any specific contour of the cut and creased portions of the hinge line. For example, the cut line 20 may be curved in convex relation to the free end of the cover or it may be a straight cut line. The cut lines 15 may also be positioned in alternating reversed position in relation to the hinge.

It is to be understood that the hinge construction is not necessarily limited to the specific carton construction herein disclosed. It may be utilized on any type of carton construction having a hinged cover therefor. The cover, for example, may be integrally hinged to any portion of an open ended container such as to the front or rear walls thereof, but the principle of hinged construction is utilized in a similar relation as in the specific embodiment herein disclosed. It is, therefore, intended to claim the invention herein disclosed as broadly as defined in the appended claims.

I claim:

1. A dispensing carton comprising a blank suitably scored and cut to provide a front, rear, bottom, end and top panels, said top panel having an integral portion hinged along a substantially longitudinal line extending from one end of the panel to the other, said portion functioning as a cover portion, said hinge comprising a series of alternately arranged semi-circular cuts and creased score lines at each end of said hinge, said cut lines intersecting said creased lines along convergent lines and at an acute angle to said creased lines so as to provide cut tongue portions extending beyond said creased lines, and a relatively long cut line connecting said series of semi-circular cuts and creased score lines, whereby upon hinging said cover open the fibers of said blank will be instantly separated without substantial frictional engagement at the cut portions.

2. A dispensing carton comprising a blank suitably scored and cut to provide a front, rear, bottom, end and top panels, said top panel having an integral portion hinged along a substantially longitudinal line extending from one end of the panel to the other, said portion functioning as a cover portion, said hinge comprising at each end thereof a series of continuous alternately arranged semi-circular cuts and creased score lines extending for about one-third the length of said hinge, said cut lines intersecting said creased lines along convergent lines and at an acute angle to said creased lines so as to provide cut tongue portions extending beyond said creased lines, and a relatively long cut line connecting said series of semi-circular cuts and creased score lines, said cut line being concavely curved toward the free edge of said cover, whereby upon hinging said cover open the fibers of said blank will be instantly separated without substantial frictional engagement at the cut portions.

3. A dispensing carton comprising a blank suitably scored and cut to provide a front, rear, bottom, end and top panels, said top panel having an integral portion hinged along a substantially longitudinal line extending from one end of the panel to the other, said portion functioning as a cover portion, said hinge comprising regularly spaced continuous cut and creased score lines extending at each end of said hinge, said cut lines intersecting said creased lines along convergent lines and at an acute angle to said creased lines so as to provide cut tongue portions extending beyond said creased lines and a relatively long cut line connecting said series of cut and creased score lines, whereby upon hinging said cover open the fibers of said blank will be instantly separated without substantial frictional engagement at the cut portions.

4. A dispensing carton comprising a blank suitably scored and cut to provide a front, rear, bottom, end and top panels, said top panel having an integral portion hinged along a longitudinal line extending from one end of the panel to the other, said portion functioning as a cover portion, said hinge comprising a curved cut line extending at its medial portion and a regularly spaced continuous cut and creased score line extending at each end of said curved cut line, said cut lines intersecting said creased lines along convergent lines and at an acute angle to said creased lines so as to provide cut tongue portions extending beyond said creased lines whereby upon hinging said cover open the fibers of said blank will be instantly separated without substantial frictional engagement at the cut portions.

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