May 17, 1955 K. KLAUSE 2,708,510

DISPENSING PACKAGE

Filed Dec. 3, 1952 2 Sheets-Sheet 1

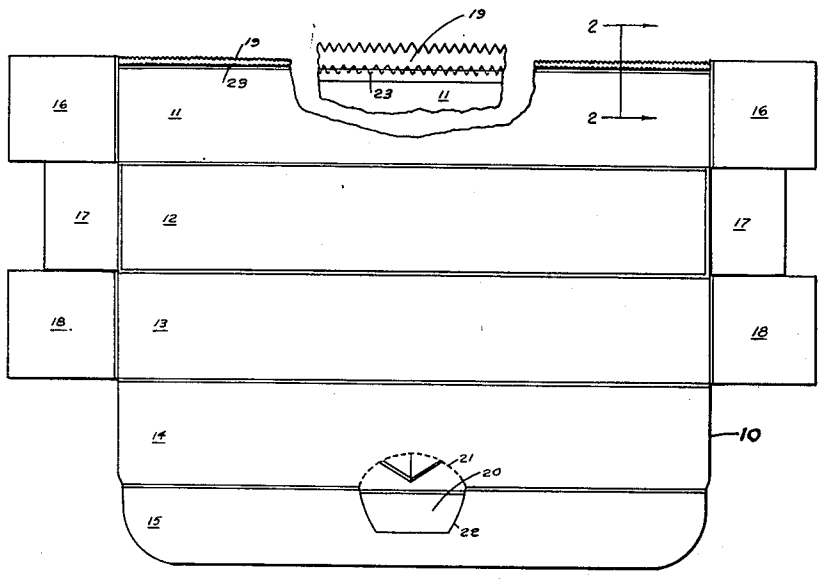


FIG. 1

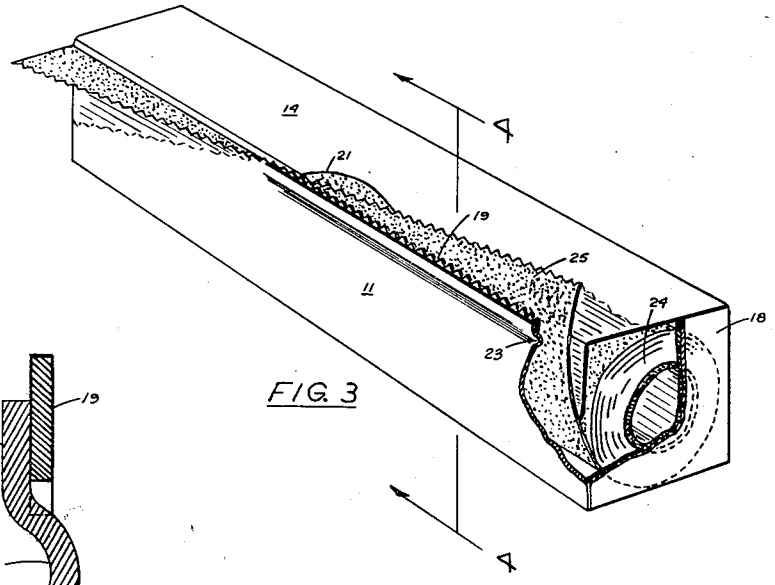


FIG. 3

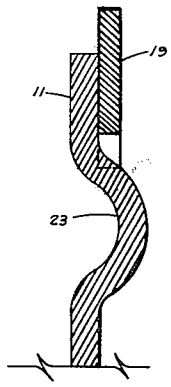


FIG 2

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DISPENSING PACKAGE

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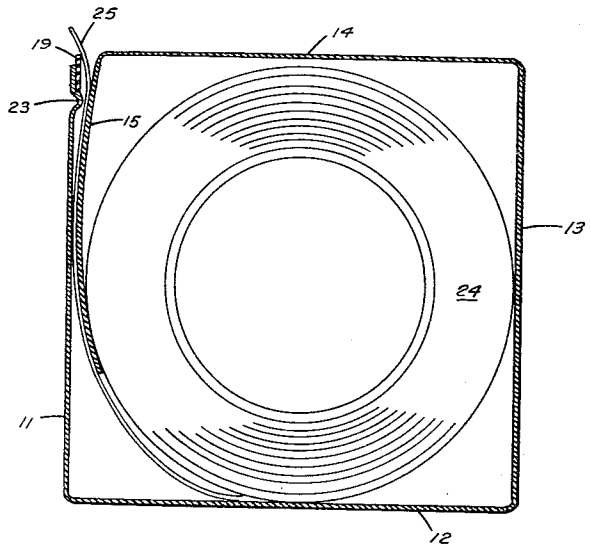


FIG 4

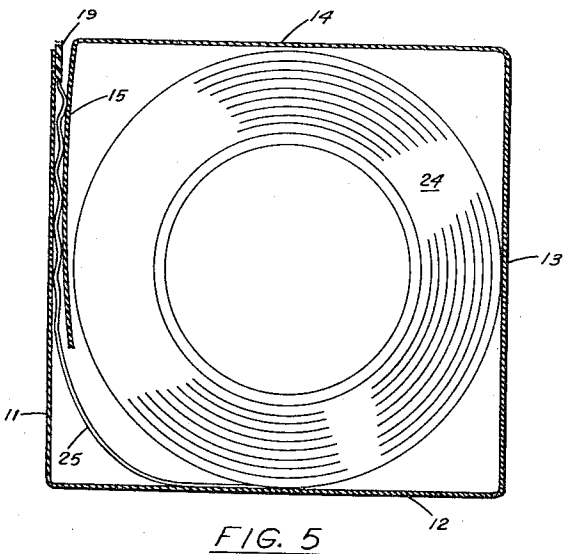


FIG. 5

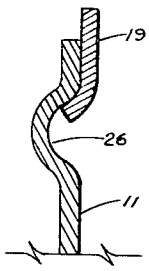


FIG. 6

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2,708,510

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DISPENSING PACKAGE

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15 Claims. (Cl. 206—58)

This invention relates to new and useful improvements in dispensing cartons, and particularly to such cartons of the type for dispensing selected lengths of sheet material from a roll of such material contained in the carton. Metal foil and waxed paper are examples of numerous items which are so boxed and dispensed.

A common type of dispensing carton for waxed paper and metal foil is made from paperboard and has a metal knife or cutter blade fixed along an outer edge of a wall of the carton, against which a selected length of the contained sheet material, after it has been unspooled from the roll of material within the carton, may be brought to separate such length from the roll. This feature is illustrated in the carton shown in U. S. Patent No. 2,624,521, for Dispensing Package, issued January 6, 1953, to Frank L. Broeren, in which the cutter blade is fastened to the inside surface of the front wall of the carton adjacent the top edge thereof. In this type of carton, the lower edge of the cutter blade has a tendency to interfere with successive withdrawals of the contained sheet material, due to the fact that the raw leading edge of the length of material to be withdrawn from the carton tends to catch beneath and behind the lower edge of the cutter blade when it is attempted to withdraw the sheet material from the carton. My invention provides new and useful means for preventing this interference, and thus for promoting easy access to and dispensing of the sheet material. My invention, though simple in its manufacture, by its very simplicity promotes the satisfactory use, and therefore the commercial prosperity, of the carton and the product which it conveys.

The objects and advantages of my invention will be readily apparent from the following description and drawings, in which:

Figure 1 is a plan view of the carton blank from which is formed a carton incorporating a preferred embodiment of my invention, with a portion thereof broken away and shown in an enlarged view,

Figure 2 is an enlarged cross-sectional view, taken along the lines 2—2 of Figure 1,

Figure 3 is a perspective view, partially cut away, showing the finished carton formed from the blank of Figure 1, and containing a roll of sheet material to be dispensed therefrom,

Figure 4 is a cross-sectional view, taken along the lines 4—4 of Figure 3,

Figure 5 is a cross-sectional view, similar to Figure 4, but showing a carton which does not incorporate my invention,

Figure 6 is a cross-sectional view, similar to Figure 2, but showing a second embodiment of my invention.

Referring first to Figure 1, it is seen that my carton is formed from a blank **10** which is divided by cut and score lines into a number of flaps and walls or panels, including front wall **11**, bottom wall **12**, rear wall **13**, cover wall **14** and cover flap **15**. End flaps **16**, **17** and **18**, respectively, are hingedly connected to each end edge of walls **11**, **12** and **13**. A serrated knife or cutter blade

19 is fixed by any suitable means to the inner surface (the upper surface of the blank as shown in Figure 1) of front wall **11** adjacent the free or top edge thereof, and protruding slightly above that edge. A sealing flap **20** is defined from wall **14** and cover flap **15** by a perforation line **21** in the wall and a cut line **22** in the flap. This sealing flap functions exactly like that illustrated in the patent of Frank L. Broeren referred to above.

Referring also to Figure 2, it is seen that a heavy score line **23** in front wall **11** lies immediately adjacent and parallel to the inner edge of blade **19**, and protrudes beyond the inner surface of front wall **11** a distance at least equal to the thickness of blade **19**. In the normal course of manufacture, these blades for successively produced carton blanks are successively cut from a sheet of material, so that a sharp serration results in the inner edge, as well as the upper edge, of the blade. For purposes of protection when dispensing the particular contained sheet material, and as here illustrated, I prefer that these serrations on the inner edge of the blade **19** be slightly imbedded into the upper protruding portion of score line **23**.

Referring to Figure 3, it is seen that the carton is formed from the blank of Figure 1 by folding walls **11** and **13** perpendicular to, and wall **14** parallel to, bottom wall **12**, with cover flap **15** lying inside and adjacent front wall **11**. End flaps **16**, **17** and **18** are inwardly folded and adhered together by any suitable means, and a portion of sealing flap **20** adhered to front wall **11**, to form a closed container. The roll **24** of sheet material **25** is, of course, inserted within the carton during an intermediate stage of formation of the carton. When the carton is opened, by removing sealing flap **20**, the sheet material **25** may be dispensed from the roll **24**. A finger or thumb is inserted into the opening in the cover **14** left by removal of the sealing flap, and then by lightly squeezing the sheet material between the thumb or finger and the front wall **11** and pulling outwardly, the sheet material may be withdrawn from the carton, unspooling the roll, to the point where the sheet may be more firmly grasped. After a sufficient length has been dispensed, the sheet may be pulled downwardly against blade **19** to sever that desired length from the roll. It will be obvious that after such a length has been severed it may frequently happen that, due to natural resiliency of the sheet material or jarring of the carton, the free edge of the sheet material remaining rolled up within the carton may withdraw below the lower edge of the blade. Referring particularly to Figure 4, it is seen that score line **23** provides a surface which protrudes inwardly to effectively overhang the lower edge of blade **19** and thus avoids any possibility of this free edge of the sheet material being caught underneath or behind the blade in such a manner as to render difficult subsequent withdrawal of the sheet material from the carton. The lower edge of this score line **23**, although it protrudes rather abruptly from the normal inner surface of the front wall **11**, from the very nature of the fact that the carton material is paperboard, does not present an edge or surface which in any way impedes withdrawal of the sheet material. It is readily apparent that score line **23** in this same way also functions to avoid the possibility of scratching or cutting the finger or thumb against the sharp inner edge of blade **19** when the sheet material is being withdrawn.

Figure 5 illustrates the difficulty in withdrawal of the sheet material which is often encountered in carton constructions lacking my improvement. The free edge of sheet material **25** is caught beneath and behind the lower edge of blade **19**, rendering difficult withdrawal of the sheet. It is obvious that such a defect would provide a source of annoyance to users of the contained product, and that from this fact there would be and has been an

effort on the part of those familiar with the problem to achieve a solution. However, in spite of the long present existence of this problem, my invention presents the first known satisfactory solution of this problem. The simplicity of this improvement is highly advantageous, since the product here described and illustrated is sold in tremendous quantities involving sales in the hundreds of millions of units annually, so that even extremely small cost differentials in manufacture may have greater weight in the overall analysis. My invention, involving this protruding, protecting score line, may be stamped into the carton blank in identically the same step of manufacture which results in the cut and score lines dividing the carton blank into walls and flaps. There is thus no additional cost of manufacture as a result of this improvement, other than the completely immaterial cost of an additional scoring knife in the dies which cut out and score the blank.

It will be obvious that, without departing from the spirit of my invention, a strip of paperboard or like material might be adhered to the inner surface of the front wall **11** of the carton, immediately adjacent but below the blade **19**, and that this strip might even take the form of a supplementary inner front wall adhered to the front wall **11** and terminating just below the blade **19**. It will be equally obvious that my invention would not be departed from by the inclusion of additional score lines spaced below my improvement, nor by the substitution of other equivalent means.

Figure 6 illustrates a second embodiment of my invention, in which the cutter blade protective means is again in the form of a score line **26**, but in this embodiment the score line is impressed into the carton blank from the side of the front wall **11** opposite to that in the first embodiment, that is, in this second embodiment the score line is impressed into the front wall **11** from the interior surface thereof. It will also be noted that in this embodiment the lower edge of the cutter blade **19** has been impressed into the depression formed in the inner surface of front wall **11** by the score line **26**. In order to avoid the apparent necessity of a second operation on the carton blank, due to the fact that score line **26** is impressed into the surface of the blank opposite to that in which are impressed the rest of the score lines dividing the blank into walls and flaps, and thereby avoiding an increase in the cost of the carton, I prefer to impress score line **26** into front wall **11** during and as a part of the same operation in which cutter blade **19** is affixed to front wall **11**. This operation then consists of cutting the cutter blade from the sheet of metal previously mentioned, placing it over the inner surface of wall **11** adjacent the free edge thereof, both of which steps are well-known in the art, and then simultaneously adhering the blade to the front wall by a well-known operation and impressing into wall **11** the score line **26**. This may all be done by known and available automatic machinery. Referring again to Figure 6, it will be apparent that this impression of score line **26** into front wall **11** may be accomplished by the action of a female die against the exterior surface of the front wall and an opposite male die acting against the lower edge of blade **19** and the adjacent inner surface of front wall **11**. It is seen that this operation results in impressing the lower edge of blade **19** into the concavity in the inner surface of front wall **11** formed by score line **26**, and that this gives the same highly advantageous results previously described in connection with my first embodiment. The lower edge of blade **19** is out of the way in such a manner as to eliminite any possibility of interference with and hindrance of withdrawal of the sheet material **25**, and the finger or thumb inserted to withdraw the sheet is equally well protected from laceration by the lower edge of blade **19**.

It will be obvious that modifications of and substitutions for various elements of the constructions herein described and illustrated might be made without departing from the spirit of my invention. In particular, it might be noted that my invention could be applied to cartons of the types

illustrated in United States Patents Nos. 1,630,495 and 2,303,253 with facility equal to that with which it is incorporated in the carton herein illustrated. My invention is to be limited only by the following claims.

I claim:

1. A carton for dispensing selected lengths of sheet material from a roll of such material contained in the carton, the carton comprising front, bottom, rear and end walls, a cover, a cutter blade fixed to the inside surface of said front wall adjacent the top thereof to provide means for severing said selected lengths from the remainder of the roll of sheet material within the carton, and means provided in said front wall adjacent the lower edge of said cutter blade to protect said lower edge from interference with the leading edge of lengths of sheet material being withdrawn from said carton, said means comprising a protrusion in said front wall effective to provide immediately adjacent said lower edge of the blade a portion of said front wall lying inwardly of said lower edge and thereby protecting said edge from interference with the leading edge of the contained sheet material.

2. A carton according to claim 1, characterized by the fact that said means comprises a score line pressed into the inner surface of said front wall to form a protrusion of the outer surface of said front wall and a concavity within the inner surface of said front wall lying partially below and partially above the lower edge of said cutter blade, the lower edge of said cutter blade being crimped outwardly to lie substantially within said concavity to avoid interference between said lower edge and the leading edge of the sheet material within the carton.

3. A carton according to claim 1, characterized by the fact that said means comprises a score line pressed into the outer surface of said front wall to form a protrusion of the inner surface of said front wall below and immediately adjacent the lower edge of said cutter blade, thereby to obscure said lower edge from interference with the leading edge of the contained sheet material.

4. A carton according to claim 3, further characterized by the fact that the lower edge of said cutter blade is partially submerged into the upper portion of said protrusion.

5. In a dispensing carton for dispensing selected lengths of sheet material, the carton including front, bottom, rear and end walls, a cover, and a cutter blade fixed to the inner surface of said front wall adjacent its upper edge for severing said selected lengths, the improvement comprising a protrusion in said front wall immediately below and adjacent the lower edge of said cutter blade providing a portion of said front wall extending inwardly of the lower edge of said blade to obscure said lower edge from interference with the leading edge of the contained sheet material.

6. An improvement for a carton according to claim 5, further characterized by the fact that said protrusion is formed by a score line impressed into the inner surface of said front wall to also form a concavity within said inner surface lying partially below and partially above the lower edge of said cutter blade, said lower edge being pressed to lie partially within said concavity to obscure said lower edge to avoid interference with the leading edge of the contained material.

7. An improvement for a carton according to claim 5, further characterized by the fact that said protrusion is formed by a score line impressed into the outer surface of said front wall.

8. An improvement for a carton according to claim 7, further characterized by the fact that the lower edge of said cutter blade is partially imbedded into the upper portion of said protrusion.

9. A carton for dispensing selected lengths of sheet material from a roll of such material contained in the carton, the carton including front, bottom, rear and end walls, a cover hingedly connected to the upper edge of said rear wall, and a cutter blade fixed to the inner sur-

face of said front wall adjacent the top edge thereof, said front wall having a score line therein parallel to and immediately adjacent the lower edge of said blade, said score line being pressed into the outer surface of said front wall to form a protrusion of the inner surface of said front wall within the carton, said protrusion lying below and immediately adjacent the lower edge of said blade and extending within said carton a distance at least as great as the thickness of said blade normal to said front wall, to protect the lower edge of said blade from interference with the contained sheet material.

10. A carton according to claim 9, further characterized by the fact that the lower edge of said cutter blade extends into and is partially imbedded within the upper portion of said protrusion.

11. A carton for dispensing selected lengths of sheet material from a roll thereof contained therein, the carton comprising front, bottom, rear and side walls, a cover, and a cutter blade affixed to the inner surface of said front wall adjacent the upper edge thereof to sever selected lengths, a portion of said front wall immediately adjacent and below said cutter blade portruding inwardly of the carton a distance at least as great as the thickness of said cutter blade normal to said front wall to avoid interference between the lower edge of said blade and the sheet material.

12. A carton according to claim 11, further characterized by the fact that the lower portion of said cutter blade extends partially into and is imbedded within the upper portion of said inwardly protruding portion of the front wall.

13. A carton for dispensing selected lengths of sheet material from a roll of such material contained in the carton, the carton comprising bottom, rear and end walls, a front panel connected to the bottom wall and a cover panel connected to the rear wall, a cutter blade fixed to the inside surface of one of said panels adjacent the free edge thereof to provide means for severing said selected lengths from the remainder of the roll of sheet material within the carton, and means provided in said one panel adjacent the edge of said cutter blade nearest the wall to which said one panel is connected to protect said nearest

edge from interference of the leading edge of lengths of material being withdrawn from from said carton, said means comprising a protrusion in said one panel effective to provide immediately adjacent said nearest edge of the blade between said nearest edge and the connection between said one panel and the wall to which said one panel is connected a portion of said one panel lying inwardly of said nearest edge of the blade and protecting said nearest edge from interference with the leading edge of the contained sheet material.

14. In a dispensing carton for dispensing selected lengths of sheet material, the carton including bottom, rear and end walls, a front panel connected to the bottom wall and a cover panel connected to the rear wall, and a cutter blade fixed to the inner surface of one of said panels adjacent its free edge for severing said selected lengths, the improvement comprising a protrusion in said one panel immediately adjacent the edge of said cutter blade nearest the wall to which said one panel is connected and between said nearest edge of said blade and the connection between said one panel and the wall to which it is connected to obscure said nearest edge from interference with the leading edge of the contained sheet material.

15. A carton according to claim 13, characterized by the fact that said means comprises a score line pressed into the inner surface of said one panel to form a protrusion of the outer surface thereof and a concavity within the inner surface thereof lying partially below and partially above said nearest edge of the blade, said nearest edge being crimped outwardly to lie substantially within said concavity to avoid interference between said nearest edge and the leading edge of the sheet material within the carton.

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