March 12, 1968 E. L. ARNESON 3,372,800

ARTICLE CARRIER

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Fig. 1

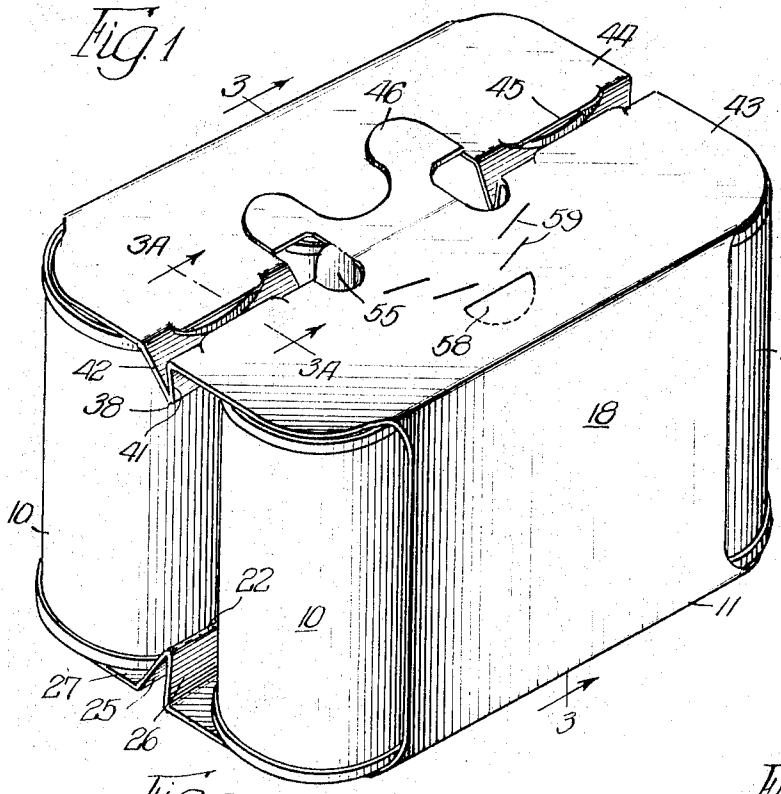


Fig. 2A

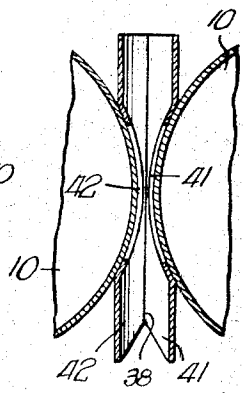


Fig. 2

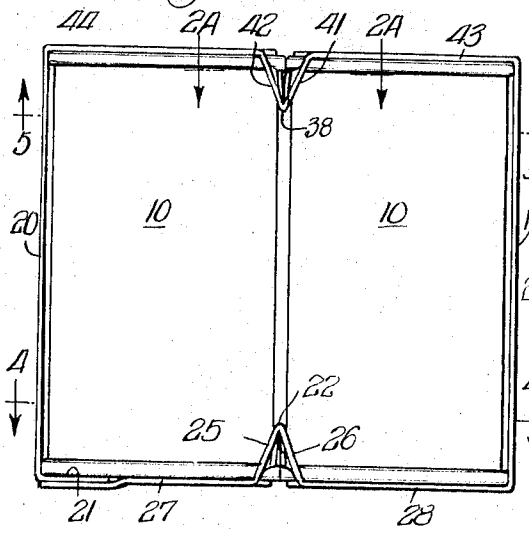


Fig. 3

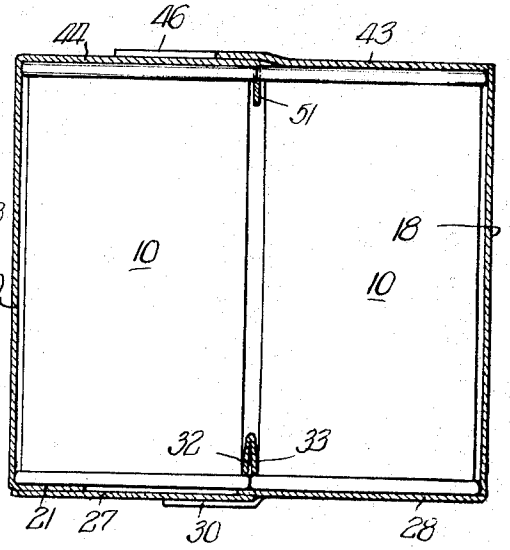
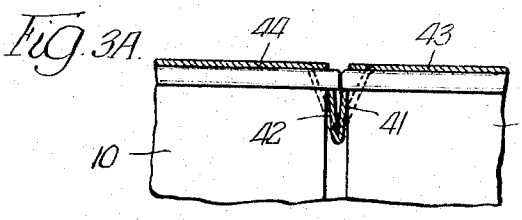


Fig. 3A



INVENTOR.
Edwin L. Arneson.
BY
Cromwell, Greist & Warden
Attys.

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Fig. 4

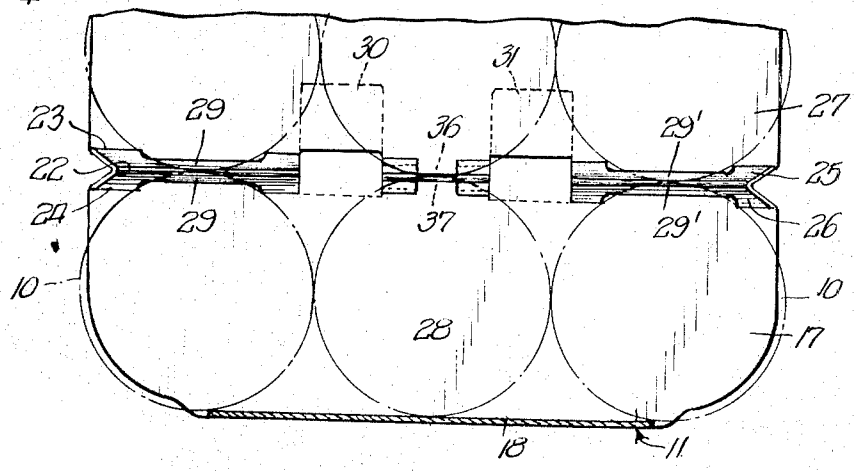


Fig. 5

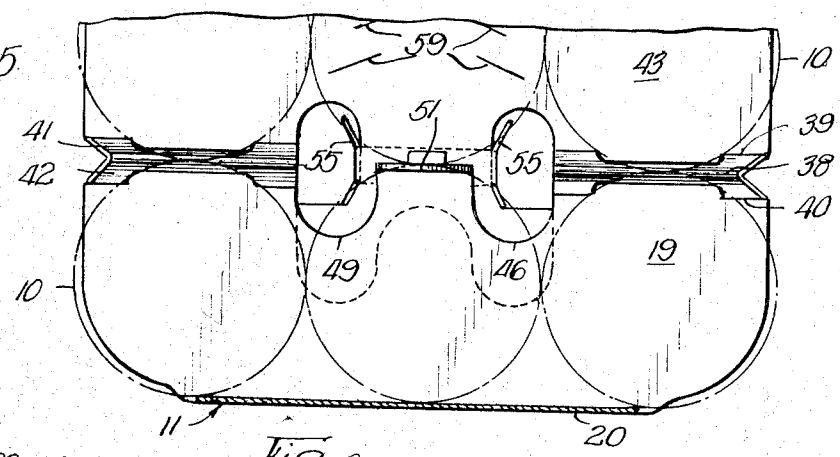
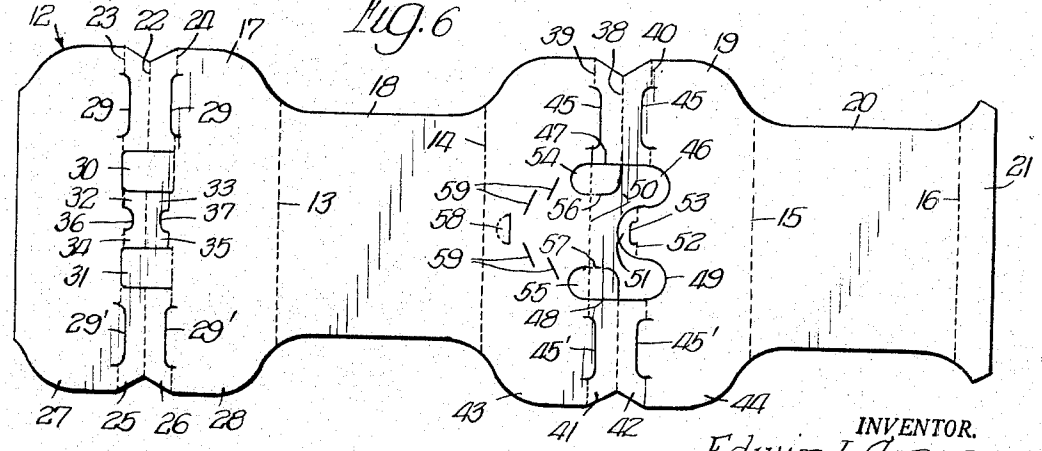


Fig. 6



INVENTOR.
Edwin L. Arneson,
BY
Cromwell, Grust & Waudby
Attys

March 12, 1968 E. L. ARNESON 3,372,800

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Fig. 7

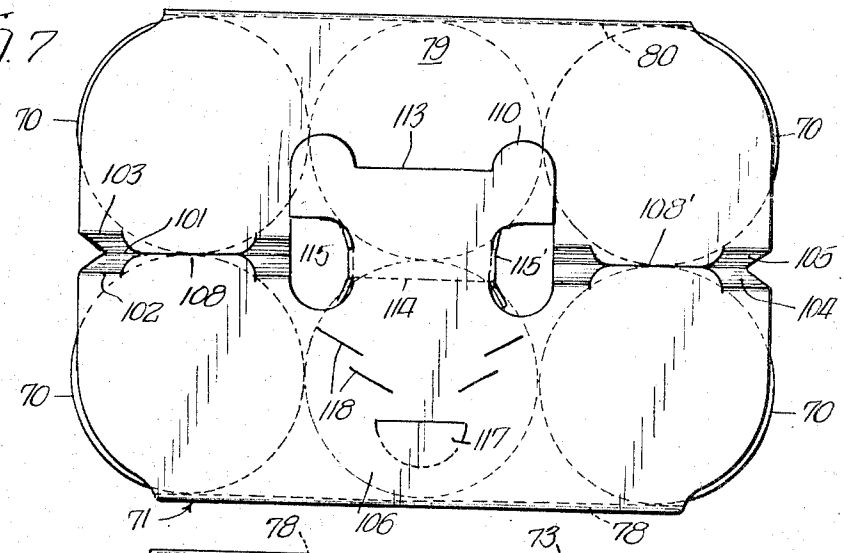


Fig 8

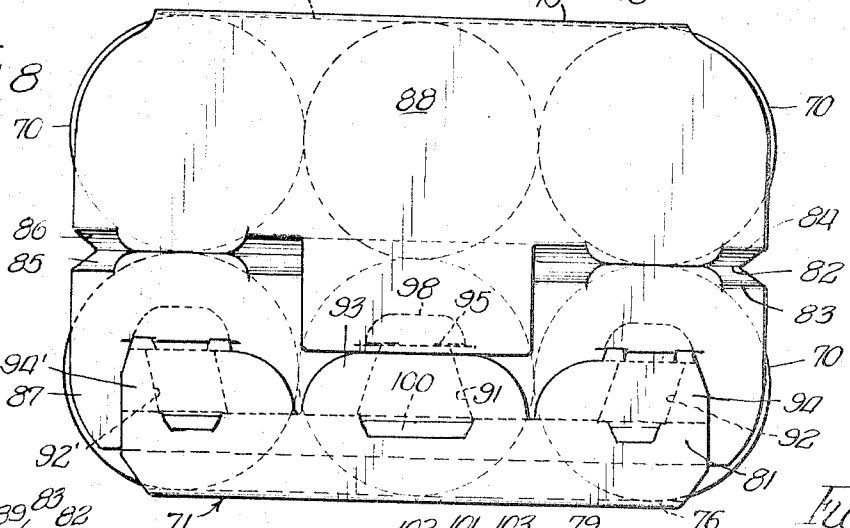
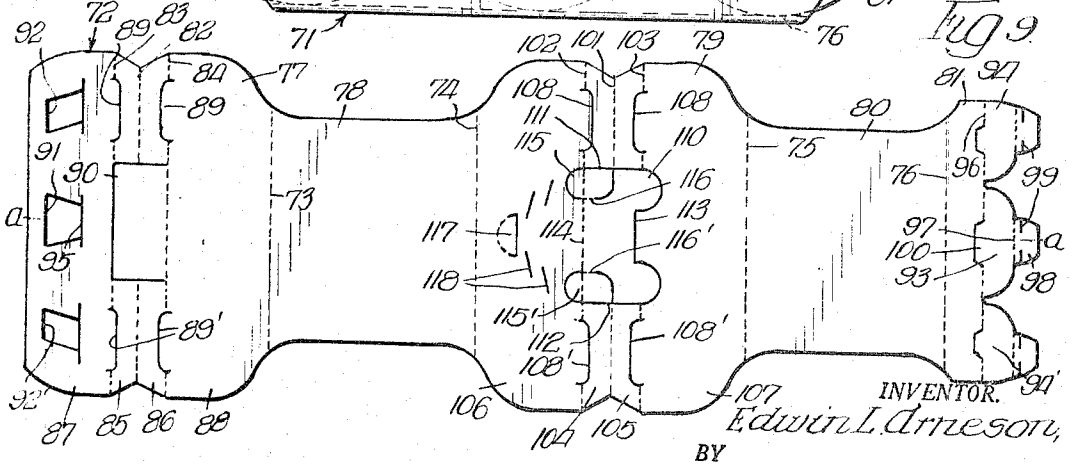


Fig 9



INVENTOR.
Edwin L. Arneson,
BY
Cromwell, Greist & Warden
Attys

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Fig. 10

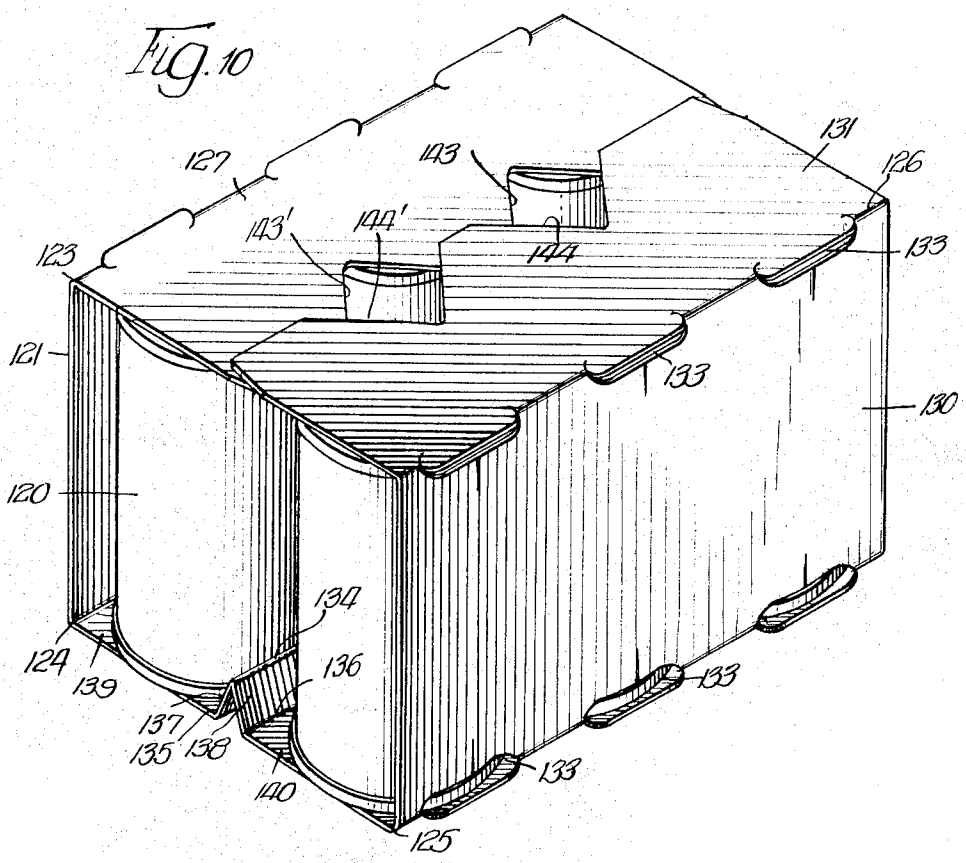
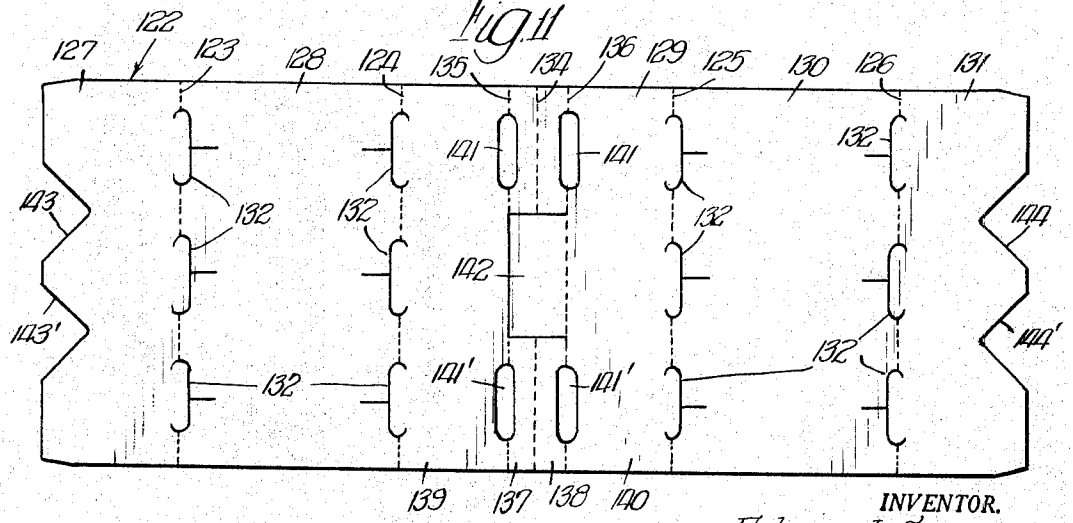


Fig. 11



INVENTOR.
Edwin L. Arneson,
BY
Cromwell, Greist & Warden
attys

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Fig. 12

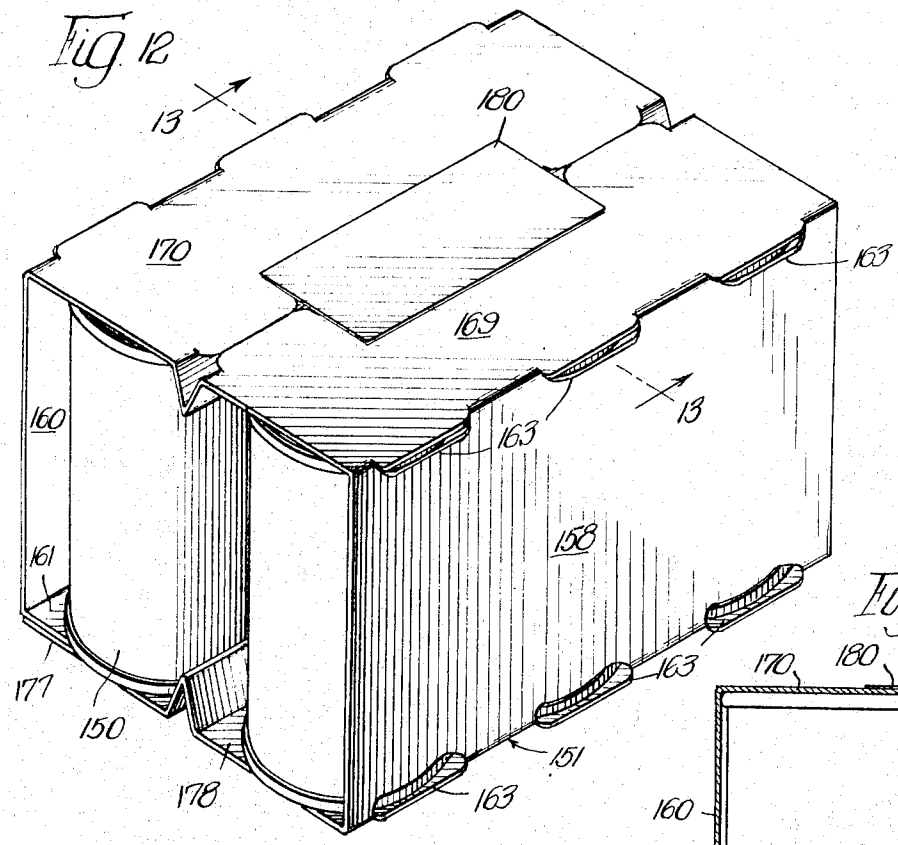


Fig. 13

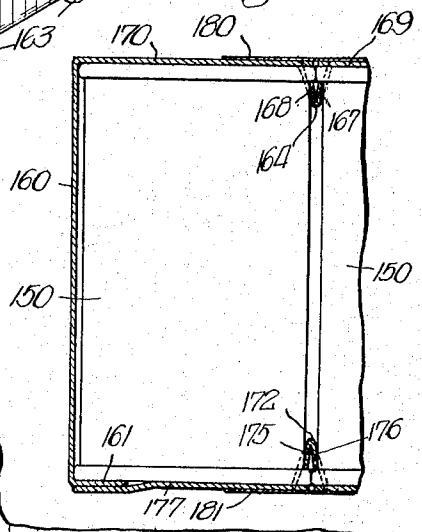
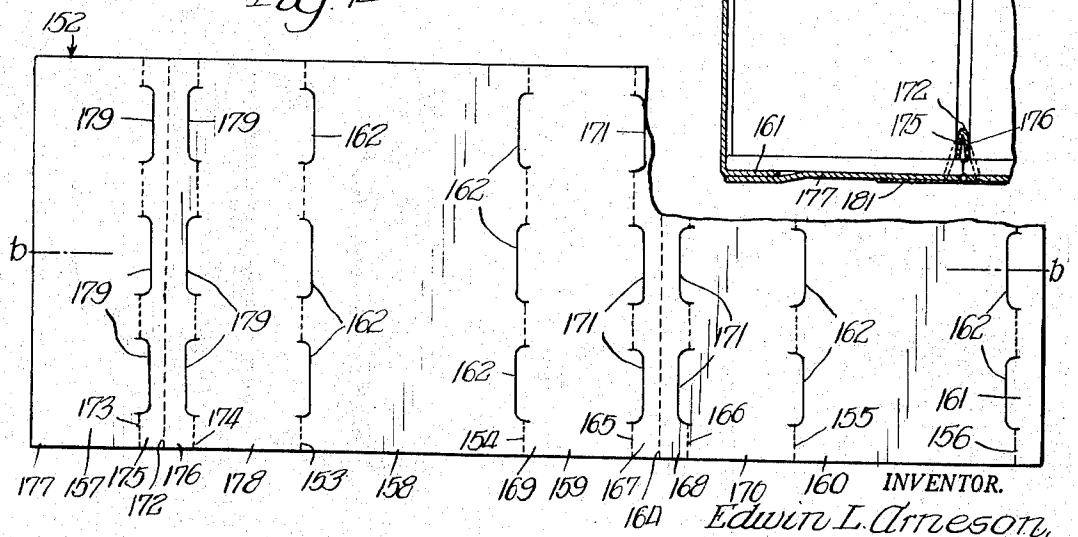


Fig. 11



INVENTOR.
Edwin L. Arneson,
BY
Cromwell, Greist & Warden
Attys

United States Patent Office 3,372,800 Patented Mar. 12, 1968

3,372,800

ARTICLE CARRIER

Edwin L. Arneson, Morris, Ill., assignor to Federal Paper Board Company, Inc., Bogota, N.J., a corporation of New York

Filed Sept. 13, 1961, Ser. No. 137,892
11 Claims. (Cl. 206—65)

This invention relates to packaging and is more particularly concerned with improvements in a package unit comprising a tubular carton or carrier and a plurality of cylindrical articles such as cans of a beverage or the like which are arranged in row formation therein.

In the marketing of canned products, such as beer, soft drinks and similar materials, various packaging units have been developed which are characterized by an open ended tube formed by wrapping a properly cut and creased paperboard blank tightly about a group of the cans, with the cans arranged in row formation generally two rows of three cans each. Many of these package units have been used extensively but most of them have not been found entirely satisfactory because adequate provision is not made for retaining the cans in the wrapper, particularly the end cans in the rows, so as to prevent their dropping out accidentally with ordinary handling of the carrier or package unit.

It is a general object, therefore, of the present invention to provide a can carrier or carton which is fabricated with maximum economy of materials from a single sheet of cardboard or the like and which is cut and scored so that it may be wrapped around an assembly of at least two rows of cans so as to form an open ended tube with adequate provision for firmly anchoring the cans so as to hold them from movement out of the open ends of the carton.

It is a further object of the invention to provide a can carrier of the type in which a cut and scored paperboard blank is tightly wrapped about a double row assembly of cans with provisions for anchoring the cans against movement out of the ends of the carrier by firmly anchoring inner edge portions of the cans, at least at one end thereof, in recesses in a partition forming member of outwardly opening, V-shaped section which extends inwardly of a container wall disposed in face engagement with the cans at one end thereof.

It is another object of the invention to provide a can carrier of the type which is formed by a paperboard blank cut and scored so as to fold about two or more rows of cans with a longitudinal partition member which is integral with the container wall at one end of the cans, which is folded inwardly thereof so as to extend longitudinally of the carrier between the rows of cans, and which is provided with apertures for engaging therein end edge portions of the cans.

It is still another object of the invention to provide a can carrier which is formed from a single sheet of paperboard or like sheet material cut and scored to provide, when wrapped about a group of at least two rows of cans, an open ended sleeve with a top panel, a bottom panel and side panels, and a longitudinal partition member integral with either the top or bottom panel which is folded inwardly so as to extend between the rows of cans and with cut out connecting flaps which are integral with one of the two panel sections resulting from the infolding of the longitudinal partition member, and which are adhesively secured to the adjoining panel section so as to tie together the two rows of cans with the end edges of the cans engaging in recesses provided in the longitudinal partition member between the same thereby to form a tightly wrapped package unit in which the cans are firmly anchored against movement out of the open ends of the carrier.

It is a further and more specific object of the invention to provide a can package, of a type which comprises an assembly of two rows of three cans each disposed within an open ended tubular container which is formed from a single sheet of paperboard or like material cut and scored so that it may be wrapped tightly about the rows of cans, wherein longitudinally extending can separating and anchoring partition forming panel members are provided which are integral with the top and bottom walls of the container, which are folded inwardly so that they are disposed between the rows of cans in the form of longitudinally extending ribs having a V-shaped cross section and which have apertures cut therein for receiving top and bottom edge portions of the cans so as to firmly anchor the cans against movement either vertically or longitudinally of the container, and wherein the rows of cans are tightly tied together by connecting flaps which are cut from the top and bottom container walls, with the flaps each extending in the plane of the wall from which it is taken so as to bridge the partition members and secure together in connected wall forming relation the two wall sections which result when the partition forming panel members are folded inwardly thereof.

It is another object of the invention to provide in a packaging unit which comprises two rows of cans enclosed in a tubular wraparound carrier, center longitudinal partition members extending inwardly of the top and bottom carrier walls and between the rows which partition members are formed by infolded panels providing a generally V-shaped cross section with apertures in the panels in which edge portions of the chines of the cans are seated so that portions of the panels at the apertures are curved around the cans and held under tension against the can bodies and beneath the chines thereby preventing movement of the cans in either vertical or horizontal directions.

These and other objects and advantages of the invention will be apparent from a consideration of the several forms of packaging unit which are shown by way of illustration in the accompanying drawings wherein:

FIGURE 1 is a perspective view of a packaging unit comprising two rows of three cans each enclosed in a tubular carton or carrier which embodies therein the principal features of the invention;

FIGURE 2 is an end elevation of the packaging unit of FIGURE 1;

FIGURE 2A is a fragmentary section taken on the line 2A–2A of FIGURE 2, to an enlarged scale;

FIGURE 3 is a cross section taken on the line 3—3 of FIGURE 1;

FIGURE 3A is a fragmentary section taken on line 3A—3A of FIGURE 1, to an enlarged scale;

FIGURE 4 is a partial section taken on the line 4—4 of FIGURE 2;

FIGURE 5 is a partial section taken on the line 5—5 of FIGURE 2;

FIGURE 6 is a plan view of the inside face of the blank of paperboard which is cut and scored preparatory to forming the carrier for the packaging unit of FIGURE 1;

FIGURE 7 is a top plan view of a modified form of the packaging unit;

FIGURE 8 is a bottom plan view of the packaging unit of FIGURE 7;

FIGURE 9 is a plan view of the inside face of the blank of paperboard which is cut and scored preparatory to forming the carrier for the packaging unit of FIGURE 7;

FIGURE 10 is a perspective view of another modified form of the packaging unit;

FIGURE 11 is a plan view of the inside face of the

blank of paperboard which is cut and scored preparatory to forming the carrier for the packaging unit of FIGURE 10;

FIGURE 12 is a perspective view of a further modified form of the packaging unit;

FIGURE 13 is a partial cross section taken on the line 13—13 of FIGURE 12; and

FIGURE 14 is a plan view with portions broken away of the inside face of the blank of paperboard which is cut and scored preparatory to forming the carrier for the packaging unit of FIGURE 12.

Referring to FIGURES 1 to 6 of the drawings, there is illustrated a packaging unit which embodies the principal features of the invention as applied to the packaging of six beverage cans of the type which have chines at each end of the can. The packaging unit comprises an assembly or group of the cans **10** arranged in two rows of three cans each in side-by-side relation and enclosed in a wrapper or carrier **11** formed from a single blank of paperboard or other material which is relatively flexible and bendable, which is capable of being cut and folded into tubular form as shown and which has sufficient strength and rigidity to support the cans which it is designed to receive.

The open ended, tube-like carrier or carton **11** is formed from a paperboard blank **12** which is cut and creased or scored as illustrated in FIGURE 6. The blank **12** is of elongate, generally rectangular form and is divided by parrallel, longitudinally spaced, transverse score lines **13**, **14**, **15** and **16** into five sections **17**, **18**, **19**, **20** and **21**. The blank sections **18** and **20** constitute a pair of side wall forming panels which are of identical size and shape. The blank section **19** which separates the two side wall forming panels **18** and **20** constitutes a top wall and top longitudinal row separator or partition member and the section **17** at the one end of the blank which has the same overall dimensions as the section **19** constitutes a bottom wall and bottom longitudinal row separator or partition member. The relatively narrow section **21** at the other end of the blank forms a connecting glue flap. The blank is cut along its side edges as illustrated so as to reduce the amount of material employed to a minimum and provide for nesting of the blanks in cutting the same from a wide web or sheet. The two side wall forming panels **18** and **20**, which are cut away at the side edges of the blank, have a dimension in the transverse direction of the blank which corresponds approximately to twice the diameter of a can **10**.

The blank end section **17** is subdivided by transversely extending medial score line **22** and equally spaced parallel score lines **23** and **24** extending along opposite sides thereof so as to define between the score lines two relatively narrow partition forming panels **25** and **26** and, on opposite sides of the score lines, top wall forming panels **27** and **28** of equal size. Two pairs of generally C-shaped slits **29** and **29'** of identical character are cut in the blank adjacent the opposite sides thereof so as to interrupt the score lines **23** and **24** as shown. The slits **29** and **29'** are spaced equal distances inwardly of the side edges of the blank, the exact location of these slits being determined by the size of the cans **10** so that when the cut and scored blank **12** is wrapped around the assembly of cans portions of the chines of the end cans will be received in the apertures formed in the panels **25** and **26** by cutting therein the slits **29** and **29'**. A pair of panel connecting flaps or glue tabs **30** and **31** are cut in the center of the blank section **17** in the area between the two score lines **23** and **24** which tabs are formed by U-shaped cuts made so that the bight portion of the U coincides with a portion of the one score line **23** while the ends of the legs of the U terminate at the score line **24** so that the portions of the two panels **25** and **26** which extend between the tabs **30** and **31** and the side edges of the blank are free to fold upon themselves about the center score line **22**. The glue tabs **30** and **31** are laterally spaced and longitudinal partition panel portions **32** and **33** extend between the same which are reduced in width by offsetting inwardly of the score lines **23** and **24** the center portions **34** and **35** of these score lines. The panel portions **32** and **33** are adapted to hinge on the score lines **34** and **35** and the latter are interrupted by C-shaped cutting lines **36** and **37** which face in opposite directions with the leg portions thereof terminating at the score lines **34** and **35** so as to form apertures in the panels **32** and **33** for receiving bottom edge portions of the center pair of cans.

The blank section **19** which forms the top wall and top longitudinal partition is subdivided by a median score line **38** and a pair of parallel score lines **39** and **40** equally spaced on opposite sides thereof so as to define between these score lines two relatively narrow partition forming panels **41** and **42** and on opposite sides of the score lines top wall forming panels **43** and **44**. Two pairs of C-shaped slits **45** and **45'** of the same character as the slits **29** and **29'** are cut in the blank so as to interrupt the score lines **39** and **40** as shown. The slits **45** and **45'** are spaced inwardly of the side edges of the blank the same distance as the corresponding slits **29** and **29'** in the bottom wall forming blank section **17**. These slits **45** and **45'** provide apertures for receiving top edge portions of the cans when the blank is wrapped about the can assembly. A connecting glue flap **46** is cut in the center portion of the blank section **19** so as to extend across the panels **41** and **42** and into the top wall panel **44**. The glue tab **46** is cut on parallel, transversely spaced lines **47** and **48** and on a recurved transverse line **49** connecting the ends of the lines **47** and **48**, the line **49** defining the free edge of the tab **46** and the latter being adapted to hinge about the center portion **50** of the transverse score line **39**. At the free edge of the tab **46** the cutting line **49** bends inwardly or in the direction of the hinge line **50** a sufficient distance to permit a small separating tab **51** for the center cans to be cut in the blank so as to hinge about a transverse score line **52** which is parallel with and offset inwardly relative to the score line **40** in the direction of the medial score line **38**. The score line **52** is interrupted at the center by a small C-shaped cut **53** opening in the direction of the panel **44** so as to provide an aperture for receiving top edge portions of the center cans. A pair of bendable tabs **54** and **55** are cut in the corners of the connecting flap **46** and extend into the panel **43** so as to hinge about the transversely spaced, longitudinal score lines **56** and **57**. A tear out section is provided in the panel **43** by cutting therein the tab **58** and the weakening or tearing lines or slits **59**. This completes the cutting and scoring of the blank which can, of course, be shipped to the user in the flat condition shown in FIGURE 6.

In assembling the carton or carrier forming wrapper blank **12** with the cans **10**, the blank **12** is folded into tubular form about an assembly of the cans **10** which comprises three cans in each of two rows in side-by-side relation with the two rows separated longitudinally. The rows of cans are placed on either the bottom or top wall forming panels **27**, **28** or **43**, **44** and the adjoining panels are folded about the assembly with the glue flap **21** overlapping and being adhesively or otherwise secured to the margin of the panel **27** at the end of the blank. The panel connecting or locking flap or tab **46** on the top forming section **19** of the blank and the panel connecting or locking flaps or tabs **30**, **31** on the bottom forming section **17** of the blank are folded out of the plane of the panels from which they are cut so as to permit application of glue to the portions of the inside faces thereof which will overlap the panels **27** and **44**, to which they are secured in the finished package. The package assembly is then compressed laterally and at the same time the can separating or partition forming panels **25**, **26**, **32**, **33**, **41**, **42** and **51** are turned inwardly towards the center of the assembly so as to extend between the two rows of cans at the top and bottom of the unit. When the two rows of cans are brought tightly together the panel connecting or locking flaps **30**, **31** and **46** are turned onto the bottom

and top wall panels 27 and 44 and secured thereto so as to form a tight package unit with the cans firmly anchored at the center of the package and locked in position so that they are restrained against movement in both vertical and longitudinal directions.

A modified form of the packaging unit is illustrated in FIGURES 7 to 9 of the drawings. In this form, two rows of cans 70 (FIGURES 7 and 8) are enclosed in an open ended tubular carrier or carton 71 which is formed by wrapping around the assembly of cans the paperboard blank 72, the latter being cut and scored as illustrated in FIGURE 9.

The blank 72 is of elongate, generally rectangular form and is divided by parallel, longitudinally spaced, transverse score lines 73, 74, 75 and 76 into five sections 77, 78, 79, 80 and 81. The blank sections 78 and 80 constitute a pair of side wall forming panels which are of identical size and shape. The blank section 79 which separates the two side wall forming panels 78 and 80 constitutes the top wall and top longitudinal row separator or partition member. The section 77 at the one end of the blank which has the same overall dimensions as the section 79 constitutes a bottom wall and bottom longitudinal row separator or partition member. The relatively narrow section 81 at the other end of the blank forms a connecting lock flap which is adapted to be secured to the end margin of the blank section 77. The blank 72 is cut along its side edges as illustrated so as to reduce the amount of material employed to a minimum and provide for nesting of the blanks when cutting the same from a wide web or sheet. The two side wall forming panels 78 and 80, which are cut away at the side edges of the blank, have a dimension in a transverse direction of the blank which corresponds approximately to twice the diameter of the can 70. The blank is otherwise cut and scored so that it is symmetrical about a longitudinal center line *a—a*.

The end section 77 of the blank is subdivided by a transversely extending medial score line 82 and equally spaced parallel score lines 83 and 84 extending along opposite sides thereof so as to define between the score lines two relatively narrow partition forming panels 85 and 86 and, on opposite sides of these score lines, bottom wall forming panel sections 87 and 88 of approximately equal size. Two pairs of generally C-shaped slits 89 and 89′ of identical character are cut in the blank adjacent the opposite sides thereof so as to interrupt the score lines 83 and 84 as shown. The slits 89 and 89′ are spaced equal distances inwardly of the side edges of the blank, the exact location thereof being determined by the size of the cans so that when the cut and scored blank 12 is wrapped around the assembly of cans portions of the chines of the end cans will be received in the apertures formed in the panels 85 and 86 by cutting therein the slits 89 and 89′. A panel connecting glue tab 90 is cut in the center of the blank section 77 in the area between the two score lines 83 and 84 which tab is formed by a U-shaped cut which is made so that the bight portion of the U coincides with a portion of the score line 83 while the ends of the legs of the U terminate at the score line84 whereby the portions of the two panels 85 and 86 which extend between the glue tab 30 and the side edges of the blank are free to fold upon themselves about the medial score line 82. The end marginal portion of the blank section 77 or the panel 87 is provided with three locking apertures comprising the center aperture 91 and the two equally spaced side apertures 92 and 92′ which are adapted to cooperate with locking tab elements provided on the connecting flap 81 at the other end of the blank. The cut which defines the innermost edge or base of each of the apertures 91, 92 and 92′ and which is indicated at 95 in the center aperture 91 is extended at its ends beyond the side edges of the aperture as shown. At the other end of the blank and in the blank section 81 three locking tab formations 93, 94 and 94′ are provided. The locking tab formations are each formed in the same manner and hinged on a transverse score line 96 which parallels the score line 76 and which is spaced therefrom in the direction of the end of the blank. Since the locking tab formations are formed in an identical manner only the center one will be described in detail. The main body of the tab formation 93 extends between the transverse score line 96 and a parallel, outwardly spaced score line 97. An outer locking tongue 98 of semi-circular shape is hinged on the score line 97 and provided with inwardly projecting slits 99. An inner locking tongue 100 is formed by a C-shaped cut along the score line 96 which extends into the base portion of the panel 81.

The blank section 79 which forms the top wall and top longitudinal partition is subdivided by a medial score line 101 and a pair of parallel score lines 102 and 103 equally spaced on opposite sides thereof so as to define between these score lines two relatively narrow partition forming panels 104 and 105 and, on opposite sides of the score lines, top wall forming panel sections 106 and 107. Two pairs of C-shaped slits 108 and 108′ of the same character as the slits 89 and 89′ are cut in the blank so as to interrupt the score lines 102 and 103 as shown. The slits 108 and 108′ are spaced inwardly of the side edges of the blank the same distances as corresponding slits 89 and 89′ in the bottom wall forming blank section 77. These slits 108 and 108′ provide apertures for receiving top edge portions of the cans when the blank is wrapped about the can assembly. A connecting glue flap 110 is cut in the center portion of the blank section 79 so as to extend across the panels 104 and 105 and into the top wall panel section 107. The glue flap 110 is cut on parallel, transversely spaced lines 111 and 112 and on a transverse line 113 connecting the ends of the lines 111 and 112, the line 113 defining the free edge of the flap 110 and the latter being adapted to hinge about the center portion 114 of the transverse score line 102. A pair of bendable tabs 115 and 115′ are cut in the corners of the connecting flap 110 and extend into the panel section 106 so as to hinge about the transversely spaced, longitudinal score lines 116 and 116′. A tear out section is provided in the panel 106 by cutting therein the tab 117 and the weakening or tearing lines or slits 118.

In assembling the package unit the blank 72 is wrapped about the cans 70 which are arranged in two rows of three cans each in side-by-side relation on the top or bottom wall forming sections of the blank with the two rows of cans spaced apart a predetermined distance. The adjoining wall panels are folded about the assembly with the connecting flap 81 overlying the bottom wall panel section 87. The locking tab formations 93, 94 and 94′ are engaged in the locking apertures 91, 92 and 92′ to connect the panel members 81 and 87 so as to form an open ended tube. The connecting flap 110 on the top wall forming section 79 and the connecting flap 90 on the bottom wall forming section 77 of the blank are folded out of the plane of the panels from which they are cut so as to permit application of glue to the portions of the inside faces thereof which will overlap the panels 107 and 87 to which they are secured in the finished package. The package assembly is then compressed laterally and at the same time the can separating or partition forming panels 85, 86 and 104, 105 are turned down towards the center of the assembly so as to extend between the two rows of cans at the top and bottom of the unit. When the two rows of cans are brought tightly together the connecting flaps 90 and 110 are turned down onto the bottom and top wall members 87 and 107 and secured thereto so as to form a tight package unit with the end cans firmly anchored or locked in position by engagement of top and bottom edge portions in the apertures provided in the center rib forming panel members 85, 86 and 104, 105 whereby the cans are effectively restrained against movement in both vertical and longitudinal directions.

A further modification of the invention is illustrated

in FIGURES 10 and 11. In this form of the packaging unit, an assembly of cans **120** comprising two rows of three cans each are enclosed in a tubular carton **121** which is formed from a paperboard blank **122**. The blank **122** is of elongate, generally rectangular form and is divided as shown in FIGURE 11 by parallel, longitudinally spaced, transverse score lines **123**, **124**, **125** and **126** into five sections **127**, **128**, **129**, **130** and **131**. The blank sections **128** and **130** constitute a pair of side wall forming panels which are of identical size and shape and which have a width corresponding approximately to the length of a row of cans. The blank section **129** which separates the two side wall forming panels **128** and **130** constitutes a bottom wall and a bottom longitudinal row separator or partition member. The two end sections **127** and **131** of the blank are adapted to be overlapped to form the top wall of the carrier.

The transverse score lines **123**, **124**, **125** and **126** which divide the blank into wall forming panels constitute hinged corner connections between the side wall forming panels **128**, **130** and the bottom and top wall forming panels **129**, **127** and **131**. The score lines **123**, **124**, **125** and **126** are each interrupted by generally C-shaped cuts **132** which are spaced transversely of the blank in accordance with the spacing of the cans **120** and which are arranged to form aligned pairs of apertures **133** in the top and bottom edges of the side wall forming panels **128** and **130** for receiving oppositely disposed portions of the chines at each end of the cans, the wrapper being folded tightly around the cans so that the chine portions are seated in the apertures **133**.

The center section **129** of the blank is subdivided by a transversely extending medial score line **134** and equally spaced parallel score lines **135** and **136** extending along opposite sides thereof so as to define between the score lines two relatively narrow partition forming panels **137** and **138** and, on opposite sides of the score lines, bottom wall forming panel sections **139** and **140** of equal size. Two pairs of apertures **141** and **141'** of identical character are cut in the blank adjacent the opposite sides thereof so as to interrupt the score lines **135** and **136** as shown. The apertures **141** and **141'** are spaced equal distances from the sides of the blank, the exact location depending upon the size of the cans, so that when the blank is wrapped about the assembly of cans portions of the chines of the end cans will be received in these apertures. A panel connecting glue tab **142** is cut in the center of the blank section **129** in the area between the score lines **135** and **136** which tab is formed by a U-shaped cut which is made so that the bight portion of the U coincides with a portion of the score line **135** while the ends of the legs of the U terminate at the score line **136** whereby the portions of the two panels **137** and **138** which extend between the glue tab **142** and the side edges of the blank are free to fold upon themselves about the medial score line **134**. The end marginal portions of the blank sections **127** and **131** are cut out at **143**, **143'** and **144**, **144'** to provide finger holes for lifting the carrier.

In assembling the package unit the cans **120** are positioned in row forming relation on the bottom forming section **129** of the blank and the adjoining wall panels are folded about the assembly in the same manner as described with reference to the form of the carrier illustrated in FIGURES 7 to 9 so that portions of the bottom chines of the end cans are trapped in the apertures **141** and **141'** while other portions on the opposite sides of the cans are seated in the bottom chine receiving openings **133**. Also, portions of the top chines are seated in the top chine receiving openings **133** in the side walls **128** and **130**. Thus the end cans in the two rows are firmly anchored at both sides at the bottom and on the outside at the top. While the center cans are anchored at the outside edges only they are restrained against movement by the firm anchoring of the end cans.

A still further modification of the invention is illustrated in FIGURES 12 to 14. In this form of the packaging unit, an assembly of cans **150**, comprising two rows of three cans each, is enclosed in a tubular carton **151** which is formed from a paperboard blank **152**. The blank **152** is of elongate, generally rectangular form and is cut and scored as shown in FIGURE 14 so that it is symmetrical about the longitudinal center line *b—b*. The blank **152** is divided by parallel, longitudinally spaced, transverse score lines **153**, **154**, **155** and **156** into five sections **157**, **158**, **159**, **160** and **161**. The blank sections **158** and **160** constitute a pair of side wall forming panels which are of identical size and shape and which have a width corresponding approximately to the length of a row of cans. The blank section **159** which separates the two side wall forming panels **158** and **160** constitutes an end wall connecting corresponding edges of the side walls and also a longitudinal row separator or partition member. For convenience in description, it may be designated the top wall. The blank section **157** at the one end of the blank constitutes the other end wall, which may be designated the bottom wall, and also a longitudinal row separator or partition member. The blank section **157** has its margin connected to the glue flap forming section **161** at the other end of the blank when the carrier is assembled.

The transverse score lines **153**, **154**, **155** and **156** which divide the blank into wall forming panels constitute hinge forming corner connections between the side wall panels **158**, **160** and the bottom and top or end wall forming panels **157** and **159**. The score lines **153**, **154**, **155** and **156** are each interrupted by generally C-shaped cuts **162** which are spaced transversely of the blank in accordance with the spacing of the cans **150** and which are arranged to form aligned pairs of apertures **163** in the top and bottom edges of the side wall forming panels **158** and **160** for receiving oppositely disposed outer portions of the chines at each end of the cans, the wrapper being adapted to be folded tightly around the cans so that the chine portions are seated in the apertures **163**.

The center section **159** of the blank is subdivided by a transversely extending medial line **164** and equally spaced, parallel score lines **165** and **166** extending along opposite sides thereof so as to define between the score lines two relatively narrow partition forming panels **167** and **168** and, on opposite sides of the score lines, bottom wall forming panel sections **169** and **170**. The score lines **165** and **166** are each interrupted by generally C-shaped cuts **171** which are identical with the C-shaped cuts **162** and are also aligned with the same in the longitudinal direction of the blank. The C-shaped cuts **171** face in the direction opposite that of the corresponding cuts **162** in the adjacent edge forming score lines **154** and **155**. The end panel **157** of the blank is subdivided in the same manner as the center panel **159** by medial score line **172** and equally spaced parallel score lines **173** and **174** extending along opposite sides of the score line **172** so as to define between the score lines two relatively narrow partition forming panels **175** and **176** and on opposite sides of the score lines the bottom wall forming panel sections **177** and **178**. The score lines **173** and **174** are interrupted by C-shaped cuts **179** which are aligned in the longitudinal direction of the blank with the cuts **162** and **171** and which are arranged in the same manner as the cuts **171**.

In assembling the package unit of FIGURES 12 to 14, the cans **150** are positioned in row forming relation on either the bottom or top forming section of the blank and the adjoining wall forming panels are folded about the assembly in the same manner as described with reference to the other forms of the carrier illustrated so that the blank is first formed into a tube and the two rows of cans are drawn into tight engagement by pressure on the outer sides while the longitudinal partition panels **167**, **168** at the top of the package and **175**, **176** at the bottom of the package are folded inwardly. While the package is compressed strips of sealing tape **180** and

181 are adhered to the top and bottom wall forming panels **169**, **170** and **177**, **178** so as to tie the respective pairs of panels together into wall forming relation while the cans are held so that portions of the chines at the top and bottom edges of the oppositely disposed pairs of cans are in engagement and seated in the apertures formed by the cuts **171** and **179** in the center longitudinal partition panels. The portions of the longitudinal partition panels **167**, **168** and **175**, **176** which are adjacent the cuts **171** and **179** are wrapped or bent about the walls of the cans immediately adjacent the chines so as to tightly grip the cans and anchor them against both longitudinal and vertical movement in the center of the package. The outside edges of the chines are seated in the apertures at the corners of the carrier and assist in holding the cans firmly anchored in the carrier.

While the outside edge apertures have been shown only in the modifications of FIGURES 10 to 14, like apertures may be used in the other forms of the invention, if desired, the side walls, of course, being lengthened as required. Also other combinations of the several longitudinal partition structures may be employed in the top and bottom walls of the carrier.

The cut out **58** and tearing lines **59** in FIGURE 1 facilitate removal of the cans from the package. When the finger is inserted in the hole resulting from the tear out tab **58** and the material between the tearing lines **59** is torn loose from the top wall panel **43**, the two panels **43** and **44** are free to move apart which permits the center longitudinal partition to unfold or open up and release the cans so that they may be readily removed out of the ends of the carrier.

In describing the several forms of the carrier which are illustrated, particular materials and specific details of construction have been referred to. However, it will be understood that other materials and different structural details may be resorted to within the spirit of the invention.

I claim:

1. A can package comprising two rows of cans having chines at opposite ends thereof and a paperboard carton tightly enclosing the cans so as to form an open ended tubular carrier with portions of the carton walls at the ends of the cans being folded inwardly between the ends of the cans so as to form longitudinal partitions each having an outwardly opening V-shaped cross section and said partitions having apertures cut therein which receive portions of the chines of the cans in each row thereof whereby to firmly anchor the cans against movement in both vertical and longitudinal directions and to restrain the cans against movement out of the open ends of the carrier.

2. A can package comprising two rows of cans having chines at opposite ends thereof and a paperboard wrapper tightly drawn about the sides and ends of the cans so as to form an open ended tubular carrier with the walls thus formed at the ends of the cans having pairs of narrow integral panels taken from the center portions thereof which are folded inwardly of the ends of the cans so as to form integral double ply, longitudinal partitions, said partitions having apertures cut therein which receive portions of the chines of the cans at each end and in each row thereof, and means overlying said partitions and connecting the remaining portions of the walls from which said narrow panels are taken in wall forming relation whereby to firmly secure the cans against movement in both vertical and longitudinal directions and to prevent accidental dislodgement of the cans from the open ends of the carrier.

3. A can package comprising two rows of cans having chines at opposite ends thereof and a carton formed by a paperboard sheet wrapped tightly about the sides and ends of the cans with central portions of the walls thus formed at the ends of the cans being folded inwardly of the ends of the cans so as to form longitudinal partitions each having an outwardly opening V-shaped cross section, said partitions having apertures cut therein which receive portions of the chines of the cans in each row thereof, and connecting tab members cut from one of the two wall sections resulting from infolding the longitudinal partitions and secured to the other of said wall sections so as to bridge the partition and tie the two wall sections together whereby to firmly anchor the cans against movement in both vertical and longitudinal directions and to restrain the cans against movement out of the open ends of the carrier.

4. In a package for an assembly of cans of the type which have chines at each end thereof, an open ended tubular carton of paperboard or similar bendable material, said carton having top, bottom and side walls adapted to extend along the ends and sides of two rows of cans enclosed therein, said carton having a longitudinally extending can separating and anchoring partition projecting inwardly of the top and bottom walls between the two rows of cans, each of said top and bottom walls comprising two panel sections and each said longitudinally extending partition comprising a pair of relatively narrow, inwardly folded and hingedly connected panels which diverge outwardly so as to provide the partition with a V-shaped cross section and which are integrally hinged to each other and to the two sections of the respective wall from which they are infolded, each of said panels having chine engaging apertures in which edge portions of the cans are seated so as to firmly anchor the cans against movement out at the ends of the carton.

5. In a package as recited in claim **4** and connecting tabs in the top and bottom walls which are hinged to one of said wall sections resulting from the infolding of the longitudinal partition and connected to the other of said wall sections.

6. A package comprising an assembly of two rows of cylindrical containers and a folded paperboard carrier enclosing the assembly which carrier comprises a pair of side wall forming members and connecting wall forming members extending between the top and bottom edges of the side wall forming members, at least one of said connecting wall members having two panels hinged along their outer edges to the respective side wall forming members, a relatively narrow longitudinal center partition of outwardly opening V-shaped cross section which center partition is formed by infolding portions of said one connecting wall member, said infolded panel portions having apertures in which end edge portions of said containers are seated, and means connecting the inner margins of said two panels and extending in bridging relation across said longitudinal partition for holding said two panels in wall forming relation with the two rows of containers tightly bound together and restrained against movement out of the carrier.

7. A package comprising an assembly of two rows of cylindrical cans and a folded paperboard carton enclosing the assembly which carbon comprises a pair of side wall members and connecting wall members extending between the top and bottom edges of the side wall members, at least one of said connecting wall members having two panels hinged along their outer edges to the respective side wall forming members and connected at their inner edges by an integral, longitudinal partition which is formed by infolding narrow inner portions of said two panels, said infolded panel portions being disposed in outwardly diverging planes and providing the partition with a V-shaped cross section, said infolded panel portions having apertures in which end edge portions of said containers are received, and panel connecting flap means integral with one of said two panels and secured to the other of said two panels, said flap means extending across said longitudinal partition and holding said two panels in wall forming relation with the two rows of containers tightly bound together and firmly anchored against movement in the carton.

8. A package comprising an assembly of two rows of cans and a paperboard carrier folded tightly about the assembly which carrier comprises a pair of side wall members and connecting wall members extending between the top and bottom edges of the side wall members, said connecting wall members each comprising two panel sections hinged along their outer edges to the respective side wall members and integrally connected at their inner edges to a relatively narrow longitudinal partition of V-shaped cross section which portion extends inwardly of said connecting wall member and is formed by infolding adjacent portions at the inner edges of the two panels of said connecting wall member, said infolded panel portions having apertures in which end edge portions of at least the end cans of both rows thereof are seated, and one or more glue flaps connecting said two panels adjacent their inner edges which glue flaps extend across said longitudinal partition for holding said partition forming panel portions in infolded relation and said two panels in wall forming relation with the two rows of cans tightly bound together and restrained against movement out of the carrier.

9. A package as recited in claim 8 and a single infolded tab integral with one of said two wall forming panels and extending in partition forming relation between the center cans of the two rows thereof.

10. A package comprising an assembly of two rows of cylindrical cans and a folded paperboard carrier enclosing the assembly which carrier comprises a pair of side wall forming members and connecting wall forming members extending between the top and bottom edges of the side wall forming members, said connecting wall members each having two panel sections hinged along their outer edges to the respective side wall forming members and connected at their inner edges by a relatively narrow longitudinal partition of V-shaped cross section which is formed by infolding adjacent portions of said two panels, said infolded panel portions being disposed between the rows at the ends of the cans and having apertures in which end edge portions of the cans are seated, and means connecting the two panels of each of said connecting wall members and bridging said longitudinal partition for holding said panels in wall forming relation with the two rows of cans tightly bound together and restrained against movement out of the carrier.

11. In a package comprising an assembly of two rows of cans and a folded paperboard carrier enclosing the assembly, said carrier comprising a pair of side wall forming members and top and bottom wall forming members extending between the top and bottom edges of the side wall forming members, said top and bottom wall members each having two panel sections hingedly connected along their outer edges to the respective side wall forming members, said panel sections having a width less than the diameter of the cans and having their inner edges spaced from each other and connected to a relatively narrow longitudinal partition of V-shaped cross section which partition comprises two relatively narrow infolded panels, said infolded panels having formations for engaging edge portions of each of the cans so that movement of the cans either vertically or longitudinally of said partition is prevented, and means connecting said two panel sections and extending in bridging relation across said longitudinal partition for holding said two panel sections in wall forming relation with the two rows of cans tightly bound together.

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JOSEPH R. LECLAIR, *Primary Examiner.*

EARL J. DRUMMOND, GEORGE O. RALSTON, FRANKLIN T. GARRETT, *Examiners.*

J. J. HOEY, *Assistant Examiner.*