Nov. 19, 1968 E. G. MATHEWS 3,411,692

CONTAINER

Filed Nov. 8, 1965 3 Sheets-Sheet 1

Fig. 1

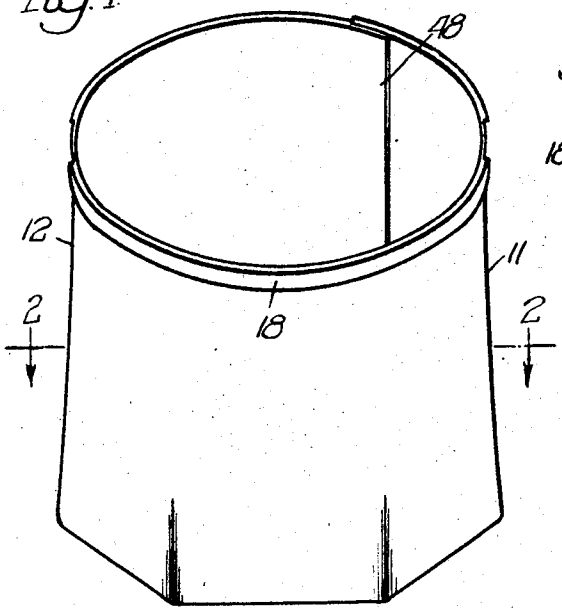


Fig. 3

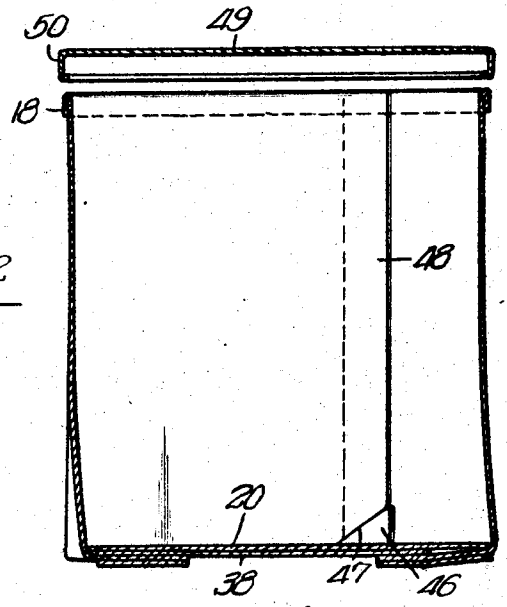


Fig. 2

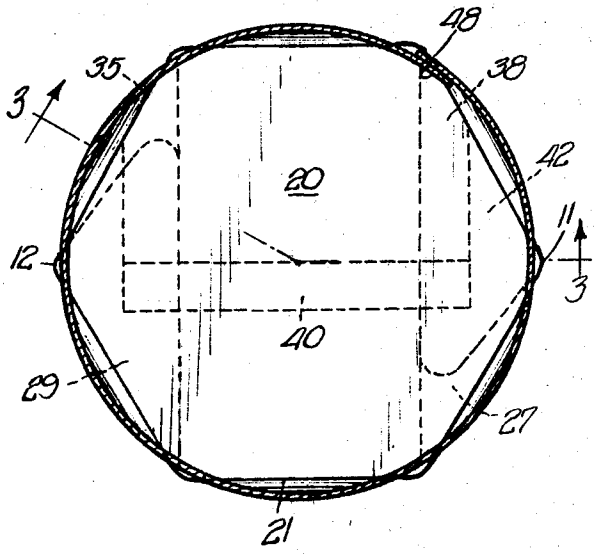
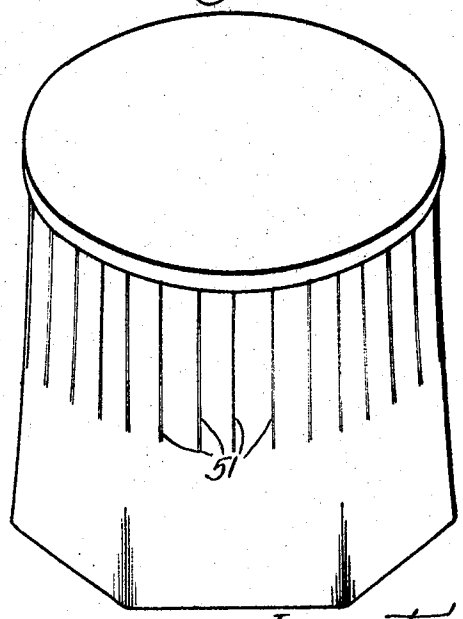


Fig. 7



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Nov. 19, 1968 E. G. MATHEWS 3,411,692

CONTAINER

Filed Nov. 8, 1965 3 Sheets-Sheet 2

Fig. 4

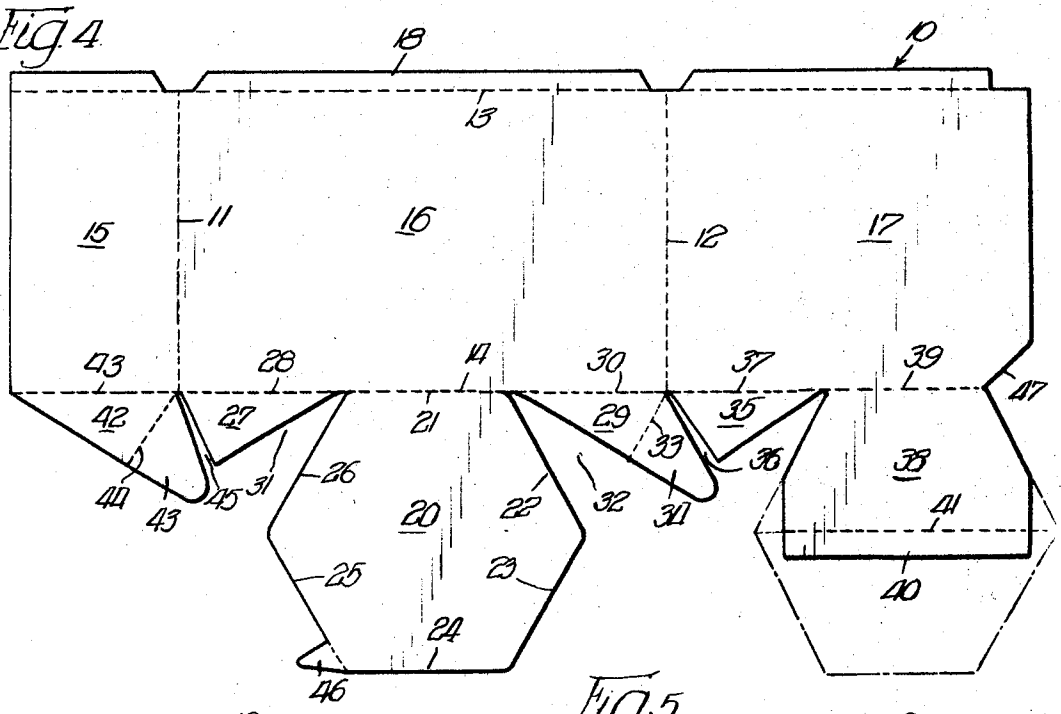


Fig. 5

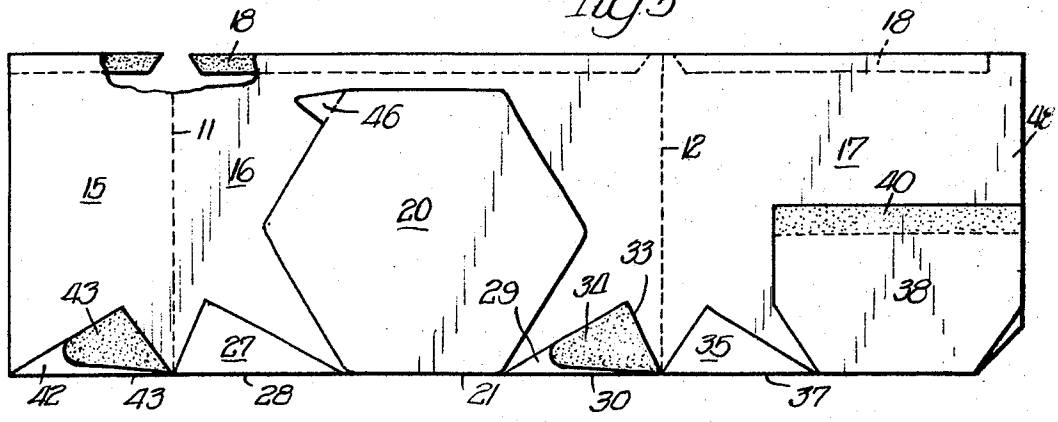
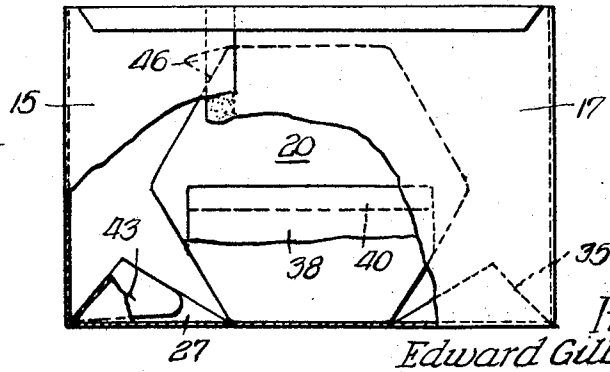


Fig. 6



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Nov. 19, 1968 E. G. MATHEWS 3,411,692

CONTAINER

Filed Nov. 8, 1965 3 Sheets-Sheet 3

Fig. 8

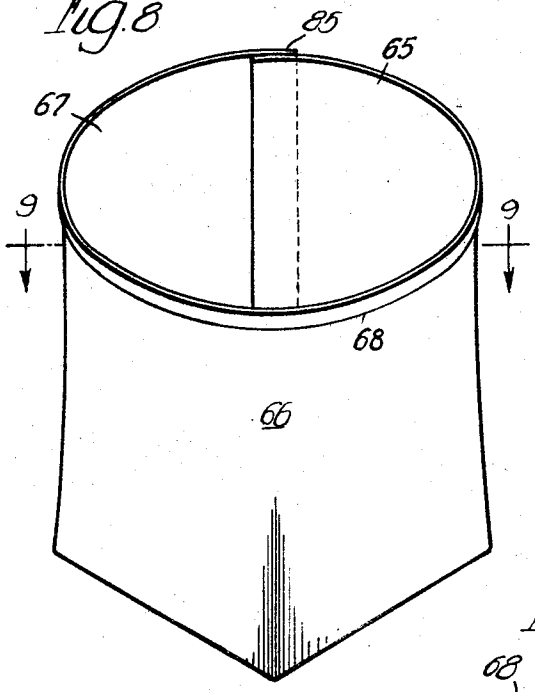


Fig. 9

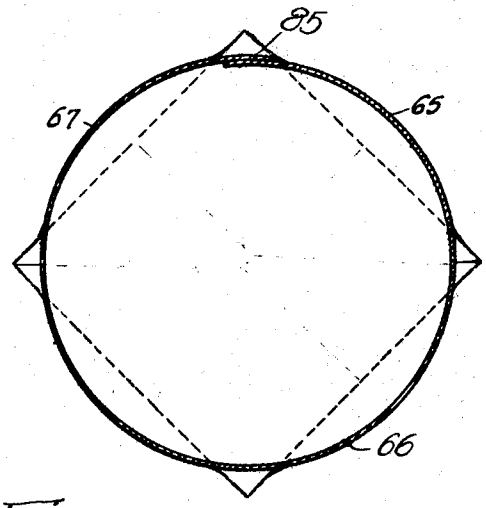


Fig. 10

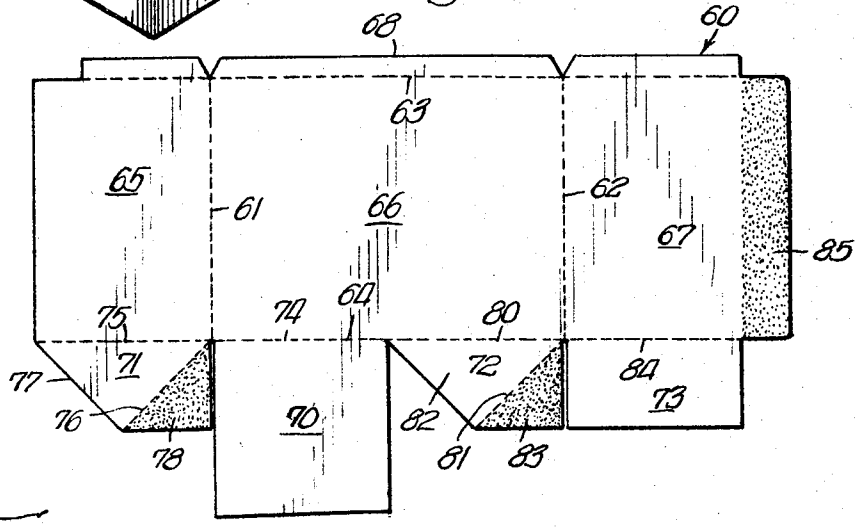
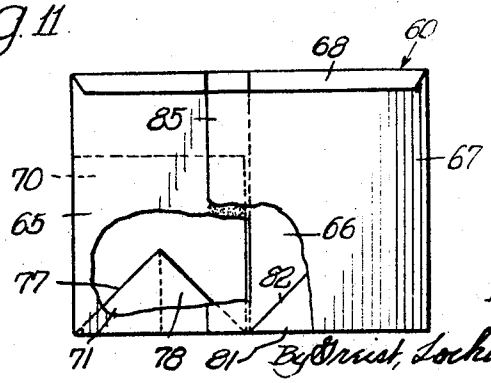


Fig. 11



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United States Patent Office 3,411,692 Patented Nov. 19, 1968

3,411,692

CONTAINER

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Filed Nov. 8, 1965, Ser. No. 506,769
6 Claims. (Cl. 229—21)

ABSTRACT OF THE DISCLOSURE

A collapsible container formed from a cut and scored blank of paperboard or similar foldable sheet material which is characterized by a tubular body, when set up, having an open top with a circular cross section and a bottom wall structure which comprises panels integrally hinged along straight lines to the bottom edge of the body and automatically foldable inwardly between the body side walls when the latter are collapsed.

This invention relates to packaging and is more particularly concerned with improvements in a container which is adapted to be formed of paperboard with a generally cylindrical shape and which is especially useful for the packaging of certain types of products which are in a liquid, semi-liquid or granular state and can be flowed into the open top of the container and subsequently dispensed therefrom.

One form of container which has been used for many years in the packaging of certain products, for example, bulk ice cream, comprises a cylindrical body, initially open at both ends, with a pair of axial scores so that it may be collapsed into flattened condition for shipment and adapted to be opened up to receive top and bottom closures comprising circular discs held within annular metal bands which engage collars on the ends of the tubular body to hold the top and bottom closure discs in position. This container has been widely used in the marketing of ice cream in quantities required for soda fountain or the like use, that is, two and one-half gallons, three, three and one-half or five gallons, for example, and the many advantages of this container, particularly in the packing, shipping, handling and dispensing of ice cream products, have been recognized. However, the use of the metal bands and the separate closure discs greatly increases the cost of storage, shipping and handling of the container. Also, setting up the container requires substantial time and labor, when it is done manually, or the use of relatively expensive setup machinery is required for automatic handling. These and other objections to the container have restricted its use to some extent and it has long been recognized that redesign of this container so that it could be produced and handled with greater economy would be highly desirable. It is an object of the present invention, therefore, to provide a container of this type which may be more economically produced, which retains the desirable features of the cylindrical containers now in use, and which has additional advantages, particularly in the handling of products such as ice cream.

It is a more specific object of the invention to provide an improved container of the type described which is fabricated from a paperboard blank in initially flattened condition and which incorporates at least one end closure comprising integral panels which are connected so as to automatically open up into end closing position upon separating the flattened side walls and forming the same into a substantially tubular body, with an open end adapted to receive a circular closure member which may be held in place by an annular metal band engaging a collar on the side wall or which has a peripheral rim for engaging the collar in a like manner.

It is a still more specific object of the invention to provide a paperboard container which is fabricated from a single blank cut and scored so as to provide a tubular body with closure panels integrally hinged to one end thereof and connected so as to fold upon each other between the side wall forming panels in the collapsed position of the tubular body and when the container is opened up having a periphery which is characterized by straight edge portions hinged to like portions at the bottom edge of the side wall, and with the side wall sections adjoining the hinge lines merging from a flat faced condition into a round faced contour adjacent the open top end of the body.

It is a still further object of the invention to provide a cylindrical container of the type described having bottom forming panels and glue flaps which are initially connected and folded to a flat position where they are embraced by the flattened body side walls and which can be pushed outwardly to form a strong flat bottom in the erected container and which bottom panels include a dust flap for rendering the bottom sufficiently tight to hold viscous semi-fluids, such as, ice creams or powders.

It is another object of the invention to provide a cylindrical container formed from a single blank which is cut and scored to divide the same into side wall forming panels and integral bottom wall forming panels which are hinged to the bottom edge of the side wall panels along straight hinge lines, the container being constructed and arranged initially in a flat folded condition for delivery to the user and being easily opened by spreading the side walls and hinging the bottom into flat operative position in a transverse plane and the container being adapted to be filled and closed by application of a flat circular top or cover of any suitable construction, for example, a disc held within a metal band which engages a collar on the side wall or a disc having a peripheral rim which can be telescoped into or over margins of the body at the mount thereof.

Another object of the invention is to provide a cylindrical container of the type described which is preferably fabricated from paperboard, for example, kraft manila lined chipboard, which is formed from a blank cut and scored to provide a pair of rectangular side wall panels, an end glue flap adapted to be glued to the opposite side edge so as to form a tube when the side wall panels are forced apart, integral bottom forming panels foldable along score lines defining a bottom edge of the side wall and including, in the order named, an outer bottom panel consisting of at least one-half of the bottom area and a glue flap extending from a central score or slit line, a triangular panel, a polygonal panel having a panel glue flap foldable along the score line, a full inner bottom dust panel to which the outer bottom panel is glued so as to fold along a diametrical hinge line, a second triangular panel, and a second polygonal panel having a panel glue flap foldable along a score line, with the glue flap on the side wall panel having a diagonal edge and the inner bottom panel having a triangular locking tab foldable along an edge forming score line so as to bring an oppositely disposed edge into position for engagement with the diagonal bottom edge of the glue flap when the container is erected, thereby to lock the bottom panels in operative position.

Another object of the invention is to provide a container having a cylindrical side wall which is formed from a single paperboard blank, cut and scored so as to provide, when connected, side wall panels which are free at one edge and form, when opened up, a circular top wall sec-

tion with integral bottom wall panels which are hinged to the other edge along straight lines so that when they are folded into operative position they constitute a bottom having a periphery characterized by a plurality of intersecting straight edge portions with the bottom sections of the body side wall which adjoin the bottom straight edge portions tapering upwardly in an outward direction and with intervening side wall portions tapering upwardly in an inward direction from the points of intersection of the straight bottom edge portions whereby the flat faced portions at the bottom margin of the side wall merge into the circular top section thereof and minimum wall contact results when a plurality of the containers are grouped in side-by-side relation.

A further object of the invention is to provide a container having a cylindrical side wall which is formed from a single paperboard blank, cut and scored so as to provide, when connected, side wall panels which are free at one edge and form, when opened up, a circular top wall section with integral bottom wall panels which are hinged to the other edge along straight lines so that when they are folded into operative position they constitute a bottom having a hexagonal periphery with the sections of the body side wall which adjoin the straight edge portions tapering upwardly first in an outward direction and then in an inward direction so as to merge the flat faces at the bottom margin into the circular top section of the body side wall whereby when a plurality of the containers are grouped in side-by-side relation predetermined minimum contact between the side walls of adjoining containers is assured.

These and other objects and advantages of the invention will be apparent from a consideration of the several forms thereof which are hereinafter described and illustrated in the drawings wherein:

FIGURE 1 is a perspective view of a container in set-up condition which embodies therein the principles of the invention;

FIGURE 2 is a horizontal section, taken on the line 2—2 of FIGURE 1;

FIGURE 3 is a vertical section taken on the line 3—3 of FIGURE 2, the view showing a top closure lid in position for application to the open top of the container;

FIGURE 4 is a plan view of a flexible paperboard blank employed in fabricating the container, the view illustrating the manner in which the blank is died out and creased, preliminary to the folding and gluing operations;

FIGURE 5 is a plan view of the blank of FIGURE 4, following initial folding of certain bottom members thereof and showing the application of glue prior to further folding operations;

FIGURE 6 is a plan view, with portions broken away, of the container in its completed flattened out condition;

FIGURE 7 is a perspective view, of a modified form of the container;

FIGURE 8 is a perspective view, of a further modified form of the container;

FIGURE 9 is a horizontal section taken on the line 9—9 of FIGURE 8;

FIGURE 10 is a plan view of the paperboard blank employed in fabricating the container of FIGURE 8, the blank being died out, creased and having glue applied preliminary to the folding and gluing operations; and

FIGURE 11 is a plan view, with portions broken away, of the container in its completed flattened out condition.

The container will be best understood by reference to the preferred manner in which it is formed and set-up. Referring first to FIGURE 4, the improved container is fabricated from a flat blank **10** of flexible paperboard, of suitable gauge or thickness, which is subdivided by parallel, transverse crease lines **11** and **12** and longitudinally extending parallel crease lines **13** and **14** into successive integrally hinged wall forming panels **15**, **16** and **17** which constitute the main portion of the blank

and which are adapted to form the side wall of the container body when setup. An edge reinforcing flap **18** extends along one side margin of the blank outwardly of crease line **13** and is adapted to hinge inward about the longitudinal crease line **13** so as to fold down and be secured against the adjacent outside face thereof. The longitudinal crease line **14** defines a bottom edge of the side wall forming panels **15**, **16** and **17** and forms a hinge line for a series of integral bottom wall or end closure forming panels which extend laterally of the main portion of the blank and of the longitudinally crease line **14**.

Panel **20**, which is the largest of the bottom forming panels and which constitutes an inner dust panel, is hexagonal in shape with six straight sides or edges **21**, **22**, **23**, **24**, **25** and **26** which determine the outline of the bottom wall of the container in setup position. The one side edge **21** of the panel **20** is integrally hinged on a line coinciding with a central portion of the score line **14** which defines the bottom forming edge of the one side wall panel **16**. The panel edges **21**, **22**, **23**, **24**, **25** and **26** are substantially equal in length and this dimension is slightly greater than one-third the longitudinal dimension of the panel **16**. A generally triangular shaped panel or flap **27** extends from the bottom forming edge of the panel **16** at one side of the bottom panel **20** and is hinged to the panel **16** on a line coinciding with the portion **28** of the score line **14**. At the other side of the panel **20** a flap **29** is hinged to the panel **16** along a line coinciding with a portion **30** of the score line **14**. The panels **27** and **29** are separated from the panel **20** by outwardly opening, V-shaped slots **31** and **32** having the apices thereof at the ends of the hinge line **21**. The panel **29** is subdivided by a score line **33** which extends diagonally outwardly from the intersection of the transverse score line **12** with the longitudinal score line **14** and is approximately in alignment with the outer edge **23** of the panel **20**. The two portions of the panel **29** are generally triangular shaped with the outer portion **34** constituting a glue flap or tab adapted to be connected to adjoining panel **35** from which it is separated by a narrow, outwardly opening, V-shaped slot **36**. The panel **35** is generally triangular in shape and is hinged to the bottom forming edge of the side wall panel **17** on a hinge line **37** coinciding with a portion of the longitudinal score line **14** and extending in the neighborhood of one-half of the length of the panel **17** in the longitudinal direction of the blank. A generally rectangular panel **38** extends from the end portion **39** of the score line **14**, laterally of the panel **17**, and this panel has a narrow glue flap **40** extending beyond the score line **41** which is adapted to be hinged about the latter and adhered to the outside face of the bottom wall panel **20**. The score line **41** is parallel with and spaced from the hinge line **39** a distance corresponding approximately to one-half the dimension in the lateral direction of the panel **20**. As indicated in phantom line the panel **38** may be hexagonal and approximately the same size as the panel **20** which in effect extends the glue flap **40**. At the other end of the blank a panel **42** extends laterally of the hinge line **43** which coincides with the end portion of longitudinal score line **14** and defines a bottom edge of the end side wall panel **15**. The panel **42** has a generally triangular extension **43** forming a glue tab which is separated from the main body of the panel by the score line **44**. The glue tab **43** is adapted to be secured to the adjoining triangular shaped panel **27** from which it is separated by an outwardly opening, generally V-shaped slot **45** with the edge of the panel **27** which defines one side of the slot being generally aligned with the edge **25** of the inner dust panel **20**. Preferably, the dust panel **20** has a small triangular locking tab **46** along the one edge **24** for co-operation with the bottom edge **47** of the glue flap portion of the panel **17**, when the container is set up, as shown in FIGURE 3.

To form the container from the blank of FIGURE 4, glue is applied and the panels are folded as illustrated in FIGURES 5 and 6. Initially the edge reinforcing flap **18** may have glue applied to its face so that it can be folded back onto the main body of the panels **15**, **16** and **17** and secured thereto to form an outer reinforcing rim around the mouth of the completed container. The flap **18** may, of course, be glued or folded at a later stage in the gluing and folding operations. The bottom wall forming panels **20**, **27**, **29**, **35**, **38** and **42** are all folded onto the inside face of the side wall portions of the blank **10** about their respective hinge lines **21**, **28**, **30**, **37**, **39** and **43** which brings these panels into the position shown in FIGURE 5, the glue flaps **34**, **43** and **40** being folded back on the score lines **33**, **44**, and **41** with glue applied to the outside faces thereof indicated in FIGURE 5. Glue is applied on the outside face of the flap forming marginal portion **48** of the wall panel **17** and the wall panels **17** and **15** are then folded about the score lines **12** and **11**, respectively, and in the sequence indicated, which brings the end margin of the panel **15** into overlapping relation on the glued marginal end portion **48** of the panel **17** and completes the fabrication of the container which then appears in the knockeddown condition shown in FIGURE 6.

The container is set up by applying a force to the edge folds **11** and **12** in the direction of the center assembly or by spreading apart the wall panels **15**, **17** and **16** to open up the side wall into generally cylindrical shape with the bottom wall forming panels being automatically pulled by the opening of the side wall panels or by pushing outwardly thereon into coplanar relation and end closing positions. The end closure thus formed automatically upon opening up the side wall panels constitutes a multipanel bottom wall with each of the six straight side edges corresponding to or extending along one of the edges **21**, **22**, **23**, **24**, **25** and **26** of the inner bottom wall panel **20** which is disposed on the inside of the container and forms a smooth inside bottom. A circular cover **49** of moldable material with an integral rim **50** may be employed with the container or a conventional disc and metal rim cover may be applied to close the open top. The empty container may be collapsed, when desired, by merely pushing in on the bottom end wall to start the folding of the panels after releasing the locking tab **46**. The side wall will collapse on the hinge lines **11** and **12** while the web portions and the bottom panels will fold inwardly between the side wall panels.

The inside bottom panel **20** is proportioned so that its maximum diameter, that is, the distance between each pair of oppositely disposed apices of the angles formed by the intersection of adjacent side edges is somewhat greater than the cross sectional diameter of the main portion of the body of the container, as shown in FIGURE 2, and when the container body is set up this results in an outward bowing of the material in the side wall sections adjacent the point of intersection of adjoining bottom edges as shown in FIGURE 3. The points on the periphery of the panel **20** which are formed at the intersection of the adjoining edges of this panel force the side wall material outwardly beyond the normal circumference of the tubular body resulting in a bottom diameter extending between oppositely disposed points which is greater than the cross sectional diameter of the body thereof. This, when taken with the tapered contour, in the axial direction of the side walls, which results from the merging of the flat bottom portions into the rounded upper portions, provides the container with an advantage which is desirable in connection with the use of the container for bulk ice cream. As a result of the construction of the container and the different contour of the side walls at the top and bottom ends when the containers are palletized after being filled so that they are arranged in side-by-side relation there is a minimum of wall contact between adjacent containers which facilitates the circulation of cold air in the freezing room and enables the temperature to be reduced more rapidly, thus saving several hours in the relatively lengthy process of freezing after the containers are filled with the freshly made ice cream which is in a semi-liquid state.

A modified form of the container is illustrated in FIGURE 7. In this form of the container, in order that the top portion of the side walls will more readily assume a circular shape when opened up, a series of relatively closely spaced scores are formed in the upper margin forming portions of the side wall panels as indicated at **51**. The scores **51** increase the tendency of the paperboard material to form a curved contour when pressure is applied to the edges of the panels at the fold lines **11** and **12** in setting up the container and to make it easier for the material in the side wall panels to merge from the flat face condition along the straight edges at the bottom into the curved circular side wall forming condition or contour desired at the top of the container. The score line **51** are shown as extended approximately half the depth of the side wall. They may, however, be extended farther towards the bottom if desired.

Another modified form of the container is illustrated in FIGURES 8 to 11. In this form of the container, the one end of the tubular body is provided with integral panels which are connected to each other so as to form a square shaped bottom when the tube is opened up. This form of the container is fabricated from a flat blank **60** (FIGURE 10) of flexible paperboard which is divided by parallel, transverse crease lines **61** and **62** and longitudinally extending parallel crease lines **63** and **64** into successive integrally hinged wall forming panels **65**, **66** and **67**, which constitute the main portion of the blank and which are adapted to form the side wall of the container body when set up. An edge reinforcing flap **68** extends along one side margin of the blank outwardly of the crease line **63** which is adapted to hinge inwardly about the longitudinal crease line **63** so as to be secured by a suitable adhesive against the adjacent outside face thereof. The longitudinal crease line **64** defines the bottom edge of the side wall forming panels **65**, **66** and **67** and also forms a hinge line for the integral bottom wall forming panels **70**, **71**, **72** and **73**. The panel **70**, which constitutes an inner dust panel, is square and determines the shape of the bottom. It is hingd on the portion **74** of the score line **64**, with the length of the hinge line **74** being approximately one-half the length of the panel **66**. The panel **71** extends from the bottom forming edge of the side wall panel **65** and is hinged to the panel **65** on a line **75** coinciding with a portion of the score line **64**. The panel **71** has a dimension laterally of the blank which is approximately one-half th corresponding dimension of the panel **70** and is subdivided by a score line **76** which extends diagonally outwardly from the intersection of the transverse score line **61** with the longitudinal score line **64** so as to divide the panel **71** into a triangular shaped main portion **77** and a triangular shaped glue tab **78**, the latter being adapted to be supplied with glue on the inner face of the blank so that it may be folded back about the score line **76** and secured to the inwardly folded panel **70** in fabricating the container. At the other side of the panel **70** the panel **72** extends laterally of the blank **64** and has a size and shape corresponding to the panel **71**. Panel **72** is hinged to the panel **66** on the hinge line **80** which coincides with the score line **64**. The diagonal score line **81** divides the panel into a triangular shaped main portion **82** and a glue tab **83** of the same shape. The rectangular panel **73** which is approximately one-half the size of the panel **70** extends laterally from the bottom edge of the side wall panel **67** and is hinged thereto on a line coinciding with a portion **84** of the score line **64**. The panels **72** and **73** are hingedly connected by means of the glue tab **83** in the same manner as panels **70** and **71**.

In forming the container from the blank **60** the panels **70**, **71**, **72** and **73** are folded about their hinge lines **74**, **75**, **80** and **84**, respectively onto the side wall panels **65**, **66**

and 67 with the glue tabs 78 and 83 being coated with an adhesive and folded back about the hinge lines 78 and 81, respectively. The side wall forming panels 65 and 67 are then folded inwardly about the score lines 61 and 62 so as to bring the adhesive coated glue flap forming marginal portion 85 which extends along the free end of the side wall panel 67 into overlying relation with the end margin of the panel 65 so as to form the container in flattened and collapsed condition as shown in FIGURE 11. The edge reinforcing flap 68 is folded about the hinge line 63 into engagement with the side wall panel and secured thereto prior to the folding of the side wall panels 65 and 67. The resultant container is set up in the same manner as the container of FIGURE 1 with the side wall forming panels being pulled apart and the bottom wall forming panels being pushed into a plane extending transversely of the axis of the tubular body. The uppermost portion of the container body can be closed by a circular lid when the container is filled while the bottom retains its square shape. The container has the desired circular cross section at the top and merges into a square cross section at the bottom permitting the use of the hinged flaps or panels for the bottom closure with the bottom forming panels being connected in automatic bottom forming relation or, if desired, they may remain free when the side wall panels are folded so as to enable them to be overlapped and secured together, by glue or other fastening means, when the container is set up preparatory to filling, in which event the bottom wall forming panels may be made rectangular or square, if desired.

I claim:

1. A collapsible carton comprising a side wall formed of a rectangular panel, the ends of which are overlapped and secured so as to form, when set up, a cylindrical body which has a circular cross section at the top and a polygonal cross section at the bottom, said side wall being collapsible into flattened condition along a pair of oppositely disposed, axially extending score lines, and a bottom wall formed of a series of interconnected panels integrally hinged to the bottom edge of the side wall panel, said bottom wall panels including an inner polygonal panel connected along a straight hinge line to a portion of the bottom edge of the side wall panel, an outer panel connected to the bottom edge of the side wall panel along a straight hinge line which is parallel with and opposite the hinge connection of the inner panel and having a glue flap foldable along a hinge line which falls on a bottom diameter parallel with and centered between the hinge connections of said inner and outer panels with the side wall panel, and two pairs of panels, each pair thereof having two adjacent overlapped and interconnected panels which are connected to the bottom edge of the side wall panel on adjoining straight hinge lines extending between corresponding ends of the hinge lines which connect said inner and outer panels with the side wall panel and said overlapped and interconnected panels extending from a common hinge line which is in alignment with said centered hinge line, and said bottom wall will collapse inwardly and fold on said centered hinge line upon pressing inwardly on the bottom wall panels as the side wall is collapsed.

2. A collapsible cylindrical container comprising, in erected condition, a body formed by a pair of rectangular side wall panels connected at their ends by an integral glue flap on the one panel which overlaps the free margin of the other panel so as to form a tube having a section of circular cross section adjacent the open top and a section of hexagonal cross section adjacent the bottom end, and a series of bottom wall forming panels integrally hinged to the bottom edges of said side wall panels along straight hinge lines of approximately equal length, said bottom wall panels including an inner panel of hexagonal shape hinged along one side thereof to a center portion of the bottom edge of the one side wall forming panel, an outer panel connected along a parallel, oppositely disposed hinge line to the center portion of the bottom edge of the other side wall forming panel and having a glue flap connected thereto on a fold forming hinge line which is parallel with the aforementioned hinge lines and extends along a diameter of said bottom wall connecting the points of intersection of the oppositely disposed pairs of side edges of said inner panel which are at opposite sides of the hinge connection of the inner panel with the side wall forming panel, and pairs of bottom forming flaps integrally connected in hinged relation to the bottom edges of the side wall forming panels on opposite sides of said inner side wall panel, the flaps of said respective pairs being hinged to one another by a glue tab flexibly connected to one thereof so as to swing into coplanar relation when the container is erected.

3. A collapsible cylindrical container as recited in claim 2, and the bottom wall of said container having a maximum diameter which is greater than the cross sectional diameter of the body at the open end thereof whereby portions of the side wall adjacent the bottom margins thereof taper inwardly and upwardly in the direction of the top thereof and intervening portions of said side wall taper outwardly and upwardly and into merging relation with the circular section at the top end of the container.

4. A collapsible cylindrical container comprising, in erected condition, a body formed by a pair of rectangular side wall panels connected at their ends so as to form a tube having a section of circular cross section adjacent the open top and a section of polygonal cross section at the bottom end, with said side wall panels having a pair of oppositely disposed, axially extending, hinge forming creases permitting the panels to be collapsed upon each other into flattened coplanar relation, and a series of bottom wall forming panels integrally hinged to the bottom edges of said side wall panels along straight hinge lines, said bottom wall panels including an inner panel of poygonal shape hinged along one side edge thereof to a portion of the bottom edge of the one side wall forming panel, an outer panel connected along a parallel, oppositely disposed hinge line to a portion of the bottom edge of the other side wall forming panel and connected to the inner bottom wall panel on a fold forming hinge line which is parallel with the aforementioned hinge lines and extends along a diameter of said bottom wall connecting the points of intersection of oppositely disposed pairs of side edges of said inner bottom wall panel and pairs of bottom forming flaps integrally connected in hinged relation to portions of the bottom edge of the side wall forming panels opposite the free edges of said inner and outer bottom wall panels, the flaps of said respective pairs being hinged to one another on hinge lines which are in the same axial plane as the hinge line at the connection of said inner and outer bottom forming panels so that said bottom panels and flaps swing into coplanar relation and automatically form a bottom closing wall when said container is erected.

5. A collapsible container formed from a blank of foldable sheet material which is cut, creased and connected so as to provide, when set up, a tubular body and a bottom closing end wall, the body comprising a pair of rectangular panels joined at corresponding ends along parallel, axially extending, hinge forming crease lines so that the panels may be collapsed upon each other into flattened coplanar relation, said body having a circular cross section at the open end, when opened up, so as to receive a cover having a circular periphery for closing said open end, said bottom end wall comprising pairs of closure forming panels which are connected along straight hinge lines to the bottom edge of the side wall, one of the panels of each pair of said bottom closure panels having a connecting flap which is hinged on a diametrical line in the setup position of the container and connected to the other panel of said pair whereby when the container is collapsed the panels of each pair are adapted to collapse upon each other inwardly of the bottom edges of the side

wall panels and are disposed between the side wall panels when the side wall panels are collapsed and said pairs of panels opening up automatically into coplanar bottom wall forming position when the side wall panels are spread apart into opened up tubular form.

6. A collapsible container as recited in claim 5 and the bottom wall of said container having a maximum diameter which exceeds the diameter at the open end of the body whereby side wall portions adjacent the bottom margins thereof are bowed inwardly and upwardly in the direction of the top thereof and intervening side wall portions are bowed outwardly and upwardly and merge with the circular top side wall margins.

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