Sept. 9, 1969 G. W. BOYER 3,465,948

DISPOSABLE COOLER

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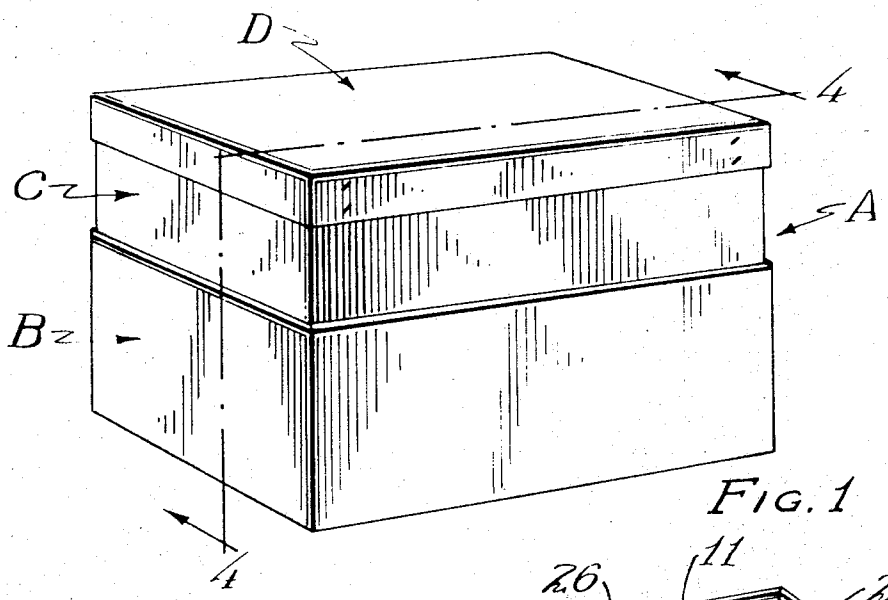


FIG. 1

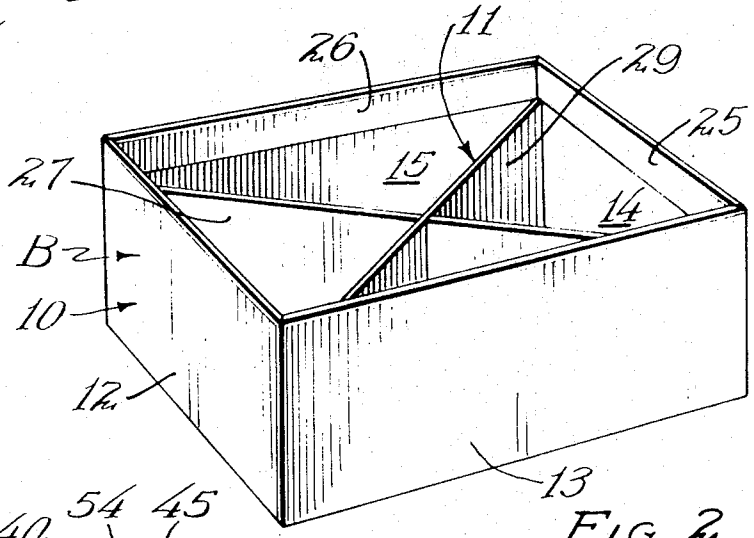


FIG. 2

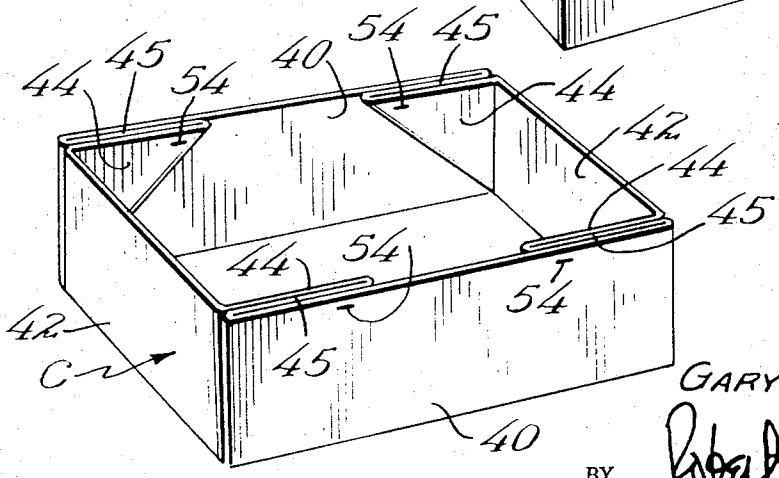


FIG. 3

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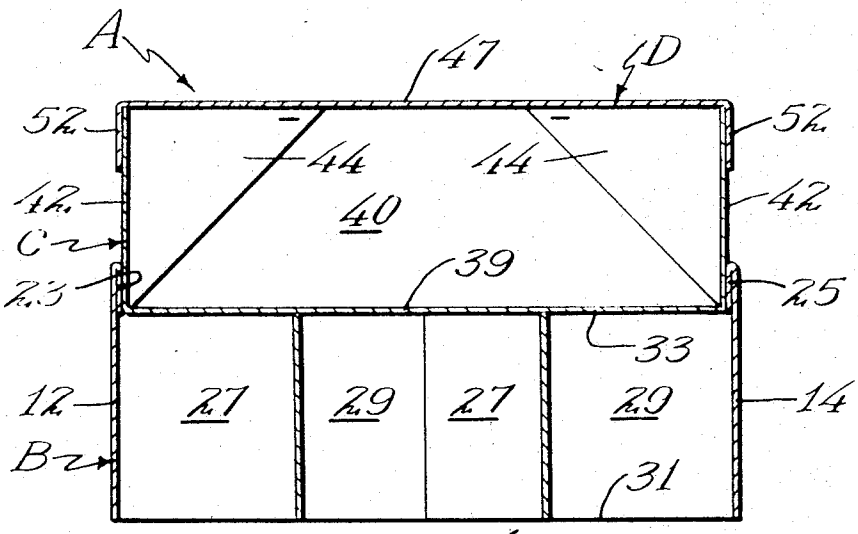


FIG. 4

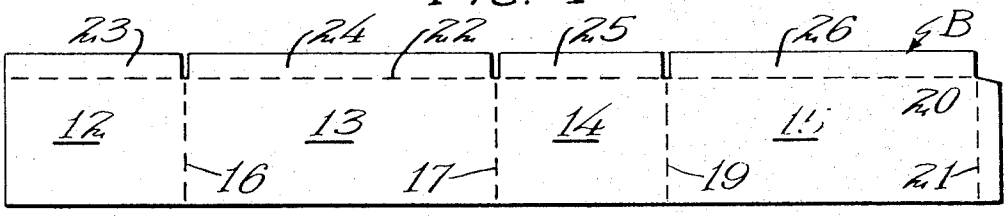


FIG. 5

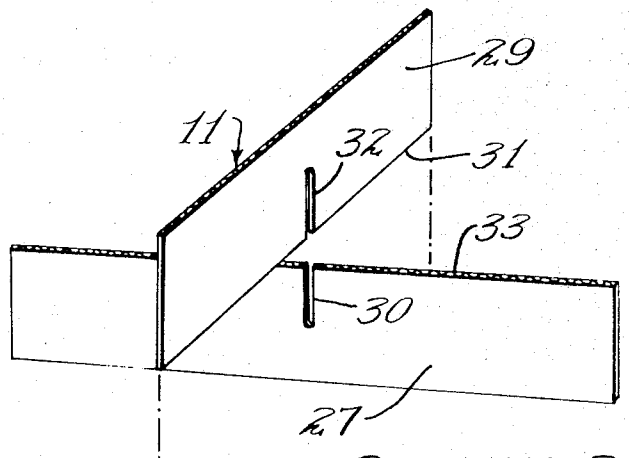


FIG. 6

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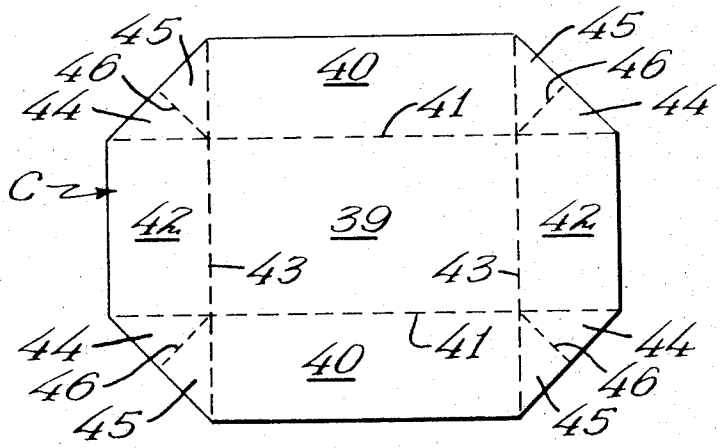


FIG. 7

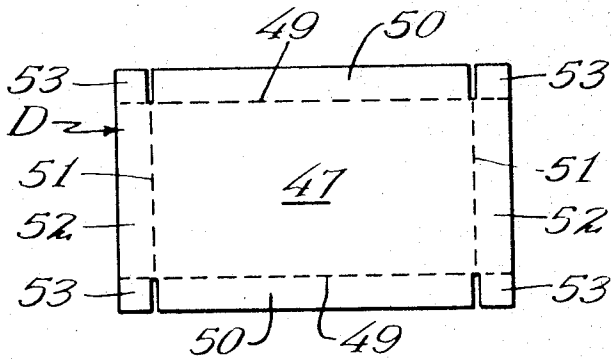


FIG. 9

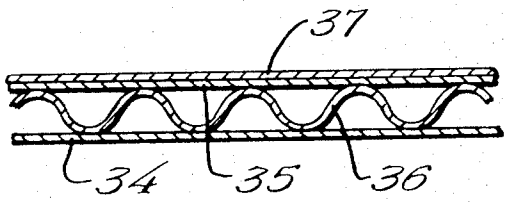


FIG. 8

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United States Patent Office

3,465,948
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3,465,948

DISPOSABLE COOLER

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Filed Oct. 3, 1967, Ser. No. 672,563
Int. Cl. B65d 5/56, 5/48, 5/58, 5/62
U.S. Cl. 229—14 8 Claims

ABSTRACT OF THE DISCLOSURE

The invention comprises a disposable cooler for bottled or canned beverages and the like. The cooler includes a base unit, a cooler unit, and a cover. The base unit comprises an open ended sleeve arranged vertically on the ground or floor. A filler extends a portion of the height of the sleeve to support the cooler unit. The cooler unit comprises a water tight tray telescoped into the upper end of the sleeve for support by the filler. The cooler unit is designed to accommodate the cans or bottles, and ice. The cover is telescoped onto the tray to close the cooler.

This invention relates to an improvement in disposable beverage coolers and deals particularly with a container made of corrugated paperboard capable of holding a considerable quantity of beverage under refrigeration for a period of several hours.

Various beverages such as the cola drinks are sold in considerable quantity for use at parties and picnics. In order to increase the sale of the beverage and to simplify the task of handling by the customer, the beverage companies normally provide coolers made of plastic or metal containing ice and capable of holding perhaps a case of 24 disposable bottles or cans of the beverage. At the conclusion of the party or picnic, it is necessary for the beverage company to pick up the coolers for reuse.

Certain of the beverage companies found that this practice was excessively expensive, and was costing the company an amount out of proportion to the profit. The main reason for the high cost was in the fact that most such parties and picnics took place after normal working hours, and oftentimes on Saturdays, Sundays and holidays. The cost of picking up the coolers at such times greatly reduced their profit. Accordingly, it was decided to attempt to produce a disposable cooler capable of holding the beverage under refrigeration for the duration of the party or picnic, and which could merely be discarded at the end of the occasion. The present invention resides in the provision of such a disposable cooler.

A feature of the present invention resides in the provision of a cooler made of corrugated paperboard which may be easily and quickly assembled at the location of the party or picnic and which may normally consist in a series of flat blanks. The parts involved include a rectangular sleeve having open upper and lower ends and including a filler extending upwardly a portion of the height of the base to act as a support for the cooler unit. The cooler unit comprises a diagonally creased tray having bellows corners and an inner surface of moisture tight material such as polyethylene. The third main part includes a cover designed to telescope over the cooler unit when the cooler unit is not in use. The cooler unit is of sufficient size to hold several cases of beverage in disposable bottles or cans. In actual practice, the cooler unit is designed to contain four cases or 96 bottles or cans, together with cracked ice in sufficient quantity to hold the

beverage under refrigeration for a period of several hours.

In order to use the disposable cooler, the base is preferably stitched by the manufacturer to produce a sleeve which is in flat folded form. Lining flanges are preferably provided hinged to the upper edge of the sleeve. The base is erected into rectangular form, and two filler members are placed in intersecting relation and inserted into the sleeve, the filler strips extending diagonally between the corners and holding the sleeve in rectangular form. The base is completed by folding inwardly and downwardly the liner flanges to overlie the filler strips.

The cooler unit is next formed by folding side and end walls into right angular relation to the bottom panel, and folding the gusset flaps at the corners of the blank to form bellows folds at the corners of the tray. Preferably, the gusset flaps are secured in face contact to the side or end walls of the container by means of a hand stitcher or other fastening means.

The cover includes a top panel having side and end walls or wall flanges hinged to the edges thereof. The side and end flanges are folded into right angular relation to the top panel, and corner flaps on the ends of two opposed side or end walls are folded into face contact with the ends of the remaining opposed walls and secured thereto by a hand stitcher or the like. The beverage and ice are inserted into the cooler unit and the structure is in readiness for use.

A feature of the present invention resides in the fact that the filler in the base of the device supports the bottom panel of the cooler unit in spaced relation to the ground or floor, providing a dead air space beneath the cooler unit which tends to retard the melting of the ice and to maintain the beverage refrigerated over a longer period of time.

These and other objects and novel features of the present invention will be more clearly and fully set forth in the following specification and claims.

In the drawings forming a part of the specification,

FIGURE 1 is a perspective view of the disposable cooler in closed assembled form.

FIGURE 2 is a perspective view of the base portion of the disposable cooler in readiness to receive the cooler unit.

FIGURE 3 is a perspective view of the cooler unit in its assembled form.

FIGURE 4 is a vertical sectional view through the disposable cooler, the postion of the section being indicated by the line 4—4 of FIGURE 1.

FIGURE 5 is a diagrammatic view of the blank from which the base sleeve is formed.

FIGURE 6 is a perspective view of the two filler strips in exploded relation.

FIGURE 7 is a diagrammatic view of the blank from which the cooler unit is formed.

FIGURE 8 is a greatly enlarged section through the corrugated board showing the water tight coating on the inner surface thereof.

FIGURE 9 is a diagrammatic view of the blank from which the cover section is formed.

The disposable cooler is indicated in general by the letter A. In general, the cooler A includes a base unit B, a cooler unit C, and a cover D. The cooler unit C telescopes into the open upper end of the base unit B, and the cover D telescopes over the upper open end of the cooler unit C.

The base unit B is indicated in its assembled form in FIGURE 2 of the drawings, and includes an open ended

sleeve indicated in general by the numeral **10**, and a filler structure which is indicated in general by the numeral **11**. The sleeve **10** is formed as shown in FIGURE 5 of the drawings and includes an end wall panel **12**, a first side wall panel **13**, a second end wall **14**, and a second side wall **15** connected together along parallel fold lines **16**, **17** and **19**. A stitch or glue flap **20** is hingedly connected to an end wall of the series such as the second side wall **15** along a fold line **21** which is parallel to the previously described lines of fold. In actual practice, the stitch flap **20** is normally stitched or glued in over lapping relation to the end wall panel **10** to form a rectangular sleeve which may be folded into flat form.

The upper edges of the wall panels described are defined by a fold line **22** which connect the panels to liner flanges. Liner flanges **23**, **24**, **25**, and **26** are foldably connected to the end wall **12**, side wall **13**, second end wall **14** and second side wall **15** along the fold line **22**. The flanges are all of equal length measured in a direction normal to the fold line **22**.

The filler structure **11** includes a pair of elongated corrugated panels **27** and **29** of generally rectangular form and preferably having the flutes of the corrugated board extending vertically when in place. The two members **27** and **29** may be identical with one member inverted relative to the other. As indicated in FIGURE 6, a slot **30** is provided in the lower edge **31** of the filler member **27** extending substantially one-half the vertical height of the panel **27**. The panel **29** is provided with a vertical slot **32** in the upper edge **33** thereof, the slots **30** and **32** being midway between the ends of the panels **27** and **29**. The slots **30** and **32** interengage to form an X-shaped filler. The panels **27** and **29** are substantially equal in length to the distance between diagonally opposite corners of the sleeve **10**.

The cooler unit C is preferably formed of corrugated paperboard having an outer liner **34**, and inner linear **35**, and a corrugated medium **36** therebetween. The inner liner **35** is provided with a coating of moisture impervious material such as polyethylene as indicated at **37**.

The cooler unit C includes a bottom panel **39** of rectangular form and of dimensions slightly less than the inner dimensions of the sleeve **10**. Side walls **40** are hingedly connected to the bottom panel **39** along parallel fold lines **41**. End walls **42** are hingedly connected to the ends of the bottom panel **39** along parallel fold lines **43**. The ends of the side wall panels **40** are connected to the ends of the end wall panels **42** by a pair of similar triangular gusset flaps **44** and **45** which are hingedly connected together along diagonal fold lines **46**.

The cover D is formed of the blank illustrated in FIGURE 9 of the drawings. The cover D includes a top panel **47** of rectangular form which is connected along parallel fold lines **49** to side wall flanges or panels **50**. The top panel **47** is also connected along fold lines **51** to end wall flanges or panels **52**. Corner flaps **53** are hingedly connected to the ends of one pair of opposed flanges **50** or **52**. In the form illustrated, the corner flaps **53** are hinged to the ends of the end wall panels **52**.

When the disposable cooler is to be used, the various units may be delivered to the point of use in flat form with the usual exception of the sleeve **10** which is stitched or glue at the manufacturer's joint and folded flat as has been described. To assemble the disposable cooler, the sleeve **10** is folded into rectangular form and rested upon the ground or floor. The filler panels **27** and **29** are interlocked and inserted into the sleeve, the panels **27** and **29** extending diagonally across the sleeve to hold the sleeve in rectangular form. The flanges **23**, **24**, **25** and **26** are then folded downwardly against the ends of the filler panels, FIGURE 2 of the drawings showing the base in completed form.

The cooler unit C is next erected by folding the gusset flaps **44** and **45** along the diagonal fold lines **46** until the gusset flaps **44** and **45** are in face contact. The combined gusset flaps are then swung into position adjoining either the side walls **40** or the end walls **42**. It will be understood that in folding the gusset flaps **44** and **45** into face contact, the side walls **40** and end walls **42** will be folded into right angular relation with the bottom panel **39**. FIGURE 3 of the drawings shows the cooler unit C in assembled form. Preferably staples **54** or other suitable fastening means hold the gusset flaps against opposed walls. FIGURE 3 of the drawings shows the gusset flaps secured in face contact with the side walls **40** of the cooler unit.

The cover unit D is then assembled by folding the side wall flanges **50** and end wall flanges **52** into right angular relation to the cover panel **47**, and by securing the corner flaps **53** in face contact with the side wall flanges **50**. When assembled, the side and end wall flanges **50** and **52** are spaced apart a distance sufficient to permit the cover D to be telescoped over the open upper end of the cooler unit C.

Before the cover D is applied, the cooler unit C is filled with disposable cans or bottles of beverage, and cracked ice or ice cubes are intermixed with the cans or bottles. When the cover is in place, the beverage will remain in a refrigerated state over a period of several hours, or throughout a length of time sufficient to last through the party or picnic. Obviously, the ice supply may be replenished if it is so desired.

I claim:

1. A disposable cooler including:
- a rectangular base unit having an open upper end,
- a filler member comprising strips of corrugated paperboard within said base secured on edge with the surfaces on substantially vertical planes and terminating in spaced relation to the upper end thereof on common place,
- a cooler unit comprising a substantially water tight tray telescoped into said base and resting upon said filler member, said tray extending upwardly from said base, and
- a removable cover on said tray.

2. The structure of claim **1** and in which said strips divide the interior of said base into a plurality of dead air spaces.

3. The structure of claim **1** and in which the corrugated flutes of said strips extend vertically.

4. A disposable cooler including:
- a rectangular base unit having an open upper end,
- a cooler unit comprising a substantially water tight tray telescoped into said base unit and extending upwardly therefrom,
- a removable cover on said tray, and
- a filler member within said base unit to provide a dead air space within said base unit beneath said cooler unit,
- said filler member comprising a pair of intersecting filler strips extending diagonally between the corners of said base unit.

5. The structure of claim **1** and including flanges on the upper edges of said base folded inwardly and downwardly to terminate substantially on said common plane.

6. A disposable cooler including:
- a rectangular base unit having an open upper end,
- a cooler unit comprising a substantially water tight tray telescoped into said base unit and extending upwardly therefrom,
- a removable cover on said tray,
- said base unit comprising an open ended sleeve including linear flanges on the upper edges of said sleeve folded to lie upwardly of the sleeve walls, and
- a filler within said base unit supporting said cooler unit, said flanges engaging the upper end of said filler.

7. The structure of claim **1** and in which said cooler unit tray includes a rectangular bottom panel, side and end walls connected to the edges of said bottom panel,

and bellows corners connecting the ends of said side and end walls at the corners of said tray.

8. The structure of claim 1 and in which said cover is telescopically secured on said tray.

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U.S. Cl. X.R.

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