Nov. 22, 1966 J. M. CRANE 3,286,907

CORRUGATED CONTAINER BLANKS AND CONTAINERS

Filed May 15. 1963 4 Sheets-Sheet 1

FIG. 1

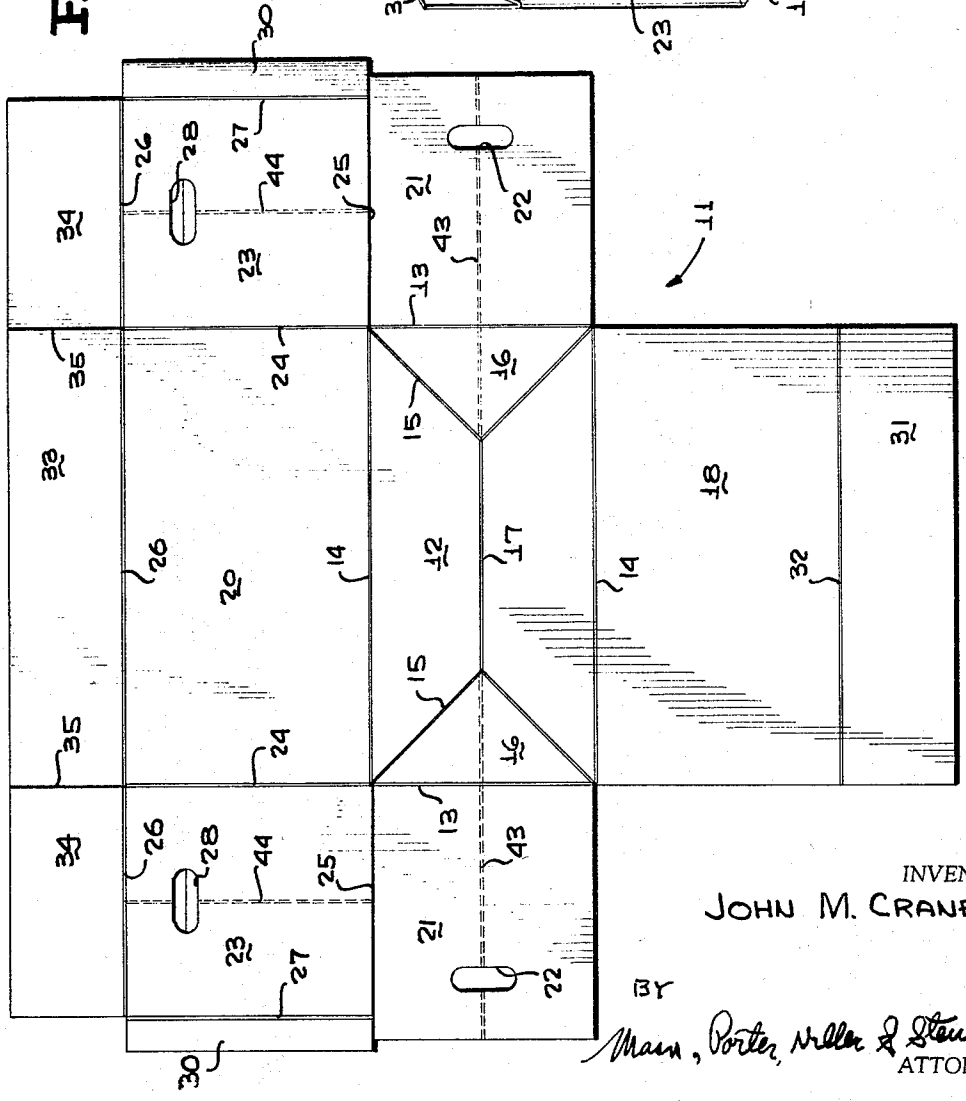
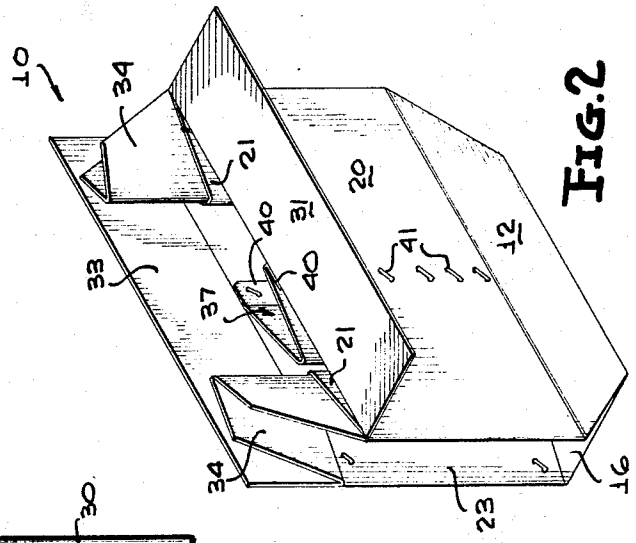


FIG. 2



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CORRUGATED CONTAINER BLANKS AND CONTAINERS

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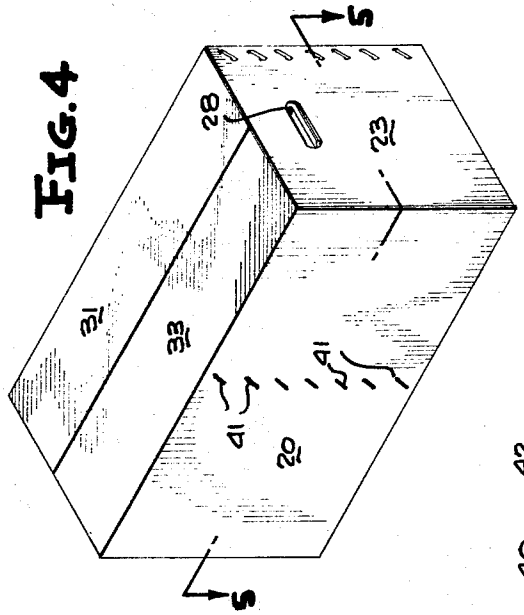


FIG. 4

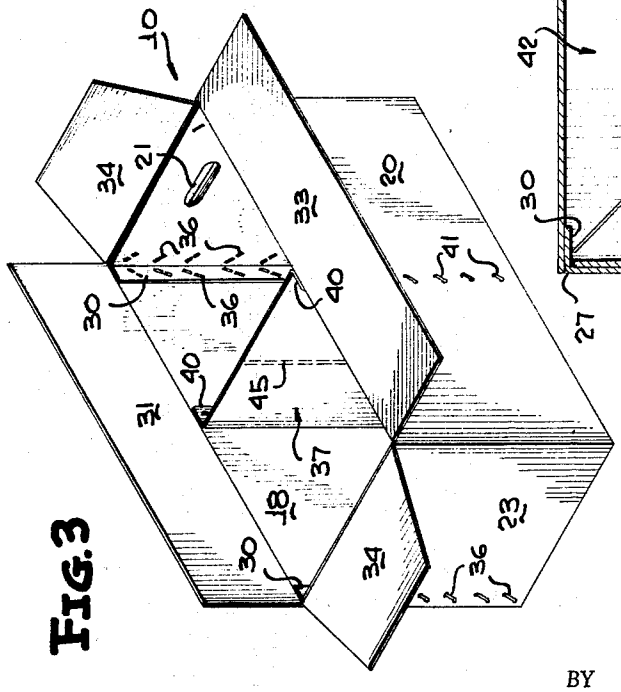


FIG. 3

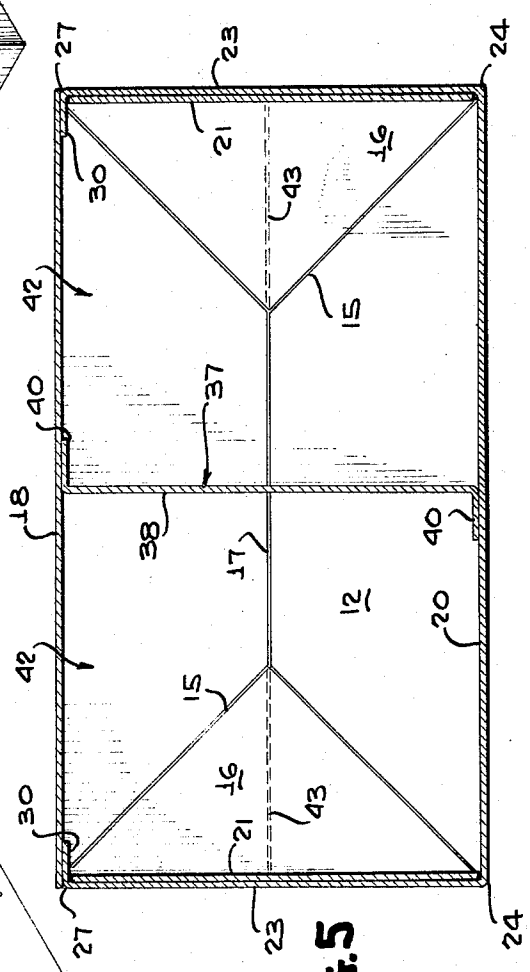


FIG. 5

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CORRUGATED CONTAINER BLANKS AND CONTAINERS

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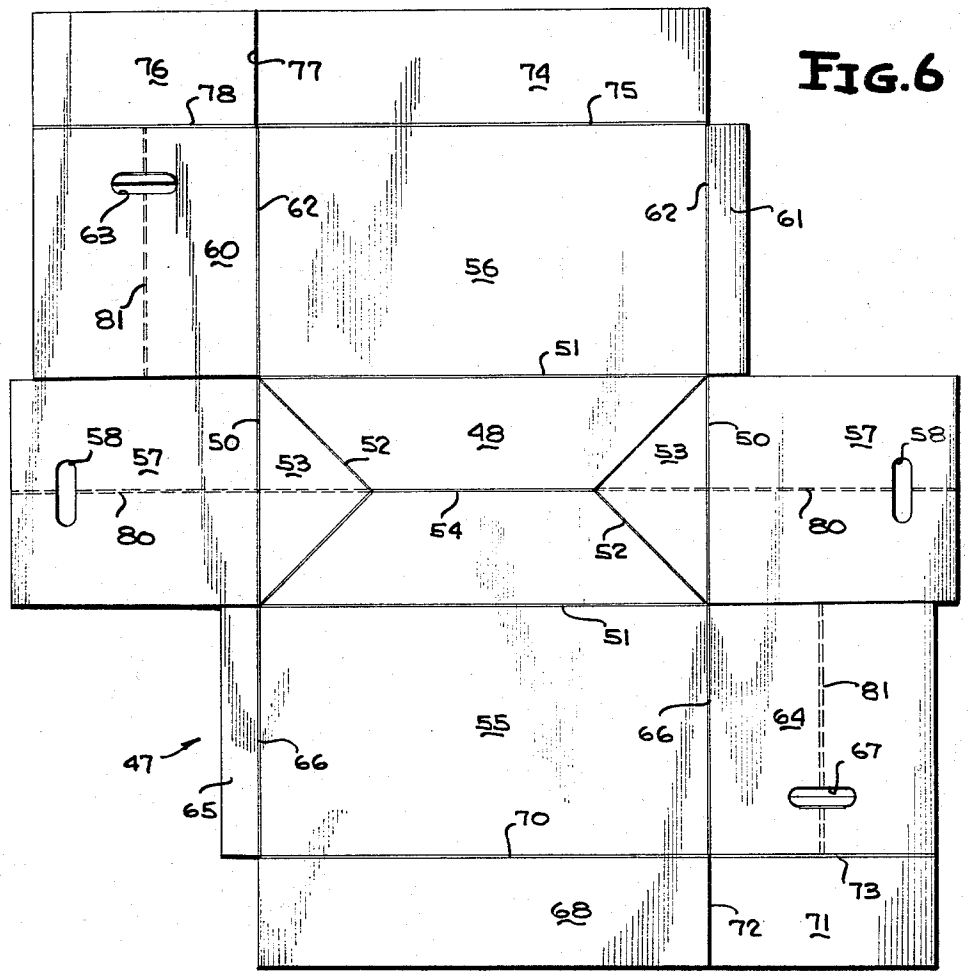


FIG.6

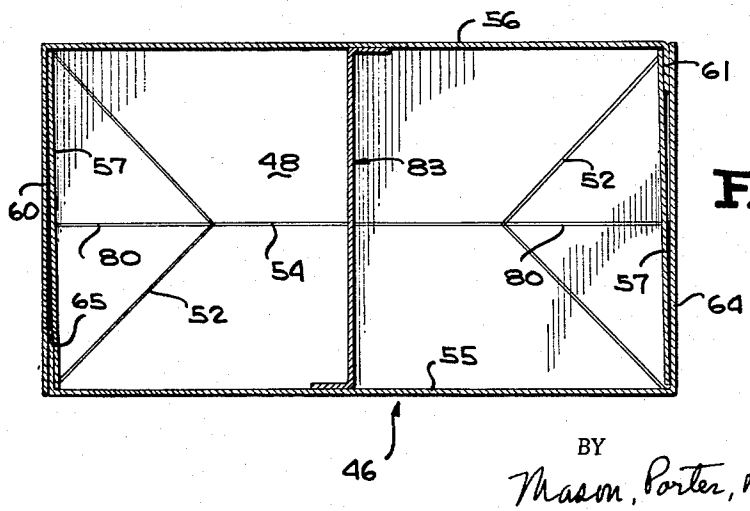


FIG.7

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CORRUGATED CONTAINER BLANKS AND CONTAINERS

Filed May 15, 1963 4 Sheets-Sheet 4

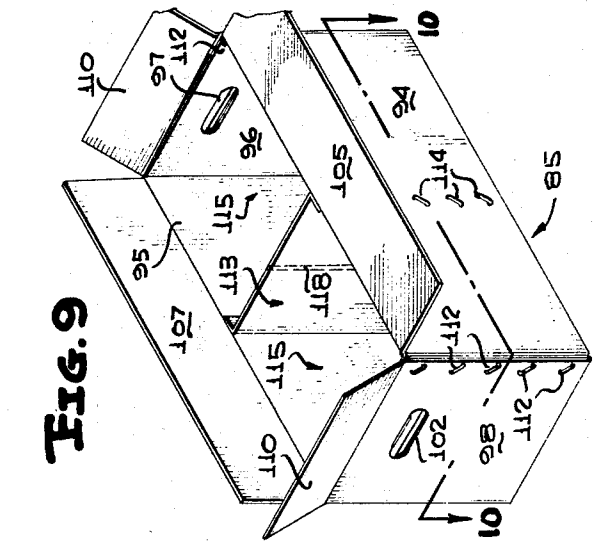


FIG. 9

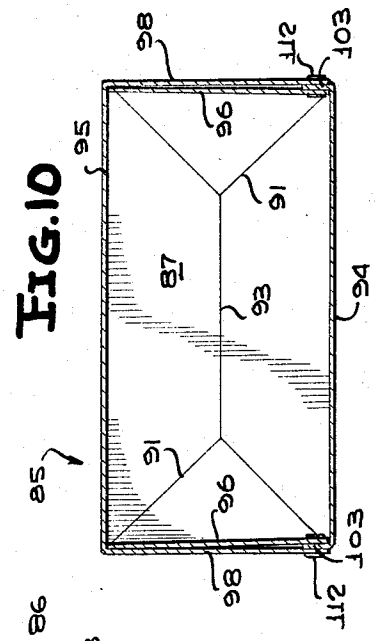


FIG. 10

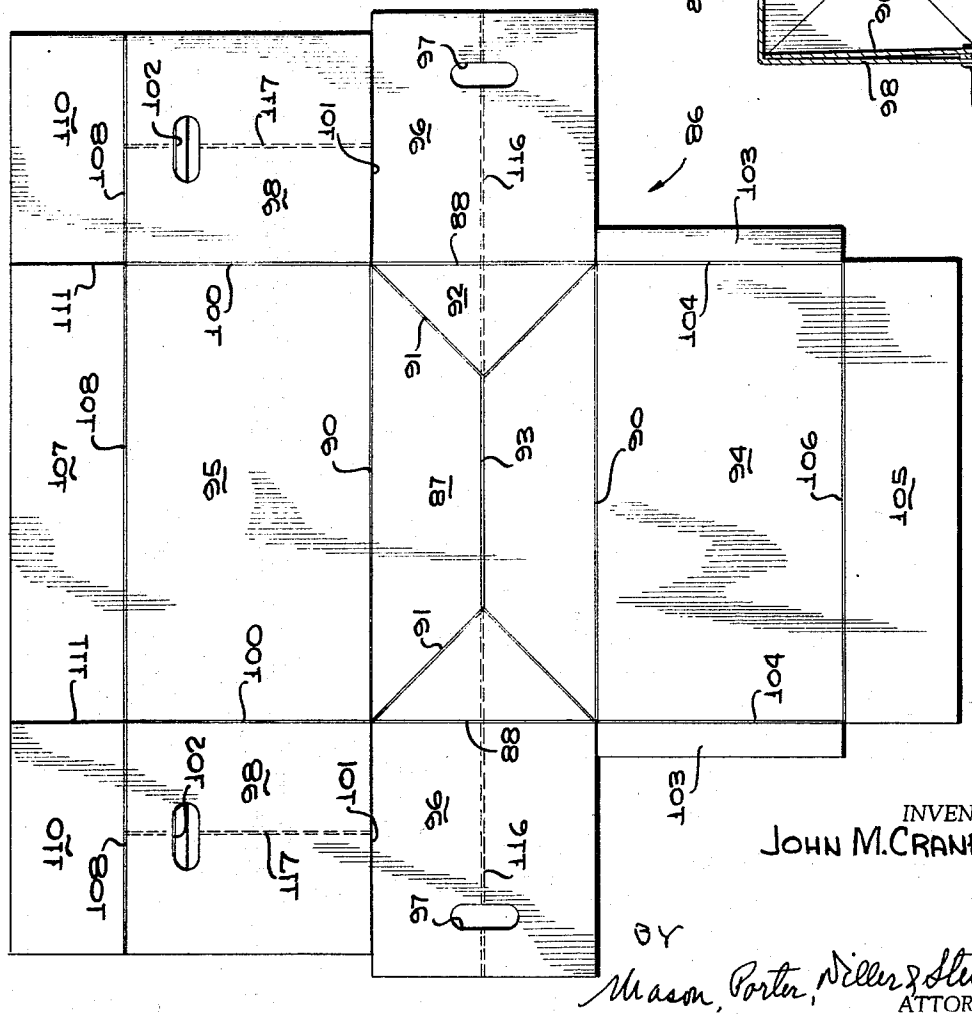


FIG. 8

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3,286,907

CORRUGATED CONTAINER BLANKS AND CONTAINERS

John M. Crane, New York, N.Y., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York

Filed May 15, 1963, Ser. No. 280,622
9 Claims. (Cl. 229—41)

This invention relates to a plurality of novel corrugated containers and the blanks therefor, and in particular, seeks to provide a plurality of novel corrugated containers which are economically fabricated, reinforced at stitched joints thereof and foldable for compact shipment.

An object of this invention is to provide a novel corrugated container and blank therefor including a bottom panel, a pair of side panels, a pair of inner end panels and a pair of outer end panels, the pair of inner end panels being joined to the bottom panel along a first pair of spaced fold lines and the outer end panels each being joined to one of the side panels along another pair of spaced fold lines, each of the outer end panels including a securing strip and each securing or reinforcing strip being stitched between adjacent inner and outer end panels to form a pair of highly reinforced seams.

Still another object of this invention is to provide a novel corrugated container and container blank including a substantially rectangular bottom panel, a first pair of inner end panels joined to the bottom panel along a first pair of fold lines, first and second side panels joined to the bottom panel along a second pair of fold lines, an outer end panel joined to each of the side panels in cater-corner relationship to the bottom panel, and a pair of securing or reinforcing strips joined to each of the side panels in cater-corner relationship to the bottom panel, each of the securing strips being sandwiched between adjacent inner and outer end panels to form highly reinforced seams at opposed corners of the corrugated container.

Another object of this invention is to provide a novel corrugated container blank and corrugated container having a substantially rectangular bottom panel, a pair of inner end panels jointed to the rectangular bottom panel along a first pair of fold lines, a pair of side panels each joined to the rectangular bottom panel along a second pair of fold lines, a pair of outer end panels joined to one of the side panels along a third pair of fold lines, and a pair of securing or reinforcing strips joined to the other of the side panels along a fourth pair of fold lines, the securing or reinforcing strips being received between adjacent inner and outer end panels to form a pair of highly reinforced adjacent corners of the corrugated container.

Another object of this invention is to provide a novel corrugated container blank and corrugated container of the types above-described, and in addition, to provide each of the inner and outer end panels with a substantially elongated access opening, the access openings of the inner end panels being disposed substantially normal to the access openings of the outer end panels, and adjacent ones of the elongated access openings in the inner and outer end panels being adapted for alignment with the corrugated container blank is erected to form the corrugated container.

Still another object of this invention is to provide a novel corrugated container blank and corrugated container of the type immediately above-described wherein the rectangular bottom panel includes a pair of angular fold lines converging away from the first pair of spaced fold lines to define a pair of opposed, substantially triangular areas, a fold line extending between the pair of opposed triangular areas, portions of the pair of angular

fold lines and the fold line between the pair of opposed triangular areas defining a pair of opposed substantially trapezoidal areas for providing compact collapsing of the corrugated container.

Another object of this invention is to provide a novel corrugated container including a bottom panel, a pair of upstanding side panels, a pair of upstanding inner panels joined to the side panels, a pair of outer end panels adjacent the inner end panels and joined to each of the upstanding side panels and a divider panel secured between the upstanding side panels substantially half way between the inner and outer end panels.

With the above, and other objects in view that will hereinafter appear, the nature of the invention will be more clearly understood by reference to the following detailed description, the appended claims and the several views illustrated in the accompanying drawings:

In the drawings:

FIGURE 1 is a top plan view of a corrugated container blank constructed in accordance with this invention, and illustrates a pair of inner panels joined to a substantially rectangular bottom panel, a pair of outer end panels joined to one of two side panels, and a securing strip joined to each of the outer end panels.

FIGURE 2 is a top perspective view of a corrugated container constructed from the corrugated container blank of FIGURE 1, and illustrates a central divider in the corrugated container and the corrugated container collapsed for purposes of shipping or storage.

FIGURE 3 is a top perspective view of the corrugated container of FIGURE 2, and illustrates the corrugated container in the fully erected condition thereof prior to packaging the container and closing the same.

FIGURE 4 is a top perspective view of the container of FIGURE 3, and illustrates the corrugated container after the container has been packaged and closed.

FIGURE 5 is a cross-sectional view taken along line 5—5 of FIGURE 4, and shows a pair of highly reinforced corner seams formed by each of the securing strips being sandwiched between and stitched to an associated one of the inner and outer end panels.

FIGURE 6 is a top plan view of another corrugated container blank constructed in accordance with this invention, and illustrates a pair of outer end panels and a pair of securing or reinforcing strips arranged in cater-corner relationship to a bottom panel of the corrugated container blank.

FIGURE 7 is an enlarged transverse sectional view taken through a container erected from the corrugated container blank of FIGURE 6, and illustrates a highly reinforced corner formed by each of the securing strips sandwiched between and secured to an associated one of the inner and outer end panels.

FIGURE 8 is a top plan view of a corrugated container blank similar to the corrugated container blanks of FIGURES 1 and 6, and illustrates a pair of outer end panels secured along each one of a pair of fold lines to a side panel and a pair of securing or reinforcing strips secured to an opposed side panel along each one of another pair of fold lines.

FIGURE 9 is a top prespective view of a corrugated container erected from the blank of FIGURE 8, and illustrates a central divider in the corrugated container and a pair of top panels and outer end panel flaps prior to being folded to close the corrugated container.

FIGURE 10 is an enlarged cross-sectional view taken along line 10—10 of FIGURE 9, and illustrates a pair of highly reinforced corners of the corrugated container of FIGURE 9 formed by each of the securing or reinforcing strips and an associated inner and outer end panel.

Referring to the drawings specifically, a container 10 of

FIGURES 2 through 5 is constructed from a corrugated paperboard container blank 11 of FIGURE 1. The corrugated container 10 of FIGURES 2 through 5 will be best understood by first referring to the container blank 11 of FIGURE 1 to which attention is now directed.

The corrugated container blank 11 of FIGURE 1 includes a substantially rectangular bottom panel 12 set off by a first pair of fold lines 13, 13 and a second pair of fold lines 14, 14. A pair of angular fold lines 15, 15 converge away from each of the first pair of spaced parallel fold lines 13, 13 and define with each a substantially triangular area 16, 16. A fold line 17 extends between the pair of angular fold lines 15, 15 substantially midway between the second pair of fold lines 14, 14 and substantially normal to the first pair of fold lines 13, 13.

A first side panel 18 of a substantially rectangular configuration is joined to the substantially rectangular bottom panel 12 along one of the second pair of fold lines 14, 14. A second substantially rectangular side panel 20 is similarly joined to the substantially rectangular bottom panel 12 along another of the second pair of fold lines 14, 14.

A substantially rectangular, identical, inner end panel 21 is joined to the rectangular bottom panel 12 along each of the first pair of fold lines 13, 13. Each of the inner end panels 21 includes an elongated access opening or hand gripping opening 22 which extends substantially parallel to the first pair of fold lines 13, 13.

An identical, substantially rectangular outer end panel 23 is secured to the substantially rectangular side panel 20 along each one of a third pair of fold lines 24, 24. Each of the outer end panels 23 is adjacent an associated one of the inner end panels 21 and separated therefrom by an identical cut line 25, 25. Each of the outer end panels 23 is set off by one of the third pair of fold lines 24, 24, one of the identical cut lines 25, 25, a second fold line 26 and one of a fourth pair of fold lines 27, 27. An elongated access opening or hand gripping opening 28 is formed in each of the outer end panels 23, and each of the elongated access openings lies substantially normal to each of the elongated access openings 22, 22 of the inner end panels 21, 21.

An elongated, substanially rectangular, narrow securing or reinforcing strip 30 is integrally joined to each of the outer end panels 23 of the container blank 11 along an associated one of the fourth pair of fold lines 27, 27. The securing or reinforcing strips 30, 30 cooperate with the side panel 18, the inner end panels 21 and the outer end panels 23 in a novel manner which will be more fully described hereafter.

A first substantially rectangular top panel 31 is joined to the first side panel 18 along a third fold line 32. A similar substantially rectangular second top panel 33 is joined to the second side panel 20 along the second fold line 26. A pair of identical, substantially rectangular outer end panel flaps 34 are each joined to an associated one of the outer end panels 23, 23 along the second fold line 26, and each of the pair of outer end panel flaps 34 is set off from the second top panel 33 along a second piar of cut lines 35, 35.

The container 10 of FIGURES 2 through 5 of the drawings is erected from the container blank 11 by folding both inner end panels 21, 21 and the side panels 18 and 20 normal to the bottom panel 12 along the respective pairs of fold lines 13, and 14. The outer end panels 23, 23 are each folded along an associated one of the third pair of fold lines 24, which places adjoining inner and outer end panels 21, 23 in abutment, as is best illustrated in FIGURE 5 of the drawings. The narrow securing or reinforcing strips 30, 30 are folded along the fourth pair of fold lines 27 in substantially coplanar relationship to each other and into abutment with the side panel 18. A plurality of staples 36 secure the panels 21, 23, 18 and the reinforcing strip 30 together in a manner clearly illustrated in FIGURES 3 and 4 of the drawings.

A central divider 37 includes a substantially rectangular central portion 38 and a pair of identical oppositely directed attaching strips 40, 40. The central divider or partition 37 is preferably constructed from corrugated paperboard or similar paperstock material and is secured to the side panels 18 and 20 by a plurality of staples 41, identical to the staples 36. The central divider or partition 37 divides the corrugated container 10 into two identical compartments 42, each of which is designed to hold approximately 15 dozens of egg cases.

After the corrugated container 10 is filled, the outer end panel flaps 34, 34 are each folded along a second fold line 26. The first top panel 31 is folded along the third fold line 32 and the second top panel 33 is folded along the second fold line 26 to the position illustrated in FIGURE 4 of the drawings. The top panels 31 and 33 are then secured in a conventional manner, for example, by a piece of pressure-sensitive tape, and the corrugated container 10 is ready for shipment.

To aid in collapsing the corrugated container 10 from the position shown in FIGURE 3 to the collapsed position of FIGURE 2, the container blank 11 of FIGURE 1 is provided with a pair of identical weakening lines 43 forming extensions of the fold line 17. These weakening lines 43 may, for example, be in the form of fold lines. An identical weakening line 44 is also formed in each of the outer end panels 23 normal to the weakening line 43 in the inner end panels 21, 21. The relationship of the inner end panels 21, and the outer end panels 23 cause the weakening lines 43 and 44 to overlap one another when the corrugated container 10 is erected to the position shown in FIGURE 3. The overlapping of the weakening lines 43 and 44 allow the abutting end panels 21 and 23 to readily fold inwardly toward each other as shown in FIGURE 2. The central divider or partition 37 is similarly provided with a weakening line 45 which causes the central partition 37 to fold from the position illustrated in FIGURES 3 and 5 to the folded position of FIGURE 2. In the collapsed position of the corrugated container 10 of FIGURE 2, a plurality of such corrugated containers can be stored or shipped while occupying a very limited amount of space.

Referring to FIGURES 6 and 7 of the drawings in particular, a corrugated container 46 of FIGURE 7 is constructed from a corrugated paperboard container blank 47 of FIGURE 6. The corrugated container 46 of FIGURE 7 will be best understood by first referring to and describing the corrugated paperboard blank of FIGURE 6.

The corrugated container blank 47 of FIGURE 6 includes a substantially rectangular bottom panel 48 set off by a first pair of fold lines 50, 50 and a second pair of fold lines 51, 51. A pair of angular fold lines 52, 52 converge away from each of the first pair of fold lines 50, 50 and define therewith a pair of substantially identical triangular areas 53, 53. A fold line 54 extends between the pair of angular fold lines 52, 52 substantially midway between the second pair of fold lines 51, 51 and substantially normal to the first pair of fold lines 50, 50.

A first side panel 55 of a substantially rectangular configuration is joined to the substantially rectangular bottom panel 48 along one of the second pair of fold lines 51, 51. A second substantially rectangular side panel 56 is similarly joined to the substantially retangular bottom panel 48 along another of the second pair of fold lines 51, 51.

A substantially rectangular, identical inner end panel 57 is joined to the rectangular bottom panel 48 along each of the first pair of fold lines 50, 50. Each of the inner end panels 57, includes an elongated access opening or hand gripping opening 58 which extend substantially parallel to the first pair of fold lines 50, 50.

A substantially rectangular outer end panel 60 and a substantially rectangular, narrow securing or reinforc-

ing strip **61** are secured to the substantially rectangular side panel **56** along an associated one of a third pair of fold lines **62, 62**. The third pair of fold lines **62, 62** form extensions of the first pair of fold lines **50, 50**. The substantially rectangular outer end panel **60** is provided with an elongated access opening or hand gripping opening **63** which is positioned substantially normal to the elongated access opening **58** of the adjacent inner end panel **57**.

A substantially rectangular outer end panel **64** and a substantially rectangular, narrow, securing or reinforcing strip **65** are each secured to the first side panel **55** along an associated one of a fourth pair of fold lines **66, 66**. An elongated access opening or hand gripping opening **67** is formed in the outer end panel **64** and extends in a direction substantially normal to the elongated access opening **58** in the adjacent inner end panel **57**.

The outer end panels **60** and **64** and the securing strip **61** and **65** are engaged in a cater-corner relationship with respect to the bottom panel **48**. This cater-corner relationship of the outer end panels **60** and **64**, and the securing strip **61** and **65** serve to reinforce opposed corner seams of the corrugated container **46** of FIGURE 7 in a manner which will be described more fully hereafter.

A substantially rectangular first top panel **68** is secured to the first side panel **55** along a first fold line **70**. The first top panel **68** is set off from an outer end panel flap **71** of the outer end panel **64** by a cut line **72**. The outer end panel flap **71** is joined to the outer end panel **64** along a fold line **73**.

A second substantially rectangular top panel **74** is joined to the second side panel **56** along a fold line **75**. The second top panel **74** is set off from an outer end panel flap **76** of the outer end panel **60** by a cut line **77**. The outer end panel flap **76** is joined to the outer end panel **60** along a fold line **78**.

The corrugated container **46** of FIGURE 7 of the drawings is erected from the container blank **47** by folding the inner end panels **57, 57**, the first side panel **55** and the second side panel **56** substantially normally to the bottom panel **48**. The outer end panel **60** is then folded along the adjacent fold line **62** into overlapping contact with the securing strip **65** which is folded along the adjacent fold line **66**, as is clearly shown in FIGURE 7 of the drawings. The outer end panel **64** and the securing strip **61** are folded in a manner substantially identical to the folding of the outer end panel **60** and the securing strip **65**. The securing strip **65** is thus sandwiched between the outer end panel **60** and an adjacent inner end panel **57** while the securing strip **61** is similarly sandwiched between the outer end panel **64** and an adjacent inner end panel **57**. A plurality of staples (not shown) such as the staples **36**, secure the securing strips **61** and **65** to the respective outer end panels **64** and **60** and also to the inner end panels **57, 57**. The securing strips **61** and **65** thus form reinforced seams at opposite corners of the corrugated containers **46**.

The corrugated container **46** of FIGURE 7 can be collapsed in a manner identical to that heretofore discussed in connection with the corrugated container **10** of FIGURES 2 through 5 of the drawings. To facilitate this collapsing, the corrugated container **46** and the blank **47** thereof are provided with a pair of identical weakening lines **80**, similar to the weakening lines **43** of the container blank **11**, forming extensions of the fold line **54**. An identical weakening line **81** is also provided in each of the outer end panels **60** and **64** normal to the weakening lines **80** in adjacent ones of the inner end panels **57, 57**. The relationship of the inner end panels **57, 57** the outer end panel **60** and the outer end panel **64** cause the weakening lines **80** and **81** to overlap one another when the corrugated container **46** is erected to the position shown in FIGURE 7, just as the weakening lines **43** and **44** of the corrugated container **10** of FIGURE 2 overlap.

A central divider **83** (see FIGURE 7), identical to the central divider or partition **37**, is secured to the side panels **55** and **56** in a manner heretofore mentioned in the description of the corrugated container **10**. The central divider or partition **83** is also provided with a weakening line (not shown) similar to the weakening line **45** of the central divider **37**.

Another corrugated container constructed in accordance with this invention is illustrated in FIGURES 9 and 10 of the drawings and is generally designated by the reference numeral **85**. The corrugated container **85** is erected from a corrugated paperboard container blank **86** of FIGURE 8.

The corrugated container blank **86** of FIGURE 8 includes a substantially rectangular bottom panel **87** set off by a first pair of fold lines **88** and a second pair of fold lines **90, 90**. A pair of angular fold lines **91, 91** converge away from each of the first pair of spaced parallel fold lines **88, 88** and define therewith a pair substantially identical triangular areas **92, 92**. A fold line **93** extends between the pair of angular fold lines **91, 91** substantially midway between the second pair of fold lines **90, 90** and substantially normal to the first pair of fold lines **88, 88**.

A first substantially rectangular side panel **94** is joined to the substantially rectangular bottom panel **87** along one of the second pair of fold lines **90, 90**. A second substantially rectangular side panel **95** is similarly joined to the substantially rectangular bottom panel **87** along another of the second pair of fold lines **90, 90**.

A substantially rectangular, identical, inner end panel **96** is joined to the rectangular bottom panel **87** along each of the first pair of fold lines **88, 88**. Each of the inner end panels **96** includes an elongated access opening or hand gripping opening **97** which extends substantially parallel to the first pair of fold lines **88, 88**.

An identical, substantially rectangular outer end panel **98** is secured to the second side panel **95** along each one of a third pair of fold lines **100, 100**. Each of the outer end panels **98**, is adjacent an associated one of the inner end panels **96** and separated therefrom by an identical cut line **101, 101**. An elongated access opening or hand gripping opening **102** is formed in each of the outer end panels **98, 98**, and each of the elongated access openings lies substantially normal to each of the elongated access openings **97, 97** of the inner end panels **96, 96**.

An identical, elongated, substantially rectangular narrow securing or reinforcing strip **103** is secured to the first substantially rectangular side panel **94** along each one of a fourth pair of fold lines **104, 104**. The securing or reinforcing strips **103, 103** cooperate with the inner end panels **96, 96** and the outer end panels **98, 98** in a manner which will be more fully described hereafter.

A first substantially rectangular top panel **105** is joined to the first side panel **94** along a fold line **106**. A similar substantially rectangular second top panel **107** is joined to the second side panel **95** along a fold line **108**.

A pair of identical, substantially rectangular outer end panel flaps **110, 110** are each joined to an associated one of the outer end panels **98, 98** along the fold line **108**. Each of the pair of outer end panel flaps **110, 110** is set off from the substantially rectangular second top panel **107** by a pair of identical cut lines **111, 111**.

The corrugated container **85** of FIGURES 9 and 10 of the drawings is erected from the container blank **86** by first folding both inner end panels **96, 96**, and the side panels **94** and **95** normal to the bottom panel **87** along the respective pairs of fold lines **88**, and **90**. The securing or reinforcing strips **103** are folded along the fold lines **104** into overlapping contact with each of the inner end panels **96, 96** as is best illustrated in FIGURE 10 of the drawings. The outer end panels **98, 98** are then folded along the fold lines **100, 100** into overlying engagement with the securing strips **103**. A plurality of staples **112** secure the panels **96, 98** and the reinforcing strips **103** together

in a manner clearly illustrated in FIGURE 10 of the drawings.

A central divider or partition **113**, identical to the central dividers **37** and **83**, is secured between the side panels **94** and **95** by a plurality of staples **114**. The central divider or partition **113** divides the corrugated container **85** into two identical compartments **115**, each of which is substantially identical to the compartments **42** of the corrugated container **10**.

The corrugated container **85** is collapsible, and to facilitate this collapsing, the corrugated container **85** and the blank **86** thereof is provided with a pair of identical weakening lines **116** forming extensions of the fold line **93** in the bottom panel **87**. These weakening lines **116** are identical to the weakening lines **43** and **80**, and take the form of fold lines or partial lines of severance. An identical weakening line **117** is also formed in each of the outer end panels **98**, **98** normal to the weakening lines **116**, extending into each of the inner end panels **96**, **96**. The relationship of the inner end panels **96** and the outer end panels **98** again cause the weakening lines **116** and **117** to overlap one another when the corrugated container **85** is erected to the position shown in FIGURES 9 and 10 of the drawings. The overlapping of the weakening lines **116**, and **117** operate in a manner identical to that heretofore discussed in the consideration of the corrugated container **10**, and a further description is deemed unnecessary for a complete understanding of this invention. Similarly, the central divider **113** is also provided with a weakening line **118** which is identical to the weakening line **45** of the central divider **37** and functions in a manner described thereto.

While example disclosures of preferred forms of corrugated containers and corrugated container blanks are disclosed herein, it is to be understood that variations in the form and material of these containers and blanks may be made without departing from the spirit and scope of this invention as defined in the appended claims.

I claim:

1. A corrugated container blank comprising a substantially rectangular bottom panel bounded by a first pair of opposed fold lines and a second pair of opposed fold lines, an inner end panel joined to the rectangular bottom panel along each of the first pair of opposed fold lines, a side panel joined to the rectangular bottom panel along each of the second pair of opposed fold lines, a first top panel joined to one of the side panels along a first fold line spaced from one of the second pair of opposed fold lines, a second top panel joined to the other of the side panels along a second fold line spaced from the other of the second pair of opposed fold lines, a third pair of spaced fold lines extending between the bottom panel and the second top panel, a fourth pair of spaced fold lines extending between the bottom panel and the first top panel, an outer end panel joined to one fold line of each of the third and fourth pair of fold lines, a securing strip joined to the other fold line of each of the third and fourth pair of fold lines, and an outer end panel flap joined to one of the outer end panels along the respective first and second fold lines.

2. A corrugated container blank comprising a substantially rectangular bottom panel bounded by a first pair of opposed fold lines and a second pair of opposed fold lines, an inner end panel joined to the rectangular bottom panel along each of the first pair of opposed fold lines, a side panel joined to the rectangular bottom panel along each of the second pair of opposed fold lines, a first top panel joined to one of the side panels along a first fold line spaced from one of the second pair of opposed fold lines, a second top panel joined to the other of the side panels along a second fold line spaced from the other of the second pair of opposed fold lines, a third pair of spaced fold lines extending between the bottom panel and the second top panel, a fourth pair of spaced fold lines extending between the bottom panel and the first top panel, an outer end panel joined to one fold line of each of the third and fourth pair of fold lines, a securing strip joined to the other fold line of each of the third and fourth pair of fold lines, the outer end panels and securing strips being arranged in cater-corner relation with respect to the rectangular bottom panel, and an outer end panel flap joined to one of the outer end panels along the respective first and second fold lines.

3. A corrugated container blank comprising a substantially rectangular bottom panel bounded by a first pair of opposed fold lines and a second pair of opposed fold lines, said bottom panel including a pair of angular fold lines converging away from the first pair of opposed fold lines to define a pair of opposed substantially triangular areas, a fold line extending between said pair of opposed substantially triangular areas, portions of the pair of angular fold lines and the fold line between the pair of opposed substantially triangular areas defining a pair of opposed substantially trapezoidal areas, an inner end panel joined to the rectangular bottom panel along each of the first pair of opposed fold lines, a side panel joined to the rectangular bottom panel along each of the second pair of opposed fold lines, a first top panel joined to one of the side panels along a first fold line spaced from one of the second pair of opposed fold lines, a second top panel joined to the other of the side panels along a second fold line spaced from the other of the second pair of opposed fold lines, a third pair of spaced fold lines extending between the bottom panel and the second top panel, a fourth pair of spaced fold lines extending between the bottom panel and the first top panel, an outer end panel joined to one fold line of each of the third and fourth pair of fold lines, a securing strip joined to the other fold line of each of the third and fourth pair of fold lines, the outer end panels and securing strips being arranged in cater-corner relation with respect to the rectangular bottom panel, and an outer end panel flap joined to one of the outer end panels along the respective first and second fold lines.

4. A corrugated container blank comprising a substantially rectangular bottom panel bounded by a first pair of opposed fold lines and a second air of opposed fold lines, an inner end panel joined to the rectangular bottom panel along each of the first pair of opposed fold lines, a side panel joined to the rectangular bottom panel along each of the second pair of opposed fold lines, a first top panel joined to one of the side panels along a first fold line spaced from one of the second pair of opposed fold lines, a second top panel joined to the other of the side panels along a second fold line spaced from the other of the second pair of opposed fold lines, a third pair of spaced fold lines extending between the bottom panel and the second top panel, a fourth pair of spaced fold lines extending between the bottom panel and the first top panel, an outer end panel joined to one fold line of each of the third and fourth pair of fold lines, a securing strip joined to the other fold line of each of the third and fourth pair of fold lines, the outer end panels and securing strips being arranged in cater-corner relation with respect to the rectangular bottom panel, and an outer end panel flap joined to one of the outer end panels along the respective first and second fold lines, a securing strip joined to each of the outer end panels along a respective third and fourth fold lines, each of the third and fourth fold lines being spaced from an associated one of the third pair of opposed fold lines, and an outer end panel flap joined to each of said outer end panels along said second fold line.

5. A corrugated container blank comprising a substantially rectangular bottom panel bounded by a first pair of opposed fold lines and a second pair of opposed fold lines, an inner end panel joined to the rectangular bottom panel along each of the first pair of opposed fold lines, a side panel joined to the rectangular bottom panel along each of the second pair of opposed fold lines, a first top panel joined to one of the side panels along a first fold line spaced from one of the second pair of opposed

fold lines, a second top panel joined to the other of the side panels along a second fold line spaced from the other of the second pair of opposed fold lines, an outer end panel joined to one of the side panels along each of a third pair of opposed fold lines, the third pair of opposed fold lines extending between the bottom panel and the second top panel, a securing strip joined to the other side panel along each of a fourth pair of fold lines and an outer end panel flap joined to each of said outer end panels along said second fold line.

6. A corrugated container blank comprising a substantially rectangular bottom panel bounded by a first pair of opposed fold lines and a second pair of opposed fold lines, said bottom panel including a pair of angular fold lines converging away from the first pair of opposed fold lines to define a pair of opposed substantially triangular areas, a fold line extending between said pair of opposed substantially triangular areas, portions of the pair of angular fold lines and the fold line between the pair of opposed substantially triangular areas defining a pair of opposed substantially trapezoidal areas, an inner end panel joined to the rectangular bottom panel along each of the first pair of opposed fold lines, a side panel joined to the rectangular bottom panel along each of the second pair of opposed fold lines, a first top panel joined to one of the side panels along a first fold line spaced from one of the second pair of opposed fold lines, a second top panel joined to the other of the side panels along a second fold line spaced from the other of the second pair of opposed fold lines, an outer end panel joined to one of the side panels along each of a third pair of opposed fold lines, the third pair of opposed fold lines extending between the bottom panel and the second top panel, a securing strip joined to the other side panel along each of a fourth pair of fold lines and an outer end panel flap joined to each of said outer end panels along said second fold line.

7. A corrugated container blank comprising a substantially rectangular bottom panel bounded by a first pair of opposed fold lines and a second pair of opposed fold lines, an inner end panel joined to the rectangular bottom panel along each of the first pair of opposed fold lines, a side panel joined to the rectangular bottom panel along each of the second pair of opposed fold lines, a first top panel joined to one of the side panels along a first fold line spaced from one of the second pair of opposed fold lines, a second top panel joined to the other of the side panels along a second fold line spaced from the other of the second pair of opposed fold lines, an outer end panel joined to one of the side panels along each of a third pair of opposed fold lines, the third pair of opposed fold lines extending between the bottom panel and the second top panel, an elongated hand gripping opening in each of said inner and outer end panels, the hand gripping openings in the inner end panels being arranged substantially normal to the hand gripping openings in the outer end panels, a securing strip joined to the other side panel along each of a fourth pair of fold lines and an outer end panel flap joined to each of said outer end panels along said second fold line.

8. A corrugated container blank comprising a substantially rectangular bottom panel set off by a first pair of fold lines and a second pair of fold lines substantially normal to and spaced from said first pair of fold lines, a pair of angular fold lines converging away from each of the first pair of fold lines, a first side panel of a rectangular configuration joined to the bottom panel along one of said second pair of fold lines, a second substantially rectangular side panel joined to the bottom panel along the other of said second pair of fold lines, a generally rectangular identical inner end panel joined to the bottom panel along each of the first pair of fold lines, each of the inner end panels including an elongated access opening extending substantially parallel to the first pair of fold lines, a generally rectangular outer end panel and a substantially rectangular narrow securing strip secured to the second side panel along an associated one of a third pair of fold lines, the third pair of fold lines forming extensions of the first pair of fold lines, a substantially rectangular outer end panel and a generally rectangular narrow securing strip secured to the first side panel along an associated one of a fourth pair of fold lines, elongated access openings formed in each of said outer end panels, said outer end panels and said securing strips being arranged in cater-corner relationship with respect to the bottom panel, a substantially rectangular first top panel secured to the first side panel, said first top panel being set off from an outer end panel flap of one of said outer end panels by a cut line, a second substantially rectangular top panel being joined to the second side panel along another fold line, and the second top panel being set off from another outer end panel flap of the other of said outer end panels by a cut line.

9. A corrugated container blank comprising a substantially rectangular bottom panel set off by a first pair of fold lines and a second pair of fold lines, a pair of angular fold lines converging away from each of the first pair of fold lines, a first substantially rectangular side panel joined to the bottom panel along one of the second pair of fold lines, a second substantially rectangular side panel joined to the bottom panel along another of said second pair of fold lines, a generally rectangular inner end panel joined to the bottom panel along each of the first pair of fold lines, each of the inner end panels including an elongated access opening extending substantially parallel to the first pair of fold lines, a substantially rectangular outer end panel secured to the second side panel along each of a third pair of fold lines, each of the outer end panels being positioned adjacent and associated one of the inner end panels and separated therefrom by an identical cut line, an elongated access opening in each of the outer end panels, each of the outer end panel access openings being substantially normal to each of the elongated access openings of the inner end panels, a substantially rectangular narrow securing strip secured to the first side panel along each one of a fourth pair of fold lines, a generally rectangular top panel joined to each of the first and second side panels, an outer end panel flap joined to an associated one of the outer end panels, and each of the pair of outer end panel flaps being set off from the second top panel by a pair of identical cut lines.

References Cited by the Examiner

UNITED STATES PATENTS

1,747,979	2/1930	Kondolf	229—33
2,645,405	7/1953	Dorfman	229—41 X
2,660,363	11/1953	Trickett et al.	229—41 X
2,761,609	9/1956	Arkin	229—41 X
3,003,680	10/1961	Wilcox	229—41
3,039,670	6/1962	Hardon	229—41

FOREIGN PATENTS

223,400	10/1924	Great Britain.

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