July 11, 1967 A. KAPLAN 3,330,389

LUGGAGE CASE

Filed April 6, 1965 6 Sheets-Sheet 1

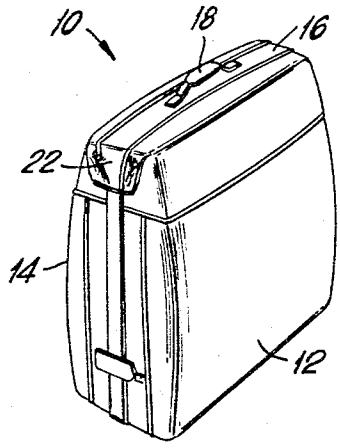


FIG. 1
(PRIOR ART)

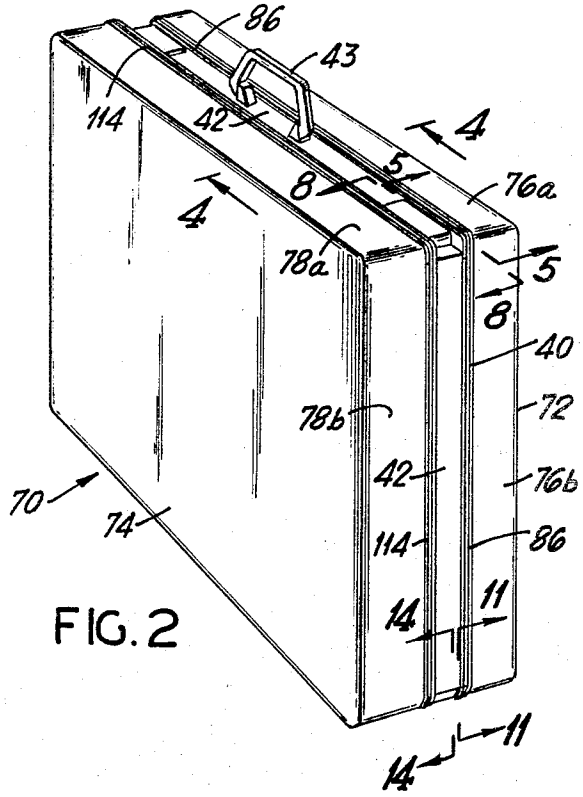


FIG. 2

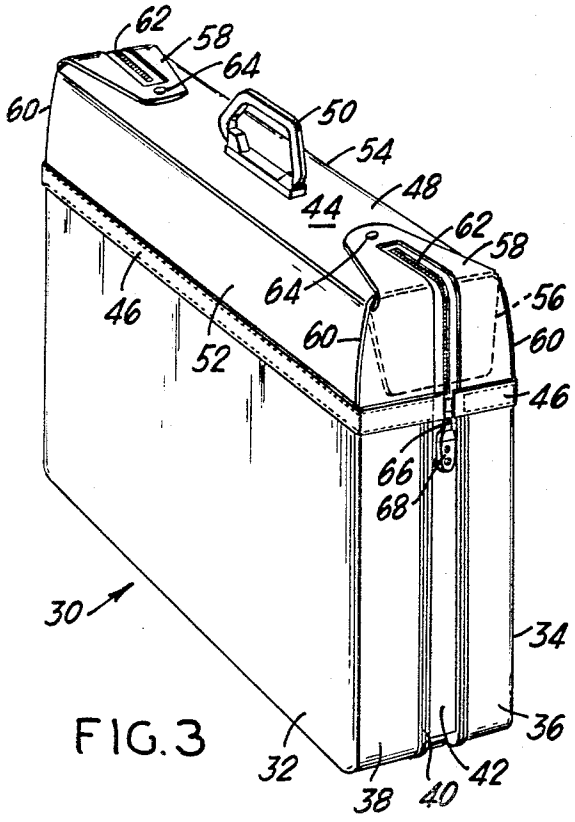


FIG. 3

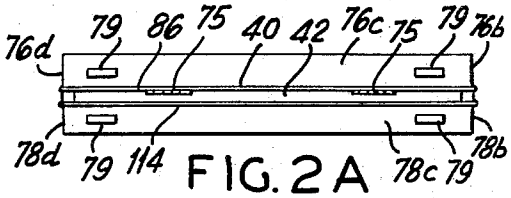


FIG. 2A

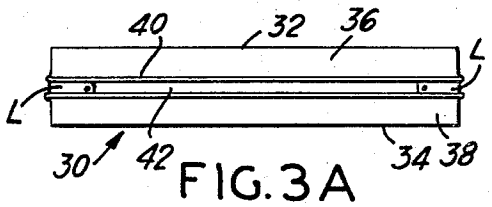


FIG. 3A

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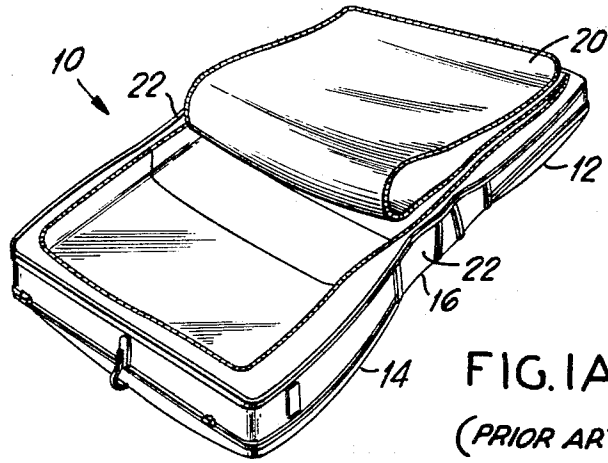


FIG. 1A
(PRIOR ART)

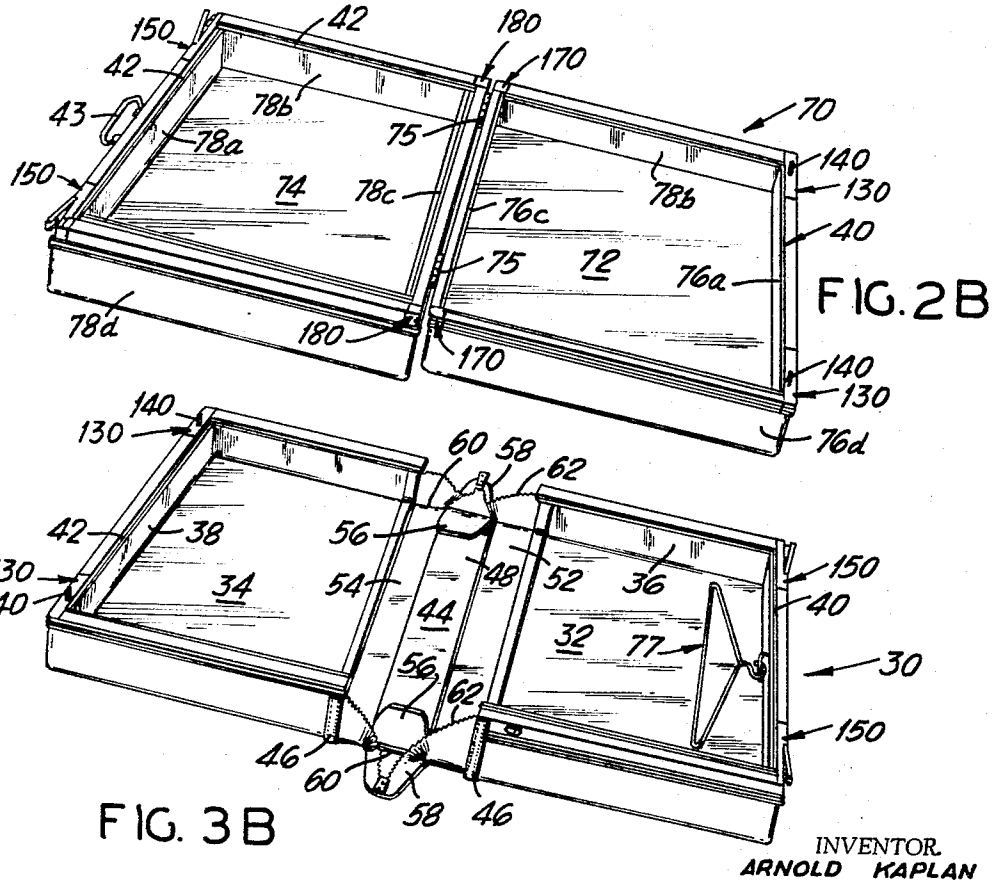


FIG. 2B

FIG. 3B

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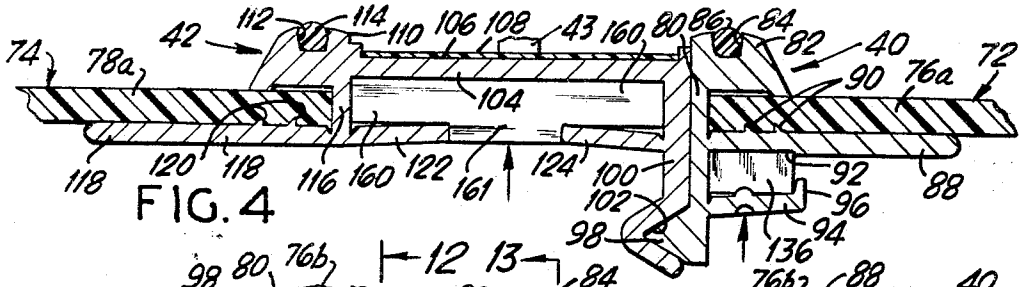


FIG. 4

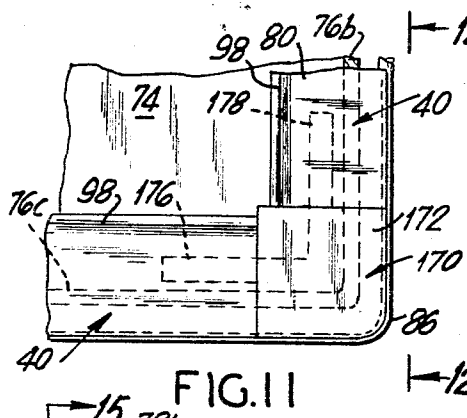


FIG. 11

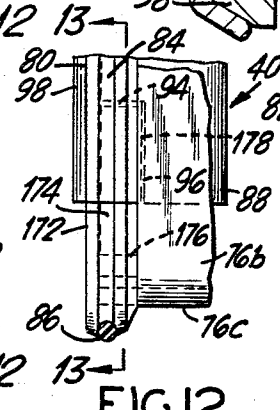


FIG. 12

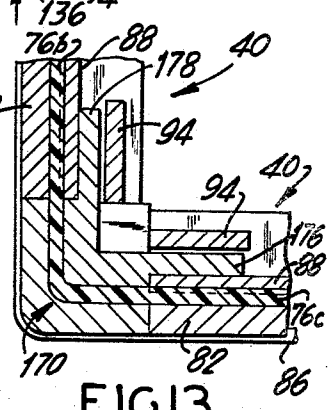


FIG. 13

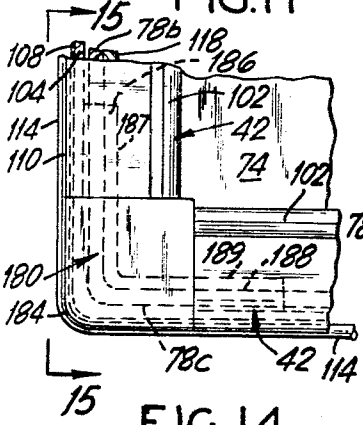


FIG. 14

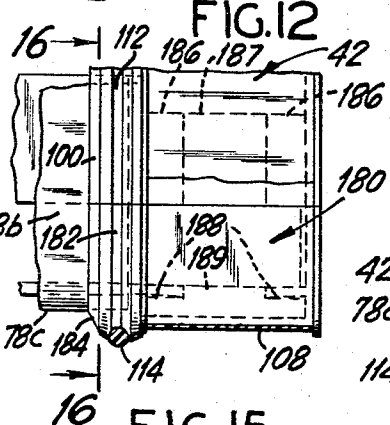


FIG. 15

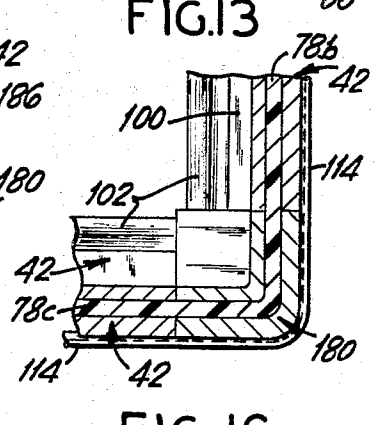


FIG. 16

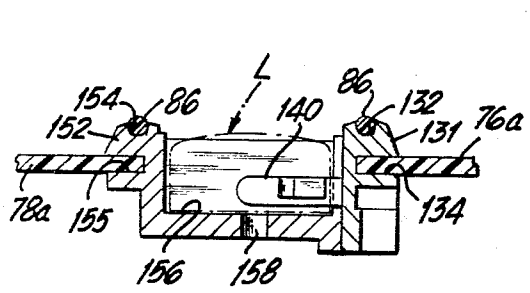


FIG. 17

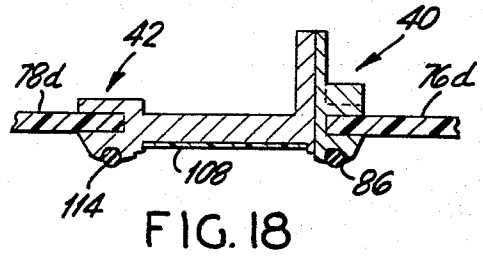


FIG. 18

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LUGGAGE CASE

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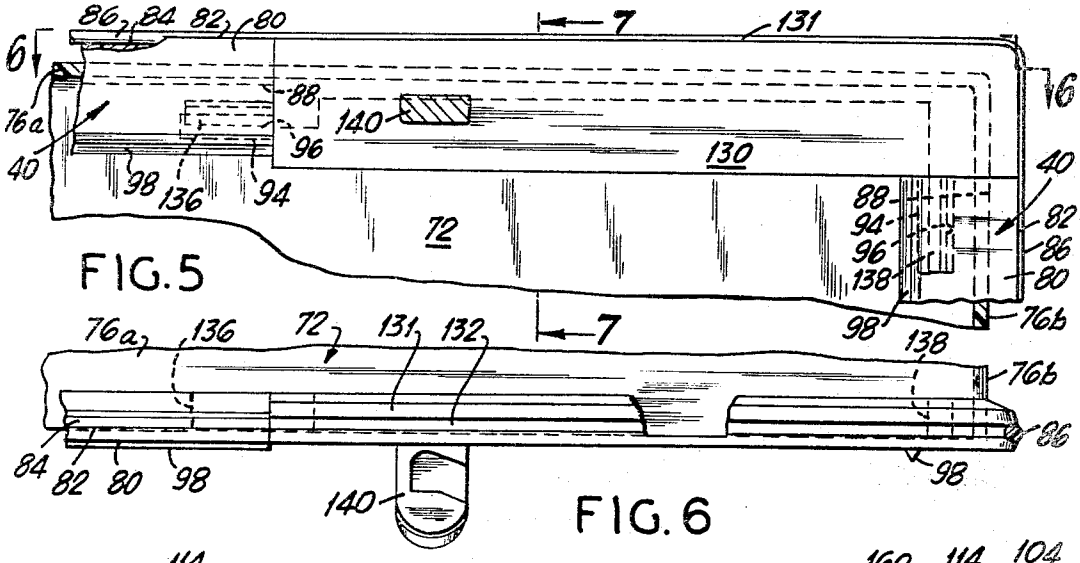


FIG. 5

FIG. 6

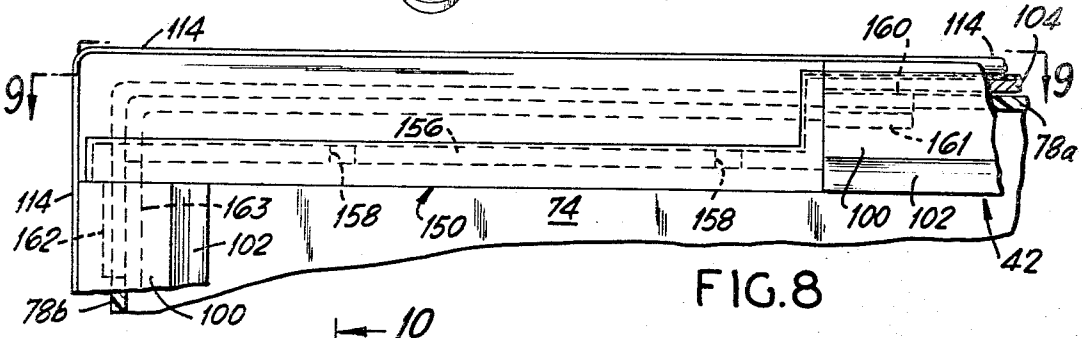


FIG. 8

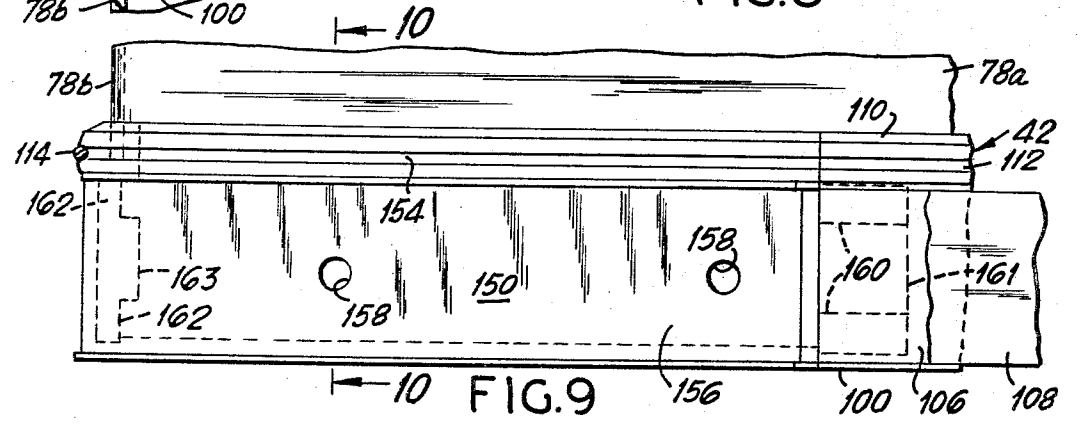


FIG. 9

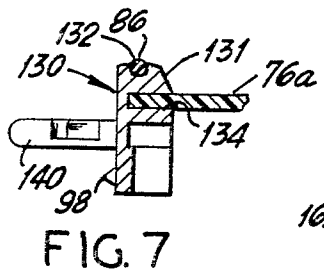


FIG. 7

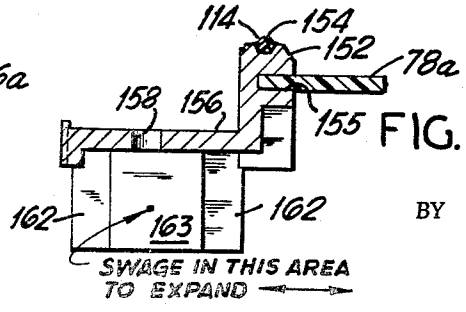


FIG. 10

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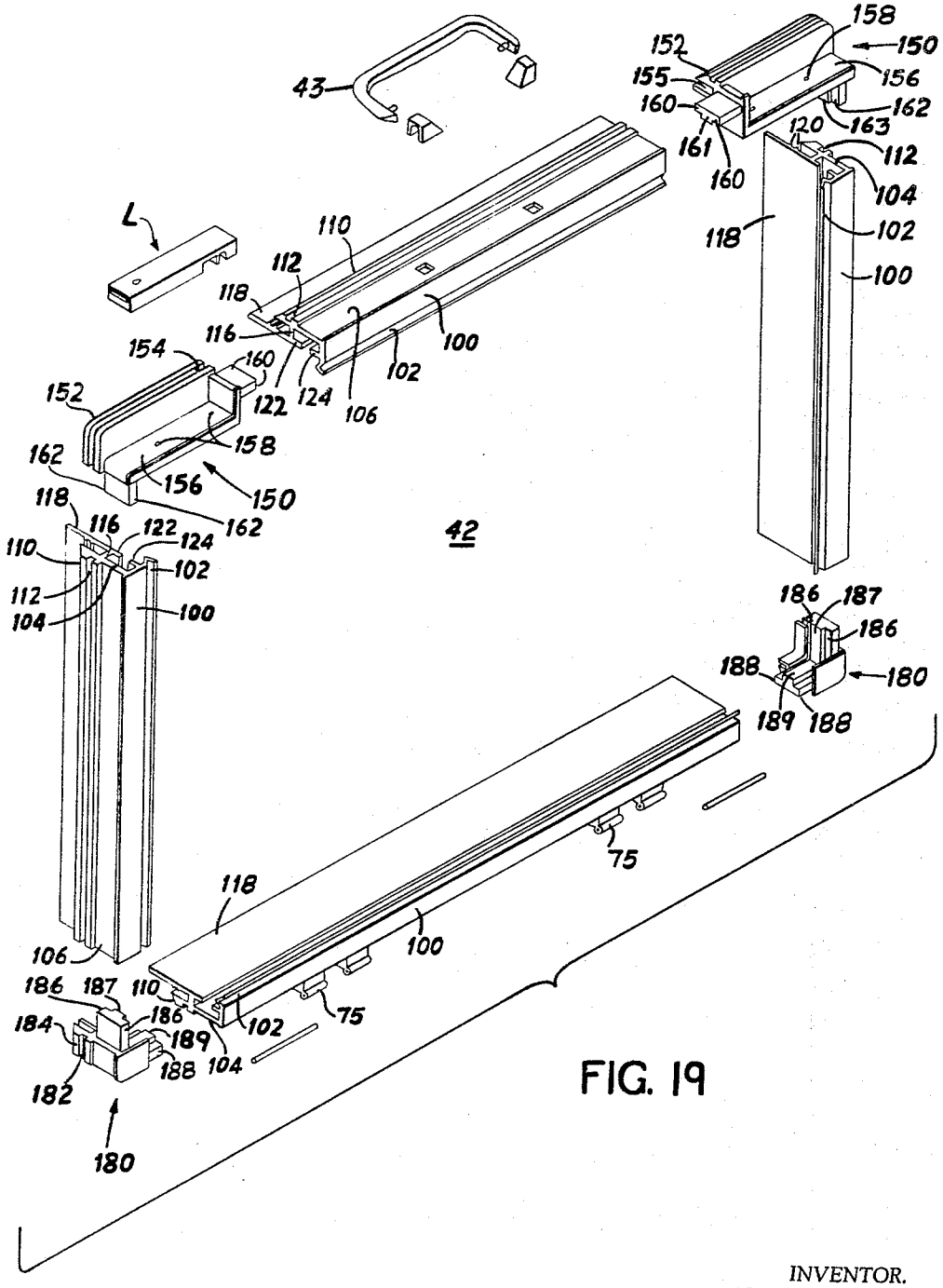


FIG. 19

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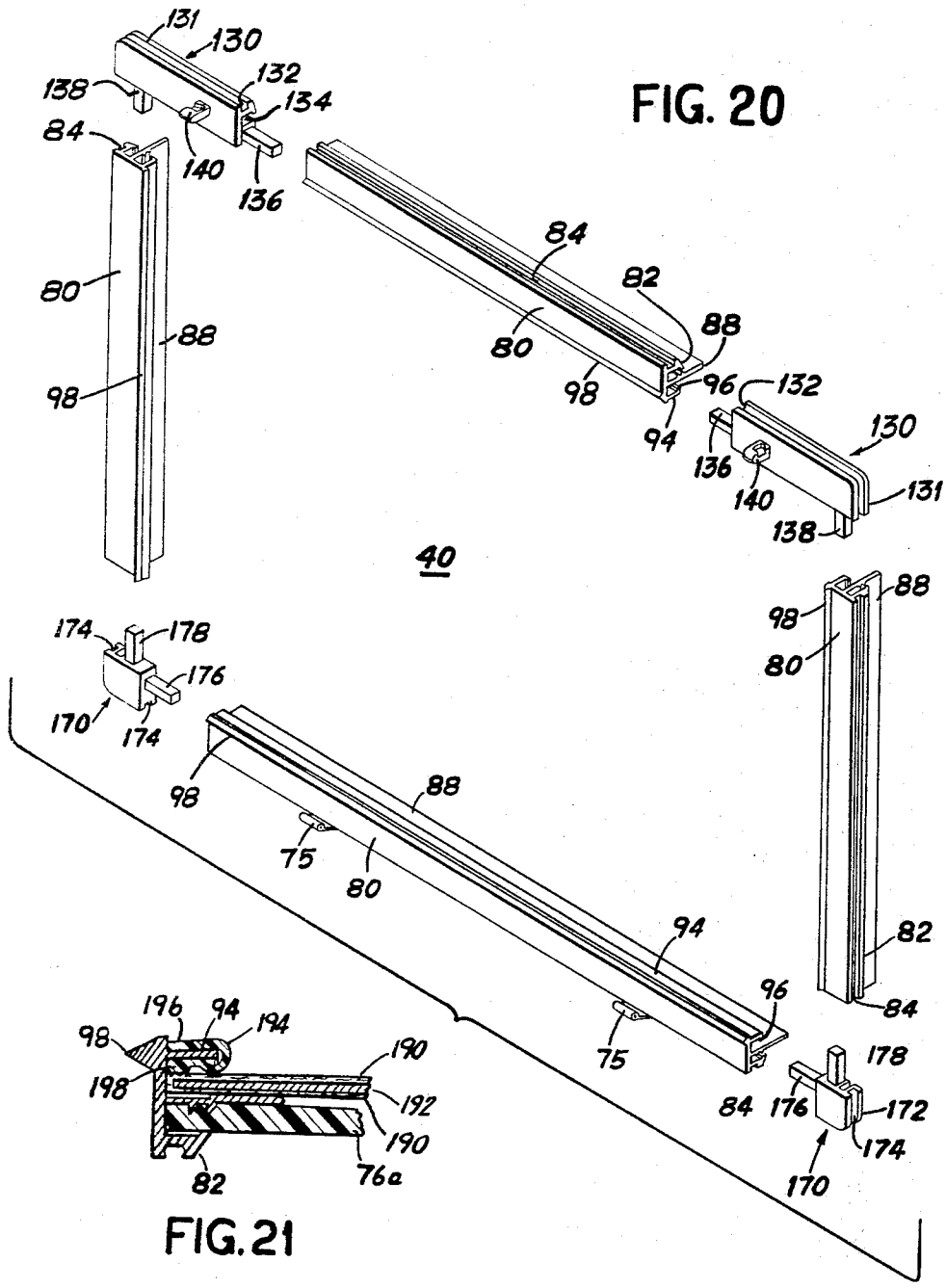


FIG. 20

FIG. 21

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United States Patent Office 3,330,389 Patented July 11, 1967

3,330,389

LUGGAGE CASE

Arnold Kaplan, 1319 Auerbach Ave., Hewlett Harbor, N.Y. 11557

Filed Apr. 6, 1965, Ser. No. 446,020
37 Claims. (Cl. 190—49)

This invention relates to luggage cases and more particularly to improved frame members therefor.

In the luggage case prior art, there are included many examples of one-piece extruded frame members. The frames used have not been entirely satisfactory from several standpoints and at best have imposed unnecessary limitations on the configuration of the case. Manufacturers utilizing one-piece frame construction had the choice of notching the frame to a sharp, miter-type joint at the corners, or alternatively using a generous radius at the corners. Both of these choices have severe drawbacks that are overcome by the present invention.

Considering the first alternative made available by the prior art, it is evident that the metal extrusion had to be carefully heat treated within a very close and specific range in order to provide structural soundness when the frame is notched. This is an additional step which involves extra costs and extra handling. The incidence of rejection of parts is also a factor in adding to the cost of the unit. Moreover, even after the frame is properly notched and bent, it is still necessary to mask the miter-type corner in some way. Thus the designer is presented with additional problems pertaining to the esthetic appeal of the luggage. Additionally, cutting and removing portions of the extruded frame tends to structurally weaken it to the point where the luggage is susceptible to damage from rough handling.

The second alternative available to the luggage manufacturer is to generously round the corners in order to avoid cutting and/or notching the frame. There are of course practical limitations to how small a radius can be formed. For a given standard size of luggage, generously rounding the corners means that the interior dimension will be reduced. This is a serious drawback, particularly where suits or coats are carried in the luggage because there will be a tendency to crush and wrinkle the shoulders. Of course, one way to avoid this is to make the entire piece of luggage wider but this is obviously an undesirable expediency.

By way of contrast, the present invention provides multisection frame members wherein the straight top, bottom and sides are metal extrusions and the corners are each preformed separate castings. The corners and sides are provided with interlocking means whereby they may readily be snapped together and securely held by swaging, adhesives or welding. The corners may be as sharp as desired and yet no strength characteristics are sacrificed. The short sections comprising the top, bottom and sides are much easier to handle than the long continuous frame section of the prior art. No special treatment of the metal is required prior to assembly. Accordingly, since no machining is required on the extruded or cast members, the rejection rate of the members is substantially reduced. In addition, unsightly corner joints do not have to be disguised and the luggage case need not be made unnecessarily large.

The present invention provides improved corner construction for both a top opening and bottom opening luggage case. For both types of cases the description and drawings will be directed towards hard shell luggage as opposed to the soft sided, flight bag type, but it should be understood that the invention is not limited thereto. For both types of luggage, the support frame for the two side shells is of multisection construction and includes

lengths of extruded members which interlock with cast corner pieces. In the bottom opening piece of luggage, comparable to the aforementioned flight bag, waterproofing boots are included at the ends of the flexible hinge on the top of the case.

Accordingly, it is an object of the present invention to provide improved frame construction in a luggage case.

Another object is to provide improved frame construction for soft and hard sided luggage cases.

An additional object of the present invention is to provide a lugage case frame of multisectioned construction.

A further object is to provide a luggage case wherein the frame therefor is comprised of cast metal corner sections and extruded metal sections connected thereto.

Another object is to provide a multisectioned frame construction for luggage cases wherein the sections interlock by snapping together.

A still further object is to provide luggage case frame construction wherein the corners are relatively sharp.

These and other features, objects and advantages of the invention will, in part, be pointed out with particularity and will in part, become obvious from the following more detailed description of the invention taken in conjunction with the accompanying drawing which forms an integral part thereof.

In the various figures of the drawing like reference characters designate like parts.

In the drawing:

FIG. 1 is a pictorial view of a prior art piece of luggage of the bottom opening type.

FIG. 1A is a pictorial view of the prior art device of FIG. 1 in the opened condition.

FIG. 2 is a pictorial view of the present invention as embodied in a top opening luggage case;

FIG. 2A is a bottom plan view of the luggage of FIG. 2;

FIG. 2B is a pictorial view of the FIG. 2 luggage case in the opened position;

FIG. 3 is a pictorial view of the present invention as embodied in a bottom opening luggage case;

FIG. 3A is a bottom plan view of the luggage of FIG. 3;

FIG. 3B is a pictorial view of the FIG. 3 luggage case in the opened position;

FIG. 4 is an enlarged, fragmentary, cross sectional view taken along line 4—4 of FIG. 2;

FIG. 5 is an enlarged fragmentary side elevation view of one side of the closure panel taken along line 5—5 of FIG. 2;

FIG. 6 is a fragmentary plan view taken along line 6—6 of FIG. 5;

FIG. 7 is a fragmentary sectional elevation view taken along line 7—7 of FIG. 5;

FIG. 8 is an enlarged, fragmentary side elevation view of the side of the closure panel opposite to and mating with that of FIG. 5, the view being taken along line 8—8 of FIG. 2;

FIG. 9 is a fragmentary plan view taken along line 9—9 of FIG. 8;

FIG. 10 is a fragmentary sectional elevation view taken along line 10—10 of FIG. 9;

FIG. 11 is an enlarged, fragmentary side elevation view of another male corner member taken along line 11—11 of FIG. 2;

FIG. 12 is a fragmentary side elevation view taken along line 12—12 of FIG. 11;

FIG. 13 is a fragmentary sectional elevation view taken along line 13—13 of FIG. 12;

FIG. 14 is an enlarged, fragmentary side elevation view of another female corner member taken along line 14—14 of FIG. 2;

FIG. 15 is a fragmentary side elevation view taken along line **15—15** of FIG. 14;

FIG. 16 is a fragmentary sectional elevation view taken along line **16—16** of FIG. 15;

FIG. 17 is a transverse sectional elevational view taken through mating frame members in the vicinity of a lock;

FIG. 18 is a transverse sectional elevational view illustrating a typical arrangement of the opposed frame members along a side at the bottom of the case intermediate two corners.

FIGS. 19 and 20 are exploded pictorial views of the members comprising the female and male portions of the luggage case; and

FIG. 21 is a typical sectional view through a male frame member showing means to retain the luggage liner.

Referring now to the drawing and in particular to FIG. 1 and FIG. 1A, there is shown a typical example of the prior art known commonly as a flight bag. Reference character **10** denotes the bag in general. Bag **10** is comprised of side sections **12** and **14**, as well as transverse central portion **16** having an integral handle **18**. The bag usually is "soft sided" being made of a fabric, but, as will be explained hereinafter, the sides may be rigid and the transverse, central portion will still serve as a hinge if it is flexible. In order to use the bag side sections **12** and **14** are separated so that the opposed faces thereof lie flat and face upwardly. The sections are then continuous and can accept a number of full length garments up to the thickness of one of the sections. Usually a continuous, zippered panel **20** is provided on the two opposed inner faces of the side sections so that the clothing may be fully covered and protected.

After the bag is filled, side sections **12** and **14** are brought together as shown in FIG. 1. It will be seen, however, that the outside ends **22** of central portion **16** tend to bunch inwardly causing the clothing therein to be wrinkled. While the bunching and resulting wrinkling have long been recognized as a problem and a shortcoming of the bag, it was hitherto felt to be unavoidable inasmuch as the inside had to be maintained as watertight as possible. The present invention teaches means for providing an internal boot that maintains the inside of the luggage substantially watertight and yet does not wrinkle the clothes inside. An outer, openable flap is also provided.

FIG. 3 and FIG. 3B will be used to illustrate only the improved boot feature of the present invention. Other important features of construction, applicable to FIG. 3 will be discussed hereinafter with respect to the FIG. 2 embodiment in order to simplify the description.

Luggage case **30**, illustrated in FIGS. 3, 3A and 3B, is of the bottom opening, hard shell type. It should be understood, however, that the improved boot feature now to be described may be used with equal facility on a soft sided case. Side sections or panels **32** and **34** are each concave in cross section and are provided with inwardly depending, peripheral flange portions **36** and **38**, respectively, along the three edges thereof. Matingly opposed frame members **40** and **42**, to be described more fully hereinafter, are secured to their respective flange portions to provide closure means for the luggage case.

Flexible hinge member **44** is suitably fastened to the upper end of shells **32** and **34** by means of a peripheral welt **46**. The hinge is therefore in the form of an inverted U defined by a central transverse portion **48** which includes handle **50** and downwardly depending transverse faces **52** and **54**. The abutment of faces **50** and **52** and the nonflanged edges of shells **32** and **34** is concealed by the peripheral welt. Both the outer ends of the hinge central portion **48** are provided with a downwardly depending inner flap or boot **56** which substantially covers the space between the ends of transverse faces **52** and **54**. In addition, upwardly and inwardly depending outer flaps **58** are also provided and are positioned such that they completely enclose the ends of the hinge by extending between faces **52** and **54**. Flaps **56** and **58** are both secured to each side of the hinge by welts **60**, it being noted that welt **60** joins one end of each flap **56** to the ends of transverse hinge portion **48**. Welt **60** also joins the side edges of flap **58** to the opposed ends of hinge faces **52** and **54**.

As best shown in FIG. 3B, outer flaps **58** are each provided with a bisecting zipper **62**, there being further provided a snap fastener **64** at the unattached end of each flap so that they may be releasably secured to mating fasteners on transverse portion **48**. Clip **66**, integral with the end of zipper **62**, is adapted to releasably mate with a lock **68** secured to the side frame of the luggage case. Thus it will be seen that with the zipper unlocked and open, outer flaps **58** will bend and spread apart when the case is opened. When the case holds a full complement of garments, inner flaps or boots **56** will serve to prevent crushing of the garment case and overlaying flaps **58** will complete a substantially watertight arrangement. Even more important is the fact that the outer flaps are partially separable. Whereas in the prior art, the comparable portion of the bag was made of one extra long piece to permit full opening, the present invention permits the bag to lay flat when it is open because flap **58** separates along a central line defined by the zipper. When the case is closed, the flap will not bulge inwardly to wrinkle the clothes because it is no longer than it has to be to permit full opening.

The opposed frame members mentioned hereinabove may best be described in connection with the embodiment illustrated in FIGS. 2, 2A, 2B and FIGS. 4–18. In the second embodiment, top opening luggage case **70** is comprised of substanliatly identical shells **72** and **74** joined to each other by means of hinges **75**. Hanger means **77** may be provided on the inside of the case and bumpers **79** included on the bottom of the case. Each of the shells have four inwardly directed, peripheral flanges **76***a*–**76***d* and **78***a*–**78***d*, respectively. Male frame member **40** is secured to flanges **76***a*–**76***d* and female frame member **42** having a handle **43** is secured to flanges **78***a*–**78***d* (FIG. 2B) in a manner now to be described.

FIG. 4 is an enlarged transverse section illustrating the cross sectional configuration and relationship of frame members **40** and **42** in the fully assembled condition. The cross section shown in FIG. 4 is typical for any point in the frame assembly between the corner members.

Frame member **40** is comprised of a wall member **80** from which depends a peripheral, outwardly facing longitudinal bead **82** having a groove **84** therein. Bumper **86** is disposed within the groove and is adapted to protect the surface of the luggage since it projects outwardly therefrom. To capture the bumper, the sides of groove **84** are deformed inwardly at a point above the centerline of the bumper. A first ledge **88** extends substantially perpendicular from approximately the midpoint of wall member **80**, the ledge being provided with a plurality of teeth **90** on the upper surface thereof and a shallow recess **92** on the lower surface thereof. Second ledge **94** extends outwardly from wall **80** intermediate the end thereof and ledge **88**. Upturned end **96** together with first and second ledges **88** and **94** as well as a portion of wall **80** define a keyway, the function of which will be described hereinafter in conjunction with the corner assembly. The lower end and inner side of wall **80** is formed with a V-shaped rib **98** projecting towards the center of the luggage.

Frame member **40** is advantageously formed by the continuous extrusion of a lightweight metal. Prior to assembly, the underside of bead **82** diverges slightly away from the upper surface of ledge **88** so that flange **76***a* of shell **72**, for example, may be placed therebetween. The bead and the ledge are crimped causing teeth **90** to bite into ledge **88** thus preventing the flange **76***a* from separating from frame member **40**.

Female frame member **42**, which would also be produced by continuous extrusion of the same lightweight

metal as frame member **40** comprises a vertical wall **100** adapted to be in abutting, confronting relationship with wall **80** when the luggage case is closed. Outwardly facing V-shaped track **102** is positioned at the bottom of wall **100** whereby it mates with V-shaped rib **98** on frame member **40**. The abutting walls and the nesting rib and track of each frame member assures that the case will closely tightly all around whereby the interior of the case will be protected from water.

Frame member **42** further comprises a central portion **104** integral with and depending perpendicularly from the uppermost portion of wall **100**. Central portion **104** is provided with a shallow recess **106** in which there is permanently secured a decorative cover strip **108**. Bead **110** having a longitudinal grove **112** dimensioned to receive bumper **114** complements bead **82** and bumper **86** in frame member **40**, so that in the closed position of the case, the frame member is symmertical about central portion **104**. Bumper **114** is also captured within groove **112** in the same manner as bumper **86**.

Bead **110** has depending therefrom a short vertical wall **116** substantially parallel to and spaced from wall **100**. Integral with the bottom of wall **116** and extending outwardly from the center of the case is a first ledge **118** having a plurality of teeth **120** formed on its upper surface. Teeth **120** are similar in function and configuration to teeth **90** of ledge **88**. By way of example, flange **78***a* of shell **74** is inserted between the initially diverging bead **110** and first ledge **118**. The bead and ledge are then crimped so that teeth **120** bite into and retain flange **78***a* in position.

Second and third ledges **122** and **124** extend inwardly towards the center of the case from walls **116** and **100**, respectively. The underside surface of central portion **104**, wall **116**, and second ledge **122**, defines one side of the keyway while the underside surface of central portion **104**, wall **100** and third ledge **124**, defines the other side of the keyway. The function of the keyway will be described hereinafter in conjunction with a typical corner assembly.

The description given hereinabove is typical for all of the frame members comprising the four sides of the luggage case. FIG. 4 is typical for any point intermediate any two adjacent corners. The only structural differences among the four sides will be due to the inclusion of the handle in one side, locks in another and hinge members in still another. These elements, however, are only additions and therefore the cross section of the frame members are substantially identical except for the corners.

Referring now to FIGS. 5–10, a typical upper corner installation will be described. FIGS. 5–7 particularly illustrate a typical male corner member **130** disposed between adjacent upper and side frame members **40**. Corner member **130** has a substantially rectangular volume (FIG. 7) and in the assembled condition is contiguous with both adjacent side frame members. The upper surface of corner member **130**, in the form of a bead **131**, is provided with a longitudinal groove **132** contiguous with groove **84** and adapted to capture bumper **86**. A slot **134** is also provided in corner member **130** whereby flange **76***a* of shell **72** may be secured (FIG. 7). It may best be seen in FIG. 6 that frame members **40** and corner member **130** appear to be a single continuous piece.

Corner member **130** is secured to adjacent frame members by means of a tongue extending from each of the ends thereof. In FIG. 5, it will be seen that tongue **136** extends horizontally from the lefthand end face of corner member **130** and tongue **138** extends vertically downward from the righthand bottom surface of corner member **130**. Referring once again to FIG. 4, tongue **136**, by way of example, is shown disposed within the keyway defined by recess **92** in the underside of first ledge **88**, a portion of wall **100**, second ledge **94** and upturned end **96** of ledge **94**. The tongue is secured in the keyway by means of a staking operation the force of which is applied upwardly against ledge **94** in the direction indicated by the arrow. Alternatively, adhesive may be used for this purpose, or, if the mating members are aluminum, they may be welded. Slotted post **140** is included in the corner casting and is adapted to releasably engage a latching mechanism L (FIG. 17).

The comparable female corner member **150** is illustrated in FIGS. 8–10. Bead **152** (FIG. 10) is substantially the same in cross section as bead **110** of frame member **42**. Further, a longitudinal groove **154** is provided to accommodate and capture bumper **114**. Thus in the assembled condition, corner member **150** appears to be a continuation of frame member **42**. As in the case of the male corner member, a slot **155** is provided in female corner member **150** whereby flange **78***a* of shell **74** may be secured (FIG. 10). By means of stepped down central portion **156**, provision is made for a latching member which is secured thereto by suitable fasteners positioned in apertures **158**. A typical latch L that may be employed in cooperation with post **140** is shown in phantom in FIG. 17.

Corner member **150** also in the form of a metal casting is provided with suitable tongues at each end whereby it may be inconspicuously joined to frame members **42**. Since corner member **150** is much wider than corner member **130**, a T-shaped tongue is provided at each end. As best illustrated in FIG. 9 and FIG. 10, tongue **160** extends horizontally from the righthand end face of corner member **150** and tongue **162** extends vertically downward from the lefthand bottom surface of the cover member. FIG. 4 illustrates the assembled condition of the aforementioned tongues. The keyway defined by the undersurface of central portion **104**, a portion of wall **100** and third ledge **124**, accommodates one side of tongue **160** while the keyway defined by the undersurface of central portion **104**, wall **116** and second ledge **122** accommodates the other side of tongue **160**. Central portion **161** of tongue **160** fits in between the opposed ends of ledges **122** and **124** (FIG. 4). The central, enlarged thickness of tongue **160** is swaged in the direction of the arrow so that the side portion thereof is spread laterally thus locking the corner member to the frame. This type of cross sectional configuration provides increased ruggedness and durability as opposed to two separate parallel tongues with no central portion. The two separate types of tongue construction were found to be inherently weak and had a tendency to fracture. The foregoing is by way of example, it being understood that the same arrangement is provided for tongue **162** which has a thickened central portion **163**. The central portion is swaged to cause tongue portion **162** to be displaced laterally, as shown in FIG. 10.

The cast bottom corner members function in substantially the same manner as the upper corner members. However, since no latches are required at the bottom of the particular case illustrated, the corner members may be substantially shorter and the mating frame members correspondingly longer. FIGS. 11–13 illustrate a typical bottom edge corner member **170**. Once again, a bead **172** is provided with a groove **174** adapted to capture bumper **86**. With the corner member in place, a continuous appearance is achieved together with the adjacent frame members.

Male corner member **170** (FIG. 11) is provided with two tongues **176** and **178**. Tongue **176** extends horizontally from the lower part of the lefthand face of corner member **170** and tongue **178** extends vertically from the righthand side of the corner member upper face.

Female corner member **180** (FIG. 14) is also provided with a groove **182** in bead **184** to capture bumper **114**. In the particular corner illustrated, there are two tongues **186** and **188**, each having a thickened central portion **187** and **189**, respectively, to define a T-shaped cross sectioned configuration. The tongues of both male and female corners at the bottom corners of the case fit into keyways in the frame members **42** in the same manner as described in conjunction with the upper corners.

The manner in which the frame segments are assembled is illustrated in FIG. 19 and FIG. 20. Disregarding the configuration of each section, it will be seen that each cast corner member is provided with a tongue at each end. Each extruded member has a mating keyway at each end. Thus it is a simple matter to assemble the various members as shown and secure them by any of the aforementioned methods.

FIG. 21 is a typical cross section through one of the male frame members. A fabric inner liner **190** is provided with a fiberboard stiffening member **192** and is inserted between first and second ledges **88** and **94** of male frame member **40**. This feature was omitted from the showing in FIG. 5 and FIG. 6 in the interest of clarity. Since the tongue and keyway configuration occurs only proximate the corners of the frame members at the juncture of the cast and extruded components, a clip **194** is utilized to secure the liner to the male frame member. A suitable adhesive may be used to secure the liner to the female member but such an expedient is not available with the male member since the bonding surface is not large enough.

Clip **194** is an extruded, rigid plastic in the form of a U defined by a first leg **196** and a second leg **198** having an enlarged end. After the liner and stiffening member are inserted between ledges **88** and **94**, the clip is snapped onto ledge **94** such that enlarged end **198** abuts the liner. A dual purpose is thereby served. The clip not only retains the liner in place but also conceals crimp marks and the bare edge of the liner.

There has been described hereinbefore an improved frame construction applicable to both top and bottom opening luggage as well as to soft and hard sided luggage. The multisection construction using straight extruded sections and cast right angle corner members successfully avoids the shortcomings of the prior art devices. The corners may be made as sharp as desired thus assuring maximum useful usage of the interior dimensions without adding unnecessarily to the exterior dimensions. The frame sections need no longer be heat treated to provide strength nor do they have to be machined to achieve square corners. Assembly is done merely by interlocking the various sections together and in addition, since the sections are each relatively short their handling is much easier.

As an additional feature on the bottom opening luggage case, an improved hinge member is provided. The inclusion of the inner boot assures that the clothes contained therein will not be wrinkled. The inclusion of the openable outer flap completes the end sealing of the flexible hinge and also permits the bag to be opened to the flat condition without requiring an extra long filler piece which would tend to wrinkle the clothes when the bag is closed. It should be noted that the inner boot and openable outer flap arrangement may also be used advantageously on either hard or soft sided luggage cases having the improved frame described herein or the prior art one-piece frame.

There has been disclosed heretofore the best embodiments of the invention presently contemplated and it is to be understood that various changes and modifications may be made by those skilled in the art without departing from the spirit of the invention.

What is claimed is:

1. A luggage case comprising, in combination:

(a) two concave shells hingedly secured to each other whereby, in the closed condition, said shells define a hollow compartment having opposed sets of peripheral edges;

(b) first and second opposed, multisectioned frame members secured to said peripheral edges of each of said shells, each of said frame members comprising:

(1) a plurality of elongated, substantially rigid, straight sections secured to the opposing edges of each of said shells intermediate at least three of the corners thereof,

(2) a rigid, right angle section secured at said corner edges of each of said shells to opposed ends of each pair of adjacent straight sections said straight sections and right angle sections being contiguous when assembled to define, in combination, a continuous frame member wherein each section of said continuous member is provided with a substantially U-shaped, outwardly facing groove on the outer surface thereof, the grooves being contiguous in the assembled condition;

(c) a resilient bumper disposed within the groove, the outer end of the groove being narrower than the inner end whereby said bumper is captured therein;

(d) closure means to releasably secure said shells to each other; and

(e) at least one hinge member joining the lowermost edge of each of said shells and an external handle member secured to one of said shells, said frame members being secured to all said edges of each of said shells.

2. A luggage case comprising, in combination:

(a) two concave shells hingedly secured to each other whereby, in the closed condition, said shells define a hollow compartment having opposed sets of peripheral edges;

(b) first and second opposed, multisectioned frame members secured to said peripheral edges of each of said shells, each of said frame members comprising:

(1) a plurality of elongated, substantially rigid, straight sections secured to the opposing edges of each of said shells intermediate at least three of the corners thereof,

(2) a rigid, right angle section secured at said corner edges of each of said shells to opposed ends of each pair of adjacent straight sections said straight sections and right angle sections being contiguous when assembled to define, in combination, a continuous frame member wherein said first frame is a male member having a longitudinal convex ridge extending at least a portion of the entire length thereof and wherein said second frame is a female member having a longitudinal concave depression extending at least a portion of the entire length thereof, said ridge and depression of said first and second frame members, respectively, being adapted to nestingly fit together in the closed condition of said luggage case;

(c) closure means to releasably secure said shells to each other; and

(d) at least one hinge member joining the lowermost edge of each of said shells and an external handle member secured to one of said shells, said frame members being secured to all said edges of each of said shells.

3. A luggage case comprising, in combination:

(a) two concave shells hingedly secured to each other whereby, in the closed condition, said shells define a hollow compartment having opposed sets of peripheral edges;

(b) first and second opposed, multisectioned frame members secured to said peripheral edges of each of said shells, each of said frame members comprising:

(1) a plurality of elongated, substantially rigid, straight sections secured to the opposing edges of each of said shells intermediate at least three of the corners thereof,

(2) a rigid, right angle section secured at said corner edges of each of said shells to opposed ends of each pair of adjacent straight sections said straight sections and right angle sections being contiguous when assembled to define, in combination, a continuous frame member wherein said first and second frame members

have different widths, the wider of said two frame members including a latch, the narrower of said frame members including means to engage said latch, the combination of said latch and latch-engaging means defining said closure means;

(c) closure means to releasably secure said shells to each other; and

(d) at least one hinge member joining the lowermost edge of each of said shells and an external handle member secured to one of said shells, said frame members being secured to all said edges of each of said shells.

4. A luggage case comprising, in combination:

(a) two concave shells hingedly secured to each other whereby, in the closed condition, said shells define a hollow compartment having opposed sets of peripheral edges;

(b) first and second opposed, multisectioned frame members secured to said peripheral edges of each of said shells, each of said frame members comprising:

(1) a plurality of elongated, substantially rigid, straight sections secured to the opposing edges of each of said shells intermediate at least three of the corners thereof,

(2) a rigid, right angle section secured at said corner edges of each of said shells to opposed ends of each pair of adjacent straight sections said straight sections and right angle sections being continguous when assembled to define, in combination, a continuous frame member wherein said right angle sections are defined by first and second tongue members extending outwardly therefrom along an axis parallel to the longitudinal axis of said straight sections, said first and second tongue members being in planes mutually perpendicular to each other whereby, in the assembled condition, said first tongue member is in the plane of one of said straight sections and said second tongue member, at right angles thereto, is in the plane of another adjacent one of said straight sections, and said right angle sections in said first frame member are male sections and said right angle sections in said second frame member are female sections, said tongues of said male and female right angle sections having different widths whereby said wider tongues are adapted to mate with the keyways of said wider straight sections and said narrower tongues are adapted to mate with said narrower straight sections;

(c) closure means to releasably secure said shells to each other; and

(d) at least one hinge member joining the lowermost edge of each of said shells and an external handle member secured to one of said shells, said frame members being secured to all said edges of each of said shells.

5. A luggage case comprising, in combination:

(a) two concave shells hingedly secured to each other whereby, in the closed condition, said shells define a hollow compartment having opposed sets of peripheral edges;

(b) first and second opposed, multisectioned frame members secured to said peripheral edges of each of said shells, each of said frame members comprising:

(1) a plurality of elongated, substantially rigid, straight sections secured to the opposing edges of each of said shells intermediate at least three of the corners thereof,

(2) a rigid, right angle section secured at said corner edges of each of said shells to opposed ends of each pair of adjacent straight sections said straight sections and right angle sections being contiguous when assembled to define, in combination, a continuous frame member;

(c) at least one hinge member joining the uppermost edges of each of said shells and an external handle member secured to said hinge member, said frame members being secured to the remaining edges of each of said shells; and

(d) closure means to releasably secure said shells to each other.

6. An improved frame member for a luggage case having two concave shells hingedly secured to each other whereby the edges of the shells are in opposition to each other to define a hollow compartment in the closed condition, the luggage case further including closure means to releasably secure the shells to each other, said improvement comprising:

(a) a plurality of elongated, substantially rigid, straight sections secured to the opposing edges of each of said shells intermediate at least three of the corners thereof; and

(b) a rigid, right angle section secured at said corner edges of each of said shells to opposed ends of each pair of adjacent straight sections, said straight sections and right angle sections being contiguous when assembled to define, in combination, a continuous frame member; wherein each section of said frame members is provided with a substantially U-shaped, outwardly facing groove on the outer surface thereof, the grooves being contiguous in the assembled condition, there being further provided a resilient bumper disposed within the groove, the outer end of the groove being narrower than the inner end whereby said bumper is captured therein.

7. An improved frame member for a luggage case having two concave shells hingedly secured to each other whereby the edges of the shells are in opposition to each other to define a hollow compartment in the closed condition, the luggage case further including closure means to releasably secure the shells to each other, said improvement comprising:

(a) a plurality of elongated, substantially rigid, straight sections secured to the opposing edges of each of said shells intermediate at least three of the corners thereof; and

(b) a rigid, right angle section secured at said corner edges of each of said shells to opposed ends of each pair of adjacent straight sections, said straight sections and right angle sections being contiguous when assembled to define, in combination, a continuous frame member; wherein said first frame is a male member having a longitudinal convex ridge extending at least a portion of the entire length thereof and wherein said second frame is a female member having a longitudinal concave depression extending at least a portion of the entire length thereof, said ridge and depression of said first and second frame members, resepctively, being adapted to nestingly fit together in the closed condition of said luggage case.

8. An improved frame member for a luggage case having two concave shells hingedly secured to each other whereby the edges of the shells are in opposition to each other to define a hollow compartment in the closed condition, the luggage case further including closure means to releasably secure the shells to each other, said improvement comprising:

(a) a plurality of elongated, substantially rigid, straight sections secured to the opposing edges of each of said shells intermediate at least three of the corners thereof; and

(b) a rigid, right angle section secured at said corner edges of each of said shells to opposed ends of each pair of adjacent straight sections, said straight sections and right angle sections being contiguous when assembled to define, in combination, a continuous frame member; wherein said first and second frame

members have different widths, the wider of said two frame members including a latch, the narrower of said frame members including means to engage said latch, the combination of said latch and latch-engaging means defining said closure means.

9. An improved frame member for a luggage case having two concave shells hingedly secured to each other whereby the edges of the shells are in opposition to each other to define a hollow compartment in the closed condition, the luggage case further including closure means to releasably secure the shells to each other, said improvement comprising:

(a) a plurality of elongated, substantially rigid, straight sections secured to the opposing edges of each of said shells intermediate at least three of the corners thereof; and

(b) a rigid, right angle section secured at said corner edges of each of said shells to opposed ends of each pair of adjacent straight sections, said straight sections and right angle sections being contiguous when assembled to define, in combination, a contiguous frame member; wherein said right angle sections are defined by first and second tongue members extending outwardly therefrom along an axis parallel to the longitudinal axis of said straight sections, said first and second tongue members being in planes mutually perpendicular to each other whereby, in the assembled condition, said first tongue member is in the plane of one of said straight sections and said second tongue member, at right angles thereto, is in the plane of another adjacent one of said straight sections and said right angle sections in said first frame member are male sections and said right angle sections in said second frame member are female sections, said tongues of said male and female right angle sections having different widths whereby said wider tongues are adapted to mate with the keyways of said wider straight sections and said narrower tongues are adapted to mate with said narrower straight sections.

10. The combination in accordance with claim 4 wherein said wider tongues of said right angle sections are defined by a thickened central portion, said thickened central portion being adapted to be deformed whereby the thinner side portions of said tongue will expand laterally to the longitudinal axis of said tongue to thereby lock said tongue in the keyway of said straight section.

11. The combination in accordance with claim 5 wherein each of said straight sections is provided with a keyway at each end thereof and each of said right angle sections is provided with a tongue extension at each end thereof, said tongues and keyways being adapted for an interfitting and locking relationship in the assembled condition.

12. The combination in accordance with claim 5 wherein each section of said frame members is provided with a substantially U-shaped, outwardly facing groove on the outer surface thereof, the grooves being contiguous in the assembled condition, there being further provided a resilient bumper disposed within the groove, the outer end of the groove being narrower than the inner end whereby said bumper is captured therein.

13. The combination in accordance with claim 5 wherein said first frame is a male member having a longitudinal convex ridge extending at least a portion of the entire length thereof and wherein said second frame is a female member having a longitudinal concave depression extending at least a portion of the entire length thereof, said ridge and depression of said first and second frame members, respectively, being adapted to nestingly fit together in the closed condition of said luggage case.

14. The combination in accordance with claim 5 wherein said first and second frame members have different widths, the wider of said two frame members including a latch, the narrower of said frame members including means to engage said latch, the combination of said latch and latch-engaging means defining said closure means.

15. The combination in accordance with claim 5 wherein said right angle sections are defined by first and second tongue members extending outwardly therefrom along an axis parallel to the longitudinal axis of said straight sections, said first and second tongue members being in planes mutually perpendicular to each other whereby, in the assembled condition, said first tongue member is in the plane of one of said straight sections and said second tongue member, at right angles thereto, is in the plane of another adjacent one of said straight sections.

16. The combination in accordance with claim 15 wherein said right angle sections in said first frame member are male sections and said right angle sections in said second frame member are female sections, said tongues of said male and female right angle sections having different widths whereby said wider tongues are adapted to mate with the keyways of said wider straight sections and said narrower tongues are adapted to mate with said narrower straight sections.

17. The combination in accordance with claim 16 wherein said wider tongues of said right angle sections are defined by a thickened central portion, said thickened central portion being adapted to be deformed whereby the thinner side portions of said tongue will expand laterally to the longitudinal axis of said tongue to thereby lock said tongue in the keyway of said straight section.

18. The combination in accordance with claim 5 wherein said straight sections are extrusions and said right angle sections are castings.

19. The combination in accordance with claim 5 wherein said shells are flexible.

20. The combination in accordance with claim 5 wherein said shells are rigid.

21. The combination in accordance with claim 5 wherein said hinge member is a flexible, sheet material member.

22. The combination in accordance with claim 5 wherein said hinge member is in the form of an inverted, open ended U-shaped, elongated channel having a central portion and two downwardly depeding spaced legs, the longitudinal edges of the each of said channel legs being secured to an upper edge of each of said shells, there being further included an inner flexible boot secured to and depending downwardly from each of the central end portions of said channel and a pair of openable outer flaps having side edges and a bottom edge, said flaps being secured to said channel across the open ends thereof whereby said boots are covered.

23. The combination in accordance with claim 22 wherein the side edges of said outer flaps are secured to the ends of said downwardly depending spaced legs of said channel and the bottom edge of said outer flap is secured to a portion of the top edges of said shell.

24. The combination in accordance with claim 22 wherein said outer flaps each include a zipper disposed in the plane of the longitudinal axis of said channel when said case is closed whereby said flaps may be opened and laterally spread apart when said luggage case is opened.

25. The combination in accordance with claim 22 wherein said outer flaps each include an extension adapted to overlay at least the ends of the top surface of said hinge member and fastening means to secure said flap extension to the top of said hinge member.

26. The combination in accordance with claim 9 wherein said wider tongues of said right angle sections are defined by a thickened central portion, said thickened central portion being adapted to be deformed whereby the thinner side portions of said tongue will expand laterally to the longitudinal axis of said tongue to thereby lock said tongue in the keyway of said straight section.

27. The combination in accordance with claim 26 wherein said straight sections are extrusions and said right angle sections are castings.

28. A bottom-opening luggage case comprising, in combination:

(a) two concave shells hingedly secured to each other whereby, in the closed condition, said shells define a hollow compartment having opposed sets of peripheral edges;

(b) first and second opposed frame members secured to the peripheral edges of each of said shells;

(c) closure means to releasably secure said shells to each other;

(d) an inverted, open ended, U-shaped, elongated hinge member having a central portion and two downwardly depending spaced legs, the longitudinal edges of each of said hinge legs being secured to an upper edge of each of said shells;

(e) an inner, flexible boot secured to and depending downwardly from each of the central end portions of said hinge member; and

(f) a pair of openable, outer flaps having side edges and a bottom edge, said flaps being secured to said hinge member across the open end thereof whereby said boots are covered.

29. The combination in accordance with claim 28 wherein said outer flaps each include a zipper disposed in the plane of the longitudinal axis of said hinge member when said luggage case is closed whereby said flaps may be opened and laterally spread apart when said luggage case is opened.

30. The combination in accordance with claim 28 wherein said outer flaps each include an extension adapted to overlay at least the ends of the top surface of said hinge member and fastening means to secure said flap extension to the top of said hinge member.

31. The combination in accordance with claim 28 wherein said hinge is a flexible sheet material member.

32. The combination in accordance with claim 28 wherein said shells are rigid.

33. The combination in accordance with claim 28 wherein said shells are flexible.

34. The combination in accordance with claim 1 including an inside liner for each of said shells, and means to secure said liners to said frame members, said liner-securing means for said straight sections of said first frame member comprising a clip, said liner-securing means for said straight sections of said second frame member comprising an adhesive.

35. The combination in accordance with claim 34 wherein said straight sections of said first frame member includes a pair of inwardly extending ledges, said liner being disposed between said ledges, said clip member being disposed intermediate said liner and one of said ledges to thereby retain said liner in place.

36. The combination in accordance with claim 35 wherein said clip member is U-shaped and defined by two spaced legs, said legs, in the assembled condition, being disposed on either side of one of said ledges whereby said liner is disposed between one of said legs and the outer of said ledges.

37. The combination in accordance with claim 34 wherein said clip member is an extruded, rigid plastic.

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