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Enes

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(54) **COLLAPSIBLE ROLLING TRAVEL COVER FOR A GOLF BAG**

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(60) Provisional application No. 62/874,693, filed on Jul. 16, 2019.

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A63B 55/00 (2015.01)
A63B 55/60 (2015.01)

(52) **U.S. Cl.**
CPC ***A63B 55/404*** (2015.10); ***A63B 55/60*** (2015.10); *A63B 2210/50* (2013.01)

(58) **Field of Classification Search**
CPC A63B 55/404; A63B 55/60; A63B 55/30; A63B 2210/50; A63B 2209/00; A45C 7/007; A45C 7/0063; A45C 7/00; A45C 7/0018; A45C 7/0036; A45C 7/0022; A45C 7/0054
See application file for complete search history.

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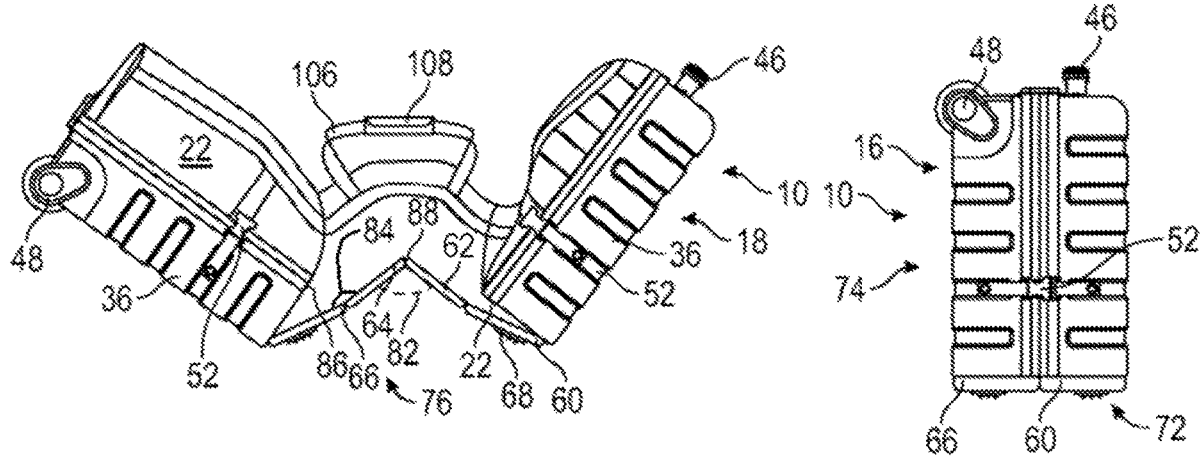
(57) **ABSTRACT**

A travel cover having a rigid top cap, a rigid bottom cap, and an elongated flexible enclosure extending between and bonded to said rigid top cap and said rigid bottom cap. The elongated enclosure is openable and closable to receive and retrieve contents. The travel cover has a longitudinally expanded mode for carrying contents and a collapsed mode for folding the enclosure into the rigid top cap and the rigid bottom cap to form a compact carrying case.

17 Claims, 9 Drawing Sheets



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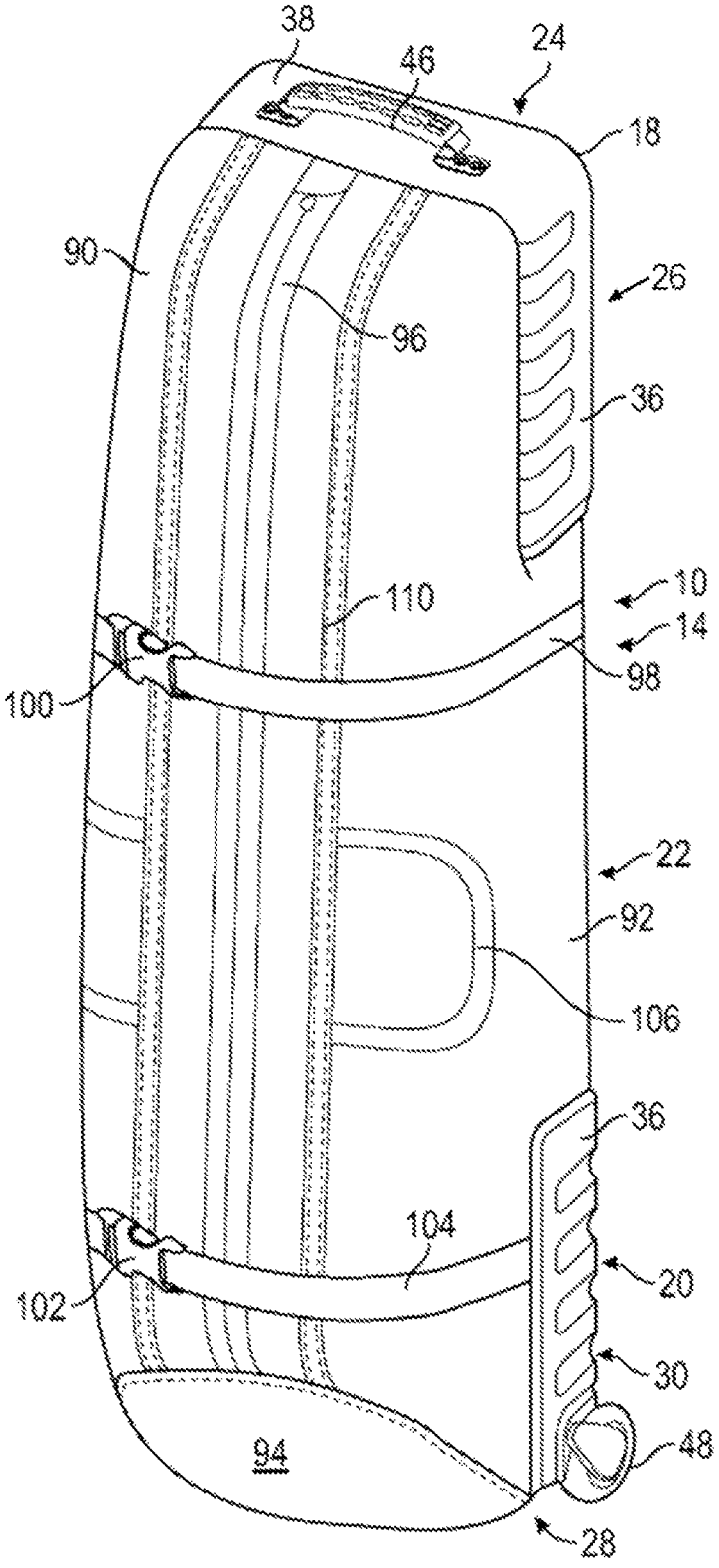
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FIG. 1

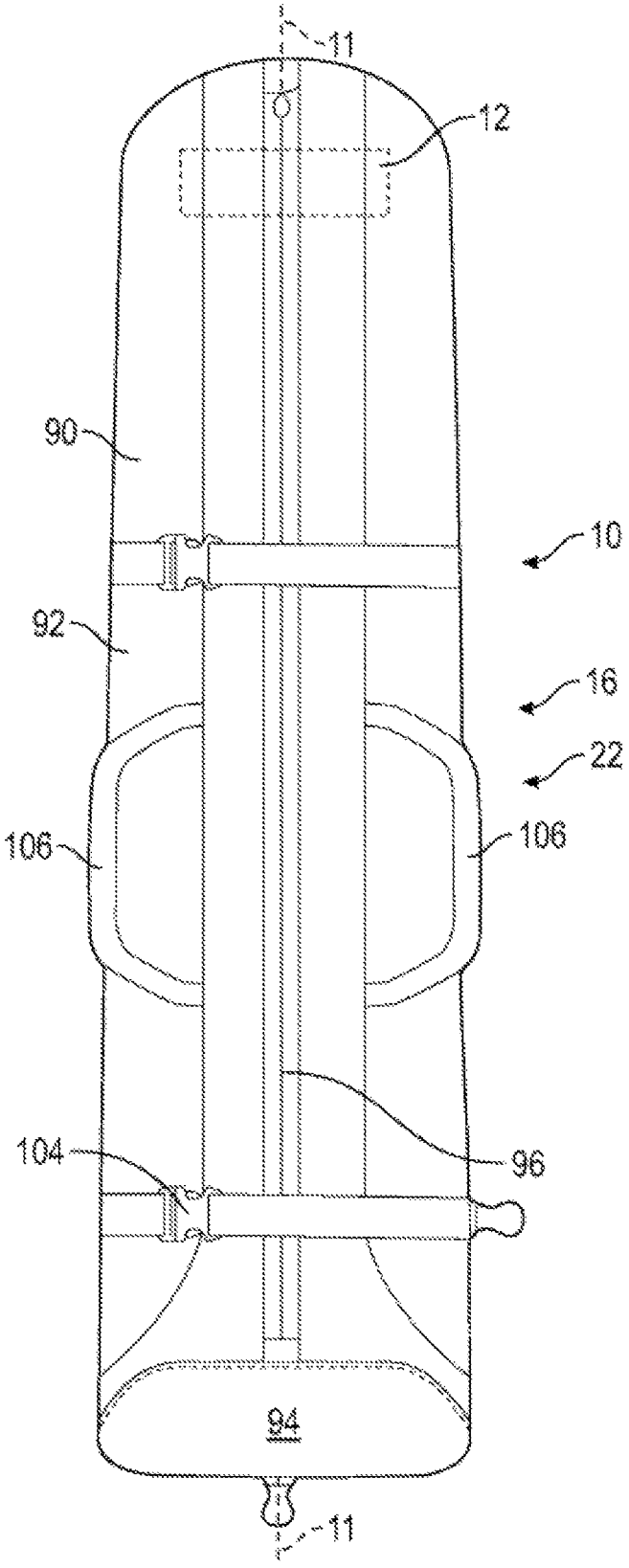

FIG. 2

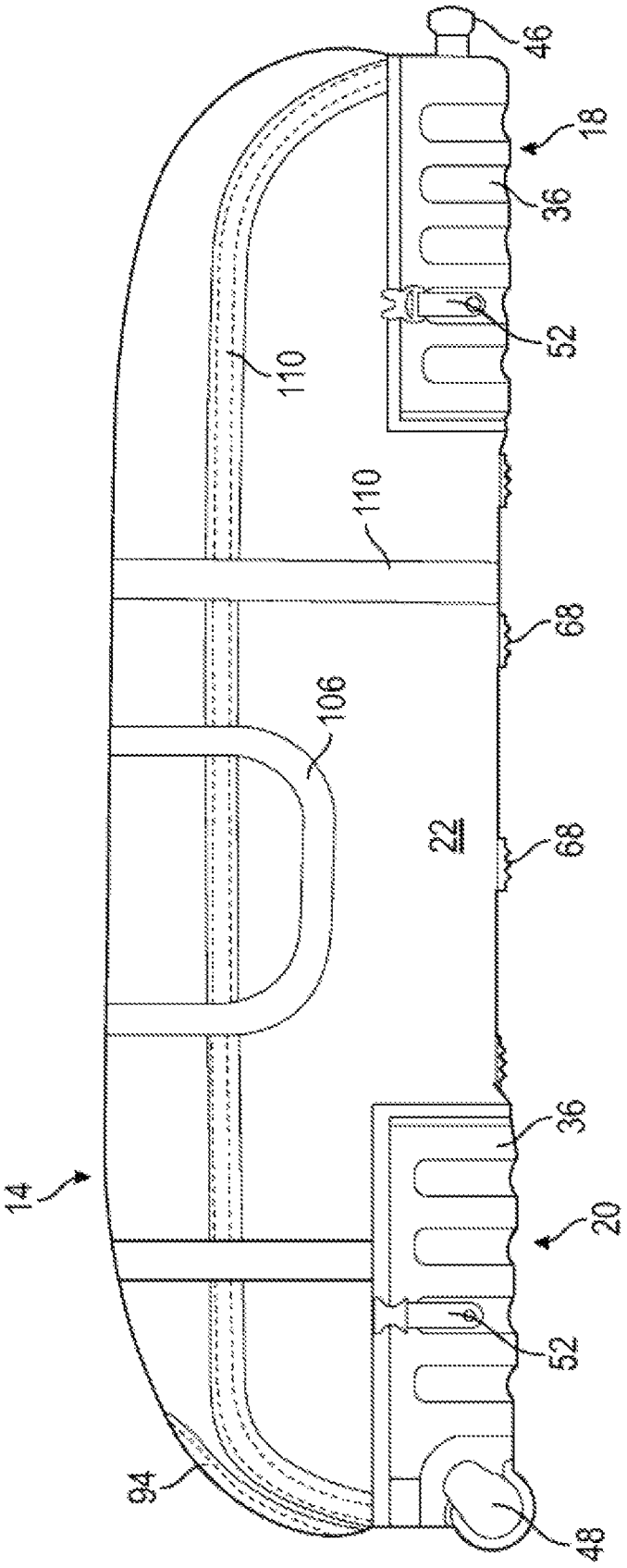

FIG. 3

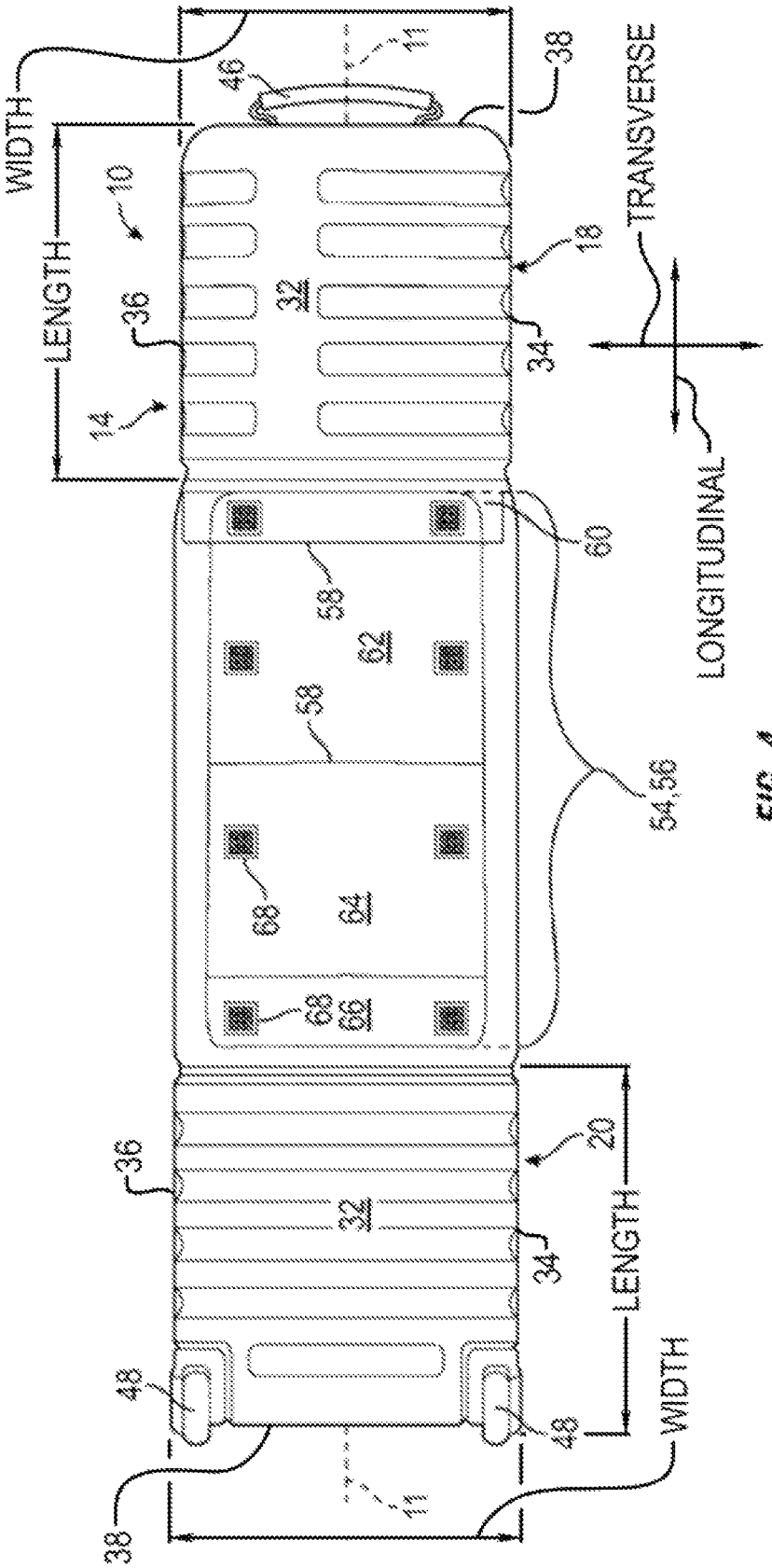
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FIG. 4

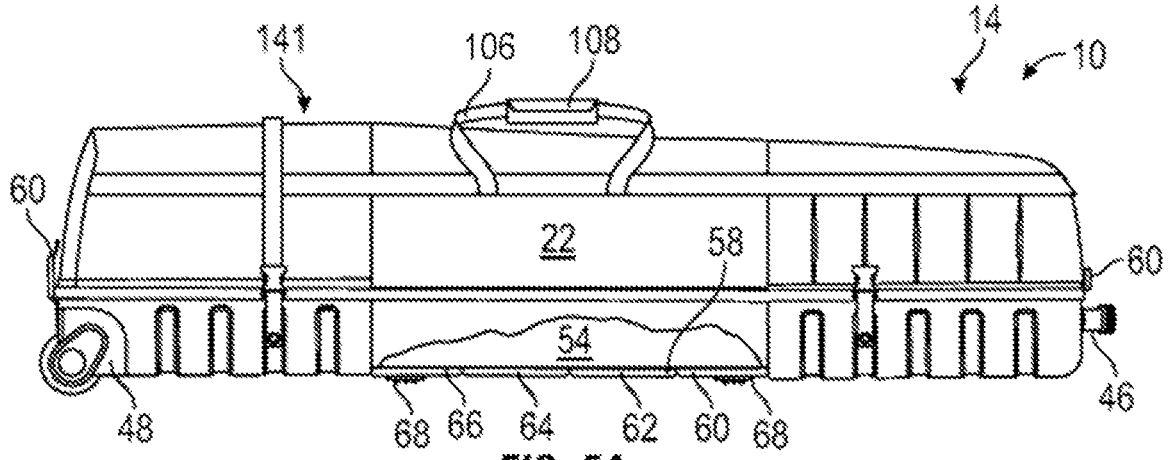

FIG. 5A

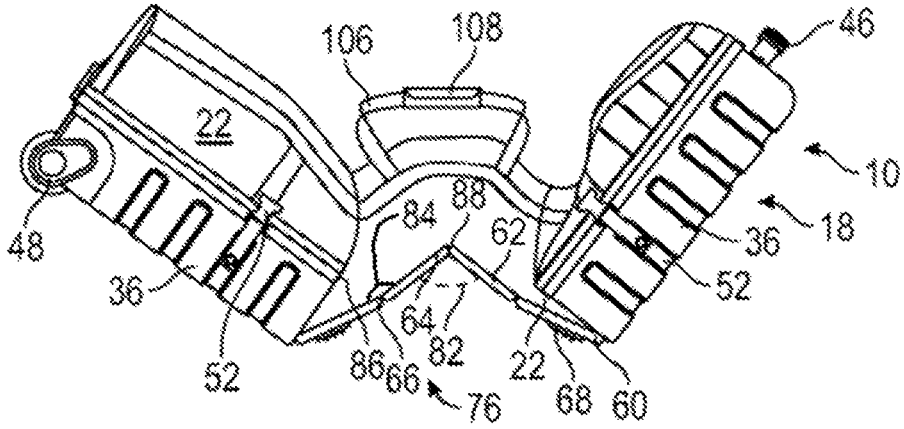

FIG. 5B

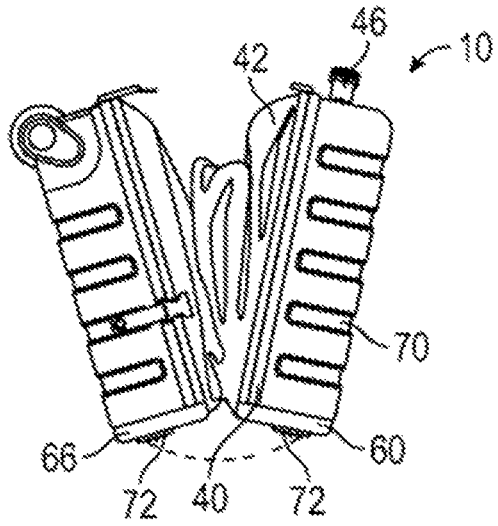

FIG. 5C

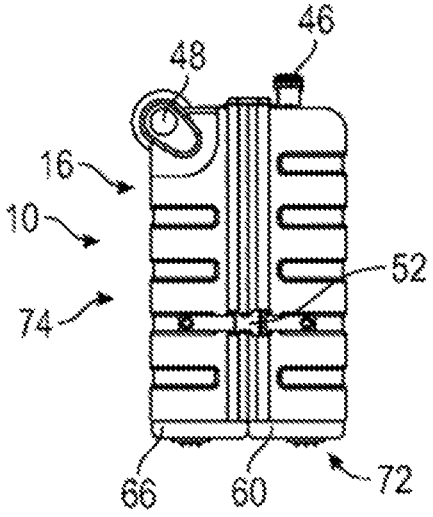

FIG. 5D

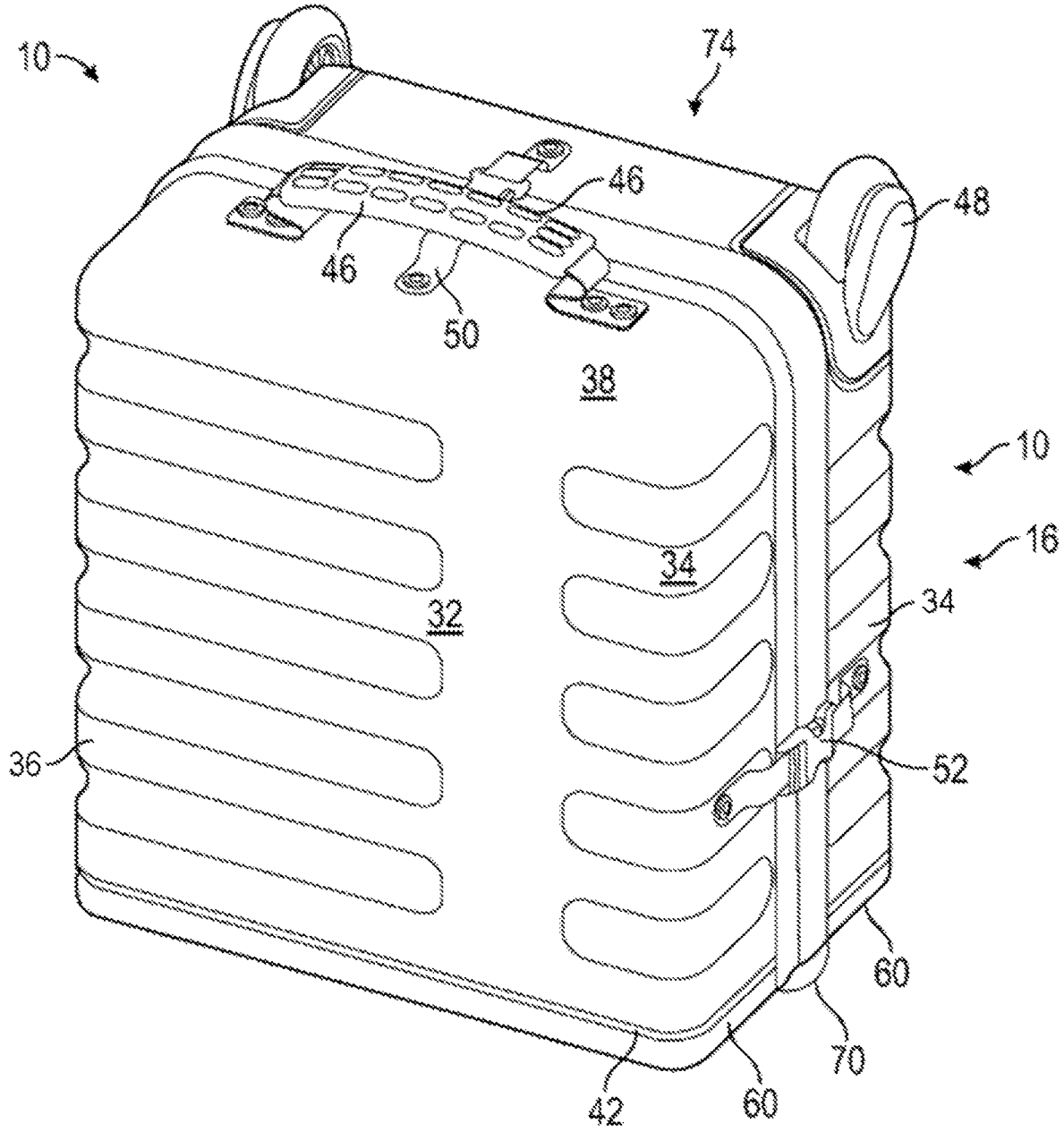

FIG. 6

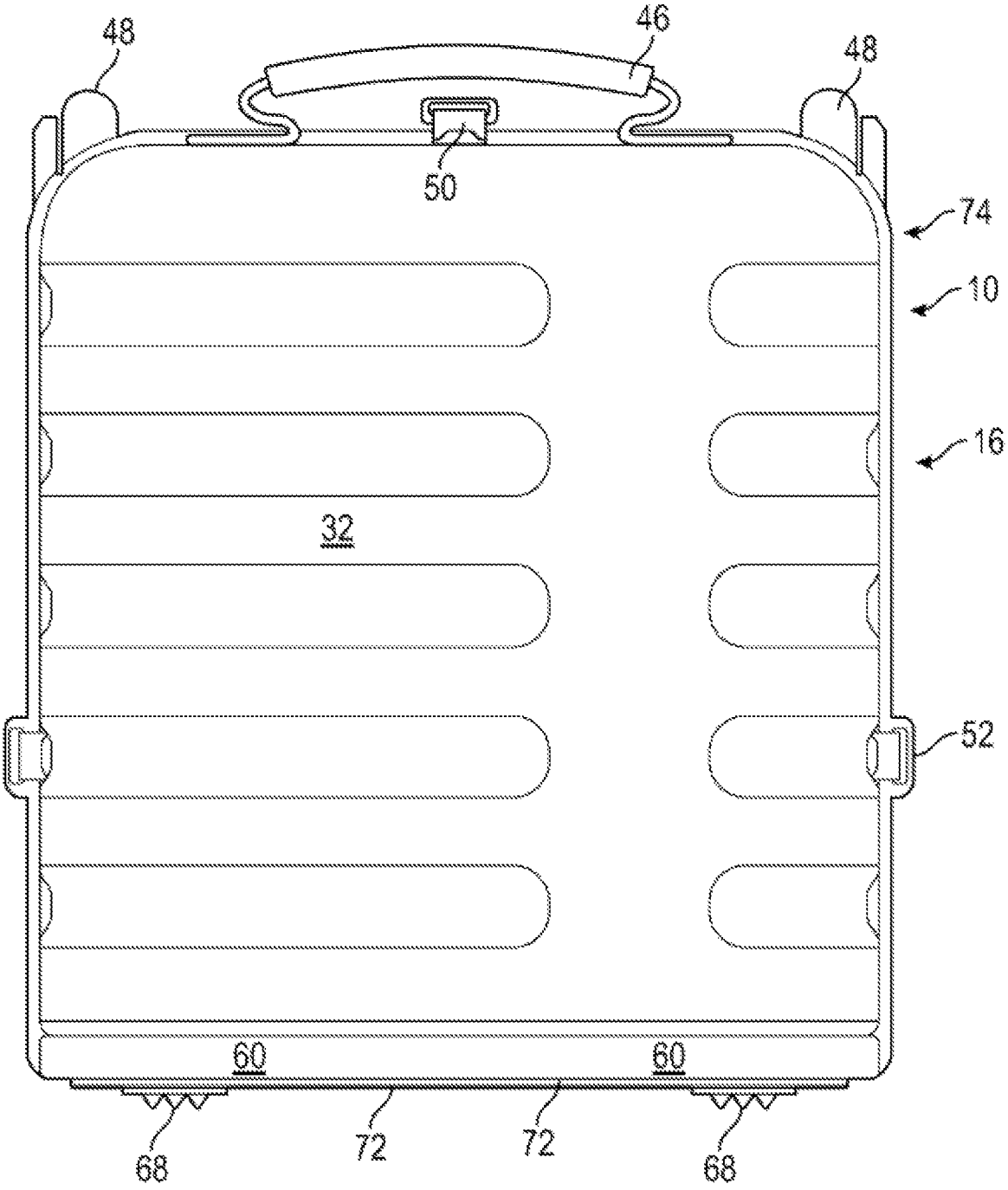

FIG. 7

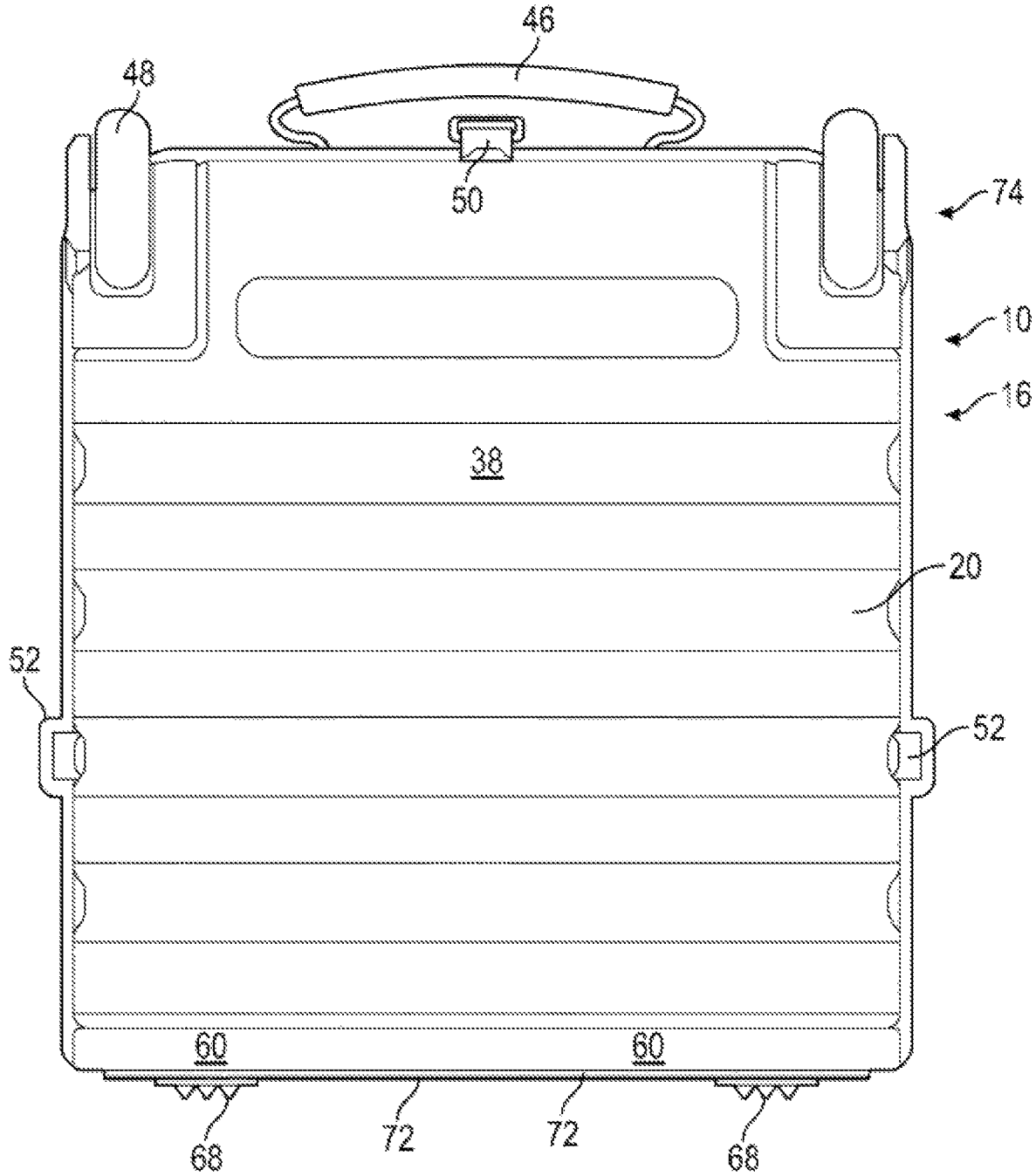

FIG. 8

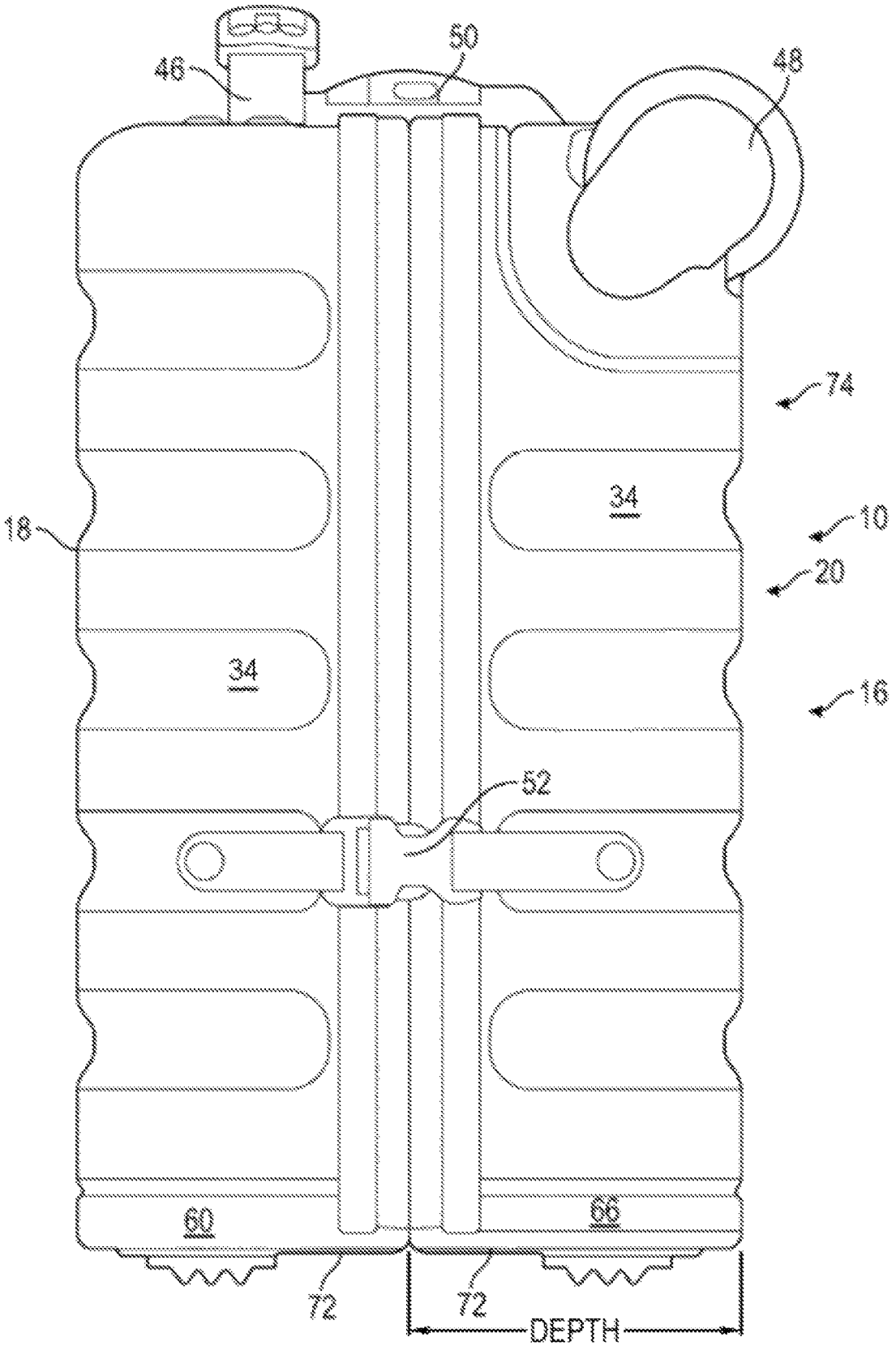

FIG. 9

COLLAPSIBLE ROLLING TRAVEL COVER FOR A GOLF BAG

This application is a continuation application of U.S. patent application Ser. No. 16/928,670, filed on Jul. 14, 2020, which claims priority from U.S. provisional application No. 62/874,693 by the same inventor, filed 16 Jul. 2019.

TECHNICAL FIELD

The present invention relates generally to accessories for golfers and particularly to a collapsible rolling travel covers primarily used for transporting golf bags.

BACKGROUND ART

Transporting their golf bag, most commonly via air, is a concern for golfers. There is always some trepidation regarding damage in transit. Also, golf travel covers can be awkward for the user to personally transport before and after placing the travel cover and bag enclosed therewith with a carrier such as an airline, railroad, or shipping operation.

Nonetheless, demand continues for more compact, more stable, more convenient, and lighter golf bag travel covers.

DISCLOSURE OF INVENTION

Accordingly, it is an object of the present invention to provide a collapsible travel cover for safely transporting a golf bag and equipment.

Another object of the invention is to provide golf bag travel cover which, when not in use, collapses into a compact shell.

A further object of the present invention is to provide a wheeled travel cover which is easy to pull over surfaces, such as airport terminal terrain.

Yet another object of the invention is to provide a travel cover which provides some hard shell protection to the clubs and the base of the golf bag.

Another object of the invention is to provide a unit which easily and quickly transitions between an expanded mode, suitable to contain a golf bag, clubs, and accessories, and a compact mode (empty of clubs and golf bag) about the size of a very small suitcase.

Briefly, one preferred embodiment of the present invention is a rolling travel cover having an expanded mode for transporting and protecting a golf bag and contents, and a collapsed carrying case mode. The travel cover includes a flexible enclosure which is bonded to a top cap and a bottom cap. The flexible enclosure includes a zipper or similar means of opening the enclosure to deposit and retrieve a golf bag and contents. The rear surface of the enclosure includes a backbone having series of semi-rigid plates connected by living hinges, which can accordion fold the enclosure within the top cap and bottom cap, and to reopen to form the elongated extended mode. A number of side release buckles secure the travel cover into desired configurations.

An advantage of the present invention is that it provides a convenient and compactable travel cover.

Another advantage of the invention is that the collapsed mode is bilaterally symmetrical and relatively thin such that multiple units may be stacked for storage or retail display.

A further advantage of the invention is that the top and bottom caps provide at least some hard-shelled protection to the contents when being wheeled or carried.

Yet another advantage of the present invention is that it may be easily transformed between the expanded and the compact modes.

Still another advantage of the present invention is that the backbone includes two plates which, in the compact mode, constitute the bottom surface of the carrying case.

These and other objects and advantages of the present invention will become clear to those skilled in the art in view of the description of the best presently known mode of carrying out the invention and the industrial applicability of the preferred embodiment as described herein and as illustrated in the several figures of the drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

The purposes and advantages of the present invention will be apparent from the following detailed description in conjunction with the appended drawings in which:

FIG. **1** is a front right perspective view of the travel cover of the present invention, in an expanded mode, with a golf bag enclosed therewithin;

FIG. **2**. is a front elevational view of the travel cover of the present invention, shown in the expanded mode with the zipper open to reveal the golf bag enclosed therein;

FIG. **3** is a left elevational view of the expanded travel cover of the present invention;

FIG. **4** is a rear elevational view of the expanded mode of the present invention;

FIG. **5***a* through FIG. **5***d* illustrate the transitional steps of expanding and collapsing the invention;

FIG. **6**. is a top/front perspective view of the travel cover of the present invention, shown in the collapsed mode;

FIG. **7**. is a top elevational view of the invention in collapsed mode;

FIG. **8** is a bottom elevational view of the collapsed mode of the preferred embodiment; and

FIG. **9** is a side view of the collapsed mode of the invention.

BEST MODE FOR CARRYING OUT THE INVENTION

The present invention is a travel cover used to transport golf bags and associated golf clubs and accessories. The travel cover is referred to by the general reference character **10**, and generally referred to as "travel cover **10**", in the drawings and description. The travel cover **10** is generally symmetrical about a vertical (in normal operation) longitudinal plane **11**. The travel cover **10** may be used with various golf bags **12** and may exist in multiple embodiments.

The travel cover **10** is used in two distinct modes. An expanded mode **14** is utilized for enclosing the golf bag **12** for safe and secure transport, and facilitating rolling along surfaces, such as parking lots and airport terminals. A collapsed mode **16** is used when the golf bag **12** is removed. This facilitates a small footprint and height in a generally cubic the form for compact storage of the travel cover **10**.

The travel cover **10** includes three discrete components, a top cap **18**, a bottom cap **20**, and a flexible enclosure **22** bonded to and extending between the top and bottom caps (**18** and **20**) in the expanded mode **14**. In the collapsed mode **16** the enclosure **22** is nearly completely enclosed.

In the expanded mode **14**, best seen in FIGS. **1** through **5**, the travel cover **10** has an upper end **24**, with the enclosure **22** extending (billowed) forward, and an upper rear **26** being formed by the top cap **18**. Similarly, a lower end **28** has a billowed out enclosure **22** in the front while a lower rear **30**

is formed by the bottom cap **20**. The enclosure **22** is bonded to the interior of the opposing caps (**18** and **20**) and the caps provide partial damage protection to golf bag **12** and contents.

The upper cap **18** and the bottom cap **20** are rigid or semi-rigid and are generally mirror images of each other in most respects. Each cap is integrally formed around a central panel **32** to which a portion of the enclosure **22** is bonded to the inner-facing surface. The central panel **32** has, extending vertically therefrom, a first side panel **34**, a second side panel **36** and a back panel **38**. The cap has an open top **40** and an open end (front) **42**.

The travel cover **10** utilizes a variety of buckles for connecting and securing opposing areas. In the preferred embodiments all of the buckles are side-release-buckles (SRBs) **52**. Each SRB **52** comprises a male component secured on one end of a gap with female component on the opposite end of the gap, with it being a matter of choice as to which component is on which end. The components operate as a matched unit and each matched pair will be designated as by a single callout herein.

The top cap **18** back panel **38** includes a handle **46** for carrying or towing. The bottom cap **20** includes a pair of wheels **48** at the junctures back plate **38** and the side plates (**34**, **36**) opposite the open end **42** to facilitate rolling.

The exterior features of the top cap **18** and the bottom cap **20** also include a series of buckles. An under-handle SRB **50** extends between the back panels **38** to secure the caps together in the collapsed mode **16**. Similarly the side panels (**34** and **36**) share, at the approximate midpoint of each, an exterior SRB **52** to further secure the travel cover **10** together in the collapsed mode **16**.

As seen in the fanciful transitional drawings of FIGS. **5***a* through **5***d*, the travel cover **10**, once the golf bag **12** and other contents are removed, collapses from the semi-bulbous elongated hump shape of the expanded mode **14**, best seen in FIG. **3**, to the squat, rectangular solid collapsed mode **18** seen in FIGS. **6-9**.

The key components facilitating the folding efficiency of the travel cover **10** are found in a semi-rigid backbone **54** extending at the rear of the enclosure **22**, which provides the interface between the caps **18** and **20** and the flexible enclosure **22**. The backbone **54**, best seen in FIGS. **4** and **5***b*. includes a series of typically fabric-covered semi rigid rectangular plates **56**, joined by living hinges **58**. From top to bottom (see FIG. **4**) the rectangular plates **56** include: a top cap end plate **60**; a first interior plate **62**, a second interior plate **64**; and a bottom cap end plate **66**. Each of the rectangular plates includes on its exterior surface a spaced apart pair of bumpers **68**. The bumpers **68** cushion the surfaces when the expanded mode **14** is laid down (FIG. **3**) while bumpers **68** on the top and bottom end plates **60** and **66** provide both cushioning and sliding resistance in the collapsed mode **16** (FIGS. **7-9**).

The top cap end plate **60** is secured to the central panel **32** at the open end **42** of the top cap **16** by a living hinge **58**, while the bottom cap plate **66** is similarly connected by a living hinge **58** to the central panel **32** open end **42** of the bottom cap **20**.

In the transition operation the top cap end plate **60** and the bottom cap end plate **66** each respectively fold inward on the respective living hinge **58** to abut with the first and second side panels (**34** and **36**) of the respective top and bottom caps (**18** and **20**) to complete a box half **70** for each cap (**16** and **18**). For this reason, the top and bottom plates (**60** and **66**) extend laterally further than the interior plates (**62** and **64**) so they are stopped against the side plates (**34** and **36**), rather than rotating further into the respective box half **70**. Then the first and second interior plates (**62** and **64**), which are formed to be longitudinally about double the length of the end plates (**60** and **66**) to form the central components of the backbone **54** of the flexible enclosure **22** respectively accordion fold into the respective box half **70**, pulling and squeezing the flexible enclosure **22** until the edges of the top cap **18** and bottom cap **20** abut against each other with almost the entirety of the flexible enclosure **22** (excluding a base **72** formed by the top and bottom plates **60** and **66**), being contained inside a complete carrying case **74** formed by the box halves **70** once the under-handle and exterior SRBs (**52** and **54**) are engaged in the collapsed mode **16**.

The illustrations of FIGS. **5***a* through **5***d* show the transition between the expanded mode **14** and the collapsed mode **16** and vice versa. FIG. **5***a* (similar to FIG. **4**) shows the fully expanded mode **14** while FIG. **5***d* shows the collapsed mode **16**. Intermediate conditions are shown in FIGS. **5***b* and **5***c*, with FIG. **5***b* showing the accordion folding patterns of the backbone **54** with particular attention to the relevant series of interior angles **76**. An interior angle between the top end plate **60** and the top cap **18** and is limited to ninety degrees of rotation from the flat position of FIG. **5***a* and the abutment with the top cap **18**. An interior angle between the top end plate **60** and the first interior plate **62**, and can be an obtuse angle ranging to an extremely acute angle as the first interior plate **62** accordion folds into the top box half **70**. Angle C **82** is the interior angle between the first and second interior plates **62** and **64** which becomes increasingly acute as the accordion folding proceeds. Angle D **84** is the interior angle between the second interior plate **64** and the bottom end plate **66**, and Angle E **86** is the interior angle between the bottom end plate **66** and the bottom cap **20**. As the accordion folding transition proceeds the top and bottom caps **18** and **20** will, as shown in FIG. **5***c*, either be drawn together or forced apart depending on the direction of the transition.

In the expanded mode **14** the flexible portions of the enclosure **22** are primarily in the form of a heavy canvas shroud **88**. A hood **90** portion extends over the upper end **24**, a tunnel **92** portion forms the intermediate extent, and a reinforced foot **94** portion extends down to the bottom cap **20**. A zipper **96** (or other securing element) runs from the top of the hood **90** to near the foot **94**. The zipper **96** facilitates access to the interior of the enclosure **22** to allow insertion and removal of the golf bag, shoes, clubs, and other accessories.

The exterior of the enclosure **22** features a first circumferential strap **98** with a first SRB **100** and a second circumferential strap **102** with a second SRB **104** to further hold the shroud **88** together and minimize slack. A pair of mid-tunnel carrying straps **106** with a snap sleeve **108** facilitate carrying or supporting the travel cover **10** from near the center of mass. In the preferred embodiment shown in the drawings reinforcing stitching **110** extends to either side of the zipper **96** to secure the carrying straps **106** and provide visible enhancement.

The top and bottom caps **18** and **20** are either high strength molded plastic or molded aluminum while the shroud **88** is high grade canvas. The buckles are high grade plastic. The wheels/casters **48** may be durable plastic or rubberized aluminum.

Many modifications to the above embodiment may be made without altering the nature of the invention. The dimensions and shapes of the components and the construction materials may be modified for particular circumstances or types of bags to be carried.

While various embodiments have been described above, it should be understood that they have been presented by way of example only, and not as limitations.

INDUSTRIAL APPLICABILITY

The travel cover **10** of the present invention is intended for use primarily by golfers (or other travelers with similarly elongated cargo) who desire to transport equipment with optimal convenience, content protection, and safety. The travel cover **10** is relatively lightweight and is suitable for carrying or rolling. The rigid top and bottom caps **18** and **20** provide damage protection from the most likely directions.

For typical use, the travel cover **10** will be stored in the collapsed mode **16** when not in use for transport. When it is time to pack up the golf bag **12** and related equipment, the user transitions the travel cover **10** to the expanded mode **14**, as described above. The buckles on the carrying case **74** are released and the enclosure **22** is unfolded and stretched out. The zipper **96** is opened to insert the contents and then closed when all is ready. The first and second straps and SRBs (**98**, **100**, **102**, and **104**) are engaged and tightened and the carrying straps **106** are engaged if desired. The travel cover **10** is then suited for rolling or carrying transport and delivery to luggage handling. Upon reaching the destination the reverse transition is accomplished and the compact carrying case **74** is suited for storage.

The extreme convenience, ease of operation, relative compactness, and light weight of the inventive travel cover **10** make it a joy to own and use and a desirable accessory for any golfer who wishes to travel with a protected container for precious golf equipment which can withstand baggage handling. The collapsed mode **16** also provides a highly compact storage and transport carrying case **74**.

For the above, and other, reasons, it is expected that the travel cover **10** of the present invention will have widespread industrial applicability. Therefore, it is expected that the commercial utility of the present invention will be extensive and long lasting.

What is claimed is:

1. A travel cover, comprising:

a top cap having a top cap central panel extending (a) transversely from a top cap dextral side panel to a top cap sinistral side panel and defining a top cap width, and (b) longitudinally from a top cap back panel and defining a top cap length, wherein:

the top cap dextral side panel and the top cap sinistral side panel extend a top cap depth distance from the top cap central panel;

the top cap back panel extends from the top cap sinistral side panel to the top cap dextral side panel;

a top cap closed end is created by the top cap back panel, the top cap sinistral side panel, the top cap dextral side panel, and the top cap central panel;

a bottom cap having a bottom cap central panel extending (a) transversely from a bottom cap dextral side panel to a bottom cap sinistral side panel and defining a bottom cap width, and (b) longitudinally from a bottom cap back panel and defining a bottom cap length, wherein:

the bottom cap dextral side panel and the bottom cap sinistral side panel extend a bottom cap depth distance from the bottom cap central panel;

the bottom cap back panel extends from the bottom cap sinistral side panel to the bottom cap dextral side panel;

a bottom cap closed end is created by the bottom cap back panel, the bottom cap sinistral side panel, the bottom cap dextral side panel, and the bottom cap central panel;

an elongated flexible enclosure extending between and attached to said top cap and said bottom cap, said elongated enclosure being openable and closable to receiving and retrieving contents, wherein:

said travel cover has a longitudinally expanded mode for carrying contents and a collapsed mode for folding portions of said enclosure into said top cap and said bottom cap to form a compact carrying case;

in the longitudinally expanded mode the top cap back panel and the bottom cap back panel are on opposite ends of the travel cover;

in the collapsed mode the top cap back panel and the bottom cap back panel are located on a common end of the compact carrying case; and

a rear side of the flexible enclosure further includes at least one end plate, which in the expanded mode is parallel to the top cap central panel and the bottom cap central panel, and folds in the collapsed mode to be perpendicular to the top cap central panel and the bottom cap central panel and form at least a portion of a base.

2. The travel cover of claim **1**, wherein the at least one end plate includes a top end plate and a bottom end plate, which in the expanded mode are parallel to the top cap central panel and the bottom cap central panel, and fold in the collapsed mode to be perpendicular to the top cap central panel and the bottom cap central panel and form the base.

3. The travel cover of claim **2**, wherein the rear side of the flexible enclosure further includes at least one interior plate located between the top end plate and the bottom end plate, which in the expanded mode is parallel to the top cap central panel and the bottom cap central panel, and in the collapsed mode is located internally between the top cap and the bottom cap.

4. The travel cover of claim **3**, wherein the at least one interior plate includes a first interior plate and a second interior plate, which in the expanded mode are parallel to the top cap central panel and the bottom cap central panel, and in the collapsed mode are located internally between the top cap and the bottom cap.

5. The travel cover of claim **1**, wherein the base includes at least one external bumper.

6. The travel cover of claim **1**, further including a bottom circumferential strap attached to the bottom cap dextral side panel and the bottom cap sinistral side panel, wherein the bottom circumferential strap includes at least one buckle.

7. The travel cover of claim **1**, further including at least one bottom cap buckle attached to the bottom cap, and at least one top cap buckle attached to the top cap, wherein the at least one top cap buckle cooperates with the at least one bottom cap buckle to secure the top cap to the bottom cap in the collapsed mode.

8. The travel cover of claim **7**, wherein the at least one bottom cap buckle includes a bottom cap back panel buckle attached to the bottom cap back panel, the at least one top cap buckle includes a top cap back panel buckle attached to the top cap back panel, and the bottom cap back panel buckle cooperates with the top cap back panel buckle to secure the top cap to the bottom cap in the collapsed mode.

9. The travel cover of claim **8**, further including a handle attached to the top cap back panel, and the top cap back panel buckle passes between the handle and the top cap back panel.

10. The travel cover of claim 8, further including a plurality of wheels attached to the bottom cap.

11. The travel cover of claim 8, wherein the at least one bottom cap buckle includes a bottom cap side panel buckle attached to the bottom cap dextral side panel, the at least one top cap buckle includes a top cap side panel buckle attached to the top cap dextral side panel, and the bottom cap side panel buckle cooperates with the top cap side panel buckle to secure the top cap to the bottom cap in the collapsed mode.

12. The travel cover of claim 1, wherein the top cap length is greater than the top cap width, and the bottom cap length is greater than the bottom cap width.

13. The travel cover of claim 1, wherein the top cap length is equal to the bottom top cap length.

14. The travel cover of claim 13, wherein the top cap width is equal to the bottom top cap width.

15. The travel cover of claim 1, wherein the top cap dextral side panel is parallel to the top cap sinistral side panel, the bottom cap dextral side panel is parallel to the bottom cap sinistral side panel, the top cap dextral side panel is parallel to bottom cap dextral side panel, the top cap dextral side panel and the top cap sinistral side panel are perpendicular to the top cap central panel, and the bottom cap dextral side panel and the bottom cap sinistral side panel are perpendicular to the bottom cap central panel.

16. The travel cover of claim 1, wherein the top cap is a single-piece molded plastic component, and the bottom cap is a single-piece molded plastic component.

17. The travel cover of claim 1, wherein the top cap is a single-piece aluminum component, and the bottom cap is a single-piece aluminum component.

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