A collapsible item of luggage is provided comprising a rigid back wall. Three non-rigid sidewalls are attached the rigid back wall and to one another to form a rectangular box. An end panel is pivotally attached to a first end of the rectangular box. A retention flange is attached to one of the back wall or the end panel. Finally, a retention rod is attached to the other of the back wall or the end panel. The retention rod is removably attachable to the retention flange such that when the retention rod is attached to the retention flange the end panel is held in an extended position generally directed away from the back wall and when the retention rod is not attached to both retention flanges the end panel may be pivoted to a collapsed position generally adjacent and parallel to the back wall.
COLLAPSIBLE DUFFLE BAG

RELATED APPLICATIONS

[0001] The present invention claims priority to U.S. Provisional Patent Application No. 60/495,201 filed Aug. 14, 2003 entitled “Collapsible Duffel Bag” the contents of which are expressly incorporated herein by reference.

BACKGROUND OF THE INVENTION

[0002] A. Field of the invention

[0003] The invention relates to the field of luggage. More specifically, the invention relates to an article of luggage having collapsible rigid walls.

[0004] B. Description of Related Art

[0005] In the past both hard-sided and soft-sided luggage has been known. Previously soft-sided duffle bags and suitcases have been known. Soft-sided duffle bags and suitcases have several advantages over hard sided bags and cases, such as ease of storage and generally lighter weight than their hard-sided counterparts. However, hard sided bags and cases protect their contents from crushing from stacking of bags and cases upon one another and mishandling by attendants. However, hard sided cases are more difficult to store and merchandise due to their inability to reduce their size when unfilled. Therefore, there is a need for a bags and cases which combine the relative advantages of hard sided and soft sided luggage.

SUMMARY OF THE INVENTION

[0006] A collapsible item of luggage is provided comprising a rigid back wall. Three non-rigid sidewalls are attached the rigid back wall and to one another to form a rectangular box. An end panel is pivotally attached to a first end of the rectangular box. A retention flange is attached to one of the back wall or the end panel. Finally, a retention rod is attached to the other of the back wall or the end panel. The retention rod is removable attachable to the retention flange such that when the retention rod is attached to the retention flange the end panel is held in an extended position generally directed away from the back wall and when the retention rod is not attached to both retention flanges the end panel may be pivoted to a collapsed position generally adjacent and parallel to the back wall.

BRIEF DESCRIPTION OF THE DRAWINGS

[0007] FIG. 1 is a top, front perspective view of an item of luggage according to an embodiment of the present invention;

[0008] FIG. 2 is a top, rear perspective view of an item of luggage according to an embodiment of the present invention;

[0009] FIG. 3 is a front view of an item of luggage according to an embodiment of the present invention;

[0010] FIG. 4 is a perspective view of an end cap according to an embodiment of the present invention;

[0011] FIG. 5 is an overhead perspective view in a first direction of an item of luggage according to an embodiment of the present invention;

[0012] FIG. 6 is an overhead perspective view in the first direction of a partially assembled item of luggage according to an embodiment of the present invention;

[0013] FIG. 7 is a side view of a retention flange according to an embodiment of the present invention;

[0014] FIG. 8 is a bottom view of a retention flange according to an embodiment of the present invention;

[0015] FIG. 9 is a plan view of a retention rod according to an embodiment of the present invention;

[0016] FIG. 10 is a section view of a retention rod inserted within an attachment flange attached to a bottom panel according to an embodiment of the present invention;

[0017] FIG. 11 is a side view of a bag having the bottom panel collapsed thereon according to an embodiment of the present invention;

[0018] FIG. 12 is an overhead perspective view in an opposite direction of FIG. 5 of an item of luggage according to an embodiment of the present invention; and

[0019] FIG. 13 is a side view of a bag having the top and bottom panels collapsed thereon according to an embodiment of the present invention.

DESCRIPTION OF THE PREFERRED EMBODIMENT

[0020] While this invention is susceptible of embodiment in many different forms, there is shown in the drawings and will herein be described in detail preferred embodiments of the invention with the understanding that the present disclosure is to be considered as an exemplification of the principles of the invention and is not intended to limit the broad aspect of the invention to the embodiments illustrated.

[0021] Referring to FIGS. 1 and 2, there is shown a bag 10 according to the present invention. The bag 10 generally comprises a rigid back wall 12, and soft sidewalls 14, 16, 18. Attached to the rigid back wall 12 is a retractable handle assembly 20 and a pair of wheels 22. Also provided are a rigid bottom panel 26 and a rigid top panel 24. The retractable handle assemblies 20 are known in the prior art and, as such, the structure of the retractable handle assembly is not discussed further.

[0022] Referring to FIG. 3, the bag 10 comprises a pair of end pocket panels 28, 30 which with the top panel 24 and bottom panel 26 define end pockets 32, 34. The end pockets 32, 34 further comprise closures 36, 38 which allow the end pockets 32, 34 to be opened and closed. The closures 36, 38 are shown in FIG. 3 as zippers, although any known closure, such as buttons or snaps can be used. Additionally, a main compartment panel 42 covers a main compartment 44. The main compartment panel 42 is attached to the sidewall 16 by two closures 50, 52 of which either one or both may be used. As depicted in FIG. 3, the closures 50, 52 are a zipper and snaps, respectively. The main compartment 44 further includes a back wall protection panel 45 having a zipper closure 47 therein providing access to the handle assembly 20 (FIG. 6). Straps 46, 48 are attached to the bag 10 and, together, may be used to lift and carry the bag 10. Additionally, feet 49 are attached to each of the top panel 24 and the bottom panel 26.
Referring back to FIG. 2, the back wall 12 comprises a center portion 54 and two end caps 56, 58. The end caps 56, 58 each comprise a back portion 60 and a generally perpendicular end portion 62 and two generally triangular shaped side portions 64 (FIG. 4). The back wall 12 further comprises two bumper rails 66, 68. The end cap 56 is attached to the retractable handle assembly 20, and the end cap 58 is attached to two wheel assemblies 70 comprising the wheels 22.

Referring to FIGS. 5 and 6, the center portion 54 is attached to the end cap 56 which is, in turn, pivotally attached to the bottom panel 26. The bottom panel 26 is held in the upright position shown in FIGS. 5 and 6 by a pair of retention rods 72. The retention rods 72 are attached to the bottom panel 26 and the center portion 54 by retention flanges 74 attached to both the bottom panel 26 and the center portion 54. Furthermore, the retractable handle assembly 20 extends through the end cap 56 and along the center portion 54.

Referring to FIGS. 7 and 8, the retention flanges 74 each comprise a generally arcuate receiving portion 76 attached at both ends to two attachment panels 78 each having bores 80 therein through which fasteners may be inserted to attach the flanges 74 to the bag 10. The receiving portion 76 further comprises a protuberance 82 on an inner half of the arcuate receiving portion 76.

Referring to FIG. 9, the retention rods 72 each comprise an elongate rod portion 84 and two end portions 86. The end portions 86 are generally cylindrical and each comprise a reduced diameter portion 88.

Referring to FIG. 10, the retention rods 72 are maintained within the flanges 74 by resiliently deflecting the protuberance 82 as the end portion 86 is inserted into the flange 74 attached to, for example, the bottom panel 26. In this manner the end portion is removably attached to the flange 74.

As shown in FIG. 5, the retention rods 72 each extend through end pocket panel 30 via holes (not shown) therein.

Referring to FIG. 11, when the retention rods 72 are removed from the flanges 74, the bottom panel 26 can be inwardly pivoted to collapse upon the bag 10.

Referring to FIG. 12, the top panel 24 is pivotally attached to the end cap 56 in the same manner that the bottom panel 26 is attached to the end cap 58. Flanges 74 are attached to the bottom panel 26 and the rigid back and retention rods 72 removably attach to the flanges 74 to hold the bottom panel 26 in the upright position. When the retention rods 72 are removed from the bottom panel 26, the bottom panel 26 can inwardly pivotally collapse onto the bag 10 (FIG. 13).

Referring to FIG. 13, the bag 10 further comprises an end handle 88 on each of the panels 26, 28. Also provided is an identification pocket 90 sewn to the side on three sides of the holder. A transparent identification holder 92 is provided within the pocket (FIG. 14). The holder 92 is attached to the pocket 90 by a strip of elastic material 94 such that the holder 92 may be removed from the pocket 90, but not permanently separated from it.

Finally, referring back to FIG. 1, the bag 10 comprises two pair of support straps 94, 96 that are removably attachable to one another across the sidewall 16. Each end of the strap is attached to the opposite sidewalls 14, 18. Another two pair of straps 98 are removably attachable to one another with ends of one pair of two pair of straps 100 are attached to the sidewall 18 and the panel 24 and the sidewall 18 and the panel 26, respectively. The support straps 94, 96, 98, 100 provide additional support to the bag 10 to prevent the closures 56, 58, 50, 52 from inadvertently opening.

In view of the above, it will be seen that several advantages of the present invention have been achieved and other advantageous results have been obtained.

I claim:
1. A collapsible item of luggage comprising:
a rigid back wall;
three non-rigid sidewalls attached the rigid back wall and to one another to form a rectangular box;
an end panel pivotally attached to a first end of the rectangular box;
a retention flange attached to one of the back wall or the end-panel;
a retention rod attached to the other of the back wall or the end-panel, the retention rod removably attachable to the retention flange such that when the retention rod is attached to the retention flange the end panel is held in an extended position generally directed away from the back wall and when the retention rod is not attached to both retention flanges the end panel may be pivoted to a collapsed position generally adjacent and parallel to the back wall.
2. The item of luggage of claim 1 wherein the attachment of the retention rod to the other of the back wall or the end panel is accomplished by a removable attachment of the retention rod to an attachment flange.
3. The item of luggage of claim 2 further comprising a second retention flange attached to the back wall and a second retention flange attached to the end panel, wherein a second retention rod is attachable to each of second retention flange of the back wall and the second retention flange of the end panel, the second retention rod being associated with the second retention flanges to cooperate with the other retention rod, such that when the both retention rods are attached to their respective retention flanges the end panel is held in the extended position and when both retention rods are not attached to their respective retention flanges the end panel may be pivoted to the collapsed position.
4. The item of luggage of claim 1 wherein the retention flange comprises a generally arcuate portion having protuberance on an interior portion thereof and the retention rod comprises at least one end portion having a reduced diameter section that cooperates with the protuberance to maintain the retention rod in a detachable association with the flange.
5. The item of luggage of claim 4 wherein the end portion of the retention rod is turned approximately ninety degrees with respect to the retention rod.
6. The item of luggage of claim 4 wherein the retention rod comprises a second end portion having a reduced diameter section that cooperates with the protuberance to
maintain the second end of the retention rod in a detachable association with the associated retention flange.

7. The item of luggage of claim 1 further comprising a second end panel pivotally attached to a second end of the rectangular box opposite the first end.

8. The item of luggage of claim 7 wherein the second end panel comprises a retention flange that is removably attached to a second retention rod, the second retention rod attached to the back wall wherein the retention rod attached to the second end panel, the second end panel is held in an extended position generally directed away from the back wall and when the retention rod is not attached the second end panel, the second end panel is pivotable to a collapsed position generally adjacent and parallel to the back wall.

9. The item of luggage of claim 1 further comprising a retractable handle.

10. The item of luggage of claim 1 further comprising a pair of wheels.

11. A collapsible item of luggage comprising:

a rigid back wall having a retention flange attached thereto;

three non-rigid sidewalls attached the rigid back wall and to one another to form a rectangular box;

an end panel pivotally attached to a first end of the rectangular box, the end panel comprising a retention flange;

a retention rod removably attachable to the retention flange of the back wall and the retention flange of end panel such that when the retention rod is attached to both retention flanges the end panel is held in a position extending in an extended position directed away from the back wall and when the retention rod is not attached to both retention flanges the end panel may be pivoted to a collapsed position generally parallel to the back wall.

12. The item of luggage of claim 11 further comprising a second retention flange attached to the back wall and a second retention flange attached to the end panel wherein a second retention rod is attachable to each of second retention flange of the back wall and the second retention flange of the end panel, the second retention rod being associated with the second retention flanges to cooperate with the other retention rod, such that when the both retention rods are attached to their respective retention flanges the end panel is held in the extended position and when both retention rods are not attached to their respective retention flanges the end panel may be pivoted to the collapsed position.

13. The item of luggage of claim 11 wherein each retention flange comprises a generally arcuate portion having protuberance on an interior portion thereof and the retention rod comprises two one end portions, each end portion having a reduced diameter section that cooperates with the protuberances of the retention flanges to maintain the retention rod in a detachable association with the flanges.

14. The item of luggage of claim 13 wherein the end portion of the retention rod is turned approximately ninety degrees with respect to the retention rod.

15. The item of luggage of claim 11 further comprising a second end panel pivotally attached to a second end of the rectangular box opposite the first end.

16. The item of luggage of claim 15 wherein the second end panel comprises a retention flange that is removably attached to a second retention rod, the second retention rod attached to the back wall wherein the retention rod attached to the second end panel, the second end panel is held in an extended position generally directed away from the back wall and when the retention rod is not attached the second end panel, the second end panel is pivotable to a collapsed position generally adjacent and parallel to the back wall.

17. The item of luggage of claim 11 further comprising a retractable handle.

18. The item of luggage of claim 11 further comprising a pair of wheels.

19. A collapsible item of luggage comprising:

a rigid back wall having a retention flange attached thereto;

three non-rigid sidewalls attached the rigid back wall and to one another to form a rectangular box;

an end panel pivotally attached to a first end of the rectangular box, the end panel comprising a retention flange;

a retention rod removably attachable to the retention flange of the back wall and the retention flange of end panel such that when the retention rod is attached to both retention flanges the end panel is held in a position extending in an extended position directed away from the back wall and when the retention rod is not attached to both retention flanges the end panel may be pivoted to a collapsed position generally parallel to the back wall;

a second retention flange attached to the back wall and a second retention flange attached to the end panel wherein a second retention rod is attachable to each of second retention flange of the back wall and the second retention flange of the end panel, the second retention rod being associated with the second retention flanges to cooperate with the other retention rod, such that when the both retention rods are attached to their respective retention flanges the end panel is held in the extended position and when both retention rods are not attached to their respective retention flanges the end panel may be pivoted to the collapsed position,

wherein each retention flange comprises a generally arcuate portion having protuberance on an interior portion thereof and the retention rod comprises two one end portions, each end portion having a reduced diameter section that cooperates with the protuberances of the retention flanges to maintain the retention rod in a detachable association with the flanges.

20. The item of luggage of claim 19 wherein the end portion of the retention rod is turned approximately ninety degrees with respect to the retention rod.

21. The item of luggage of claim 19 further comprising a second end panel pivotally attached to a second end of the rectangular box opposite the first end, the second end panel comprising a retention flange that is removably attached to a second retention rod, the second retention rod attached to the back wall wherein the retention rod attached to the second end panel, the second end panel is held in an extended position generally directed away from the back wall and when the retention rod is not attached the second end panel, the second end panel is pivotable to a collapsed position generally adjacent and parallel to the back wall.
end panel, the second end panel is pivotable to a collapsed position generally adjacent and parallel to the back wall.

22. The item of luggage of claim 19 further comprising a retractable handle.

23. The item of luggage of claim 19 further comprising a pair of wheels.

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