Jan. 18, 1955 R. S. GANS 2,699,951

GOLF CLUB CARRIER HAVING FOLDING RUNNING GEAR

Filed July 26, 1950 4 Sheets-Sheet 1

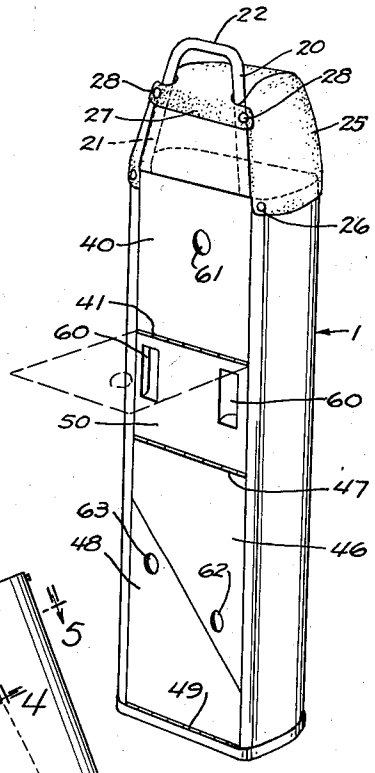


Fig. 1.

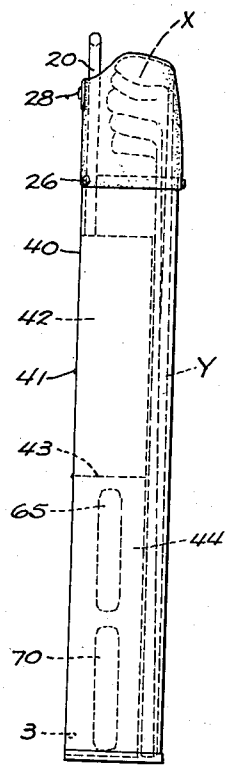


Fig. 2.

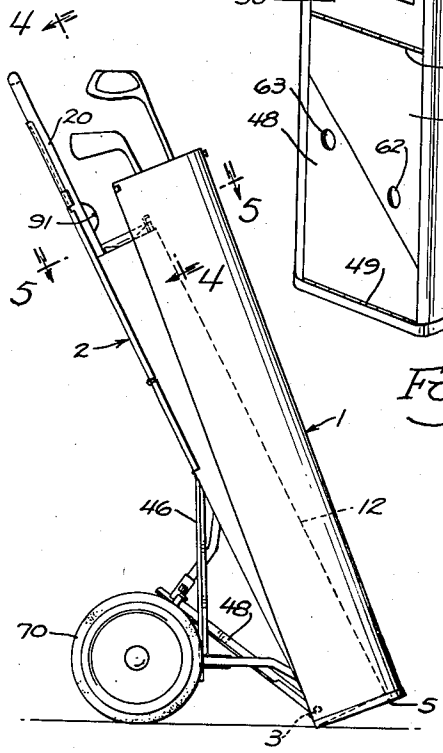


Fig. 3.

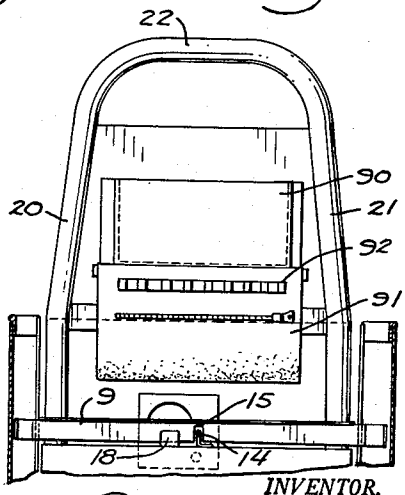


Fig. 4.

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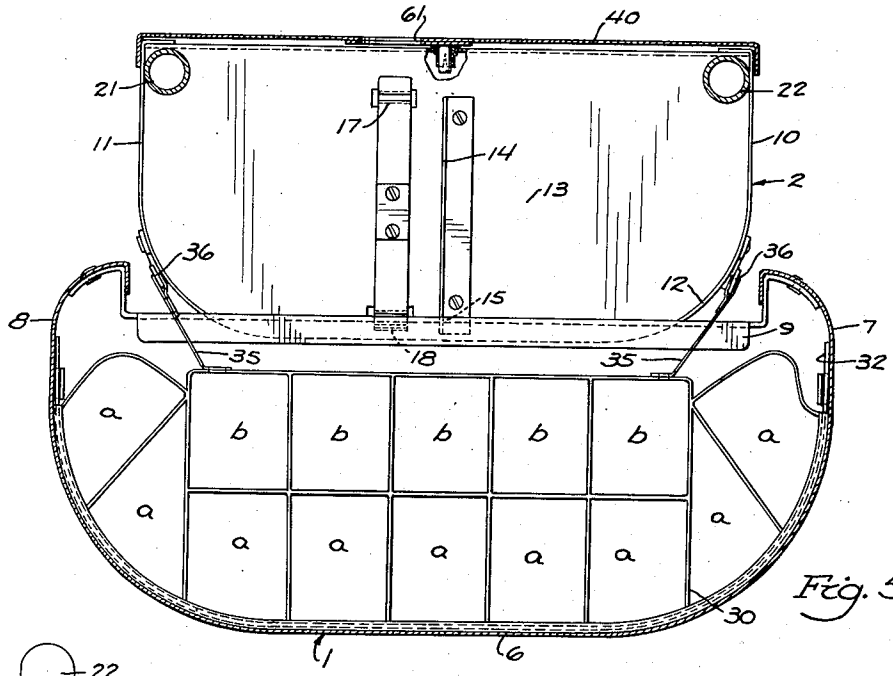


Fig. 5.

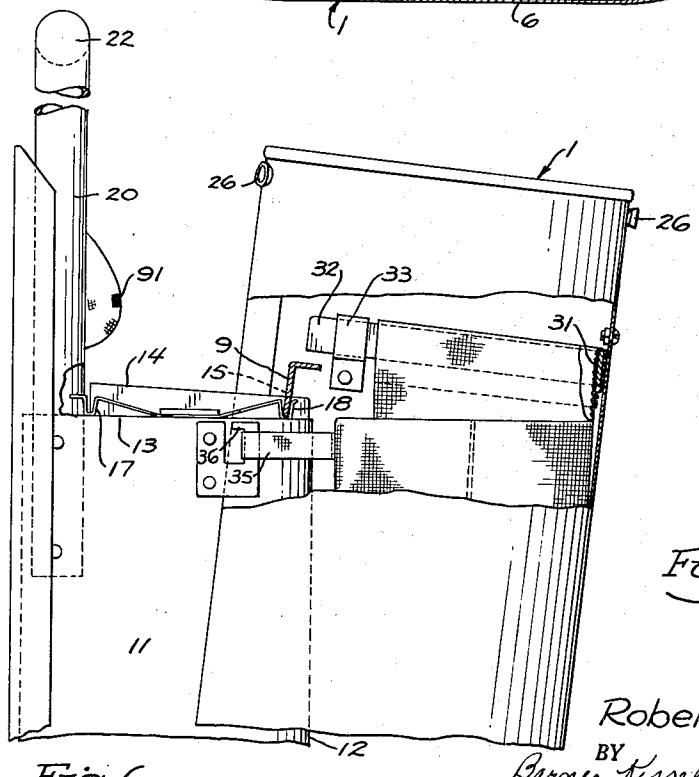


Fig. 6.

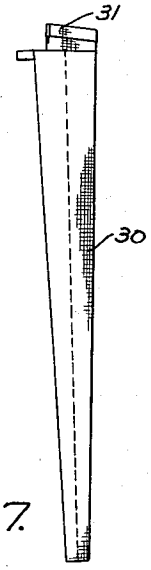


Fig. 7.

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GOLF CLUB CARRIER HAVING FOLDING RUNNING GEAR

Filed July 26, 1950 4 Sheets-Sheet 3

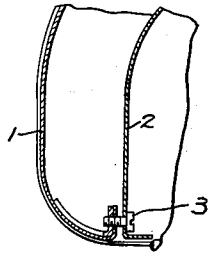


Fig. 10.

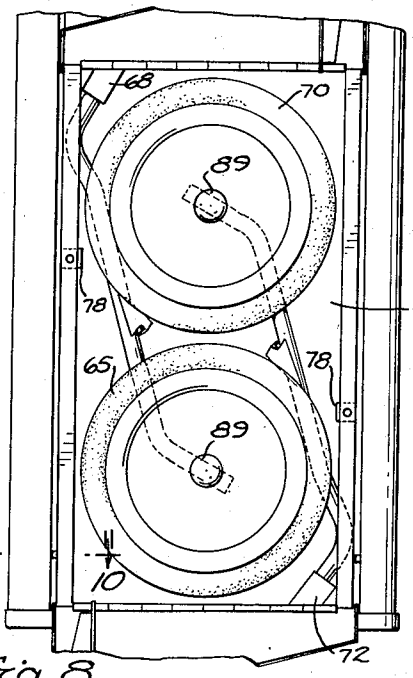


Fig. 8.

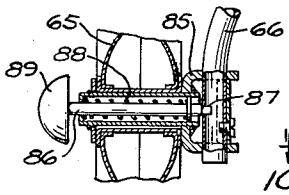


Fig. 11.

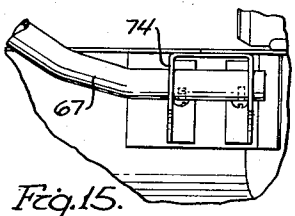


Fig. 15.

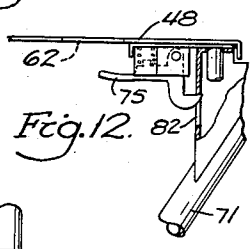


Fig. 12.

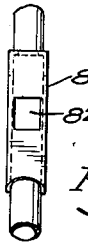


Fig. 13.

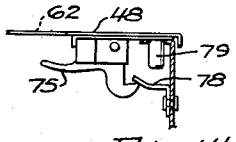


Fig. 14.

Fig. 9.

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GOLF CLUB CARRIER HAVING FOLDING RUNNING GEAR

Filed July 26, 1950 4 Sheets-Sheet 4

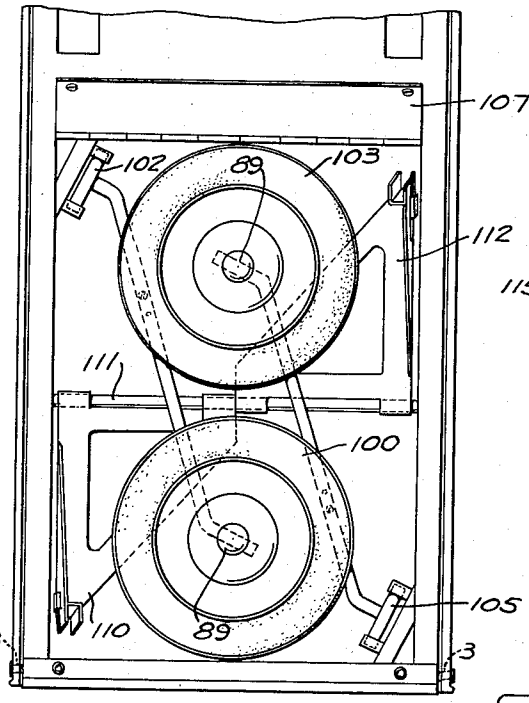


Fig. 16.

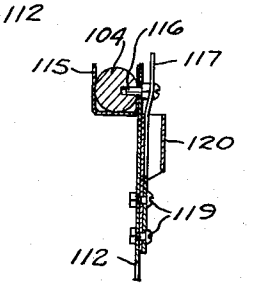


Fig. 18.

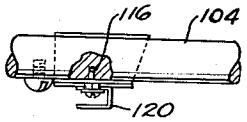


Fig. 19.

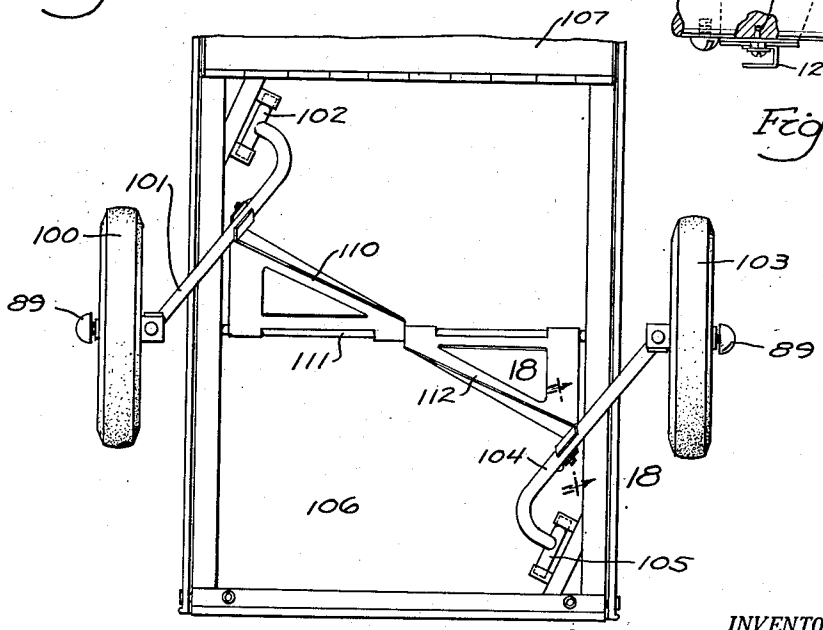


Fig. 17.

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United States Patent Office

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GOLF CLUB CARRIER HAVING FOLDING RUNNING GEAR

Robert S. Gans, Birmingham, Mich.

Application July 26, 1950, Serial No. 176,034

10 Claims. (Cl. 280—38)

This invention relates to a golf club carrier and it has to do particularly with a carrier of convenient shape and construction in which the clubs, and other equipment, may be transported, and which carrier has ground engaging wheels or running gear, collapsible so that the same may be erected or conditioned for use and collapsed into a small compact compartment when not in use.

From a general standpoint the objects of the invention are to provide an improved golf club carrier of rugged light weight construction in which the clubs as well as other equipment may be contained, and the carrier employed in a manner similar to a piece of luggage when the clubs and equipment are transported from place to place as, for example, in an automotive vehicle, or in any other means of transportation. The ground engaging wheels may be erected for use and the carrier employed during a game of golf in which event the carrier may be pulled or pushed over the golf course with its ground engaging wheels in use.

As is well known to most everyone, the maximum transverse dimension of a golf club, is at the head thereof, while the shaft of the club is quite narrow. Therefore, when a golf club or a plurality of golf clubs are placed together in a compartment or area of rectangular shape or similar shape, the head or heads overlie a substantial open area or unused space. One object of the invention is to provide a carrier which makes use of this space not only for housing the collapsed ground engaging wheels, but also to provide a compartment for other equipment that a golfer may have, such as shoes, an extra garment and the like.

In carrying out the invention, a carrier is provided of suitable elongated form with a compartment in the space unused by the golf club shafts for housing the ground engaging wheels, and in one form of the invention the closure elements or door elements for the compartment constitute part of the supporting structure for the ground engaging wheels when they are in use. A further object is to provide a container which may be partially opened when in use for easy access to the clubs and for ease in removing and replacing a club. The carrier is equipped with handle means so that it may be easily carried and maneuvered as well as means for accommodating other golfing accoutrements, such as a pad and pencil, tees, golf balls and the like.

The accompanying drawings illustrate golf club carriers made in accordance with this invention and in these drawings:

Fig. 1 is a perspective view of a carrier constructed in accordance with the invention, illustrating in dotted lines how one of the doors may be opened.

Fig. 2 is a side elevational view with the compartments illustrated in dotted lines and showing the general position of the golf clubs and the ground engaging wheels in collapsed position.

Fig. 3 is a side elevational view illustrating the carrier with the wheels erected for use and with the carrier opened.

Fig. 4 is an enlarged view taken on line 4—4 of Fig. 3 showing some of the construction and illustrating the arrangement for accommodating tees and golf balls.

Fig. 5 is an enlarged cross sectional view taken substantially on line 5—5 of Fig. 3 showing the carrier in open position and illustrating structural elements and the pockets for golf clubs.

Fig. 6 is an enlarged view partly in side elevation and with parts cut away and shown in section, illustrating the carrier in open position and demonstrating some structural features.

Fig. 7 is a view of the fabric pocket construction for the golf shafts.

Fig. 8 is a view looking into the compartment which houses the land engaging wheels and showing the same in collapsed condition.

Fig. 9 is a view similar to Fig. 8 showing one wheel erected for use and for showing the other wheel in a position about to be secured in erected position.

Fig. 10 is a sectional view taken on line 10—10 of Fig. 8 illustrating a pivotal construction.

Fig. 11 is a sectional view taken on line 11—11 of Fig. 9 showing a wheel hub structure.

Fig. 12 is a detailed view illustrating the structure and a catch for holding a ground engaging wheel in erected position.

Fig. 13 is a view illustrating a bracket mounted on a wheel engaging rod.

Fig. 14 is a view partly in section showing a door of a compartment latched in closed position.

Fig. 15 is a view looking in the direction of the arrow 15 of Fig. 9 showing the mounting for a wheel supporting rod.

Fig. 16 is a very looking into a compartment of a carrier and illustrating a modified manner of mounting the wheels.

Fig. 17 is a view similar to Fig. 16 showing the modified wheel mounting in erected position.

Fig. 18 is a sectional view taken on line 18—18 of Fig. 17 showing a catch device for holding the wheels erected.

Fig. 19 is a view looking at the top of Fig. 18 with a part cut away.

The carrier comprises two shell portions, one of which is generally illustrated at 1 and the other at 2 (Fig. 3) and these portions are hinged together as at 3 (Fig. 10) and are arranged so that the portion 2 fits within the portion 1. The outer portion, that is, the portion 1, has a suitable bottom 5 and rising therefrom is an enclosing wall having one side which may be considered the front major side 6 and two minor sides 7 and 8. This wall is preferably made of sheet aluminum so that it has adequate strength and yet it is light in weight. Thus, it will be observed, by considering Fig. 5, that the outside member 1 is generally of three sided construction. Extending across the open side near the top thereof is a reinforcing bar 9 which also serves as a latching device.

The inner member 2 is likewise preferably formed of light material, such as sheet aluminum, plastic, coated fabrics or fiber and it has side portions 10 and 11 and an inner wall 12 and an enclosing top panel 13. Mounted on the panel 13 is a guide 14 which is slidably disposed in a slot 15 of the cross piece 9 (Fig. 4) so as to accurately guide the two shell members as they are moved on the pivot 13. Also on the inner member is a double spring catch or latch. This is in the form of a spring arm secured centrally and having a recessed latching portion 17 at one end and a recessed latching portion 18 at its other end for engaging the cross piece 9 as shown in Fig. 6. When the bag is open the cross piece 9 is engaged in the catch 18; when the bag is closed the cross piece 9 is engaged in the catch 17. The catch may be depressed by a thumb or finger when it is desired to open and close the carrier.

Secured to the inner member 2 is a handle structure which may be in the form of a tube bent into generally U-shape in form having one leg 20 secured to the member 2, another leg 21 secured to the member 2 and a bight portion 22 which may be gripped by the hand.

When the carrier is closed the heads of the clubs are preferably enclosed by a fabric covering as illustrated in Figs. 1 and 2, this covering being shown at 25 and being secured to the upper edge of the member 1 by suitable means, such as snap fasteners 26 and having a portion 27 which can be passed through the handle and secured to the body portion of the cover by snap fasteners 28. The club heads lie within the projected lines of the major sides of the carrier.

When the carrier is closed as shown in Fig. 2, the shafts of the clubs lie in the narrow space between the two shell parts 1 and 2. To separate the shafts and to make it easy to remove and replace the same, a flexible boot structure generally shown at 30 in Fig. 7 is preferably employed. This boot structure embodies a sewed fabric construction providing pockets *a*, and pockets *b*, and the upper edge is provided with a casing 31 through which a metal strap 32 may be passed and the strap has project-

ing ends for engagement in brackets **33** to support the structure depending therefrom. A piece of elastic or length of rubber is secured to each side of the pocket structure as shown at **35** and the ends of the elastics are fastened to brackets or hooks **36** on the member **2**. The result of this is that when the carrier is open as shown at Fig. 5, the elastic elements are drawn taut and the several pockets pulled open. The pockets as illustrated in Fig. 5, have a rather squarish appearance but, of course, the fabric construction will not be so squarish in normal use. The several pockets *a* are convenient for iron clubs, and the several pockets *b* are convenient for wood clubs. When the bag is closed, as shown in Fig. 2, and as above mentioned, the club heads *x* overlie the member **2** and the club shafts *y* lie in the narrow space between the two shell members.

The exposed side of the member **2** has a door **40** hinged as at **41** so that it may be opened for access into a compartment illustrated at **42**. This compartment underlies the club heads and may be used for various articles of equipment. Below the compartment **42** and preferably separated therefrom by a partition **43** is a compartment **44** for housing the ground engaging wheels. This compartment has two doors separated diagonally as illustrated in Fig. 1 with the upper door **46** pivotally mounted as at **47** and the lower door **48** pivoted as at **49**. Each door is of trapezoidal shape. A fixed panel **50** with recessed portions **60** constituting handles by which the carrier may be gripped and carried is positioned in the intermediate portion of the carrier. The door **40** has an opening **61**, the door **46** has an opening **62** and the door **48** has an opening **63** so that a finger may be passed therethrough to manipulate a holding latch (Fig. 14). The exposed side of the member **2**, forms the second major side of the rectangular cross sectional shape of the carrier when the members **1** and **2** are closed relative to each other.

The wheel structure is demonstrated in Figs. 8 and 9. One wheel **65** is mounted on a rod or tubular member **66** with an intermediate offset portion **67** and one end pivotally mounted as at **68**. The other wheel **70** is mounted on a like rod or tubular member **71** pivotally mounted as at **72**. The pivotal mounting for each of these members may be in the form of a bracket **74** (Fig. 15). In Fig. 9 the upper door **46** is open and positioned horizontally and it will be noted that it has a spring pressed latch **75** thereon. The door **48** has a similar latch **75** (Fig. 14) arranged to engage a keeper **78** when the door is closed and each of these latches can be manipulated through openings **61**, **62** and **63**. Each door also has a stud **79**.

Each wheel supporting rod is provided with a bracket **80** with an opening **81** and another opening **82** positioned at right angles thereto. The wheel **70** of Fig. 9 is just in a position to be secured by the door **46**. The wheel **65** is already secured by the door **48**. To secure the wheel **70** in position, its door **46** is partially closed to a position as indicated in Fig. 3 and the stud **79** is passed through the opening **81** and the catch **75** engages in the opening **82** (Fig. 12). It will be understood that both doors **46** and **48** and both wheel supporting rods **66** and **71** have similar catching arrangements.

The wheels are shown in collapsed position in Fig. 8 where it will be noted that the wheel **70** may be swung on its pivot **72** so that it occupies the upper portion of the compartment **44** and the wheel **65** is swung on its axis **68** so that it occupies the lower portion of the compartment. In this connection, it will be observed that the pivots **68** and **72** are angularly disposed relative to the sides and ends of the walls of the compartment but that they are generally parallel to each other. It will be observed also that wheel **65**, for example, is adequately supported at spaced points, these being its pivot **68**, the connection of the door with the rod **66** and the hinge of the door which extends to a corner of the compartment diagonally opposite the pivot **68**. The wheel **70** is supported in like but reverse manner. Thus the doors of the compartment serve as structural members. When the wheels are erected for use the carrier appears as shown in Fig. 3 and the user may grasp the handle **22** or pull or push the carrier along the ground.

In order to have the wheels **65** and **70** lie flat in the compartment each wheel may be mounted on its supporting rod so that it may be swiveled. This is demonstrated in Fig. 11 where it will be noted that the wheel **65** is

mounted on a knuckle **85** which can turn on the rod **66** but which is held latched with respect thereto by a spring pressed bolt **86** projectable into a recess **87** in the rod **66**. The spring is shown at **88** and the bolt may be retracted by a handle **89**. When the wheels are to be folded into the compartment the bolts may be retracted so that the knuckles may be turned and the wheels positioned generally in alignment with each other. However, where the size of the wheels and the dimensions of the compartment permit this pivotal mounting may be dispensed with.

The portion of the member **2** on the back side of the handle **20** is advantageously provided with a pocket **90** for a pad of paper, a score card or the like, a pocket **91** for golf balls and series of loops **92** for tees.

A modified form of wheel mounting is shown in Figs. 16 and 17. In this form the wheel **100** on its supporting rod **101** is pivotally mounted as at **102**; the wheel **103** is similarly carried by its rod **104** pivotally mounted as at **105**. The compartment is shown at **106** and the door or closure therefore is illustrated at **107** as open. There is a bracket **110** pivotally mounted on a cross rod **111** for holding the rod **101** and a bracket **112** on the same cross rod for holding the rod **104**. Thus, swinging brackets are used instead of the doors. In closed position, the brackets lie in the compartment, as shown in Fig. 16, and in open position the wheels and their supporting rods and their brackets are folded out as shown in Fig. 17. Each bracket has a U-shaped element **115** for receiving a rod as shown and the bracket has a pin **116** carried by a spring arm **117** projectable into a recess into the rod. The spring **117** is a leaf spring mounted to the bracket as at **119** and there is preferably a loop or guard **120** which prevents one from retracting the spring so far as to bend it beyond its elastic limit.

It will readily be seen how the wheel supporting rod and the bracket may be shifted relative to each other until the pin **116** seats in its recess and it will also be seen how the spring **117** may be released from its recess when the wheels are to be folded into the compartment. The wheels of this modified form may have the knuckle mounting like that shown in Fig. 11 so that they may be turned on their mountings in order to place them in parallel position in a common plane when stowed away. Of course, in both forms where, as above mentioned, the size of the wheels and the dimensions of the housing compartment permit, the wheels may not have a pivotal mounting on their supporting rods in which event they are slightly angularly disposed relative to the other when collapsed. Nevertheless, they are substantially in a common plane in a sense that they lie in an area normally unused by the shafts of the golf clubs.

The entire carrier construction, when made of light metal parts, such as aluminum or aluminum alloy may have a weight, including its wheels, comparable to the weight of an average size golf bag plus a separate wheel attachment which is now quite commonly used. With the carrier of this invention, the clubs may be transported to and from the golf course or to and from the user's automobile even more conveniently than in an ordinary golf bag and yet a complete carrier is provided which makes for easy access to the clubs while in use and which incorporates its own running gear. Moreover, the carrier will be found to be convenient when traveling over the country either in an automobile or in public conveyances. Everything is compactly embodied including the additional compartment for additional equipment, clothing or other accoutrements.

I claim:

1. A golf club carrier comprising an elongated body structure arranged to receive and hold the golf clubs and having a handle at its upper end, said body structure having a compartment at its lower end, running gear including a pair of wheel supporting arms, and a pivot in the compartment for one of the arms, said pivot being positioned adjacent the upper end of the compartment and being disposed diagonally relative to a vertical line, another pivot in the compartment for the other arm, said other pivot being adjacent the lower end of the compartment and positioned diagonally with respect to a vertical line, a wheel on the free end of each arm, said arms and wheels being pivotally movable into and out of said compartment, and bracket means engageable with the arms to hold the arms and wheels out of said compartment with the wheels in ground engaging position.

2. A golf club carrier comprising an elongated body structure arranged to receive and hold the golf clubs and having a handle at its upper end, said body structure having a compartment at its lower end, running gear including a pair of wheel supporting arms, and a pivot in the compartment for one of the arms, said pivot being positioned adjacent the upper end of the compartment and being disposed diagonally relative to a vertical line, another pivot in the compartment for the other arm, said other pivot being adjacent the lower end of the compartment and positioned diagonally with respect to a vertical line, said pivots having their axes substantially parallel to each other, a wheel on the free end of each arm, said arms and wheels being pivotally movable into and out of said compartment, and bracket means engageable with the arms to hold the arms and wheels out of said compartment with the wheels in ground engaging position.

3. A golf club carrier comprising, a body structure having a compartment at its lower end, a door member pivotally mounted at the top of the compartment, a door member pivotally mounted at the bottom of the compartment, said doors each enclosing a part of the compartment when in closed position and being shaped so that their free edges substantially come together on a diagonal line, a pair of ground engaging wheels, means for supporting each wheel so that the same may be moved into the compartment and moved to a position outside the comparment in ground engaging position, and catch means on each door member for connecting one door member with one supporting means for holding the wheels in ground engaging position.

4. A golf club carrier comprising, a body structure having a compartment at its lower end, a door member pivotally mounted at the top of the compartment, a door member pivotally mounted at the bottom of the compartment, said doors each being of trapezoidal shape so that their free edges substantially meet each other on a diagonal line when the doors are closed, running gear including a pair of wheels and an arm for each wheel mounted so that the arms and wheels may be folded into the compartment and positioned outside the compartment in ground engaging position, and latch means for connecting each door member substantially at a corner thereof most remote from the pivotal mounting thereof with one of the arms for holding the wheels in ground engaging position.

5. A golf club carrier comprising, a body structure having a compartment at its lower end, a door member pivotally mounted at the top of the compartment, a door member pivotally mounted at the bottom of the compartment, said doors each being of trapezoidal shape so that their free edges substantially meet each other on a diagonal line when the doors are closed, a wheel supporting arm pivotally mounted in a diagonal position in one upper corner of the compartment, a wheel supporting arm pivotally mounted on a diagonal pivot in a lower corner of the compartment which is diagonally opposite the first named pivot, said pivots being substantially parallel with each other, a wheel mounted on each arm, said arms being movable on their pivots for positioning the wheels within the compartment and without the compartment, means on the upper door substantially at its corner most removed from the pivot thereof for connection to the arm mounted in the lower part of the compartment for holding the arm and its wheel in ground engaging position, means on the lower door substantially at its corner most remote from the pivot thereof for connection to the arm mounted in the upper corner of the compartment for holding the wheel thereof in ground engaging position.

6. The golf club carrier structure as substantially recited in claim 4 characterized in that each wheel is journalled on a knuckle rockable on its respective arm and releasable means for holding the knuckles against rocking movement on the arm, whereby the wheels may be rocked on the arms, and placed in a substantially common plane within the compartment.

7. A golf club carrier comprising, a body structure having a compartment therein, running gears including collapsible wheel supporting means and two ground engaging wheels on said supporting means, said supporting means being collapsible into the compartment with the two wheels positioned in the compartment with their axes displaced from each other and displaced from a median transverse line through the compartment and with the wheels generally in rim to rim engagement, said supporting means being extendable from the compartment and extendable laterally thereof to position the wheels in ground engaging position substantially on the same axial line which is substantially the same line as said median line with each wheel laterally removed to opposite sides of the body structure and means for holding the supporting structure in said extended position.

8. A golf club carrier comprising, a body structure having a compartment therein, running gear including two wheel supporting arms pivotally mounted in the compartment, a ground engaging wheel on each arm, said arms being pivotal to positions within the compartment with one wheel lying in the upper part of the compartment and with one wheel lying in the lower part of the compartment with their axes displaced one above and one below a median line across the compartment and the wheels generally in rim to rim relationship, said arms being pivotal to a position so that they extend outside of the compartment and project to opposite sides of the body structure with the wheels in ground engaging position on opposite sides of the structure and with their axes substantially coinciding with said median line and means for holding the arms in extended position with the wheels in ground engaging position.

9. A golf club carrier comprising, a body structure having a compartment at its lower end, a wheel supporting arm pivotally mounted on a diagonal axis in one upper corner of the compartment, a wheel supporting arm pivotally mounted on a diagonal axis in the lower diagonally opposite corner of the compartment, a ground engaging wheel mounted on each arm, the arms and wheels being pivotal to a position housed within the compartment and to a ground engaging position outside the compartment, a pair of pivotally mounted brackets positioned within the compartment and each swingable outwardly of the compartment, and means on each bracket for engaging one of the wheel supporting arms for holding the arms and wheels in erected position outside of the compartment with the wheels in ground engaging position.

10. A carrier for golf clubs comprising, an elongated rigid body substantially rectangular in cross section throughout its length having major and minor sides and of hollow form, means to receive a plurality of golf clubs insertable into the body from the top end thereof with the shafts of the golf clubs positioned downwardly and with the shafts lined up substantially parallel to the major sides of the body, the body having a length such that the club heads lie above the top thereof when the shafts are positioned therein, the dimension of the minor sides being such that when the heads of the clubs are positioned cross-wise of the major sides they lie completely within projected lines of the major sides, the body thereby having space therein in excess of that required by the golf club shafts, the body having a compartment in its lower portion within the confines of its side walls and occupying some of the excess space alongside of the means for receiving the golf club shafts, running gear for the carrier comprising two wheels, a support on which each wheel is mounted, means permanently fixed to the lower portion of the carrier including elements for detachably engaging each support for holding each support with its wheel in ground engaging position, whereby the carrier may be propelled with the wheels engaging the ground, the support for each wheel being so pivoted to the carrier body that when said supports are detached from said elements the supports and the wheels thereon are movable into the said compartment with the wheels in compact relationship and with their axes extending transversely of the major sides of the body.

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