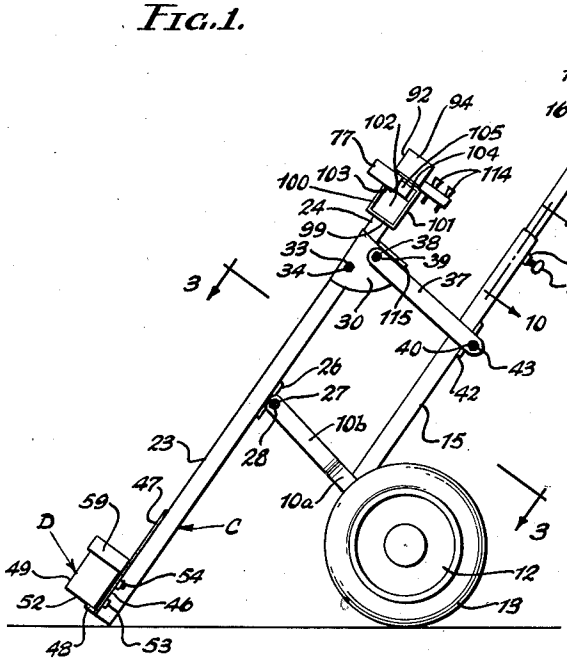
Dec. 11, 1951 O. L. EVANS ET AL 2,578,409

BAGLESS GOLF CART

Filed March 13, 1950 2 SHEETS—SHEET 1

FIG. 1.



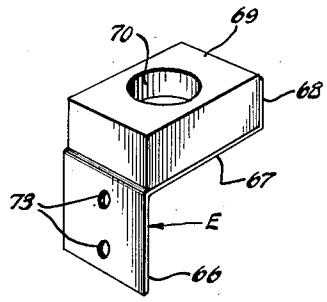


FIG. 11.

FIG. 2.

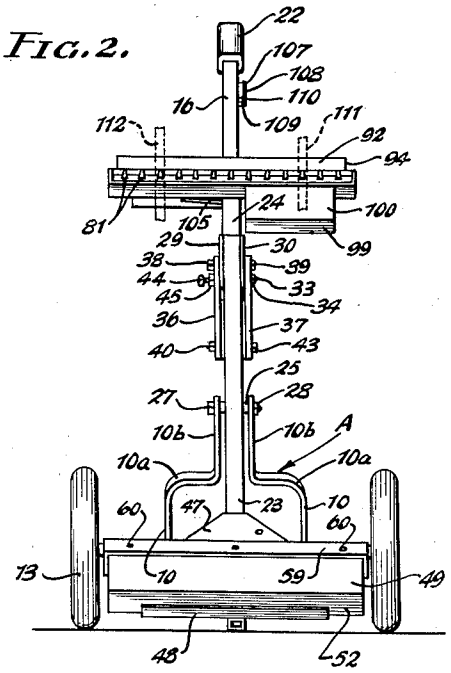
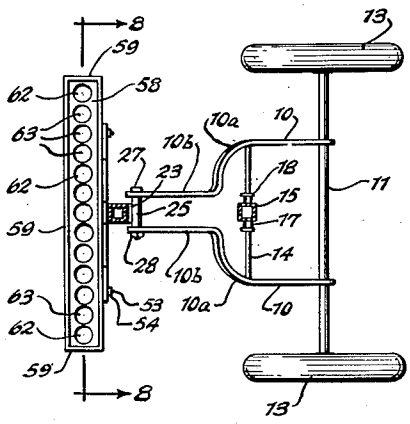


FIG. 3.



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BAGLESS GOLF CART

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FIG. 9.

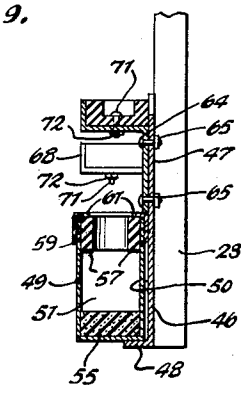


FIG. 10.

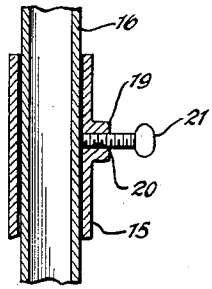
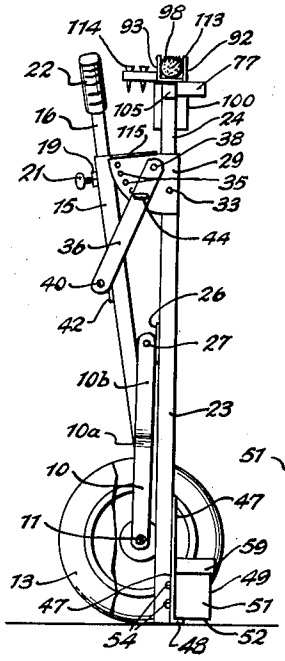


FIG. 4.



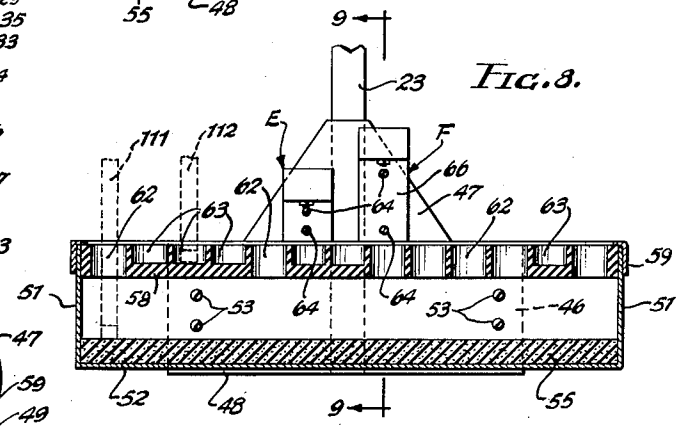


FIG. 6.

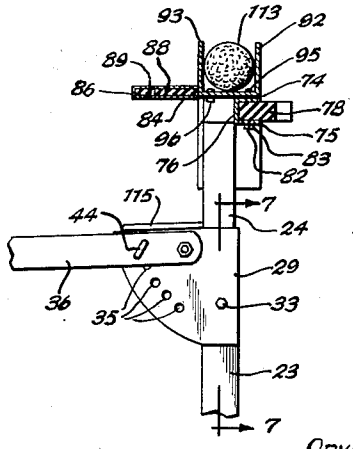
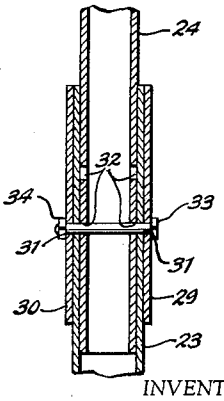


FIG. 7.



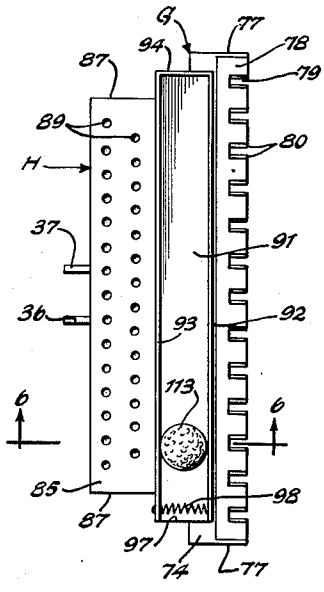


FIG. 5.

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2,578,409

UNITED STATES PATENT OFFICE

2,578,409

BAGLESS GOLF CART

Orville L. Evans and William H. Warth,
Rushville, Ind.

Application March 13, 1950, Serial No. 149,306

3 Claims. (Cl. 280—36)

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The present invention relates to improvements in a bagless golf cart and has for an object to provide a device of this kind by means of which golf clubs and other golf accessories can be moved over the terrain of a golf course during the playing of a game of golf.

A further object of the present invention is to provide an improved bagless golf cart upon which the golf clubs can be mounted directly without the necessity of using a golf bag or the like.

Another object of the present invention is to provide an improved device of this character in which the golf clubs are securely held and yet can be quickly and easily withdrawn therefrom.

A still further object of the present invention is to provide an improved bagless golf cart in which the clubs are supported in a substantially vertical position with the club heads uppermost and in spaced apart relation so that the club heads will not knock against one another and the golfer can quickly select the club desired for the particular shot.

The present invention aims to provide an improved structure which can be adjusted to accommodate sets of golf clubs having shafts of different lengths, such as, men's size sets of clubs and ladies' or junior size sets of clubs.

The present invention also aims to provide an improved bagless golf cart in which means are provided for accommodating golf clubs of a set having different length shafts.

An important object of the present invention is to provide an improved bagless golf cart in which means are incorporated for maintaining a perfect balance regardless of the number and weight of clubs placed thereon so that the load is balanced in such a manner as to actually aid in the movement of the cart over the golf course.

The present invention has for another object the provision of an improved golf cart which can be collapsed when not in use so that it can be stored in a luggage compartment of an automobile, in a club house locker or in the home.

With the foregoing and other objects in view, the invention will be hereinafter more fully described and more particularly pointed out in the appended claims.

In the drawings, in which the same parts are denoted by the same reference numerals throughout the several views,

Figure 1 is a side elevational view of the improved bagless golf cart constructed in accordance with the present invention and illustrated in one of its open operative positions.

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Figure 2 is a front elevational view of the same,

Figure 3 is a sectional view taken on the line 3—3 of Figure 1 and looking in the direction of the arrows,

Figure 4 is a side elevational view of the improved device in collapsed condition showing the opposite side to that illustrated in Figure 1 of the drawing and with parts broken away,

Figure 5 is a top plan view of the tee supporting member, the golf ball supporting member and the bracket for receiving the club head portion of the shafts of the golf clubs,

Figure 6 is a sectional view taken on the line 6—6 of Figure 5 and looking in the direction of the arrows,

Figure 7 is a sectional view taken on the line 7—7 of Figure 6 and looking in the direction of the arrows,

Figure 8 is a sectional view taken on the line 8—8 of Figure 3 and looking in the direction of the arrows,

Figure 9 is a sectional view taken on the line 9—9 of Figure 8 and looking in the direction of the arrows,

Figure 10 is a sectional view taken on the line 10—10 of Figure 1 and looking in the direction of the arrows, and

Figure 11 is a perspective view of one of the auxiliary golf club shaft receiving sockets.

Referring more particularly to the drawings, A generally indicates a yoke which comprises a pair of spaced apart arms 10, the lower ends of which are apertured to receive therethrough an axle 11. The lower ends of the arms 10 are secured as by welding or the like to intermediate portions of the axle 11. The axle 11 has mounted on its opposite ends supporting wheels 12 which are equipped with semi-pneumatic tires 13.

A handle supporting rod 14 has its opposite ends secured to the inner faces of the arms 10 as by welding or the like. A handle generally indicated at B comprises two telescopic sections 15 and 16 which may be of non circular shape in cross section and may be hollow. A bearing sleeve 17 is rotatably mounted upon the rod 14 intermediate its ends and is restrained against axial movement on the rod 14 by washers 18 which are secured as by welding or the like to the rod 14 at opposite sides of and in engagement with the sleeve 17.

The lower end portion of the section 15 of the handle B is secured to the sleeve 17 by welding or the like for rotative movement with the sleeve. Adjacent its upper end the section 15 of the handle B has a nut 19 secured to its rear face.

The rear face of the section 15 is provided with an opening 20 which is in alignment with the threaded opening of the nut 19. A thumb screw 21 is threadedly received by the nut 19 and is adapted to have its inner end extend through the opening 20 of the section 15 and frictionally bind the section 16 in its preselected vertical adjustment. The upper end portion of the section 16 has mounted thereon a hand grip 22 which may be made of rubber or the like.

Immediately above the rod 14, the arms 10 are bent inwardly for a short distance at 10*a* and then extend upwardly in spaced parallel relation as indicated at 10*b*.

A standard generally indicated at C comprises a lower member 23 and an upper member 24 which is telescopically received by the member 23. The members 23 and 24 may be non circular in cross section and of hollow formation. A bearing sleeve 25 is secured by welding or the like to a plate 26 which is in turn secured by welding or the like to the rear face of the member 23 intermediate its ends. A threaded bolt 27 extends through the sleeve 25 and aligned apertures in the upper ends of the portions 10*b* of the yoke A. A nut 28 is received by the threaded end of the bolt 27 for retaining the portions 10*b* of the yoke for rotative movement on the bolt 27.

A pair of segmental plates 29 and 30 are secured to the opposite side faces of the lower member 23 of the standard C adjacent its upper end portion. The plates 29 and 30 and the opposite sides of the member 23 are provided with aligned openings 31 and the opposite sides of the member 24 are provided with pairs of aligned openings 32 which are adapted to be selectively brought into registry with the openings 31. A threaded bolt 33 extends through aligned openings 31 and 32. A nut 34 is threadedly received by the bolt 33 for securing the members 23 and 24 in vertically adjusted position. The segmental plates 29 and 30 extend rearwardly of the section 23 and the plate 29 is provided with an arcuately arranged series of holes 35. A pair of links 36 and 37 have their forward end portions pivotally mounted on a bolt 38 which extends through aligned apertures in the links and in the segmental plates 29 and 30. A nut 39 is threadedly received by the bolt 38. The rear end portions of the links 36 and 37 are pivotally mounted on a a bolt 40 which extends through suitable apertures in the links and is suitably supported by a plate 42 by welding or the like.

The plate 42 is in turn secured to the rear face of the lower section 15 of the handle B intermediate its ends. A nut 43 is threadedly received by the bolt 40. A thumb screw 44 has a nut 45 mounted thereon and is threadedly received by a threaded opening in the link 36. The threaded opening in the link 36 is adapted to be selectively brought into registry with one of the holes 35 of the segmental plate 29. The thumb screw 44 is then adapted to extend through the threaded opening in the link 36 and engage in the selected aligned hole 35 of the plate 29.

A plate having a main body portion 46 which may be substantially oblong in shape and an upwardly extending substantially triangularly shaped portion 47 is secured as by welding or the like to the forward face of the lower end portion of the member 23 of the standard C. The lower edge portion of the plate 46 is bent forwardly to provide a flange 48.

A box generally indicated at D comprises front and rear walls 49 and 50, respectively, end walls 51, a bottom 52 and opened at the top. The bottom 52 of the box rests upon the flange 48 of the plate 46 and is secured to the plate 46 by bolts 53 which extend through suitable openings in the plate 46 and the rear wall 50 of the box. Nuts 54 are threadedly received by the bolts 53.

A cushion 55 of sponge rubber is inserted within the box D and secured to the bottom thereof in any suitable manner. The upper portions of the front and rear walls 49 and 50 of the box D are provided with inwardly extending flanges 57. A block of hard rubber or the like 58 is received through the open top of the box D and rests upon the flanges 57 of the front and rear walls 49 and 50. If desired, the block 58 can be secured to these flanges 57. A strip of metal, plastic, or the like 59 surrounds the upper edge portions of the box D and is secured to the front and rear walls 49 and 50 of the box by screws or the like 60. The upper edge portion of the strip 59 is provided with an inturned flange 61 which overhangs and engages the upper marginal edges of the block 58 to maintain the block seated upon the flanges 57. The block 58 is provided with a plurality of through openings 62 which communicate with the interior of the box D. The block 58 is also provided with sockets 63.

Auxiliary socket members, generally indicated at E and F are mounted on the forward face of the triangular portion 47 of the plate 46 by bolts or the like 64 and nuts 65. As shown more particularly in Figure 11 of the drawing, the auxiliary socket member E comprises a supporting member of angle iron shape in cross section having a vertical flange 66 and a horizontal flange 67. The forward edge portion of the flange 67 is bent upwardly to provide a vertical retaining flange 68 which is disposed parallel to and cooperates with the forward face of the triangular portion 47 of the plate 46 to retain therebetween a block 69 of hard rubber or the like. The block 69 is provided with a substantially centrally disposed socket 70. A screw 71 extends through the bottom of the socket 70 and through a suitable opening in the flange 67 and receives a nut 72 for securing the block 69 to the flange 67. Suitable openings 73 are provided in the flange 67 for receiving therethrough the bolts 64. The auxiliary socket member F is similar in structure to the socket member E, except that the flange 66 is made longer than the corresponding flange of the member E.

A bracket, generally indicated at G, comprises a top wall 74, bottom wall 75, rear wall 76 and end walls 77. The end walls 77 extend forwardly of the top and bottom walls 74 and 75. The rear wall 76 of the bracket G is secured to the upper portion of the forward face of the member 24 of the standard C by welding or the like. A block 78 of hard rubber or the like has its rear portion received between the top and bottom walls 74 and 75 of the bracket G and its forward portion extends forwardly of the top and bottom walls of the bracket G. The opposite ends of the block 78 engage the end walls 77 of the bracket G and the forward edge of the block terminates substantially flush with the forward edges of the end walls 77. The forward edge portion of the block 78 is provided with a series of spaced apart recesses 79. The upper portions of the opposite walls of each recess 79 are slightly beveled downwardly and inwardly as indicated at 80. The bottom portions of the opposite walls of each recess

79 are beveled upwardly and inwardly as at 81 to a greater degree than the bevel at 80. The block 78 is retained within the bracket G by bolts 82 which receive nuts 83.

A tee receiving tray, generally indicated at H, comprises a bottom wall 84, a top wall 85, a rear wall 86, end walls 87 and a sheet of sponge rubber 88. The bottom wall 84 is longer than the top wall 85 and extends forwardly thereof and is provided with suitable openings for securing it to the top wall 74 of the bracket G by means of the bolts 82. The layer of sponge rubber 88 is confined between the top and bottom and rear walls 84, 85 and 86. The bottom and top walls 84 and 85 are provided with aligned holes 89 and the layer of sponge rubber 88 is provided with holes 90 which are in registry with the holes 89, but are of slightly smaller diameter than the holes 89.

A golf ball carrying trough having a bottom 91, a forward wall 92, a rear wall 93 and an end wall 94 rests upon the upper surface of the bottom wall 84 of the tray H and is secured thereto by the bolts 82 and by bolts 95 which receive nuts 96. The end of the trough opposite to the end wall 94 is open as indicated at 97. A coil spring 98 has its opposite ends attached to the upper edges of the front and rear walls 92 and 93, respectively, of the trough adjacent the open end 97.

A container comprising a bottom 99, a front wall 100, a rear wall 101 and an end wall 102 is secured to the bottom wall 75 of the bracket G and to the bottom wall 84 of the tray H by the bolts 82 and 95 which extend through flanges 103 and 104 on the front and rear walls 100 and 101, respectively.

A brace 105 has its opposite end portions secured to the rear wall 76 of the bracket G by welding or the like and its intermediate portion secured to the rear face of the upper end portion of the member 24 of the standard C. One end portion of the brace 105 extends into the container over its end wall 102.

A holder for lighted cigars or cigarettes comprises a flange 106 which is secured by welding or the like to the section 16 of the handle B adjacent the hand grip 22 and a cigarette supporting plate 107 having upstanding side and bottom flanges 108 and 109, respectively. The plate 107 is provided with an opening 110 adjacent the flange 109. When the player is making a shot he can place his lighted cigar or cigarette upon the plate 107 and it will be confined there by the flanges 108 and 109 and the adjacent side of the section 16 of the handle B. The lighted end of the cigar or cigarette will be disposed over the opening 110 so that air can freely circulate around the lighted end to support combustion.

In the use of the device the upper member 24 of the standard C will be adjusted up or down in the lower member 23 to accommodate men's clubs or ladies' or junior clubs, depending upon the size of the clubs to be carried by the cart. This adjustment will be made by loosening the nut 34 and removing the bolt 33. After the member 24 has been suitably adjusted the bolt 33 and nut 34 will be replaced.

The clubs will be successively placed upon the cart by extending the hand grip portion of the longer clubs 111 through the openings 62 in the block 58 until the end of the club rests upon the cushion 55. These longer clubs are usually the "woods." The shaft of each club adjacent the head end thereof will be forced into a corresponding aligned recess 79 of the block 78. Due to the resiliency of the material from which the block 78 is made and the beveled arrangement of the walls of the recesses the shaft can be readily inserted in the recesses by exerting relatively slight pressure upon the shaft and at the same time the club will be firmly secured to prevent rattling or accidental displacement.

The hand grip end portions of the shorter clubs 112 or "irons" will then be successively inserted in the sockets 63 of the block 58 so that the ends of the clubs will rest upon the bottoms of the sockets 63. The shaft of each iron club adjacent its head will be forced into a corresponding aligned recess 79 of the block 78 and the iron club will be retained by the cooperative action of the socket 63 and the recess 79.

A plurality of golf balls, such as indicated at 113, will be placed in the trough 91 and will be retained therein due to the inherent resiliency of the walls 92 and 93 and the action of the coil spring 98 in drawing the walls 92 and 93 towards each other into frictional engagement with the balls 113.

Golf tees 114 will be inserted through the holes 89 and 90 of the tray H and will be frictionally retained therein by the layer 88 of sponge rubber.

When the golf clubs, golf balls and tees have been placed upon the cart in the manner described above, the golfer can adjust the spread between the wheels 13 and the box D to obtain the best possible balance. This adjustment for the proper balance can be made by loosening the thumb screw 44 and by suitable pressure on the handle B the wheels 13 may be moved towards or away from the box D. Through the yoke A and the links 36 and 37 the load will be adjusted forwardly or backwardly depending upon the direction the handle B is moved. The links 36 and 37 will swing about their pivot bolts 38 and the link 36 will carry with it the thumb screw 44 into registry with one of the holes 35 in the plate 29. When the proper adjustment has been secured the thumb screw 44 will be screwed into the selected hole 35 and the parts will be maintained in their selected adjusted position. With this arrangement such a proper balance of the load will be obtained as to actually aid in the movement of the cart.

The upper section 16 of the handle B may be adjusted within the section 15 by loosening the thumb screw 21 and sliding the section 16 into or out of the section 15. When the desired adjustment has been obtained the thumb screw 21 may be screwed into frictional engagement with the section 16 to retain it in the selected position. The golfer can move the cart by grasping the hand grip 22 and balancing it on the wheels 13 by means of which it may be rolled over the ground. When it is desired to make a shot the cart may be disposed as shown in Figure 1 of the drawing in which the cart is supported by the wheels 13 and the lower end portion of the member 23. The golfer selects the desired club and removes it from the cart by grasping the shaft adjacent the recess 79 and exerting pressure on the shaft forwardly of the cart.

Due to the beveled formation of the walls of the recess and the resiliency of the material of the block 78 the shaft will be readily removed from the recess. One of the golf tees 114 can be removed from the tray H by a slight upward pull on the golf tee. A ball 113 may be withdrawn from the trough 91 by forcing it under the spring 98 and from between the walls 92 and 93 or one

end of the spring may be removed from the wall to release the golf ball.

When it is desired to store the golf cart the thumb screw **44** will be loosened until it is clear of the holes in the plate **29**. The cart will then be collapsed to the condition shown in Figure 4 of the drawing by moving the wheels **13** and the box D together. The thumb screw **44** will then be screwed into the aligned hole **35**. It will be noted from Figure 4 of the drawing that in this collapsed position the lower section **15** of the handle B will have its upper portion received between the rear edge portions of the plates **29** and **30** to prevent lateral movement of the handle B and its associated parts. As shown in Figure 4 of the drawing, the upper section **16** of the handle B is disposed at right angles to its operative position illustrated in Figure 1 of the drawing. This is effected by entirely removing the upper section **16** from the lower section **15** and turning the section **16** through substantially 90 degrees and then reinserting it into the section **15**. It will also be noted from this figure 4 of the drawing that the entire structure is disposed within the limits of the diameter of the wheels **13**.

It will be noted from Figure 1 of the drawing that when in its fully extended position the upper edges of the links **36** and **37** will engage the under surface of a plate **115** to limit the spreading of the wheels **13** and the box D. This plate **115** is secured to the upper edges of the plates **29** and **30** by welding or the like. When in collapsed condition a dust-proof and weather-proof cover of plastic or the like may be placed over the cart and the golf clubs. When the cart is in use this plastic cover may be stored in the container **99**.

The auxiliary socket members E and F can be mounted or removed from the portion **47** of the plate **46** by means of the bolts **64**. The sockets **70** of these auxiliary members are used in the same manner as are the sockets **63** of the block **58**.

It is obvious that various changes and modifications may be made in the details of construction and design of the above specifically described embodiment of this invention without departing from the spirit thereof, such changes and modifications being restricted only by the scope of the following claims.

What we claim is:

1. An improved bagless golf cart comprising supporting wheels, a yoke mounted on said supporting wheels, a handle pivotally mounted on said yoke, a standard pivotally mounted on said yoke, a box mounted on the lower end of said standard for supporting the hand grip portions of golf clubs, a block mounted on the upper end portion of said standard for removably gripping the shafts of said golf clubs adjacent the heads thereof, means for movably connecting said handle to said standard, said standard comprising two telescopic members for permitting adjustment of said block towards and from said box, and means for securing said members in adjusted position.

2. An improved bagless golf cart as claimed in claim 1 characterized by the fact that said handle comprises two telescopic sections to permit lengthening or shortening said handle, and means for securing said sections in adjusted position.

3. An improved bagless golf cart comprising supporting wheels, a handle pivotally supported by said wheels, a standard pivotally supported by said wheels, a box mounted upon the lower end portion of said standard for receiving the hand grip portions of golf clubs, a cushion disposed in said box upon which the ends of the golf clubs are adapted to rest, a block mounted upon the upper end portion of said standard and having recesses for receiving shafts of said golf clubs adjacent the heads thereof, a pair of segmental plates mounted on said standard, one of said plates having an arcuate series of holes, a pair of links pivotally connected to said handle and pivotally connected to said standard, a thumb screw carried by one of said links and adapted to be brought selectively into registry with one of the holes in the said one segmental plate, a stop plate mounted on said segmental plates and disposed in the path of movement of said links to limit the movement thereof in one direction, the rear portions of said segmental plates being spaced apart to receive therebetween said handle when the cart is in fully collapsed condition.

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