Dec. 25, 1951 K. M. LARSEN 2,579,937

FOLDABLE GOLF BAG CARRIER

Filed April 4, 1949 2 SHEETS—SHEET 1

FIG. 1

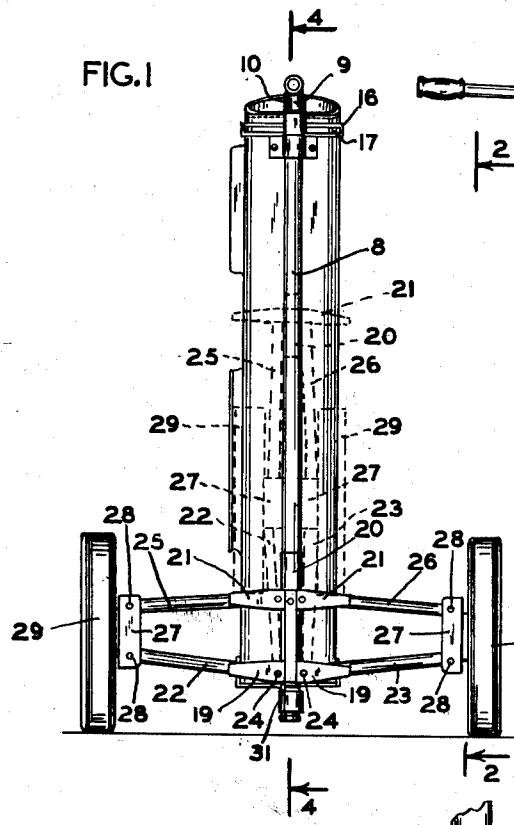


FIG. 2

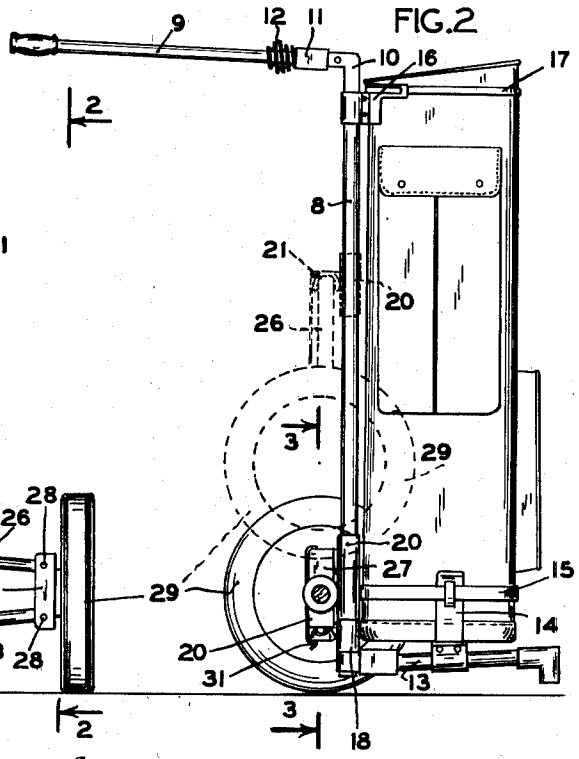
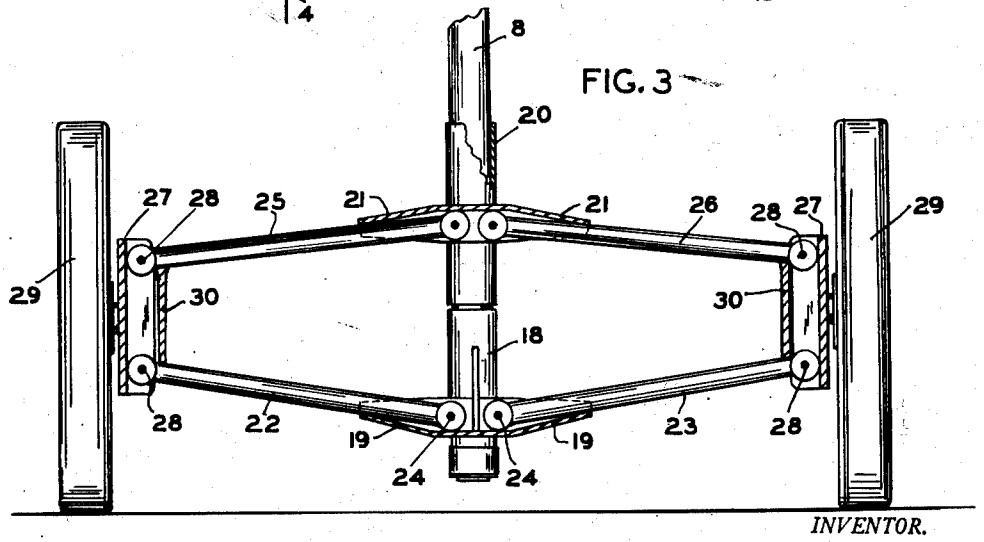


FIG. 3



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FOLDABLE GOLF BAG CARRIER

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FIG.4

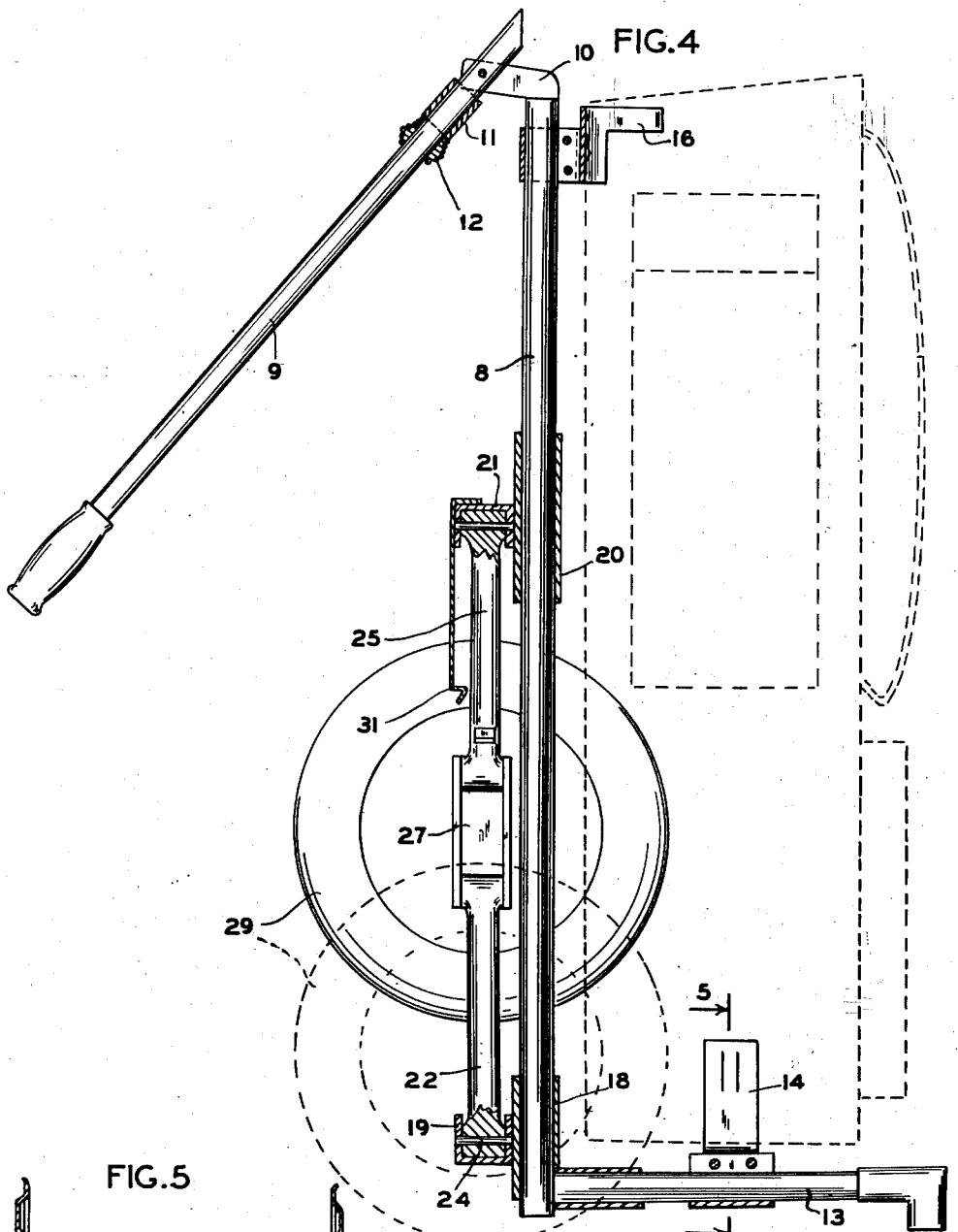
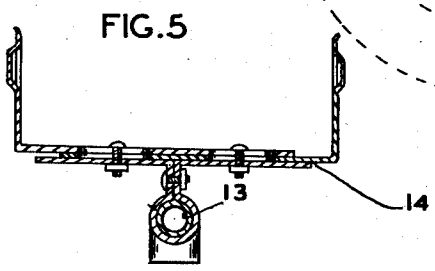


FIG.5



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FOLDABLE GOLF BAG CARRIER

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2 Claims. (Cl. 280—42)

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This invention relates to collapsible golf bag carriers.

It is an object of my invention to provide a novel and improved collapsible golf bag carrier in which the wheels as well as the gripping handle may be collapsed into retracted position to form a compact unit for easy transportation thereof to and from the golf course.

It is another object of my invention to provide a golf bag carrier having an upstanding member with a pair of wheels respectively mounted on the outer portions of two pairs of toggle arms, the inner ends of said toggle arms being mounted on said upstanding member with provision for shifting movement longitudinally thereof to permit positioning said wheels in outwardly extending diametrically opposed operative position as well as permitting the retraction of said wheels inwardly and upwardly into substantial engagement with the upstanding member to lie substantially flush therewith.

It is a further object to provide a golf bag carrier having an elongated upstanding member with two pairs of toggle arms operable in a single plane disposed through said upstanding member, said toggle arms being respectively interconnected at their outer ends by a pair of links pivoted thereto and each having a wheel mounted thereon, said wheels being disposed in substantially parallel relation throughout the operation of said toggle arms to retract or project said wheels.

More specifically, it is an object to provide a golf bag carrier having an elongated upstanding member adapted to have a golf bag attached thereto and provided with a retractable wheel mechanism including two pairs of substantially coplanar toggle arms with the inner ends of the upper arms being shiftably mounted on said member and the outer ends of each pair of arms being pivotally interconnected by a link having a wheel journaled thereon to maintain said wheels in substantially parallel planes during retraction and projection thereof, said toggle mechanism having two pairs of opposed arm-engaging cradles adapted to receive the respective inner portions of said arms when in fully outwardly projected position to permit said arms to be securely locked in said position, certain of said cradles being fixed to said upstanding member to positively lock said toggle wheel-supporting mechanism against rotation when in operative position.

It is still another object to provide a collapsible golf bag carrier having a rearwardly extending stabilizing foot member adapted to cooperate

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with said wheels when in projected operative position to support the carrier unit when the wheels are projected outwardly when said unit is in stationary position.

These and other objects and advantages of my invention will more fully appear from the following description made in connection with the accompanying drawings wherein like reference characters refer to similar parts throughout the several views and in which:

Fig. 1 is a front elevational view of my improved golf bag carrier with the wheels shown in retracted position by dotted lines and having a golf bag mounted thereon;

Fig. 2 is a vertical sectional view taken substantially along the line 2—2 of Fig. 1 showing most of the structure shown in Fig. 1 in side elevation.

Fig. 3 is a fragmentary vertical sectional view taken substantially along the line 3—3 of Fig. 2;

Fig. 4 is a central vertical sectional view taken substantially along the line 4—4 of Fig. 1; and

Fig. 5 is a fragmentary sectional view taken substantially along the line 5—5 of Fig. 4.

As shown in the accompanying drawings, I provide a novel and extremely simple golf bag carrier having an upstanding main frame member such as the tubular element 8 having a handle 9 normally disposed in forwardly extending relation thereto and pivotally connected to a suitable elbow member 10 which is fixed to the upper extremity of upstanding tubular member 8. Any suitable means for retaining the handle member 9 in outstanding position may be provided, such as the shiftable sleeve 11 slidably mounted thereon and having a spring 12 for urging the sleeve into locking position. Said sleeve 11 surrounds a portion of the handle member 9 as well as an outstanding portion of the elbow 10 to lock said handle in forwardly extending position.

A rearwardly extending foot member 13 is mounted at the bottom extremity of the upstanding member 8 to stabilize the structure while in stationary position, as will be brought out hereafter. Suitable attachment means are provided such as the lower attachmnet means comprising a bag bottom receiving cradle 14 fixed to the stabilizing foot 13 and having a pair of spaced upstanding arms thereon with a strap 15 for surrounding the lower portion of the bag and an upper attachment means comprising a curved bracket 16 fixed to the upper portion of the upstanding member 8 and having an attachment strap 17 connected thereto for securing the upper portion of the beg to said upstanding member 8.

A fixed mounting member 18 is secured to the lower portion of tubular member 8 and has a pair of outstanding arm-receiving cradles 19 fixed thereto. A shiftable sleeve 20 is slidably mounted on tubular member 8 above the fixed mounting member 18 and has a pair of outstanding inverted arm-receiving cradles 21. A pair of lower wheel supporting arms 22 and 23 are respectively mounted in the cradles 19 as by the fixed pivot pins 24 through the inner portions of the arms and cradles. A pair of upper wheel supporting arms 25 and 26 are pivotally connected at the inner ends with the inner portions of the respective cradles 21 for shifting movement therewith. A pair of interconnection links 27 are respectively connected to the outer ends of the upper and lower arms at the respective sides of the carrier, as by the four pivot pins 28. The wheels 29 are journaled on suitable shafts mounted on interconnection links 27, and as best shown in Fig. 3, a pair of stop bars 30 are interposed between the outer marginal portions of the arms to prevent jackknifing of the wheels during the projection and retraction thereof.

From the foregoing paragraph describing the wheel supporting mechanism, it will be seen that the pivoted arms 22 and 25, and 23 and 26 form two pairs of toggle arms which are mounted on the upstanding tubular member 8 to permit the projection and retraction of the wheels 29. The two pairs of toggle arms extend outwardly on opposite sides of the upstanding member 8 and lie in a single plane substantially through said upstanding member 8 throughout their entire operation. The double pivotal connections of the links 27 permit the wheels 29 to be maintained substantially parallel to each other and at right angles to the plane through said toggle arms and in substantially parallel relation to the upstanding member 8. The toggle arms hold said links 27 in positively fixed substantially parallel relation to the upstanding member 8 when said wheels are in extreme outwardly and downwardly projected position. A spring clip 31 is fixed at one end to the shiftable cradles 21 and is adapted to engage the fixed cradles 19 to securely lock said wheels in operative position with the lower arms 22 and 23 positively engaged in cradles 19, and the upper arms 25 and 26 positively engaged in cradles 21.

The operation of my improved golf bag carrier is obvious from the drawings. With the carrier folded up into retracted position as shown in the dotted line position in Fig. 1 and the full line position in Fig. 4, an extremely compact easy to carry unit is formed. The wheels 29 lie in adjacent side by side relation to the golf bag and the elongated frame member 8, and the handle 9 folds downwardly to overlie the member 8 thereby producing a compact unit with the golf bag attached thereto, which is very little larger than the golf bag itself. When the carrier is to be put into operation, the sleeve 20 is shifted downwardly to project the toggle arms and wheels outwardly into fully extended operative position.

It will be seen that I have provided an extremely simple and compactly collapsible golf bag carrier having a toggle wheel supporting mechanism with the arms thereof lying in a single plane substantially through the upstanding frame member 8 and with the wheels 29 thereof constantly maintained in parallel relation and disposed at right angles to the plane of said toggle mechanism. By maintaining the parallel relation between the wheels in the extreme retracted position, the wheels lie flat against the side of the bag and the upstanding frame member 8; and when the wheels are in downwardly projected operative position, they are locked in outstanding position laterally of the upstanding frame member 8. The inter-connector links 27 permit said wheels 29 to be maintained at right angles to the plane of said toggle mechanism and substantially parallel to the upstanding frame member 8. It should be noted that the axes of rotation of the wheels are coincident in operative position and in extreme retracted position and also remain substantially coincident during retraction and projection thereof.

It will, of course, be understood that various changes may be made in the form, details, arrangement and proportions of the parts without departing from the scope of my invention.

What I claim is:

1. A collapsible golf bag carrier comprising an elongated upstanding member with a forwardly extending handle mounted on the upper portion thereof, two pairs of toggle arms lying in substantially the same plane disposed substantially through said upstanding member, a link element pivotally interconnecting the outer ends of each pair of said arms, a pair of wheels respectively journalled in outstanding relation on said links, a pair of fixed pivots connected to the lower portion of said upstanding members and disposed at right angles to the plane of said toggle mechanism and connecting the inner ends of the lower arms with said upstanding member, a longitudinally shiftable element mounted on said upstanding member and having the inner ends of the upper arms pivotally connected thereto for shifting movement therewith, said wheels lying in spaced substantially parallel planes disposed at right angles to the plane of operation of said toggle mechanism at least when in extreme projected and retracted positions, a pair of outstanding stabilizing cradle elements fixed to the lower portion of said upstanding member adjacent said fixed pivot pins and extending laterally outwardly therefrom to receive the lower toggle arms when in outwardly projected position and positively prevent rotational shifting movement thereof during operation of the carrier unit, a second pair of outstanding stabilizing cradle elements fixed to said longitudinally shiftable element in inverted relation with the ends of the upper toggle arms pivotally connected to the respective inner portions of said inverted cradles, means for rigidly interconnecting said two pairs of cradle elements when said wheels are in extreme outwardly projected position to securely lock said arms in operative position, and means for attaching a golf bag in substantially parallel relation to said upstanding member.

2. A collapsible golf bag carrier comprising an elongated upstanding member with a forwardly extending handle mounted on the upper portion thereof, two pairs of toggle arms lying in substantially the same plane disposed substantially through said upstanding member, a link element pivotally interconnecting the outer ends of each pair of said arms, a pair of wheels respectively journalled on said links, a pair of fixed pivots connected to the lower portion of said upstanding member and disposed at right angles to the plane of said toggle mechanism and connecting the inner ends of the lower arms with said upstanding member, a longitudinally shiftable element mounted on said upstanding member hav-

ing the inner ends of the upper arms pivotally connected thereto for shifting movement therewith, said wheels lying in spaced substantially parallel planes disposed at right angles to the plane of operation of said toggle mechanism at least when in extreme projected and retracted positions, a pair of laterally extending stabilizing cradle elements fixed to the lower portion of said upstanding member adjacent said fixed pivot pins and extending outwardly therefrom to receive the lower toggle arms when said arms are in extreme outwardly projected position to positively prevent rotational shifting movement thereof relative to said upstanding member during the operation of said carrier unit, latch means for positively locking said lower arms into said cradle

elements, and means for attaching a golf bag in substantially parallel relation to said upstanding member.

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