United States Patent [19]

Leis

[11] **3,747,882**

[45] **July 24, 1973**

[54] **PORTABLE STAND STRUCTURE**

[76] Inventor: **Daniel Leis**, Box 237, Garden Plain, Kans. 67050

[22] Filed: **June 21, 1971**

[21] Appl. No.: **155,143**

[52] **U.S. Cl.** ..... **248/96**, 150/1.5 B, 248/169

[51] **Int. Cl.** **A63b 55/10**

[58] **Field of Search** ..... 248/96, 150, 158, 248/188.6, 169; 150/1.5 B; 211/178 A, 178 R

[56] **References Cited**

UNITED STATES PATENTS

1,606,113	11/1926	Walcott	248/96
2,493,978	1/1950	Kromer	248/169
1,757,471	4/1930	Platt	248/96
1,792,399	2/1931	Schermuly et al.	248/169
1,657,170	1/1928	McLaren	248/96
1,904,731	4/1933	Harris	248/96 X
2,590,154	3/1952	Burns	150/1.5 B X

FOREIGN PATENTS OR APPLICATIONS

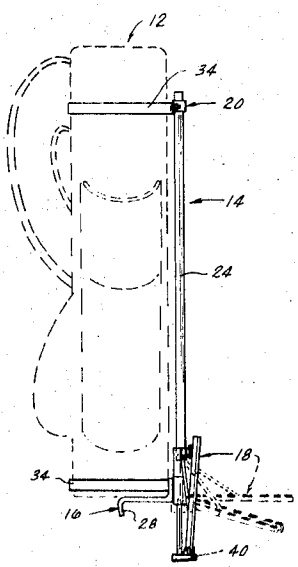
1,515,494	1/1968	France	248/169
107,030	4/1938	Australia	248/96
656,978	1/1963	Canada	248/96

Primary Examiner—Roy D. Frazier
Assistant Examiner—Rodney H. Bonck
Attorney—John H. Widdowson

[57] **ABSTRACT**

A portable stand has a main support member to receive and mount a parcel, and legs pivotally and translatably mounted therewith. The legs are adapted to extend to support the portable stand in an upright position when the stand is placed on a supporting surface and to retract along the main support member when the stand is raised.

4 Claims, 7 Drawing Figures



PATENTED JUL 24 1973

3,747,882

SHEET 1 OF 2

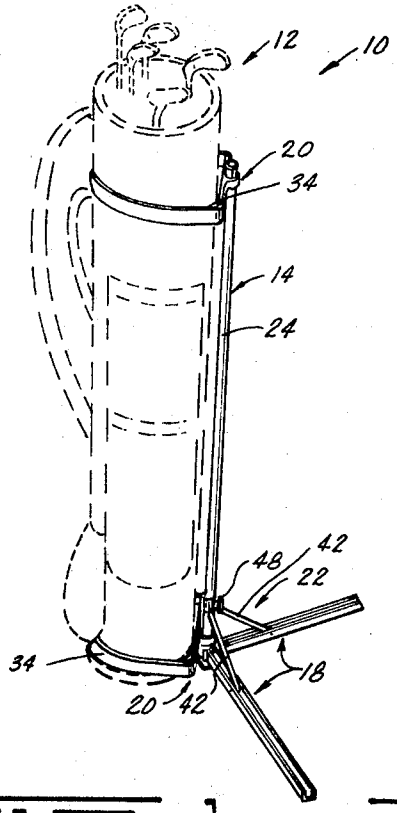


FIG. 1

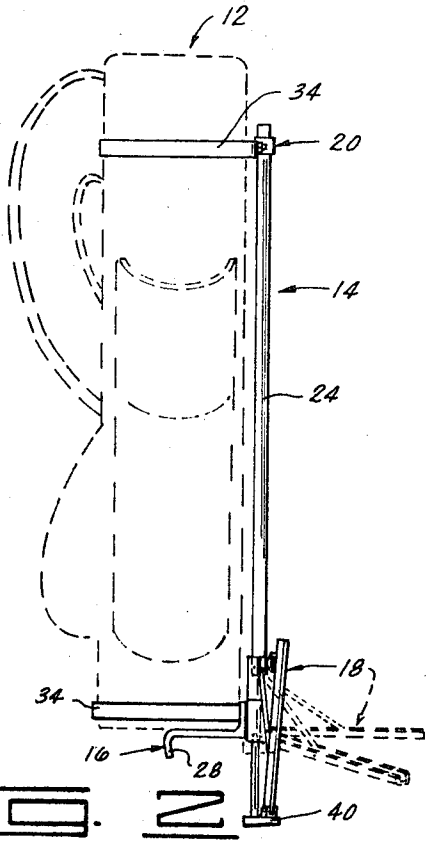


FIG. 2

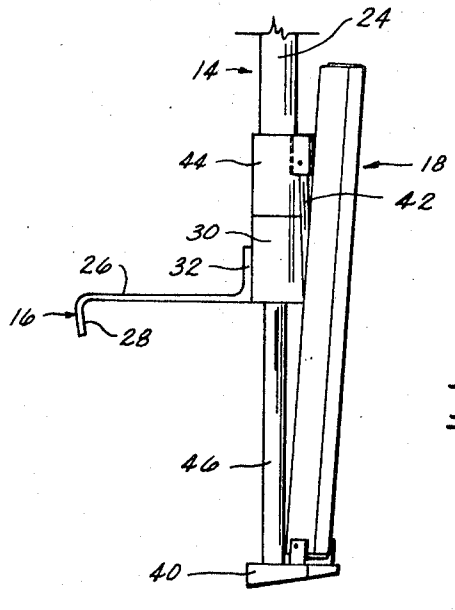


FIG. 3

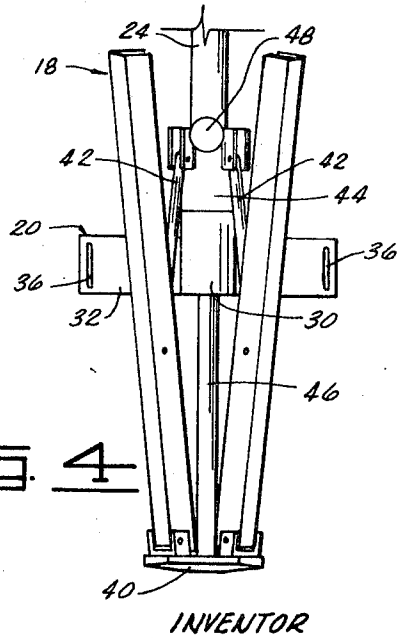


FIG. 4

INVENTOR
DANIEL LEIS

BY John A. Wilkinson
ATTORNEY

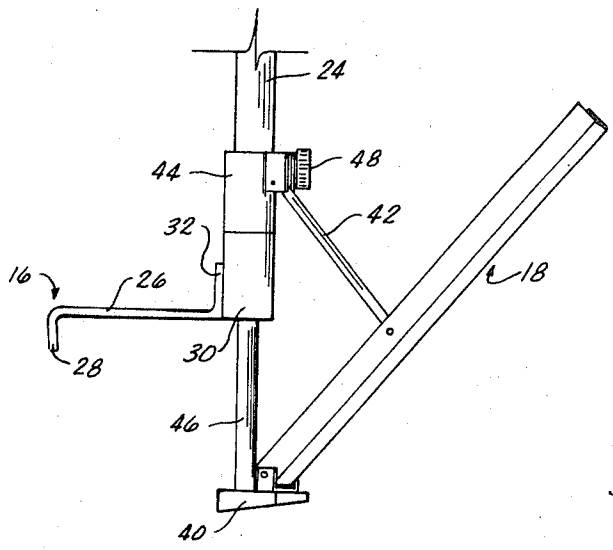


FIG. 5

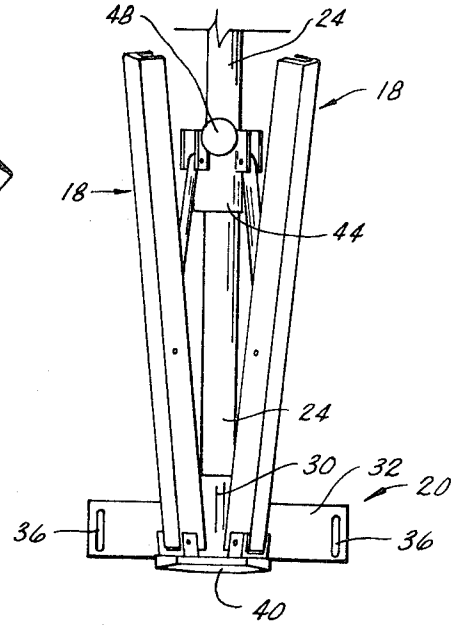


FIG. 7

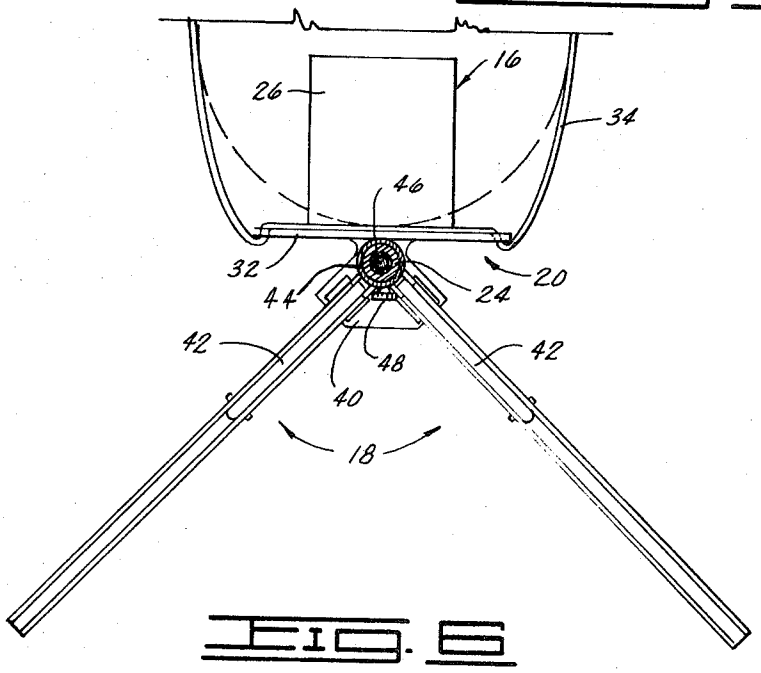


FIG. 6

INVENTOR
DANIEL LEIS

BY John H. Widdowson

ATTORNEY

PORTABLE STAND STRUCTURE

There are numerous types of self-standing devices known in the prior art adapted to support things in an upright position. Basically self-standing devices are constructed somewhat alike with legs which extend from the body of the device as the device is set down on a supporting surface. Some of the self-standing devices have a gear operated mechanism to extend three or more legs as a probe touches the supporting surface while others use linkage systems for the same function. These leg extension devices characteristically have a number of precisely formed parts and are subject to much wear and subsequent failure. The heretofore self-standing devices have been integrally constructed with whatever they are to support; for instance, in golf bags, umbrella supports, folding chairs, etc.

In one preferred specific embodiment of this invention, a portable stand includes a main support member securable to a parcel and having one fixed base member and two extendable and retractable support legs mounted on the bottom portion thereof. The main support member includes an elongated conduit member with flanges extending transversely from it which are fitted with belts that are used to secure a parcel to the portable stand. The fixed base member is secured to the main support member and functions to support the stand as a leg and to support a parcel. The pair of legs are preferably connected to the main support member by a sliding linkage joined at a movable base member so the legs translate and rotate from a retracted position adjacent the main support member to an extended position radially projecting from the base of the main support member. A parcel can be secured to the portable stand and the stand and parcel carried using the stand as a handle to carry the parcel or using an existing handle on the parcel and carrying the portable stand. The legs of the portable stand retract to be generally aligned with the main support member when the stand is raised and extend when the stand is set down on the base. When the portable stand is in the sitting position, it supports the parcel in a nearly upright position by resting on the base member, the extended legs and the movable base member.

One object of this invention is to provide a portable stand overcoming the aforementioned disadvantages of the prior art devices.

Still, one other object of this invention is to provide a portable stand structure attachable to a parcel so the parcel can be supported in an upright position by the stand.

Still, another object of this invention is to provide a portable stand having a main support member attachable to a parcel with a base and fixed leg and having a pair of extendable and retractable legs adapted to extend automatically when the stand and attached parcel are placed on a supporting surface.

Yet, another object of this invention is to provide a portable stand having a pair of extendable and retractable legs used in supporting the portable stand and postionable in a fixed and stored retracted position.

Various other objects, advantages, and features of the invention will become apparent to those skilled in the art from the following discussion, taken in conjunction with the accompanying drawings, in which:

FIG. 1 is a perspective view taken from above of the portable stand in the upright self-standing position with a golf bag secured thereto;

FIG. 2 is a side elevation view of the portable stand and golf bag with the legs shown in a retracted position in solid lines and with the legs shown prespectively in the extended position and in dashed lines;

FIG. 3 is an enlarged side elevation view of the lower portion of the portable stand with the legs in the retracted position;

FIG. 4 is an enlarged leg side elevation view of the lower portion of the portable stand as shown in FIG. 3 with the legs in the retracted position;

FIG. 5 is an enlarged side elevation view of the lower portion of the portable stand with the legs shown in an intermediate or partially extended position;

FIG. 6 is a top view of the portable stand in the upright position with the legs in the extended position and showing the golf bag and attaching belt in dashed lines; and

FIG. 7 is a leg side elevation view of the lower portion of the portable stand with the legs shown in the retracted and stored position.

The following is a discussion and description of preferred specific embodiments of the portable stand structure of this invention, such being made with reference to the drawings, whereupon the same reference numerals are used to indicate the same or similar parts and/or structure. It is to be understood that such discussion and description is not to unduly limit the scope of the invention.

Referring to the drawings in detail and in particular of FIG. 1, the portable stand structure of this invention, indicated generally at **10**, is shown in self-standing upright position with a golf bag **12** secured thereto. The portable stand structure **10** includes a main support assembly **14** with a base **16** and a pair of legs **18** mounted on its lower portion by a linkage assembly **22** and having parcel attaching assemblies **20** on its top and bottom.

The main support assembly **14** is a straight elongated conduit member **24** with the base **16** and an attaching assembly **20** attached to its lower end and another attaching assembly on its upper end adapted to hold a parcel on one side of the conduit. The base **16** has a flat plate **26** with a downwardly curved outer edge **28** and is attached to the conduit **24** by a collar **30**. The base **16** extends a short distance perpendicularly outward from the conduit **24** to extend under the parcel, as it can be seen in FIG. 2, where it extends under the golf bag **12**. The base forms one leg of the support for the portable stand **10**.

The attaching assemblies **20** are compris of a flange **32** attached to and extending from the conduit **24** and a belt **34**. The flange **32** is generally rectangular in shape with slots **36** in the outer ends. The flange **32** on the lower end of the main support member **14** is integral with the collar **30** and is positioned perpendicular to the base plate **26**. The other attaching assembly **20** on the upper end of the main support member **14** has a flange **32** integrally formed with a collar **38** around and secured to the conduit member **24**. The belt **34** is looped through the flange slots **36**, around the parcel and secured to hold the parcel in place.

The belt **34** shown in the drawings is a one-piece, no-buckle type belt now in popular use on golf carts and the like; the belt **34** adhere to itself along the inner side of the flange **32**. However, it is to be understood that any suitable type belt or strap can be used with this invention to hold a parcel in place against the flanges **32**.

Also, the portable stand of this invention is shown with two attaching assemblies **20**; however, it is to be understood that more than two of them can be provided in order to secure various parcels. Practice has shown that two attaching assemblies **20** are sufficient to hold the golf bag **12** in place on the portable stand **10.**

The legs **18** of the portable stand **10** are connected to the main support member **14** by a linkage assembly **22.** The linkage assembly **22** includes a pair of legs **18** pivotally attached to a wedge member **40** translatably mounted with the conduit member **24,** and connecting rods **42** connecting each leg **18** to a movable collar member **44** mounted on the conduit member **24.** The wedge member **40** is secured to a guide rod **46** which extends into the conduit **24** a short distance. The legs **18** are pivotally mounted to the wedge so as to be equally spaced relative to one another and the base plate **26** as can be seen in FIG. **6.** The wedge **40** has a generally triangular planform shape and a cross-sectional wedge shape as can be seen in FIGS. **3, 4, 5** and **7.** When the portable stand is in the sitting position the wedge **40** is on the supporting surface along with the base **16** and the legs **18.** The movable collar **44** is sized to slide easily over the conduit **24,** and it is provided with a set screw **48** to hold it in a fixed position on the conduit **24.** The movable collar **44** is provided with ears to pivotally attach the connecting rods **42.** Each of the legs **18** is attached to a connecting rod in its center portion. The legs **18** are preferably channel shaped as shown in the drawings; however, it is to be noted that other shapes of legs could be used; however, practice has shown the channel shape to be easily attachable to the connecting rods and provides a flat supporting surface on the bottom side thereof.

The linkage apparatus **22** moves the legs **18** from the retracted position to the extended position. FIGS. **1** and **6** show the portable stand **10** with the legs **18** in the fully extended position. FIGS. **2, 3, 4** and **7** show the portable stand **10** with the legs in the fully retracted position. When the legs **18** are fully extended, the movable collar **44** is adjacent to the top side of the other collar **30,** the wedge member **40** is adjacent to the bottom of the other collar **30** and rests on the supporting surface with the legs **18** positioned radially from the wedge member **40** as can be seen in FIG. **2.** When in the extended position, the set screw **48** of the movable collar **44** can be tightened thereby fixing the movable collar **44** which holds the legs **18** in the extended position. When the legs **18** are in the normally retracted position, they are substantially parallel to the conduit member **24** and depending from the movable collar **44** by the connecting rods **42** with the wedge **40** below the collar **30** and positioned by the attached guide rod **46** as can be seen in FIG. **2, 3** and **4** of the drawings. When in the retracted position, the legs can be easily put in the storage position by raising the movable collar **44,** thereby lifting the legs **18,** wedge **40** and guide rod **46** so the wedge **40** is in contact with the bottom of the collar **30** and conduit member **24** as shown in FIG. **7.** In order to hold the legs **18** in the storage position, the set screw **48** can be tightened securing the movable collar **44** to the conduit **24.**

An advantage of the extendable and retractable legs is that when the legs **18** are in the retracted position and depending from the movable collar **44** as shown in FIGS. **3** and **4,** the portable stand **10** can be set down on the wedge **40** forcing it upward and moving the legs outward to the extended position. As shown in the intermediate position of FIG. **5** the legs swing upward and outward in moving from the retracted position to the extended position. As the legs **18** are moved to the extended position, the wedge **40,** base **16** and legs simultaneously contact the supporting surface and are in position to support the stand **10** and any attached parcel in an upright position. The relative position of the base **16,** wedge **40** and legs **18** in the extended or sitting position can be seen in FIGS. **2.** When in the extended or sitting position, practice has shown the equal spacing of the legs **18** relative to the base **16** as shown in FIG. **6** provides resistance to tipping. When the portable stand is placed on a supporting surface the outer portions of the legs **18,** the wedge member **40** and the downward turned edge **28** of the base are in contact with the supporting surface. Once the portable stand is lifted from the supporting surface, the legs **18** are moved to the retracted position, as shown in FIG. **4,** by their weight and the weight of the rod **46** and wedge **40.** In moving from the extended position to the retracted position the legs **18** move inward and downward. The portable stand **10** and parcel can be carried with the legs **18** in this retracted position so it can be set down at any time in the upright position. In practice this advantage of portability and self-standing has been found to be extremely advantageous when the parcel is a golf bag, as is shown in the drawings, because they are normally carried a short distance, set down, left for a short time, then picked up and carried again. Where a golf bag **12** is shown as the parcel attached to the portable stand, it is to be understood that the stand can be attached to and used with any parcel where self-standing is desired.

The retracted position shown in FIGS. **2, 3** and **4** of the legs **18** is to be noted as being significantly different from the storage position shown in FIG. **7.** The retracted position has the legs **18** and wedge **40** depend from the movable collar **44** by the connecting rods **42.** From the retracted position the legs **18** are moved outward and upward on upward movement of the wedge **40.** In the storage position the legs **18** and wedge **40** are in the same relative position as the retracted position, but they are displaced toward the opposite end of the conduit **24** so the wedge **40** is against the end of the conduit. In this retracted position the legs **18** and wedge **40** cannot be moved once the set screw **48** in the movable collar **44** is tightened securing the movable collar **44** in place. The storage position of the legs is preferably used when the portable stand **10** is stored for a time when its self-standing capability is not needed.

In the manufacture of the portable stand structure **10** of this invention, it is obvious the structural members thereof can be easily constructed from standard structural forms. Also, it is obvious the structural members of the portable stand can be constructed of properly sized to be sufficiently strong in order to support a desired parcel.

In the use and operation of the portable stand structure **10** of this invention, it is seen that same provides a self-standing structure due to the legs **18** and the base **16** that can be secured to a parcel to hold it in an upright position. The portable stand is economical to manufacture, simple to use, can be easily stored and can be attached to a variety of different parcels to hold same in an upright standing position.

As will be apparent from the foregoing description of the applicant's portable stand structure, relatively inexpensive and simple means have been provided to support a parcel in an upright position. The portable stand structure is self-standing and operable under its own weight and will stand by itself on a supporting surface. The portable stand structure is economical to manufacture, simple to use, and can be easily secured to a parcel for use.

While the invention has been described in conjunction with preferred specific embodiments thereof, it will be understood that this description is intended to illustrate and not to limit the scope of the invention, which is defined by the following claims.

I claim:

1. A portable stand comprising:

a. a main support member being an elongated conduit member having means to secure thereto an auxiliary parcel and having a base member extending from the lower end portion thereof,

b. at least two legs pivotally and translatably mounted to move parallel to said main support member by a linkage means mounted on said lower end portion of said main support member, said linkage means adapted to position said legs in a generally horizontal position in contact with a supporting surface when said stand is placed thereon and to position said legs along said elongated main support member and adjacent thereto,

c. said linkage means has a movable base member translatably mounted with said conduit member and pivotally mounted with the inner ends of said legs, a collar member slidably mounted with said conduit member, and a pair of connecting rod members pivotally mounted with said collar member and the center portions of said leg members,

d. said means to secure an auxiliary parcel has a belt member to encircle the parcel and means to attach said belt member to said conduit member, and

e. said leg members are positioned about said main member so as to be substantially equally spaced relatively to said base member.

2. The portable stand as described in claim **1**, wherein:

a. said movable base member is secured to an elongated base guide member slidably mounted in said conduit member to guide said movable base member in longitudinal movement relative said conduit member,

b. said movable base member has a plurality of lugs extending therefrom to mount said inner ends of said pair of legs for pivotal rotation to align with said base guide member,

c. said collar member has a plurality of lugs extending therefrom to mount said connecting rod members for pivotal rotation and alignment with said conduit member, and

d. said base member is a plate like support member secured to the lower end of said conduit member adapted to in conjunction with said legs support said stand in an upright position and to provide supporting surface for a parcel.

3. The portable stand as described in claim **2**, wherein:

a. said collar member has a set screw extending therethrough to secure said collar member to said conduit member in a fixed position, and

b. said means to attach said belt to said conduit member is a flanged collar secured to said conduit member extending transversely therefrom and having apertures in the end portions of same to pass said belt.

4. The portable stand as described in claim **3**, wherein:

a. said portable stand has a plurality of said flanged collars and said belts to attach a parcel to said conduit member.

* * * * *

UNITED STATES PATENT OFFICE

CERTIFICATE OF CORRECTION

Patent No. 3,747,882 Dated July 24, 1973

Inventor(s) Daniel Leis

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

Column 2, line 3, "prespectively" should read -- perspectively --; line 50, "compris" should read -- comprised --. Column 5, line 29, after "thereto" insert -- by the force of gravity when said stand is not in contact with a supporting surface --.

Signed and sealed this 8th day of January 1974

(SEAL)
Attest:

EDWARD M.FLETCHER,JR.
Attesting Officer

RENE D. TEGTMEYER
Acting Commissioner of Patents

FORM PO-1050 (10-69)

USCOMM-DC 60376-P69
★ U.S. GOVERNMENT PRINTING OFFICE : 1969 O—366-334.