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Tainsh

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[54] **COLLAPSIBLE BOW AND ARROW STAND**

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[52] **U.S. Cl.** ..... **248/165;** 211/60 R

[51] **Int. Cl.²** **F16M 11/32;** A45F 3/44

[58] **Field of Search** 211/85, 178, 2, 60, 13; 5/110, 111; 248/96, 95, 165, 168, 169, 170, 150, 156, 151, 133, 135, 48, 6, 7, 188, 166, 188.6, 122, 121, 124, 125

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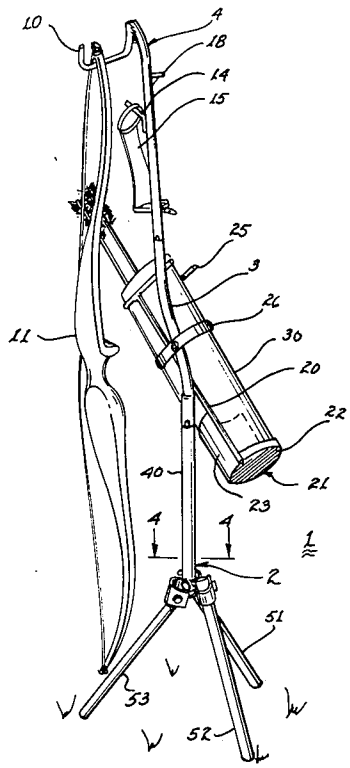
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[57] **ABSTRACT**

A stand of segregable and collapsible components for supporting archery implements in the field is disclosed.

6 Claims, 4 Drawing Figures



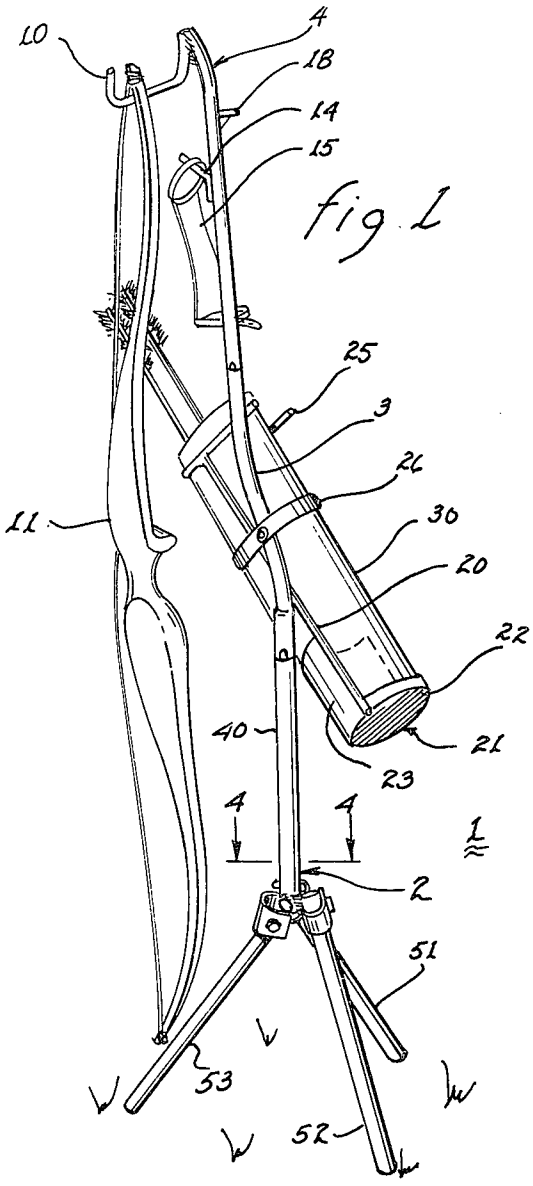


fig. 1

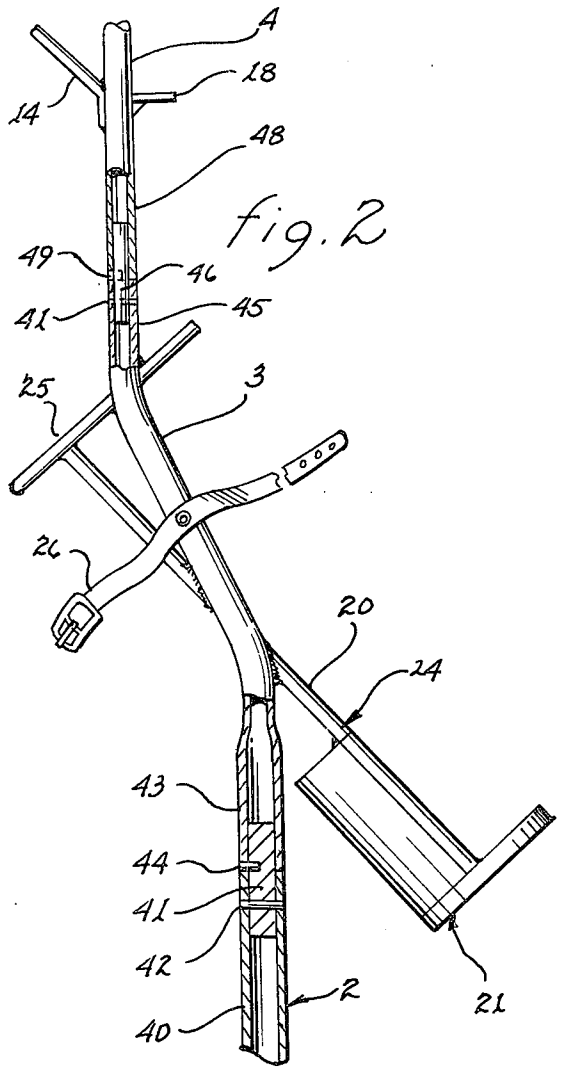


fig. 2

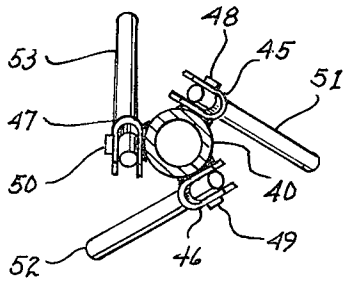


fig. 4

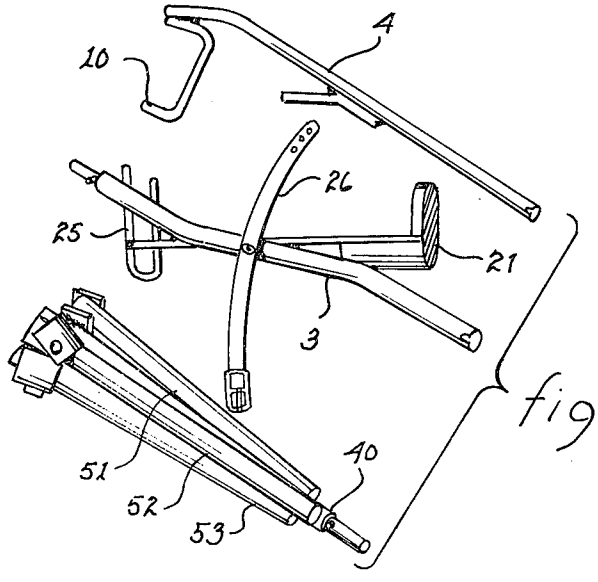


fig. 3

COLLAPSIBLE BOW AND ARROW STAND

The present invention relates to sporting equipment and, more particularly, to sporting equipment useable in the field by an archer.

The sport of archery has become very popular in recent years which has resulted in the establishment of tournaments at various levels of competence. During any such tournament, the archer must, like any sport, concentrate upon and direct his attention to the matter of accurately aiming and releasing the arrow. Any superficially imposed detractions from this purpose negatively affect the archer's power of concentration.

The archer, whether participating in a sporting activity or pursuing a competitive endeavor, usually does so from a fully erect position. Since most such activities take place in an open area where there are no trees or bushes against which the bow and arrows may be leaned, the archer must erect an impromptu stand or place his equipment upon the ground when not in use. An impromptu stand is invariably only tolerably sufficient and may exasperate or otherwise completely destroy the archer's power of concentration. If the bow, arrows and other equipment must be laid on the ground, the archer is seriously inconvenienced and the items might easily be stepped upon by the archer himself or by passersby. This inconvenience and contingent damage also deleteriously affects the archer's concentration upon the task at hand.

It is therefore a primary object of the present invention to provide a stand specifically intended to support an archer's equipment in the field.

Another object of the present invention is to provide a collapsible and transportable stand for archers.

Still another object of the present invention is to provide a stand for suspending an archer's bow above ground and for supporting a quiver at a readily accessible elevation.

A further object of the present invention is to provide a stand for supporting an archer's bow, quiver, wrist shield and spotting scope without requiring the archer to bend over when retrieving these items.

A still further object of the present invention is to provide an archer's stand which can be broken down into three components.

A yet further object of the present invention is to provide an archer's stand which can be broken down into an easily transportable compact bundle.

These and other objects of the present invention will become apparent to those skilled in the art as the description thereof proceeds. The present invention may be described with greater specificity and clarity with reference to the following drawings, in which:

FIG. 1 illustrates the present invention is use.

FIG. 2 illustrates a partial cut-away view of the interconnected sections of the present invention.

FIG. 3 illustrates an exploded view of the components of the present invention when they are broken down.

FIG. 4 illustrates a top view of the tripod taken along lines 4—4, as shown in FIG. 1.

As shown in FIG. 1, the stand 1 of the present invention is formed of three components, tripod 2, central member 3 and top member 4. A laterally extending flat bottomed hook 10 is attached to the upper extremity of top member 4. The hook supports a bow 11 by being inserted at the junction between the bow string and the bow. Hook 10 may be expanded in width to support a plurality of bows. The angular orientation of hook 10 with respect to stand 1 is set such that the lower extremities of any suspended bows 11 lie between a pair of legs of tripod 2. Thereby, there is little likelihood of marring or scarring the bows when they are hung or removed. A peg 14 extends from top member 4 at a point below hook 10 and is angularly displaced therefrom. Peg 14 may be used to support miscellaneous items, such as a wrist shield 15. In addition, a mount 18 extends from top member 4 for supporting a spotting telescope.

A rod 20 is welded, or otherwise attached to central member 3 in non-alignment therewith. A receiver 21, which includes a base 22 and a shield 23, is secured to the lower end of rod 20. A U-shaped member 25, having one arm attached to rod 20, depends from rod 20. The combination of rod 20, receiver 21 and U-shaped member 25 defines a support 24 for a quiver 30. The height and angular orientation of rod 20, which dictates the angular orientation of quiver 30, is selected to permit an archer to insert and withdraw his arrows 35 with ease. A strap and buckle 26 is riveted or otherwise attached to central member 3 in proximity to the point of engagement between rod 20 and the central member. Strap 26 is wrapped and buckled about quiver 30 to retain the quiver within support 24.

Central member 3 is specifically configured to have a dual dogleg shape. By using such a shape, the laterally suspended bows 11 are adequately counterbalanced by the quiver 30 and its supporting structure. When no bows are suspended, the stand 1 is still stable since the force of gravity acting upon the quiver and other laterally extending elements is directed downwardly within a vertically envelope defined by the extremities of the legs of the tripod 2. Thereby, there is little, if any, tendency for stand 1 to tip over, whether or not any bows are suspended from hook 10.

Tripod 2 is formed by a stanchion 40 and three pivotable legs 51, 52 and 53 depending therefrom. It, like all tripods, provides a stable base for stand 1 on smooth or rough terrain.

Referring to FIG. 2, the means for interconnecting the three components of stand 1 will be described in detail. An upwardly extending stud 46 is secured within the upper cylindrical section 45 of central member 3 by a rivet 47. Stud 46 engages and mates with a lower cylindrical section 48 of upper member 4. A lock screw 49 or similar mechanisms interlocks stud 46 with section 48. The upwardly extending stanchion 40 of tripod 2 may be formed of a pipe, as shown, and an upwardly extending stud 41 is secured within the upper end thereof by a rivet 42. Stud 41 mates with a lower cylindrical section 43 of central member 3 and is secured thereto by a lock screw 44 or similar mechanisms.

The tripod 2 will be described in further detail with joint reference to FIGS. 1 and 4. Three U-shaped members 45, 46 and 47 are equiangularly displaced from one another and welded to the lower end of stanchion 40. One of legs 51, 52 and 53 is pivotally secured within each of the U-shaped members by one of bolts 48, 49 or 50. When the legs are in the position shown in FIG. 1, further upward pivotal movement of the legs is inhibited by the lower edge of the base of the respective U-shaped members. As the weight of the stand and the apparatus attached thereto exerts a continuing force, via stanchion 40, upon the U-shaped members at their point of contact with the legs, the legs are firmly and

continuingly maintained in the position shown.

The collapsibility of the present invention will be described with particular reference to FIG. 3. To collapse stand 1, all equipment depending therefrom or supported thereby must first be removed. Thereafter, the upper section 4 is severed from central section 3 by releasing lock screw 49 and extracting stud 46 from within section 48. Similarly, tripod 2 is severed from central member 3 by releasing lock screw 44 and withdrawing stud 41 from within section 43. The legs 51, 52 and 53 of tripod 2 are pivoted upwardly until they are in general alignment with stanchion 40 and assume the position shown in FIG. 3.

For storage or transportation purposes, the collapsed tripod 2, central member 3 and top member 4 are placed adjacent one another and secured together by strap 26. Although the buckle on strap 26 serves admirably to compensate for the girth of quiver 4 as well as the girth of the collapsed and bundled stand 1, other wrapping means may be used, such as rubberized cord, ties, or straps having pressure sensitive means disposed at their ends.

The minimum length of the bundled stand is essentially limited by the longest one of the top member 4, central member 3, or stanchion 40. Thus, with a little forethought in manufacturing the present invention, the length of these items can be made approximately equal so that the maximum height of stand 1 is obtained while minimizing the overall length of the bundle.

From the above description it will become evident to archers and others skilled in the art that the present invention can serve them well in the field, yet, the stand will present little, if any, problems during transportation to and from the field. Further, the stand may be made of lightweight materials to ease the burden of carrying it.

While the principles of the invention have now been made clear in an illustrative embodiment, there will be immediately obvious to those skilled in the art many modifications of structure, arrangement, proportions, elements, and components, used in the practice of the invention which are particularly adapted for specific environments and operating requirements without departing from those principles.

I claim:

1. A collapsible stand formed of three detachable components for supporting an archer's equipment, said stand comprising in combination:
   a. a detachable upper member, said upper member including a laterally extending hook for supporting at least one bow;
   b. a detachable central member, said central member including support means for supporting a quiver, said support means comprising:
      1. a rod attached to said central member in non-alignment therewith;
      2. a receiver secured to the lower end of said rod for receiving the bottom of the quiver; and
      3. a U-shaped bracket extending from the upper end of said rod for supporting the upper end of said quiver;
   c. stud means disposed intermediate said upper member and said central member for selectively attaching and detaching said upper member and said central member;
   d. a detachable tripod for supporting said central member and said upper member, said tripod including:
      1. a stanchion;
      2. three legs; and
      3. bracket means for pivotally attaching said legs to one end of said stanchion, said bracket means accommodating pivotal movement of said legs from a juxtaposed position with said stanchion to a locked position;
   e. further stud means disposed intermediate said central member and said tripod for selectively attaching and detaching said central member and said tripod, and
   f. strap means for securing said upper member, said central member and said tripod to one another to form a bundle; whereby, said stand is erected by attaching respective ones of said upper member, said central member and said tripod and privotally positioning said legs to a depending position from said stanchion and said stand is collapsed for storage and transportation by detaching said upper member, said central member and said tripod from one another, pivotally positioning said legs to a juxtaposed position with said stanchion and bundling said upper member, said central member and said tripod together with said strap means.

2. The stand as set forth in claim 1 wherein said strap is affixed to said central member in proximity to the junction between said central member and said rod, whereby said strap also serves as a retainer to maintain said quiver within said support means.

3. The stand as set forth in claim 2 wherein said bracket means comprises individual bracket means for each said leg, said individual bracket means including:
   a. a U-shaped bracket having a pair of arms, one of said arms being welded to the lower end of said stanchion; and
   b. bolt means extending through at least one of said arms for retaining one end of the respective one of said legs intermediate said pair of arms.

4. The stand as set forth in claim 3 wherein said individual bracket means are equiangularly displaced about the lower end of said stanchion.

5. The stand as set forth in claim 1 including a peg extending from said upper member for supporting a wrist guard and a mount extending from said upper member for supporting a spotting telescope.

6. The stand as set forth in claim 1 wherein said central member is formed in a dual dogleg shape to maintain the center of gravity of said stand vertically aligned within the perimeter of said tripod regardless of whether all or part of the archer's equipment is supported by said stand.

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