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J. A. PEARSON
ARCHERY BOW STRINGER
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3,253,587

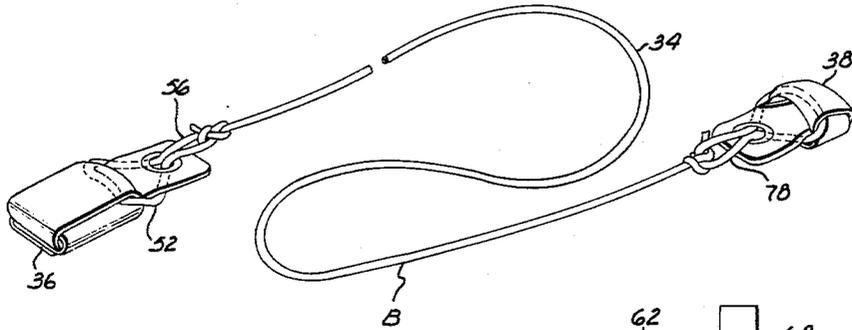


FIG. 1

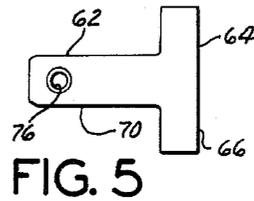


FIG. 5

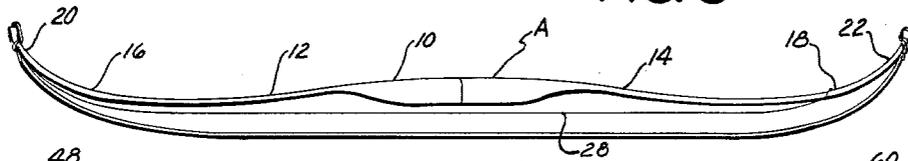


FIG. 2

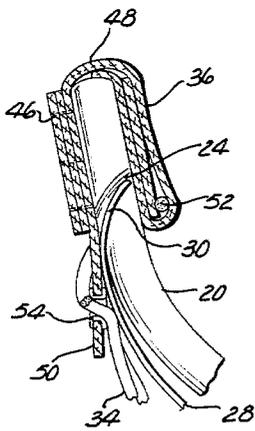


FIG. 3

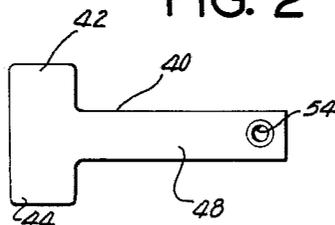


FIG. 6

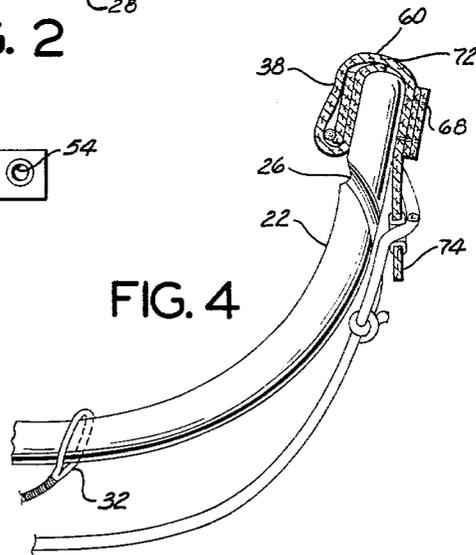


FIG. 4

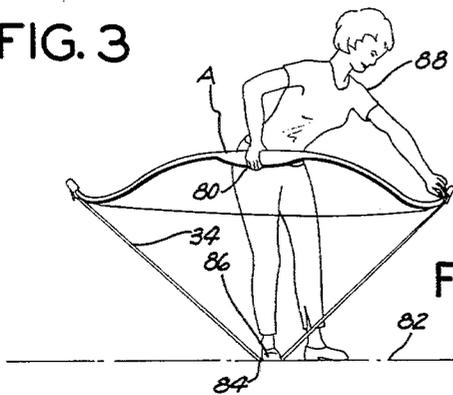


FIG. 7

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ARCHERY BOW STRINGER

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Substituted for abandoned application Ser. No. 179,060,
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366,936

4 Claims. (Cl. 124—23)

This application is a substitute for the parent case Serial No. 179,060 filed March 12, 1962 which is now abandoned.

The present invention relates generally to the field of sports, and more particularly to a device for stringing a bow used in archery.

During the past few years the sport of archery has increased tremendously in popularity. The bows used in archery are relatively stiff and require a strength to deform them to positions where they may be strung that is far beyond that of the average woman. Consequently, a woman interested in archery is dependent upon others to string a bow that she will use, or resort to the use of a bulky, clumsy device to string the bow that is heavy and inconvenient to carry.

Also in recent years the bow and arrow have enjoyed a resurgence of popularity as a means for hunting. The bow used for such purposes is usually extremely stiff and requires a very considerable manual effort for even a man to string. A bow is not carried in the strung condition, for it is considered a lethal weapon and can only be placed in a condition for use after arrival of the user at the target site or in a locality in which hunting will be done.

A primary object in devising the present invention is to provide a simple, bow stringer that is light in weight and can be folded into such a compact configuration when not in use as to permit it to be carried in the pocket by a user, ready for use in stringing a bow easily and quickly by a person having but limited strength, such as a woman.

Another object of the invention is to provide a bow stringer that eliminates the deficiencies of such devices available heretofore, and to also provide a bow stringer that can be fabricated from standard, commercially available materials without the use of elaborate plant facilities, whereby it can be retailed at a sufficiently low price as to encourage the widespread use thereof among archery enthusiasts.

These and other objects and advantages of the present invention will become apparent from the following description of a preferred form thereof, and from the accompanying drawing illustrating that form, in which:

FIGURE 1 is a perspective view of the invention;

FIGURE 2 is a side elevational view of a bow showing the invention removable engaging the extremities of the tips, before the bow is deformed to permit a second looped end of a string to be placed in an engaging position with a second tip thereof;

FIGURE 3 is a combined side elevational and vertical cross-sectional view of a first tip of the invention showing the manner in which a first looped end of a string is removably held in a groove formed therein by a first cup forming a part of the invention;

FIGURE 4 is a combined side elevational and vertical cross-sectional view of a second tip showing the manner by which the same is engaged by a second cup that forms a part of the bow stringer which permits a second looped end of a string to be removably engaged by a downwardly tapered groove that is formed in the second tip;

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FIGURE 5 is a top plan view of a blank used in forming the second cup embodied in the bow stringer;

FIGURE 6 is a top plan view of a blank used in forming the first cup embodied in the invention; and

FIGURE 7 is a side elevational view of the bow stringer shown being used by a woman to string a bow.

With continued reference to the drawings for the general arrangement of the invention, a typical archery bow is shown in FIGURE 2 that is normally formed of laminated wood, which when not deformed, tends to occupy the position shown therein. However, when the bow, identified generally by the letter A is used, it is deformed to the configuration shown in FIGURE 7.

The present day bow A includes a central portion 10 that is generally referred to as a "riser." The riser 10 is relatively thick and has two identical limbs 12 and 14 which are of lesser thickness and extend outwardly from the ends thereof. The limbs will hereinafter be referred to as first limb 12 and second limb 14, although they are identical structurally.

The outer extremity of first limb 12 and second limb 14 develop into recurves that are identified in FIGURE 2 as first recurve 16 and second recurve 18. Recurves 16 and 18 develop into first and second tips 20 and 22 respectively. The detailed structure of the first tip 20 is shown in FIGURE 3 and the same detailed structure of the second tip 22 is shown in FIGURE 4. The first tip 20, as may be seen in FIGURE 3, has a circumferentially extending first groove 24 formed therein that tapers downwardly and outwardly relative to the riser 10. Second tip 22 also has a circumferentially extending second groove 26 formed therein that likewise tapers downwardly and outwardly relative to riser 10.

A string or cord 28 is provided that has a first loop 30 formed on one end thereof which is adapted to engage the first groove 24, as shown in FIGURE 3. String 28 also has a second loop 32 formed on the other end thereof as illustrated in FIGURE 4. As will be seen in FIGURE 2, string 28 is shorter than the longitudinal distance between the first and second tips 20 and 22 when the bow A is in the non-deformed position. However, when the bow A is deformed to a shooting position, both the first and second loops 30 and 32 engage the grooves 24 and 26 respectively, and hold the bow in the deformed position as shown in this figure.

The bow stringer B, which is the subject of the present application, is shown in FIGURE 1 and includes a heavy cord 34 that has a first cup 36 attached to one end thereof and a second cup 38 to the opposite end. Cups 36 and 38 are preferably formed from a pliable sheet material such as leather or the like, but if desired, can also be molded from a suitable tough plastic material.

The first cup 36, as illustrated in FIGURE 6, is formed from a T-shaped sheet of leather referred to generally by the numeral 40. Two projecting portions 42 and 44 of sheet 40 are overlapped (FIGURE 3) to define a ring, and these overlapping portions are rigidly connected by stitching 46. The elongate portion 48 of the sheet 40 is doubled over, also as shown in FIGURE 3, and extends downwardly within the confines of the band formed by the projecting portions 42 and 44.

Stitching 46 extends through the elongate portion 48 to hold a part thereof in such a position that it cooperates with the projecting portions 42 and 44 to define the first cup 36, as shown in FIGURES 1 and 3. The length of the elongate portion 48 as well as the width of the projecting portions 42 and 44 is so selected that a cup 36 is provided which has sufficient interior depth as to extend downwardly over the groove 24 and firmly hold the first loop 30 of the string 28 in position in the first groove 24.

After the first cup 36 has been formed as above described, a part of the elongate portion 48 will extend downwardly as a tab 50 (FIGURE 3). A first end portion of cord 34 is doubled over to define a first eye 52 that engages the cup 36 and extends downwardly over the exterior of the tab 50 and then through an opening 54 therein to the under side thereof. The eye 52 is partially defined by a binding 56 that holds the free end portion of the cord defining the eye adjacent to a second portion of the cord, as may be seen in FIGURE 1.

A second cup 60 is provided, as shown in FIGURES 4 and 5, and is preferably formed from a T-shaped sheet of material such as leather, or the like, that is identified generally by the numeral 62. Sheet 62 has two projecting portions 64 and 66 that are formed into a band and partially overlap one another. The overlapped sections of the sheet portions 64 and 66 are rigidly affixed to one another by stitching 68, or other conventional means. The elongate portion 70 of the sheet 62 is doubled over on the portions defining the band above described and a part thereof is also held in fixed relationship with the band by the stitching 68 therethrough. If desired, a rivet could be substituted for the stitching 68. The rivet would serve the same purpose as the stitching. A part 72 of the elongate portion 70 cooperates with the band to define the second cup 38, best seen in FIGURE 4.

A part of the elongate portion 70 extends downwardly from the cup 38 to define a second tab 74 in which an opening 76 is formed. The cord 34 has a second eye 78 formed therein that engages the second cup 39 (FIGURE 1) and then extends downwardly through the opening 76, as can best be seen in FIGURES 4 and 5. Cup 38 is of such size as to snugly engage the second tip 22, but is not of such depth that it extends downwardly over the second groove 26 formed therein.

When it is desired to use the invention in stringing the bow A as shown in FIGURE 7, the riser 10 is grasped by the user's hand 80. The first and second cups 36 and 38 are removably mounted on the first and second tips 20 and 22 respectively in the positions best seen in FIGURES 3, 4 and 7. Due to the length thereof, the cord 34 depends downwardly from the bow A when it is held as shown in FIGURE 7. The bow A is initially so disposed relative to the ground surface 82 that the user may place his foot 86 on a centrally disposed portion 84 of the cord 34.

When the user 88 is holding the bow A in his hand 80 and holding the cord 34 in contact with the ground surface 82 by his foot 86, the bow is manually moved upwardly relative to the ground surface, preferably by a slow upward movement. Upward movement of the bow A results in deformation of the bow as shown in FIGURE 7, with the first and second cups 36 and 38 tending to move closer to one another as do the first and second tips 20 and 22.

When the first and second tips 20 and 22 have moved longitudinally toward one another to the extent that the second loop 32 can be caused to engage the second groove 26, this action is taken. It will be particularly noted in FIGURE 4 that due to the length of the tab 74, the eye 78 of the cord 34 is disposed away from the second tip 22 and does not interfere with placement of the second loop 32 in the second groove 26. After the second loop 32 has been placed in the second groove 26, upward movement on the bow A is relaxed, and the bow is in a strung condition.

To unstring the bow, the invention is used as shown in FIGURE 7, with the first and second tips 20 and 22 being moved longitudinally towards one another to the extent that the second loop 32 can be disengaged from the second groove 26. Of course, during use of the bow for shooting, the first and second cups 36 and 38 are removed

from the first and second tips 20 and 22 respectively, with the bow stringer being carried in the user's pocket 88 or folded to be carried in another compact configuration by the user.

While in describing the invention the first and second cups 36 and 38 have been illustrated as being formed from T-shaped sheets 40 and 62 respectively of a material such as leather, it will be apparent that should it be desired, these cups can be molded from an appropriate material such as a polymerized resin, or the like, and used in the same manner as illustrated in FIGURES 3 and 4.

While the invention herein shown and described is fully capable of achieving the objects and providing the advantages hereinbefore mentioned, it is to be understood that it is merely illustrative of the presently preferred embodiment of the invention, and that I do not mean to be limited to the details of construction herein shown other than as defined in the appended claims.

I claim:

1. In combination a bow including a riser having limbs, recurves and tips extending in opposite directions therefrom, said tips having first and second circumferentially extending grooves formed therein that taper towards one another, a string having first and second loops on the ends thereof engageable in said grooves, and a compact device capable of being carried in a user's pocket to string said bow, said device including:

(a) a cord of substantially greater length than said string with said first and second loops;

(b) a first cup affixed to a first end of said cord, said first cup being of sufficient length as to slidably engage a first of said tips and extend downwardly over said first loop after it has been disposed in said groove in said first tip; and

(c) a second cup affixed to a second end of said cord, said second cup being capable of removably engaging said second tip, which second cup is of such length as to at no time overlie said groove in said second tip, with said bow being adapted to be strung when an intermediately positioned portion of said cord is held in a fixed position by a user with said bow being moved away from said position by a user to deform said bow, which second loop is slid into said second groove when said bow is so deformed, with said cups being removable from said bow after said first and second loops are both engaging said grooves due to said cord being longer than said string.

2. A device as defined in claim 1 wherein said cups are formed from a pliable sheet material that is capable of slidably and snugly engaging said tips.

3. A device as defined in claim 1 which further includes first and second tabs that extend downwardly from said first and second cups respectively, with said first tab being of such length that it abuts against the rear surface of said first tip to prevent disengagement of said first loop from said first groove during the stringing of said bow, with the ends of said cord being affixed to said tabs and extending longitudinally along at least portions thereof.

4. A device as defined in claim 1 which further includes first and second tabs that extend downwardly from said first and second cups respectively, each of which tabs have an opening formed therein, with the end portions of said cord being doubled over to define eyes that extend circumferentially around said cups and tips, with portions of said eyes extending through said openings for at least parts of said cord defining the same to lie longitudinally relative to said tabs when said bow is being deformed to place said second loop in said second groove.

No references cited.

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