United States Patent [19]

Stanislawski et al.

[11] **3,853,111**

[45] **Dec. 10, 1974**

[54] **ADJUSTABLE BOWSTRING RELEASE FOR ARCHERY BOW**

[76] Inventors: **Melvern B. Stanislawski,** 7135 S.E. Cora St., Portland, Oreg. 97206; **Daniel F. McKinney,** 1427 Coquette St., Medford, Oreg. 97501

[22] Filed: **Feb. 25, 1974**

[21] Appl. No.: **445,589**

[52] **U.S. Cl.** **124/35**

[51] **Int. Cl.**..... **F41c 19/00,** F41b 5/00

[58] **Field of Search**.... 124/35 A, 35 R, 30 R, 30 A; 273/84

[56] **References Cited**

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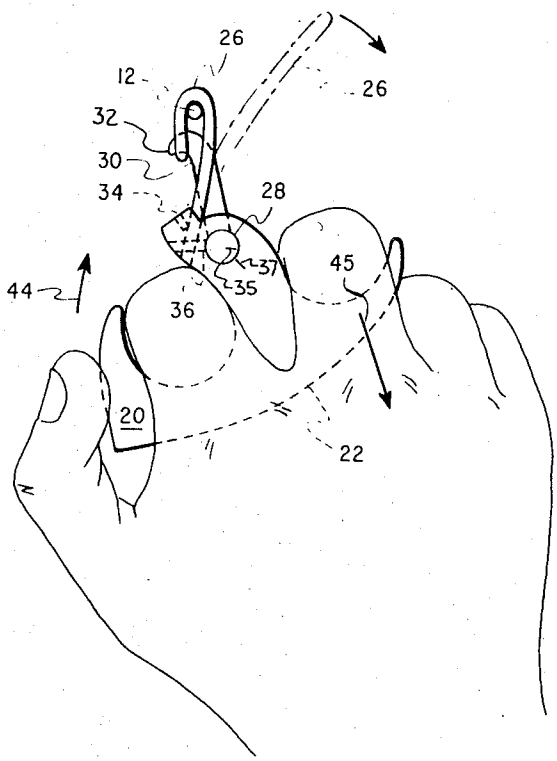
Primary Examiner—George J. Marlo
Assistant Examiner—William R. Browne
Attorney, Agent, or Firm—Chernoff & Vihauer

[57] **ABSTRACT**

An adjustable rope release for an archery bow, triggered by squeeze action of the fingers, which permits the archer to set the point in the squeeze motion at which the arrow is released. The rope release comprises a hand grip, for grasping by the index and middle fingers of the bowstring-drawing hand, from which a rope cord is looped around the bowstring and held by a hooked pin whose angle of projection relative to the grip member is adjustable by set screws. Squeezing of the middle finger of the hand causes the hand grip to pivot laterally relative to the drawn bow to a point which permits the rope loop to suddenly slip off the hooked pin, thereby releasing the bowstring and projecting the arrow toward its intended target.

7 Claims, 4 Drawing Figures



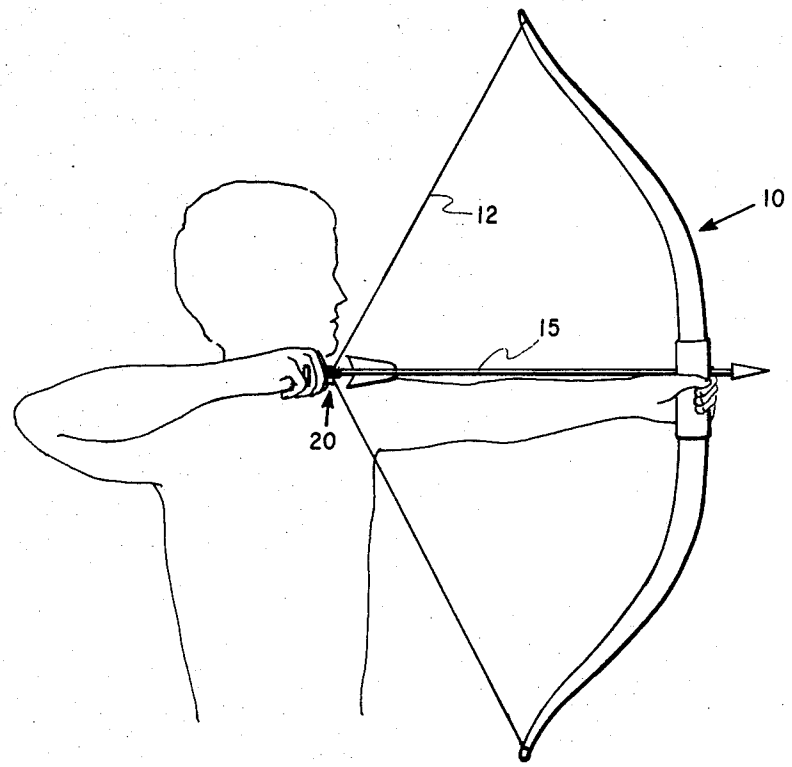


FIG. 1

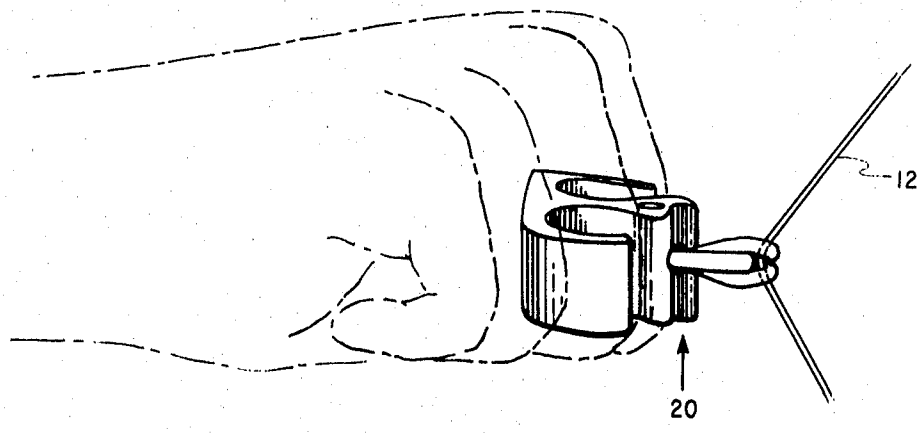
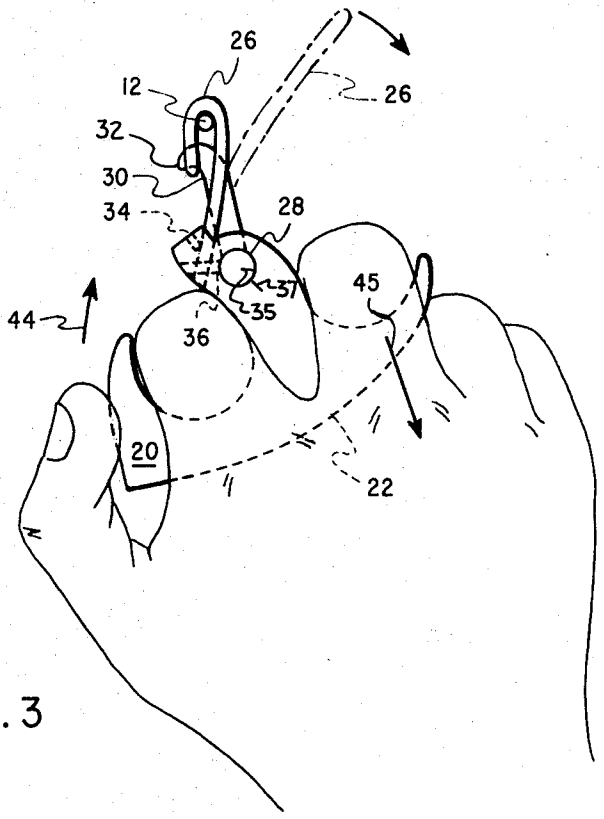


FIG. 2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12
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32
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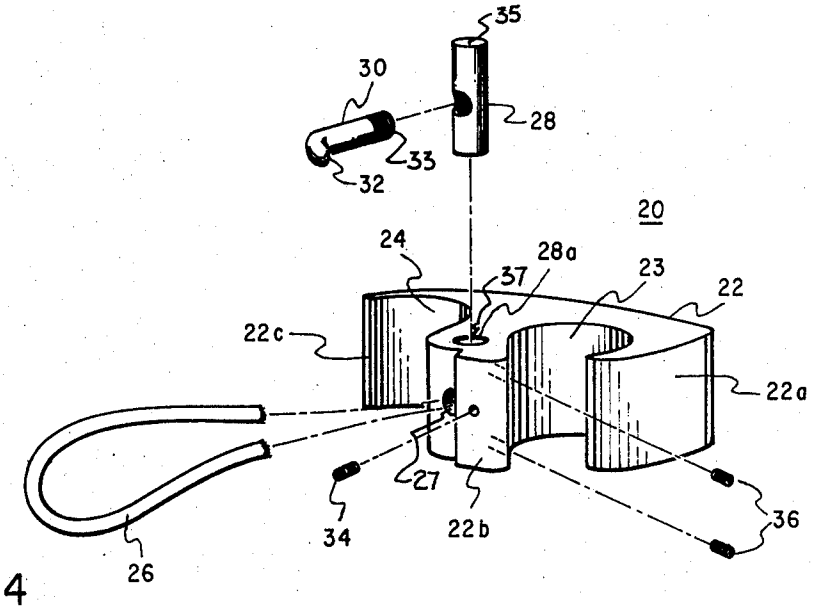
FIG. 3


35
30
28
33
32
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24
28a
37
23
22
22c
22a
27
34
22b
36
26

FIG. 4

ADJUSTABLE BOWSTRING RELEASE FOR ARCHERY BOW

BACKGROUND OF THE INVENTION

This invention relates to a rope release for an archery bow and, more particularly, is directed to a rope release, triggered by squeeze action of the fingers, which is adjustable so as to allow the archer to set the point in the squeeze motion at which the bowstring is released, thereby accommodating to individual preferences and producing improved archery shooting.

In archery contests, as well as in bow hunting where marksmanship is important, precise control of the various parameters affecting the accuracy of arrow flight is crucial. Accordingly, various mechanical aids have been developed for use by archery marksmen including optical bowsights, stabilizers for absorbing the shock of arrow release, arrow rests, etc., all with the objective of improving accuracy. To the same end various mechanical releases or trigger devices are known and in use, as an alternative to merely gripping the bowstring directly with the fingers of the drawing hand, to reduce the variations in arrow release caused by the effects of strain and fatigue on the archer holding the highly tensioned bow to ensure that the bowstring is released consistently by the archer at the same point in the triggering action of the hand. Thus rope releases, utilizing a cord which is looped around the bowstring and gripped by a releasable pin or other triggered member which is actuatable by movement of one or more fingers of the hand, are known to the art and are in common use by archery enthusiasts.

However, rope releases have not heretofore been adjustable so that the archer, while obtaining a consistent release of the arrow at a known point in the triggering action of his hand, has not been able to regulate the point at which this release occurs. Such prior devices therefore force the archer to conform his style of shooting to that imposed by the release device, and in some cases necessitates considerable adaptation by him to the constraints imposed by the mechanical release device. It would therefore be desirable to provide an archer with an arrow rope release which is adjustable as to the point of release so as to permit the archer to utilize his preferred release style, much like the setting of the trigger action on a rifle.

SUMMARY OF THE PRESENT INVENTION

The present invention is directed to an improved squeeze-action rope release for an archer's bow which has an adjustable trigger for permitting the archer to set the point in the squeeze motion at which the arrow is released.

The arrow release of the present invention provides a hand grip, for grasping by the bowstring-drawing hand and from between the index and middle fingers of which projects from the grip a flexible cord loop which is looped around the middle of the bowstring and engaged by a slightly hooked pin, the projection angle of which relative to the hand grip may be adjusted within a range of settings. The archer draws back the bowstring with the slotted end of the arrow fitted therein to the desired degree of tension, sights on the target and initiates the action of arrow release by squeezing his middle finger against the grip of the release device. This squeezing action rotates the grip through a slight arc of movement relative to the drawn bow, sufficient to cause the tensioned bowstring to transpose to a point where it suddenly pulls the cord loop off the hooked end of the projecting trigger pin, thereby releasing the bowstring and projecting the arrow toward its target.

Means are provided, exemplarily in the form of set screws bearing against a pivot pin member to which the hooked trigger pin is attached, for adjusting the angle of projection of the trigger pin so as to permit regulation of the point, in the arcuate travel of the grip responsive to the finger squeezing action, at which the loop of cord is released. This adjustability feature permits the archer to obtain consistent release of the bowstring at a desired point in his squeeze action on the release, thereby ensuring more precise placement of shots as he can coordinate aiming and other parameters of his style to the precise moment of arrow release.

It is accordingly a principal objective of the present invention to provide an improved squeeze-action rope release accessory for use with an archery bow which is adjustable as to the point in the squeeze motion at which the arrow is released.

It is a principal feature of the present invention to provide an adjustable rope release for use with an archery bow which permits the user to adjust the release action of the device to his individual preferences.

It is a further feature of the present invention to provide a new and improved rope release for use with an archery bow whose release is triggered by squeezing of the middle finger of the hand.

The foregoing objectives, features and advantages of the present invention will be more readily understood upon consideration of the following detailed description of the invention, taken in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a pictorial view showing an archer using an archery bow in conjunction with a mechanical release device.

FIG. **2** is an enlarged detail view of FIG. **1** showing the arrow release of the present invention.

FIG. **3** is a top pictorial view showing details of the arrow release of the present invention.

FIG. **4** is an exploded view of the arrow release of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

FIG. **1** shows an archery bow **10** of conventional design having a bowstring **12** into which the slotted tail end of an arrow **15** is fitted and which is engaged by an arrow rope release **20.** As conventional, the bowstring is held by a release device carried in the dominant hand of the archer (shown here as a right-handed individual), drawn back to the desired tension and held there while the arrow **15** is sighted on the target, either by the naked eye or with the aid of a bowsight, and then released by the archer, causing the arrow to be projected toward its intended target.

As best shown in FIGS. **2** and **3** the improved arrow release **20** of the present invention comprises a grip member **22,** grasped primarily by the forefinger and middle finger of the hand, which engages the bowstring **12** by means of a loop of cord **26** which projects between these two fingers, is bent in a loop around the middle of the bowstring and releasably held by a trigger pin **30** which also projects between the forefinger and

middle finger of the hand and terminates in a slightly hooked portion **32.** Squeezing of the middle finger of the hand, as indicated by the arrowhead **45,** causes the grip **22** to pivot clockwise, as indicated by the arrowhead **44** when viewed from the top of the hand. As the grip commences to pivot, the position of the bowstring **12** within the loop of the cord **26** relative to the trigger pin **30** shifts, producing an increasing force component on the loop end of the rod aligned with the angle of the hook termination **32.** This force component eventually is sufficient to overcome the frictional restraint of the hook, thus suddenly freeing the end of the loop from its engagement with the pin, as indicated by the phantom lines, and releasing the bowstring **12.** This triggering action, culminating in release of the bowstring, is controlled substantially solely by the squeezing action of the middle finger of the hand as it pivots the grip **22** within a limited range of clockwise movement. (It will be apparent that the release device of the present invention is equally usable by left-handed archers by flipping the grip for gripping by the left hand.)

The point in the squeeze action of the finger at which the loop **26** is freed from engagement with the hooked termination **32** of the trigger pin **30** may be regulated by adjustment of the angle which the projecting trigger pin **30** makes with the grip **22.** This adjustment is accomplished by turning of the pivot pin **28,** to which the trigger pin **30** is attached, and then locking it in the desired position through means of set screws **36.** Marking indicia **35, 37** on the pivot pin and the border of its borehold, respectively, provides the user with a visual indication of the angular setting of the trigger pin **30.**

FIG. 4 depicts in an exploded view details of the assembly and construction of the arrow release. Grip portion **22,** fabricated from a suitable material such as cast aluminum or high-impact plastic, is of generally E-shaped configuration comprised of a first leg **22***a*, a middle leg **22***b* and a remaining leg **22***c*, the interiors of the legs forming a pair of arcuate grooves **23, 24** configured to confortably receive the terminal portions of the forefinger and middle finger, respectively, of the hand.

On the end face of the center leg **22***b* an opening **29** is provided through which the ends of a loop of cord **26,** formed of a flexible rope material such as braided nylon, is inserted and held in place by a locking fastener screw **34.** The end face of the center leg **22***b* is also provided with a second opening **27,** either very proximate to or contiguous with the first opening **29,** for receiving the near end **33** of the trigger pin **30** of metal or other suitable material. The threaded near end **33** of the trigger pin is screwed into a recess formed near the mid-axis of cylindrical pivot pin **28,** also of metal or like material, after the pivot pin is mounted within a corresponding borehole opening **28***a*. A small clearance is provided between the pivot pin **28** and its borehole opening **28***a*, and in addition the opening **27** receiving the trigger pin is slightly elongated, so as to provide a limited range of angular movement through which the pivot pin and its associated trigger pin **30** can be rotated, thus providing the desired degree of angular adjustment in the position of the trigger pin relative to the grip **22.** The angular position of the trigger pin **30** can then be locked at a desired setting through tightening of the pair of set screws **36** provided in the center leg **22***b* of the grip body which bear against and hold the pivot pin in position.

The terms and expressions which have been employed in the foregoing abstract and specification are used therein as terms of description and not of limitation, and there is no intention, in the use of such terms and expressions, of excluding equivalents of the features shown and described or portions thereof, it being recognized that the scope of the invention is defined and limited only by the claims which follow.

What is claimed is:

1. A rope release for use with an archery bow comprising a grip adapted for grasping by the bowstring-drawing hand and configured with a pair of recesses for receiving portions of the forefinger and middle finger of the hand, a flexible cord loop whose terminal ends are attached to said grip, and a pin member projecting from said grip having a hook termination at one end adapted to releasably engage the bight portion of said loop and whose other end is attached to said grip between said recess pair, and adjustment means for permitting the angle of projection between said pin member and said grip to be varied to regulate the point at which said loop is freed from said hook termination during the squeezing of a user's finger on the rope release.

2. The rope release of claim **1** wherein said adjustment means comprises a pivot dowel to which said pin member is attached and which is mounted for limited rotation within said grip, and fastener means for securing said pivot dowel at a present rotational position.

3. The rope release of claim **2** wherein indicia are associated with said pivot dowel for providing a visual indication of the rotational setting thereof.

4. The rope release of claim **1** wherein said loop is attached to said grip between said recess pair closely proximate said pin member.

5. The rope release of claim **1** further including fastener means for releasably securing said loop to said grip, thereby permitting replacement of said loops when needed.

6. A squeeze-action rope release for use with an archery bow comprising a hand grip of substantially E-shaped configuration having a pair of recesses for receiving portions of the forefinger and middle finger of the bowstring-drawing hand, a flexible cord loop whose terminal portions are attached to said grip between said recess pair therein, a pin member projecting from and coupled to said grip between said recess pair therein proximate said loop terminal portions, the projecting end of said pin member releasably engaging the bight portion of said loop after it has been bent around a bowstring, adjustment means for coupling said pin member to said grip to permit the angle of projection which said pin member makes with said grip to be varied to regulate the point at which said loop is freed from said pin member, whereby release of a bowstring is effected by squeezing of the middle finger of the hand while the forefinger remains substantially rigid, thereby rotating said grip relative to the drawn bowstring and causing said bight portion of said loop to slide off said pin member.

7. The rope release of claim **6** wherein said adjustment means comprises a pivot dowel to which said pin member is attached and which is mounted for limited rotation within said grip, and fastener means for securing said pivot dowel at a preset rotational position.

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UNITED STATES PATENT OFFICE

CERTIFICATE OF CORRECTION

Patent No. 3,853,111 Dated Dec. 10, 1974

Inventor(s) Melvern B. Stanislawski and Daniel F. McKinney

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

Col. 1,	Line 25	After "bow" insert --and--.
Col. 3,	Line 42	Change "confortably" to --comfortably--.
Col. 4,	Line 31	Change "present" to --preset--.
Col. 4,	Line 39	Change "loops" to --loop--.

Signed and sealed this 11th day of February 1975.

(SEAL)
Attest:

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Attesting Officer

C. MARSHALL DANN
Commissioner of Patents
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FORM PO-1050 (10-69)

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