

[54] BOW CORD RETRACTING AND RELEASING DEVICE

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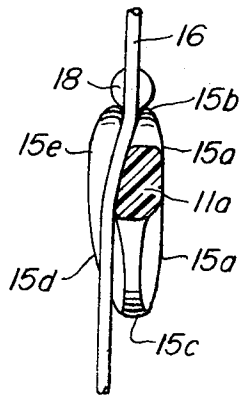
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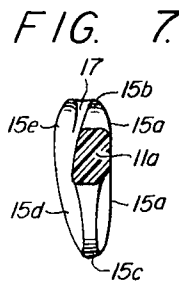
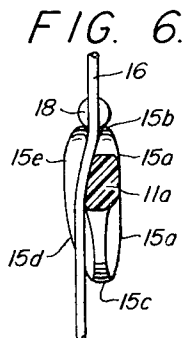
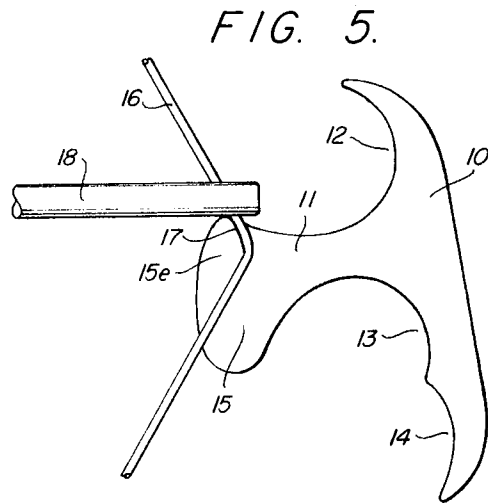
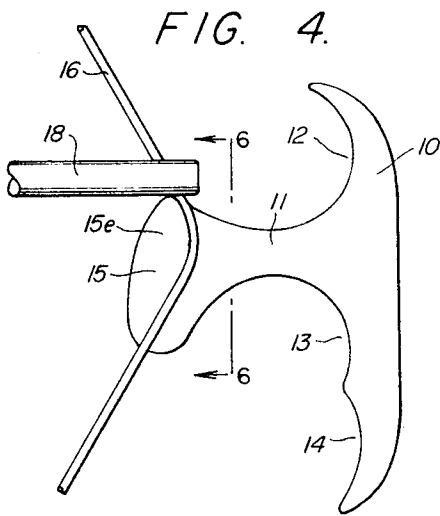
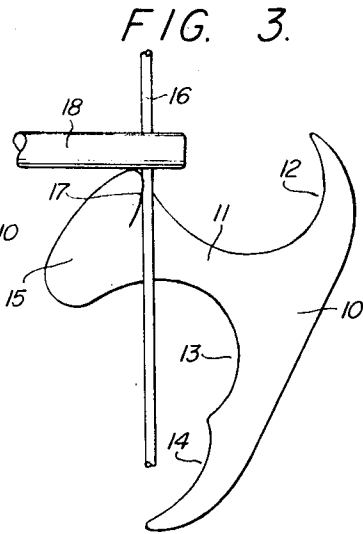
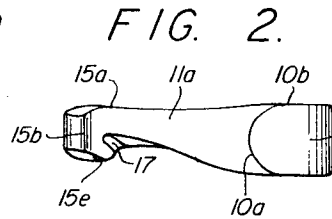
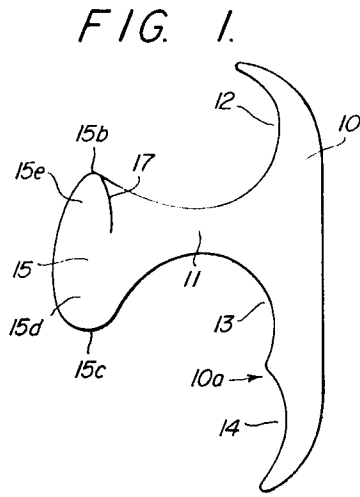
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[57] ABSTRACT

A unitary rigid body shaped to provide a hand grip portion and a bowstring-engaging trigger member disposed forwardly of the grip portion and interconnected therewith by a stem portion. The hand grip portion is held in an upright position when the body is being used to retract a bow string. The trigger member is elongate longitudinally of the bow string when engaged and is rearwardly channeled longitudinally thereof but canted outwardly of the stem from one end of such trigger portion toward the opposite end thereof the trigger member terminates in a smooth and tapering mergence with the adjacent lateral face of the trigger member, preferably intermediate the length thereof, to provide an outwardly canted hook formation capable of securely holding the bow string until the rigid body is tipped forwardly to effect easy and smooth release of such bow string.

6 Claims, 7 Drawing Figures





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## BOW CORD RETRACTING AND RELEASING DEVICE

## BACKGROUND OF THE INVENTION

## Field

The invention is in the field of archery accessories and is particularly concerned with devices for retracting or drawing backwardly the string of a bow to provide the energy for shooting an arrow and to trigger release of the bow string from its retracted position.

## State of the Art

Many different devices have been developed for the purpose, but there has remained the need for a device which will act easily and smoothly with a minimum of maneuvering to trigger release of the bow string, while still enabling the archer to take accurate aim and to maintain positive control.

## SUMMARY OF THE INVENTION

In accordance with the invention the desired attributes for a device of this kind are obtained by providing, in a unitary body, a hand grip having a stem member extending forwardly therefrom and supporting at its end an elongate bow-string-engaging trigger member that extends transversely of the stem and preferably in parallel with the hand grip. Such trigger member is channeled longitudinally and rearwardly and is elongate longitudinally of the bow string when engaged thereby. The channel is canted outwardly of the stem from one end of the trigger member toward the opposite end thereof and terminating in smooth and tapering mergeance with the adjacent lateral face of the trigger member to provide a correspondingly canted hook formation, preferably end thereof to about one-half the length of the trigger member, for receiving and securely holding the string of a bow during retraction thereof and for effecting easy and smooth release thereof when the device is tipped forwardly.

The hand grip is preferably narrow and elongate and contoured to receive an archer's index, i.e. forefinger, at one side—usually above—the stem, and to receive the middle and fourth finger at the other side—usually below—the stem. Thus, the stem extends forwardly between the archer's index and forefinger and his middle finger. It and the trigger member preferably have one lateral face constituting a substantially rectilinear extension of a lateral face of the hand grip, with the opposite lateral face contoured to provide the bow-string-engaging hook formation. Thus, such opposite lateral face of the stem is smoothly and convergently curved toward the longitudinal axis of the device and such opposite lateral face of the trigger member terminates where the trigger member is channeled rearwardly as previously described, preferably at such axis, to provide for securely receiving but smoothly releasing the bow string.

The device is advantageously molded to shape from a rigid plastic material.

## THE DRAWING

A desirable form of the device constituting the best mode presently contemplated for carrying out the invention is illustrated in the accompanying drawing, in which:

FIG. 1 is a view in side elevation showing the bow-string-engaging hook formation;

FIG. 2, a top plan view, considering the bow and the device to be held vertically rather than horizontally;

FIG. 3, a view corresponding to that of FIG. 1, but showing a bow string and arrow fragmentarily and the device tipped backwardly for securely engaging the bow string prior to and during retraction thereof;

FIG. 4, a view corresponding to that of FIG. 3, but showing the device held substantially vertically during the taking of aim at a target;

FIG. 5, another view corresponding to that of FIG. 3 but showing the device tipped forwardly to indicate how the retracted bow string is released;

FIG. 6, a vertical section taken on the line 6—6 of FIG. 4; and

FIG. 7, a similar view with the bow string removed.

## DETAILED DESCRIPTION OF ILLUSTRATED EMBODIMENT

In the particular form illustrated, the rigid body constituting the device is unitary, being preferably molded to shape from a thermosetting or thermoplastic synthetic resin material. It comprises an elongate and narrow hand grip member 10 having finger-accommodating indentations formed in its forward face 10a along the length thereof and a stem member 11 projecting forwardly from such face between a single finger-accommodating indentation 12 adapted to receive an archer's index or forefinger and a pair of similar indentations 13 and 14 adapted to receive his middle and fourth fingers, respectively.

Stem member 11 serves to connect hand grip member 10 with an elongate, forwardly positioned, bow-string-engaging trigger member 15 that extends longitudinally of the bow string 16, FIG. 4, when engaged thereby. Such trigger member 15 has a lateral face 15a, FIG. 2, constituting a substantially rectilinear extension of a lateral face 11a of the stem member and of a lateral face 10b of the grip member.

The opposite lateral face of the device is configured to securely receive and smoothly release a bow string. Thus, the trigger member 15 is longitudinally channeled rearwardly at 17, preferably at or near the longitudinal axis of the device, as shown, with the channel canted outwardly of the stem 11, see FIG. 6, from an end 15b of the trigger member toward but terminating short of the opposite end 15c thereof in smooth mergeance with the adjacent lateral face 15d of such trigger member. Preferably, such channel 17 terminate about midway of the length of the trigger member, as shown. Between the termination of channel 17 and the end of 15b of trigger member 15 the lateral face 15d of such trigger member bulges outwardly to form, in effect, a wedge-shaped portion 15e for dislodging a bow string when the device is tipped forwardly.

In using the device of the invention, the bow is preferably held vertically, so that the device itself is held vertically in the retracted position of the bow string, see FIG. 4, with the rear, bow-string-engaging end of an arrow 18 resting on the upper end 15b of the trigger member 15. After aiming the archer need merely tip the upper end of the device forwardly, as shown in FIG. 5, to cause the wedge shaped portion 15e of such trigger member to dislodge the bow string, 16, from channel 17 and to thereby release its stored energy for projecting the arrow.

Initial engagement of the bow string for retraction purposes is preferably as shown in FIG. 3, with the device tipped backwardly and the bow string 16 in secure engagement with channel 17.

Whereas this invention is here illustrated and described with respect to a certain preferred form thereof, it is to be understood that many variations are possible without departing from the inventive concepts particularly pointed out in the claims.

## I claim:

1. A bow string retracting and triggering device, comprising a rigid body shaped to provide a hand grip member; a bow-string-engaging trigger member disposed forwardly of said grip member; and a stem member interconnecting said grip member and said trigger member; said trigger member having two lateral faces said trigger member being elongate longitudinally of a bow string as engaged thereby a channel means canted outwardly of the stem from one end of the trigger member toward the opposite end thereof and terminating in a smooth and tapering mergeance of said channel means with one of said two lateral faces of the trigger member to provide a correspondingly canted hook formation for receiving and securely holding a string of a bow during retraction thereof and for effecting easy and smooth release thereof when the device is tipped forwardly in a plane of a retracted bow string, said channel means supporting progressively less and less of a bow string during the forward tipping movement of the device, and said hand grip member being in substantially a plane

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formed by a bow string and a bow when a bow string is being pulled to a cocked position.

2. A device in accordance with claim 1, wherein the channel means terminates about midway of the length of the trigger member.

3. A device in accordance with claim 2, wherein the channel means is located substantially at the longitudinal axis of the trigger means.

4. A device in accordance with claim 3, wherein the hand grip member is formed with a single finger-receiving indentation in its forward face and at its end that is at the same side of

the stem member as the one end of the trigger member, and is formed with two additional finger-receiving indentations along its said forward face at the opposite side of the stem member.

5 5. A device in accordance with claim 4, wherein the other lateral face of the trigger member is substantially rectilinearly in shape and aligned with corresponding lateral faces of the stem member and hand grip member, respectively.

6. A device in accordance with claim 5, molded to shape  
10 from a synthetic resin material.

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