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ARCHER'S ARROW NOCK AND FINGER GRIP

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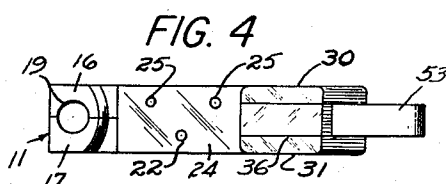
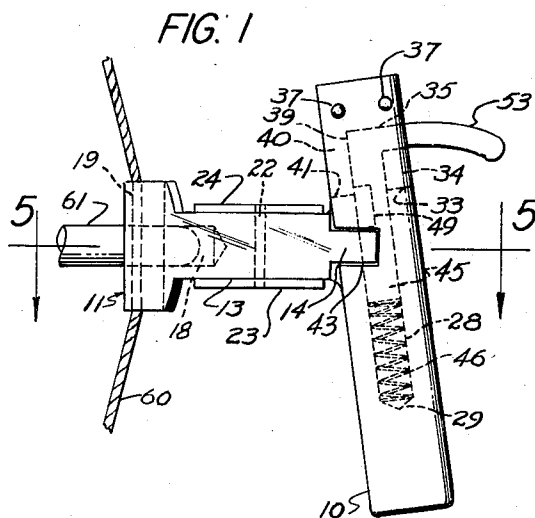


FIG. 5

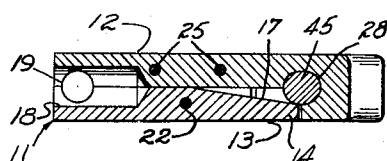


FIG. 6

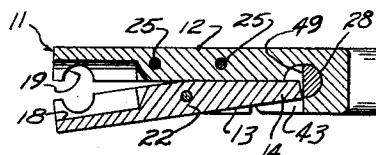


FIG. 2

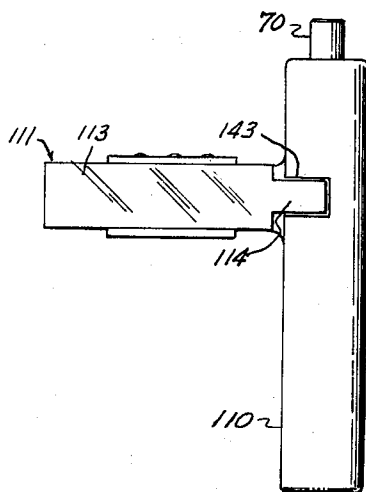
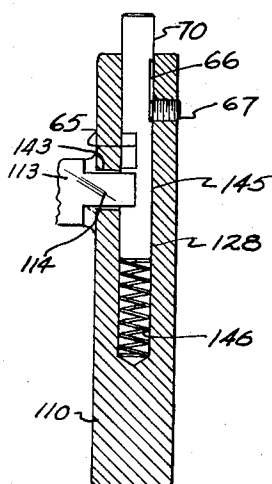


FIG. 3



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ARCHER'S ARROW NOCK AND FINGER GRIP

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4 Claims. (Cl. 124—35)

This invention relates to improvements in gripping and triggering devices adapted to be for use by archers.

A major object of the invention is to provide an improved and simplified archer's hand grip and trigger device which reduces the skill heretofore required for proper gripping of the bow string with a conventional arrow in nocked engagement therewith, while simplifying manual release of the arrow from a desired anchor point, such as from a chin anchor or a cheek anchor, substantially to improve the marksmanship of the average archer.

A further object is to provide an improved archer's hand grip and trigger device which permits archers of limited skill to use the same arm and hand movements employed by highly skilled archers without use of the grip, and to do so in the absence of the substantial skill heretofore required for perfect finger release of the bow string, thus reducing the time heretofore required to obtain archery proficiency.

Other objects will be in part obvious, and in part pointed out more in detail hereinafter.

The invention accordingly consists in the features of construction, combination of elements and arrangement of parts which will be exemplified in the construction hereafter set forth and the scope of the application of which will be indicated in the appended claims.

In the drawings:

Fig. 1 is a side elevation, partially in phantom of a hand grip mechanism incorporating the invention.

Fig. 2 shows in elevation a hand grip mechanism having an alternate embodiment of the invention incorporated therein.

Fig. 3 is a vertical section of the shank portion of the device of Fig. 2.

Fig. 4 is a top plan view of the device of Fig. 1.

Fig. 5 is a section taken along lines 5—5 of Fig. 1 with the jaws of the device closed.

Fig. 6 is a view similar to Fig. 5 but with the jaws open.

Figs. 1, 4, 5 and 6 show an archer's triggerable hand grip device incorporating a preferred embodiment of the invention and comprising a shank-like finger grip 10 and forwardly extending set of jaws generically designated 11. Jaws 11 include a jaw arm 12 having one end fixed to shank 10 as by welding, the drawings showing that arm as an integral extension of the shank material for convenience of illustration. A second jaw arm 13 is mounted to pivot in respect to arm 12, as later described, both arms 12 and 13 being of identical configuration forwardly of the pivot point of arm 13 to terminate in enlarged jaws 16 and 17, contoured to define, when closed, an outwardly open cylindrical arrow nock receiving socket 18 positioned longitudinally of the arms and a vertical string bore 19 disposed to intersect socket 18. Jaws 11, when open, receive arrow 61 with bowstring 60 nocked thereto, and when closed, lock the arrow and string therein.

Shank 10 preferably is diagonally positioned in respect to arms 12, 13 to facilitate ease of hand positioning at

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an anchor point such as near the chin or cheek bone of an archer, but the shank may be otherwise positioned such as at right angularity to the arms as shown in the alternate embodiment, Fig. 2. Arm 13 is pivotally connected to arm 12 by a pintle 22 held between a pair of spaced plates 23, 24 which are mounted to the top and bottom surfaces, respectively, of arm 12 by rivets 25 and extend laterally of arm 12 a sufficient distance to anchor pintle 22 as shown. Shank 10 is provided with a centerbore 28 extending downwardly to terminate in a closed end 29, the upper end thereof leading into a diametric channel 34 between shoulders 30 and 31, extending downwardly to shoulders 33 and 41. A closure member 36 of right angular shape is disposed in channel 34 and riveted to shank 10 at 37 with one leg 35 thereof closing the upper channel end and the other leg 40 closing the side above arm 12, leaving the opposite side of the channel open from the lower face of leg 35 to the bottom shoulder 33 thereof.

Referring to Figs. 5 and 6, the inner end portion 17 of leg 13 is tapered, starting near pintle 22, to reduce the leg to approximately half its width at the inner end thereof, thus permitting pivoting of the outer end of leg 13 to the jaw open position of Fig. 6 which positions the inner tapered end thereof in abutment with the inner surface of arm 12 as shown with tongue 14 extending into the shank bore. To provide clearance for such pivoting, shank 10 is provided with a forwardly opening notch 43 leading into centerbore 28, Figs. 1 and 6. A plunger 45 is disposed within centerbore 28, the upper end thereof carrying a thumb depressible lever 53 projecting through slot 34 for movement of plunger 45 downwardly against the bias of a coil spring 46 in bore 28, the limits of movement of plunger 45 being set by stops 33 and 35 respectively. Plunger 45 is provided with a forward lateral notch 49 shown dotted and above shank notch 43, Fig. 1, but registerable, with the plunger depressed, with shank notch 43 to permit tongue 14 of arm 13 to be swung into bore 28 to be detent held therein, upon plunger release. Upon manual closure of jaws 11, tongue 14 swings out of bore 28 and plunger 45 snaps upwardly to prevent tongue 14 from moving inwardly, thus locking the jaws until released by subsequent depression of plunger 45. With a drawn bowstring held in the string bore, the jaws instantly fly apart upon depression of plunger 45 by lever 53 with attendant release of the arrow.

In the device of Figs. 2 and 3, shank 110 is shown disposed in right angularity to the jaw members 111 rather than being diagonally disposed in respect thereto. The device functions in a similar manner, however, with plunger 145 provided with a forward notch 65 for registry, when depressed against spring 146 by thumb engageable extension 70 with shank groove 143 to permit tongue 114 of pivoted arm 113 to enter notch 65, thus opening the jaws, tongue 114 being detent held by plunger 145 under urge of spring 146. When the jaws are closed, plunger 145 snaps upwardly to lock them in the manner above described. Plunger 145 is provided with an axially extending notch 66 into which the inner end of a stop member 67 projects to limit the vertical movement of plunger 145.

I claim:

1. In a device of the character described, a first jaw having a center-bored handle secured thereto in a plane transverse to the axis of said jaw and having handle portions disposed above and below said first jaw, a second jaw pivotally attached to said first jaw for movement about an axis generally co-planar with said handle and having a tongue portion positioned to be swung into the bore of the handle, spring biased plunger means disposed within the handle bore and provided with an aperture, registerable upon depression of the plunger against its

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biasing spring, to provide clearance permitting said tongue portion to be swung into the centerbore.

2. In a device of the character described, a shank, a pair of arrow nock and bowstring receiving jaws extending laterally from said shank intermediate the ends thereof, one jaw being fixed thereto and the other jaw pivotally attached to the fixed jaw for movement about an axis generally co-planar with said shank, said shank being longitudinally chambered and radially notched adjacent the base of the jaw fixed thereto, said pivoted jaw including a tongue positioned to be pivoted into said shank notch, a plunger in said chamber provided with a notch to allow pivoting of said tongue into said chamber when aligned with the shank notch and to prevent such pivoting when non-aligned therewith, a depressible lever extending outwardly of said shank for the control of said plunger, and a spring biasing said plunger in a position of non-alignment of said notches.

3. In a device of the character described, a first jaw having a handle secured thereto in a plane transverse to the axis of said jaw, said handle having portions thereof extending above and below the axis of said first jaw, a second jaw pivotally attached to said first jaw for movement about an axis generally co-planar with said handle and having a tongue portion positioned to be pivoted into the handle when the second jaw is moved into an open position, and a channeled plunger slidably disposed within the handle with a thumb operable portion projecting therefrom, means biasing said plunger in a direction of non-alignment of its channel with the tongue portion of the second jaw to lock the pivoted jaw in a closed position, but movable, by thumb depression, against the biasing means into alignment to unlock the pivoted jaw and permit pivoting thereof to an open position.

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4. An archer's hand grip device comprising a center-bored shank provided with a radial notch extending through the shank wall and into the bore, an arm fixed to the shank intermediate the ends thereof to extend outwardly thereof from the notched portion thereof, a second arm pivotally attached to said fixed arm for movement about an axis generally co-planar with said shank and provided at one end with a tongue positioned to be received within said notch and bore, a plunger disposed within said bore for axial movement in respect to said plunger and provided with a radial notch for the reception of said tongue when the plunger notch is moved into registry with the shank notch, a spring maintained under compression within the bore to urge the plunger into a position of non-registry of said notches, means positioned externally of said shank for the depression of said plunger against the urge of said spring for registry of said notches, each of said arms having a jaw member at the outer end thereof defining, when closed, a cylindrical socket disposed horizontally of said arms for the clamped reception of the nock end of an arrow and a string bore disposed transversely of said socket for reception of a bowstring in nocked engagement with an arrow.

References Cited in the file of this patent

UNITED STATES PATENTS

228,302	Beard	June 1, 1880
299,436	Stockman	May 27, 1884
2,417,791	Tyszkiewicz	Mar. 18, 1947
2,488,597	Konold	Nov. 22, 1949
2,646,646	Glass	July 28, 1953