

United States Patent

Allen

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[54] ARROW REST

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[58] Field of Search **124/30 R, 24, 23, 22, 41**

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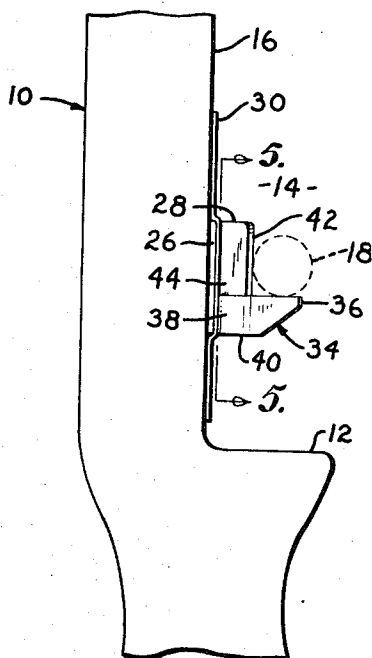
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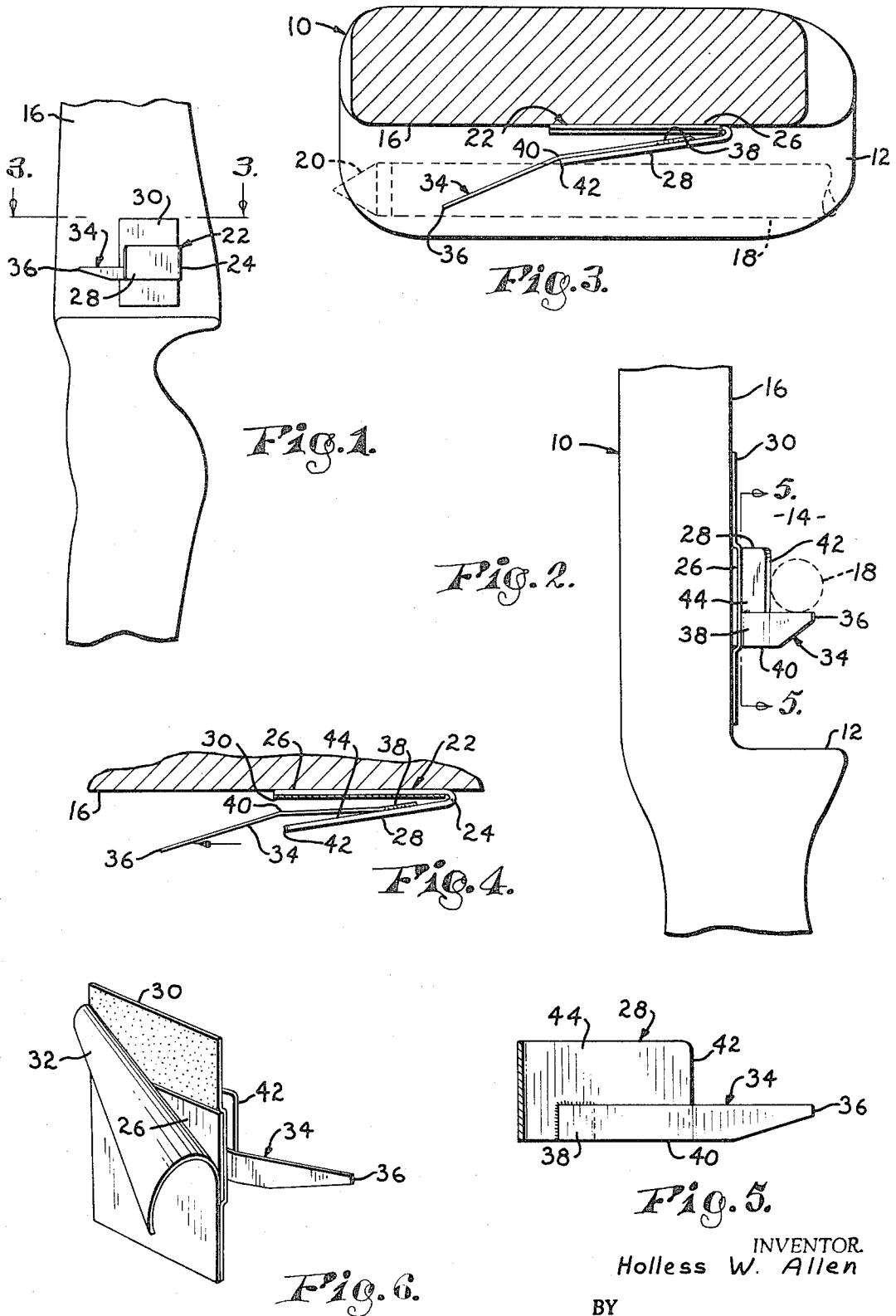
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ABSTRACT

The shaft of an arrow is supported in the sight window of an archery bow by an arrow rest comprising a flexible finger which shifts laterally as it is engaged by the feathers of the arrow after release. The finger is attached to a bendable spacer tab and is movable therewith to a position desired by the archer where the shaft of the arrow is aligned with the path of the bowstring. The tab is formed of sufficiently heavy plate stock to be rigid and remain in the desired position under lateral force that may be applied thereto as the arrow is shot.

5 Claims, 6 Drawing Figures





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ARROW REST

This invention relates to improvements in arrow rests for archery bows.

An important object of the present invention is to provide an arrow rest which is adapted to bows of various designs and which may be easily and rapidly adjusted to a position wherein the shaft of the arrow is aligned with the path of the bowstring.

Another important object of the invention is to provide an arrow rest which minimizes the contact between the feathers of the arrow and the bow or the rest itself, in order to prevent deflection of the arrow in its initial flight as the feathers pass the bow, and also prevent the feathers from becoming damaged.

Still another important object of the invention is to provide an arrow rest as aforesaid in the form of a universal attachment suitable for bows of various designs, and which may be easily secured to a bow without the need for a special mounting.

In the drawing:

FIG. 1 is a side elevational view of the handle section of an archery bow, showing the arrow supporting device of the present invention attached thereto;

FIG. 2 is an enlarged, fragmentary, front view of the structure shown in FIG. 1;

FIG. 3 is a further enlarged, cross-sectional view taken along line 3—3 of FIG. 1;

FIG. 4 is a view of the arrow supporting device similar to FIG. 3, illustrating the flexing of the rest;

FIG. 5 is a cross-sectional view taken along line 5—5 of FIG. 2; and

FIG. 6 is a perspective view of the device showing the backing partially removed from the adhesive strip.

Referring to the figures, the handle section 10 of an archery bow is shown particularly in FIGS. 1-3, where it may be seen that the section 10 is provided with the usual arrow shelf 12 which forms a part of the sight window 14 of the bow. A bow for right-handed shooters is depicted, thus the arrow side 16 is the left side of the bow as the latter would be viewed from the rear during shooting. The shaft 18 of an arrow is illustrated in broken lines in FIGS. 2 and 3 in the position assumed at full draw. Note in this respect that the head 20 of the arrow (FIG. 3) is in approximate lateral alignment with the front of the bow.

The arrow supporting device of the present invention includes a support plate 22 having a line of bend 24, the plate 22 presenting a pair of leaves 26 and 28 joined at the line of bend 24. Specifically, the plate 22 is of elongated, rectangular configuration and is bent at approximately the longitudinal center thereof to form the two leaves 26 and 28. The rectangular portion defined by the leaf 26 is attached to the side 16 of the handle section 10 at the sight window 14, thus the leaf 28 is spaced outwardly from the side 16 and, as will be discussed, presents a spacer element or tab which is particularly useful in aligning the arrow for proper flight.

The portion 26 of the support plate 22 is affixed to the side 16 by an adhesive strip 30 which, prior to use, is covered with a removable backing 32 that is ultimately peeled from the strip 30 (FIG. 6) just prior to attaching the device to the bow. An arrow rest in the nature of a flexible finger 34 is carried by the tab 28 and extends forwardly and outwardly therefrom when the device is secured to the bow in its proper orientation. The finger 34 has a tapered outer end 36, an inner end 38 fixed to the tab 28, and a bend 40 intermediate the ends 36 and 38 which is disposed adjacent the forward edge 42 of the tab 28.

From the foregoing it may be appreciated that, besides the adhesive attaching strip 30, the arrow supporting device of the present invention is composed of two parts, the support plate 22 and the arrow rest finger 34. Both of these components are preferably composed of a suitable metallic plate material such as phosphor bronze or annealed steel. It is important to note that the support plate 22 is of significantly heavier plate stock than the finger 34 for the purpose to be discussed hereinafter. Permanent attachment of the finger 34 to the inner surface 44 of the tab 28 is readily accomplished by such means as soldering the inner end portion 38 directly to the surface 44.

In use, referring to FIGS. 2 and 3, it may be seen that the shaft 18 of the arrow overlies the outer end portion 36 of the finger 34 and engages the forward edge 42 of the spacer tab 28. Accordingly, the arrow shelf 12 is not used; instead, the arrow is supported by the finger 34 and is also positively maintained in a predetermined spaced relationship to the side 16 of the bow by virtue of the tab 28 against which the shaft 18 also rests. The line of bend 24 in the support plate 22 permits the archer to move the tab 28 laterally in the window 14 to set this spacing between the side 16 and the shaft 18. This is important since the axis of the shaft 18 must be aligned with the path of the bowstring or the thrust imparted to the arrow by the bowstring will propel the arrow to one side or the other of the intended path of travel. Furthermore, it is apparent that arrow shafts of different diameters will require different spacing from the side 16 in order to provide the desired alignment with the bowstring. In the present invention, the archer may conveniently adjust this spacing as needed by bending the spacer tab 28 about the line of bend 24 until the proper position is reached.

Referring particularly to FIG. 4, the finger 34 is shown in an inwardly flexed position depicting the action of the finger after the arrow is released and at the time that the feathers of the arrow are passing the bow. By this action, the feathers meet minimum resistance as the arrow is shot since the finger 34 yields upon contact by the feathers to both minimize the deflection of the arrow that would otherwise occur with a stationary rest and also prevent the feathers from becoming damaged. In contrast to the finger 34 of the present invention, it may be appreciated that a stationary rest such as the shelf 12 tends to impart this undesired deflection to the arrow as well as damage the feathers as they are necessarily brought into sudden contact with the ledge as the arrow is shot.

The difference between the plate stock employed to form the support plate 22 and the finger 34 may now be readily appreciated. In the case of the finger 34, it is desired that the finger be laterally flexible so as to minimize any interaction with the feathers when the arrow is shot, as discussed above. Conversely, with respect to the leaf 28 of the support plate 22 that forms the spacer tab, it is desired that this tab remain in the position selected by the archer, yet both the tab and the finger must move together as the tab is positioned so that the finger will be properly disposed to receive the shaft 18 regardless of the spacing selected. To this end, the inner end portion 38 of the finger 34 is fixed to the tab 28 and the finger normally extends along the inner surface 44 thereof to the bend 40, whereupon the finger then projects both forwardly and laterally outwardly from the forward edge 42 in clearing relationship to the tab 28. The plate material employed for the support plate 22 has sufficient thickness to render the tab 28 rigid under lateral force which may be applied thereto upon release of the arrow, thus the tab 28 remains in the selected position as the arrow is shot. (Such lateral force is an undesired result caused by sidewise movement imparted to the bowstring by the archer as it is released, a behavior known as "archer's paradox.") However, as discussed above, the line of bend 24 permits the archer to easily select the position of the tab 28 in accordance with shooting conditions.

I claim:

1. A device for supporting the shaft of an arrow comprising: a support plate having a portion thereof adapted to be affixed to an arrow side of a bow and a spacing means for positioning an arrow on a bow, said spacing means forming a part of said plate and adapted to extend into a sight window; and
- a flexible arrow rest finger attached to and carried by said spacing means presenting an extension projecting therefrom, and having a normal disposition for receiving an arrow shaft with the latter resting thereon while in engagement with said spacing means,
- said spacing means being yieldable and movable by bending to any of a number of positions for permitting proper spacing of an arrow from a side of a sight window, but said spacing means being composed of sufficiently heavy

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plate material to be substantially rigid to resist deflection so as to remain in a selected position under a lateral force applied thereto when engaged by an arrow being launched,

said arrow rest finger being movable in unison with said spacing means to the selected position, and said finger flexing laterally relative to the spacing means upon engagement by feathers of an arrow as the latter is launched and thereafter returning to said normal disposition.

2. The device as claimed in claim 1, said support plate having a line of bend and said portion and said spacing means being integral with each other and joined at said line,

said spacing means yielding at said line as it is moved laterally to the selected position.

3. The device as claimed in claim 2, said support plate including a pair of leaves joined at said line and presenting said portion of the plate and said spacing means respectively.

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4. The device as claimed in claim 1, said arrow rest finger having opposed, inner and outer ends, said inner end being rigid with said spacing means, and said outer end projecting clear of said spacing means for receiving an arrow shaft.

5. The device as claimed in claim 1, said spacer element presenting a forward edge engageable by said shaft when the latter is on the arrow rest, and having an inner surface facing away from said shaft, said arrow rest comprising a finger having opposed, inner and outer ends and a bend intermediate said ends, said inner end being rigid with said spacer element with the stretch of the finger between said inner end and said bend normally extending alongside said inner surface, said bend being adjacent said forward edge and said outer end projecting clear of said spacer element for receiving said shaft.

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