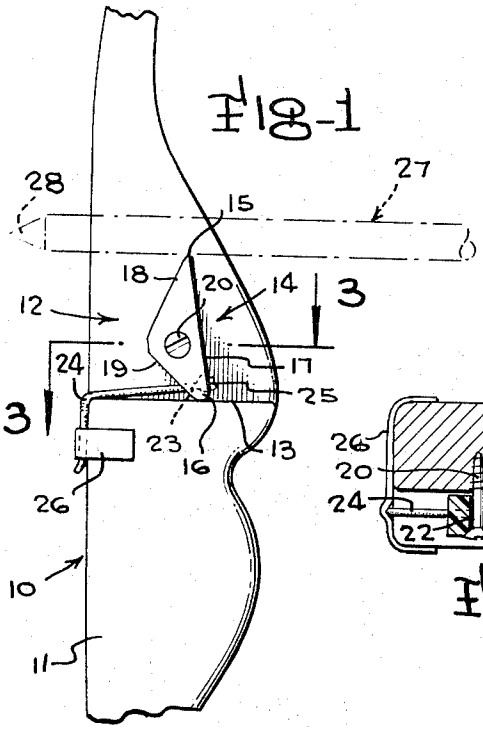
March 12, 1968 E. J. LOSH 3,372,686

ARCHERY BOW HANDLE WITH RESILIENTLY BIASED ARROW REST

Filed Sept. 30, 1965

Fig-1



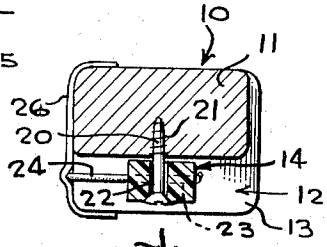


Fig-3

Fig-2

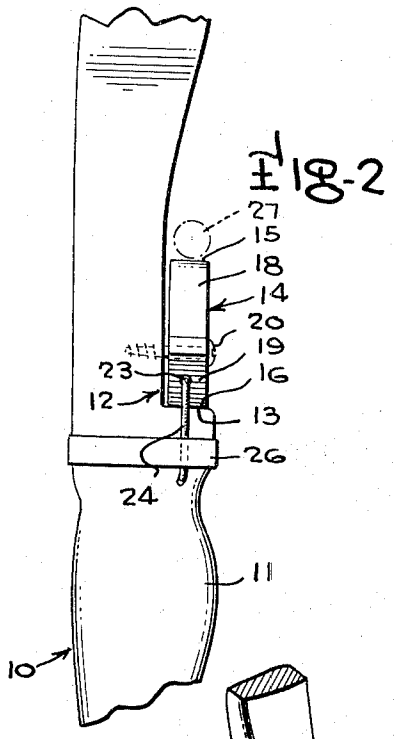


Fig-4

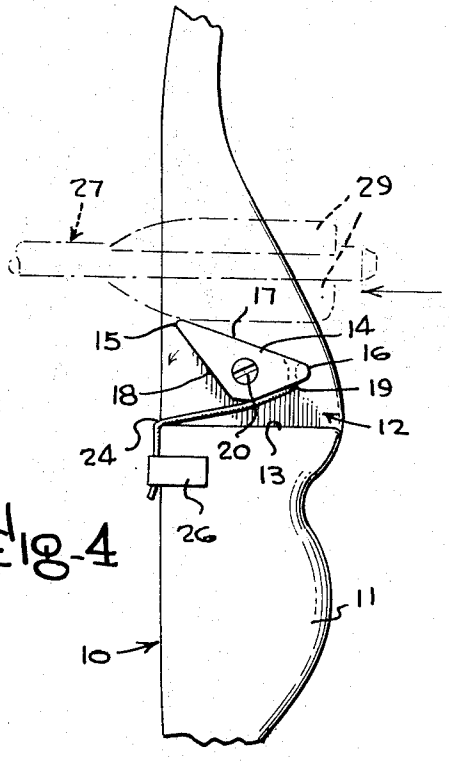
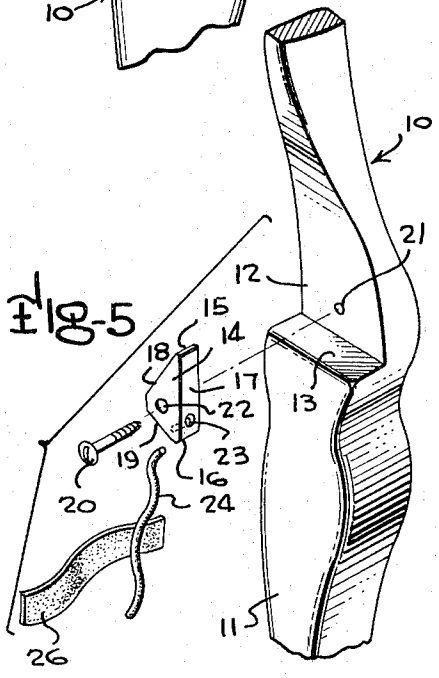


Fig-5



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United States Patent Office 3,372,686 Patented Mar. 12, 1968

3,372,686

ARCHERY BOW HANDLE WITH RESILIENTLY BIASED ARROW REST

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Filed Sept. 30, 1965, Ser. No. 491,743
3 Claims. (Cl. 124—24)

This invention relates to archery equipment, and in particular to an archery arrow rest.

The object of the present invention is to provide an archery arrow rest wherein an arrow can be propelled toward a target with increased accuracy and with a minimum amount of interference to the flight of the arrow.

A further object is to provide an archery arrow to be propelled with increased accuracy, and in addition the present invention will help reduce the wear on the arrow feather which comes in contact with the rest by yielding to this additional force, and wherein the rest of the present invention will help correct or compensate for the distorted flight of the arrow caused by the undesirable condition known as nock pinch.

Still another object is to provide an archery arrow rest that can be mounted on either side of a bow handle to accommodate either right or left hand archers, and wherein the rest can be made of any suitable material, such as plastic, metal, wood or the like, the device of the present invention being simple in design and easy to maintain, and wherein the present invention is not adversely affected by moisture or other climatic conditions as with machine made parts, and wherein the rest of the present invention does not yield to the slightest forward movement of the arrow to thereby cause the arrow to obtain a downward angle before it is free of the string and forward of the bow handle.

A still further object of the present invention is to provide an archery arrow rest that is rugged in structure and foolproof in operation and which is economical to manufacture and efficient in use.

These and other objects of the invention will become apparent from a reading of the following specification and claims, together with the accompanying drawings wherein like parts are referred to and indicated by like reference characters and wherein:

FIG. 1 is a fragmentary side elevational view illustrating the archery arrow rest of the present invention.

FIG. 2 is a fragmentary elevational view taken at right angles to the view shown in FIG. 1.

FIG. 3 is a sectional view taken on the line 3—3 of FIG. 1.

FIG. 4 is a view generally similar to FIG. 1 but showing the movement of the rest upon contact by the feather.

FIG. 5 is a fragmentary view showing the parts in disassembled relation for clarity of illustration.

Referring in detail to the drawings, the numeral **10** indicates a portion of a conventional bow that includes the usual handle **11** which is provided with a cutout window section **12** as well as a permanent arrow shelf **13**, FIG. 1.

The archery arrow rest of the present invention is indicated generally by the numeral **14** and as shown in the drawings the rest **14** has a generally triangular shape and includes upper and lower tapered ends or edges **15** and **16**, and the rest **14** is arranged in the cutout window section **12**. The rest **14** further includes a generally straight surface **17** as well as angularly arranged inclined surfaces **18** and **19**.

The numeral **22** indicates an aperture which is arranged in the rest **14**, FIG. 5, and the aperture **22** is arranged off center in the rest. The numeral **20** indicates a securing element such as a screw which is adapted to extend through the aperture **22**, and the screw **20** is adapted to engage a suitable aperture or opening **21** in the end of

the handle **11**. The screw **20** functions as a pivot mounting for the rest **14**.

There is provided in the lower portion of the rest **14** a generally horizontally disposed opening **23**, and the numeral **24** includes a resilient or rubber band which extends through the opening **23**, and a knot **25** is adapted to be formed or tied at the end of the band **24** as shown in FIG. 1. The numeral **26** indicates a retaining member which may be a small piece of masking tape that is adapted to be used for fastening the other end portion of the band **25** to the bow handle **11**, as shown in FIGS. 1 and 4.

In the drawings the numeral **27** illustrates in broken lines in FIGS. 1 and 4 a portion of a conventional arrow that has the usual end portion **28** as well as the feathers **29**.

From the foregoing, it will be seen that there has been provided an archery arrow rest, and in use, with the parts arranged as shown in the drawings, it will be seen that the rest **14** is adapted to be arranged in the cutout window section **12** of the handle **11**, and the screw member **20** extends through the off center opening **22** to engage with the opening **21** to provide a pivot mounting for the rest **14**, for a purpose to be later described. The yieldable resilient band **24** has a portion thereof extending through the opening **23** of the rest **14**, and the band **24** may be affixed in its proper location in any suitable manner. Thus, the knot **25** may be arranged in one end of the band **24** to prevent the band **24** from coming out of the proper position in the rest **14**. The other end of the band **24** may be anchored in place to the bow handle **11** in any suitable manner, as for example by means of a piece of tape **26**.

It is to be noted that with the parts arranged as shown in FIG. 1 for example, the arrow **27** engages the top edge portion **15** of the rest **14**, and the lower edge or end portion **16** engages the permanent arrow shelf **13**. When the rest **14** pivots or moves in a position such as that shown in FIG. 1 to a position such as that shown in FIG. 4, the end **16** moves out of engagement with the shelf **13**. The spring member or rubber band **24** serves to exert a proper pressure or tension on the rest so that it will function in the desired manner. Some of the desired aspects or features of the present invention are as follows: The rest can be mounted on either side of the bow handle to accommodate either the right or left hand archers. The device can be made of plastic, metal, wood or any other suitable material. The device has a simple design, and it is characterized by a simplicity of action and maintenance. The action of the rest is not affected by moisture or other adverse climatic conditions, as is the case with machined metal parts.

Also, some archers desire to mount the rest higher on the bow handle and this can be done with the rest of the present invention by cementing a small block of wood to the side of the bow, under and in contact with the bottom right side of the rest. This acts as a stop for the rest. The block is adapted to be supplied with each rest. Also, the rest of the present invention will lend assistance to the true flight of the arrow regardless of the number of feathers used on the arrow, whether there are three feathers, four, six or eight, which are sometimes used by archers.

In addition, light weight aluminum target arrows or heavy wood hunting arrows may be used with equal accuracy supplied to the arrows by the rest. Furthermore, less tension is applied to the rubber bands and for light aluminum arrows, and more tension is applied to heavy hunting arrows. This permits minimum resistance to the arrow by the rest. This is to be contrasted with the employment of springs where the resistance is constant and fixed for all types and weights of arrows.

The important point or aspect to be stressed in con-

nection with the present invention is that the rest does not yield to the slightest forward movement of the arrow to thereby cause the arrow to obtain a downward angle before it is free of the string and forward of the bow handle. The feathers coming in contact with the rest will cause it to move out of the way of the protruding feathers, and this permits the arrow to maintain a parallel flight rather than cause the end of the arrow to be deflected upward, as is the action caused by the fixed type rest.

Also, the shape of the rest can be changed or altered without altering the action or function of the rest.

With further reference to the present invention, it is the desire of an archer, using mechanical or human means, to propel an arrow from a modern version of the long bow from the bow string to the target, with as little interference to the arrow's flight as possible. The arrow rest is attached to the window section of the bow handle by various means. They are of two types, the stationary or fixed type, and the disappearing shelf type. The fixed or stationary type arrow rest causes deflection of the arrow when the feathered end, such as the feathered end 29 of an arrow 27 comes in contact with the arrow rest, causing the feathered end of the arrow to be deflected outwardly and upwardly.

Also, with the disappearing shelf arrow rest, the arm supporting the arrow at full draw of the bow is removed from supporting the arrow at the first forward movement of the arrow. This permits the forward or point end 28 of the arrow 27 to assume a downward angle to thereby deflect it from its previous position to release the horizontal plane.

The arrow rest of the present invention will overcome these disadvantages by remaining stationary and yielding at the proper time of arrow passage across the rest. The arrow rest is composed of a piece of suitable material such as a cam shape plastic material and in addition it is adapted to utilize a small screw such as the screw 20 in conjunction with a small rubber band 24. Wood or metal can be used in place of the plastic for making the rest 14.

As shown in the drawings, the arrow rest 14 is mounted on the cutout window section of the bow handle 11 by the small screw which is inserted in a small hole 22 that is drilled off center in the rest. The screw 20 is not seated tightly so as to permit the rest 14 to pivot forwardly and downwardly. When mounting the rest 14 on the bow, the bottom right portion 16 is placed in contact with the permanent shelf 13, as shown in FIG. 1, and this permanent shelf is found on all bows. A small hole 23 is adapted to be drilled or formed horizontally through the bottom portion of the rest 14 to receive the small rubber band or resilient strip 24. The resilient strip or band 24 is adapted to have a knot 25 to prevent the band from coming out of the hole 23, and this knot may be tied in the band. The free end of the band 24 is pulled to the left with just enough tension to keep the rest in an upright position as shown in FIG. 1. The loose end of the rubber band 24 is then fastened to the back of the bow handle 11 in any suitable manner, as for example by means of a piece of masking tape 26. As a result of the radius or configuration of the rest 14 including the position of the edge 15, at no time during the pivotal movement of the rest 14 does it exceed its height obtained in its normal inactive position.

The friction of the passage of the arrow 27 across the top of the rest 14 has not caused the rest to move, as shown in FIG. 1, due to the tension exerted by the rubber band 24 which is applied to the bottom of the rest.

It is to be noted that in normal shooting position, the arrow 27 engages the top of the rest 14 as shown in FIG. 1. As the bow string is released, the arrow 27 moves forward across the rest. When the feathers 29 on the arrow shaft come in contact with the rest 14, these feathers cause the rest 14 to pivot forwardly and downwardly as shown in FIG. 4.

The arrow rest of the present invention will reduce the wear on the feathers in contact with the rest by yielding to this extra force.

In addition, the rest of the present invention will help to correct distorted flight of an arrow caused by the undesirable condition known as nock pinch, that is, too much presure applied to the bow string by the top finger which comes in contact with the arrow knock. The rest helps correct this condition by not yielding to the downward pressure on the arrow and it yields only to the forward motion of the arrow. The amount of yielding can be adjusted by adding or subtracting tension to the rubber band. In the event that it is desired to mount the rest higher on the bow handle than the height of the rest above the permanent arrow shelf 13 will permit, a small block of wood which may be cemented to the bow under the bottom right portion of the rest which takes the place of the permanent arrow shelf and acts as a stop to prevent the bottom of the rest from moving forward.

It will now be clear that there is provided a device which accomplishes the objectives heretofore set forth. While the invention has been disclosed in its preferred form, it is to be understood that the specific embodiment thereof as described and illustrated herein is not to be considered in a limited sense as there may be other forms or modifications of the invention which should also be construed to come within the scope of the appended claims.

I claim:

1. In an archery arrow rest, a bow handle having a permanent arrow shelf and a cutout window section, said rest being arranged in the cutout window section of the bow handle, said rest having a generally triangular formation and including upper and lower tapered edges, said rest further including a straight surface, and angularly arranged inclined surfaces, there being an aperture in said rest, and said aperture being arranged off center in the rest, a securing element extending through said aperture and into engagement with said bow handle to provide a pivot mounting for the rest, the lower portion of said rest having a horizontally disposed opening therein, a resilient member having a portion thereof extending through said opening and being affixed to the rest adjacent the straight surface thereof, and a retaining member for securing the other end portion of said resilient member to said bow handle.

2. The structure as defined in claim 1, wherein the upper end of said rest is adapted to have an arrow arranged in engagement therewith, and whereby as the bow string is released, the arrow moves forward across the rest, and when the feathers of the arrow come in contact with the rest they cause the rest to pivot forwardly and downwardly.

3. The structure as defined in claim 1, wherein the upper end of said rest is adapted to have an arrow arranged in engagement therewith, and whereby as the bow string is released, the arrow moves forward across the rest, and when the feathers of the arrow come in contact with the rest they cause the rest to pivot forwardly and downwardly, the friction of the arrow passing over and across the top of the rest being prevented from causing the rest to move due to the tension of the resilient member applied to the bottom of the rest.

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