Jan. 7, 1964

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3,116,730

QUIVER ASSEMBLY FOR BOW ATTACHMENT

Filed June 12, 1961

Fig. 1

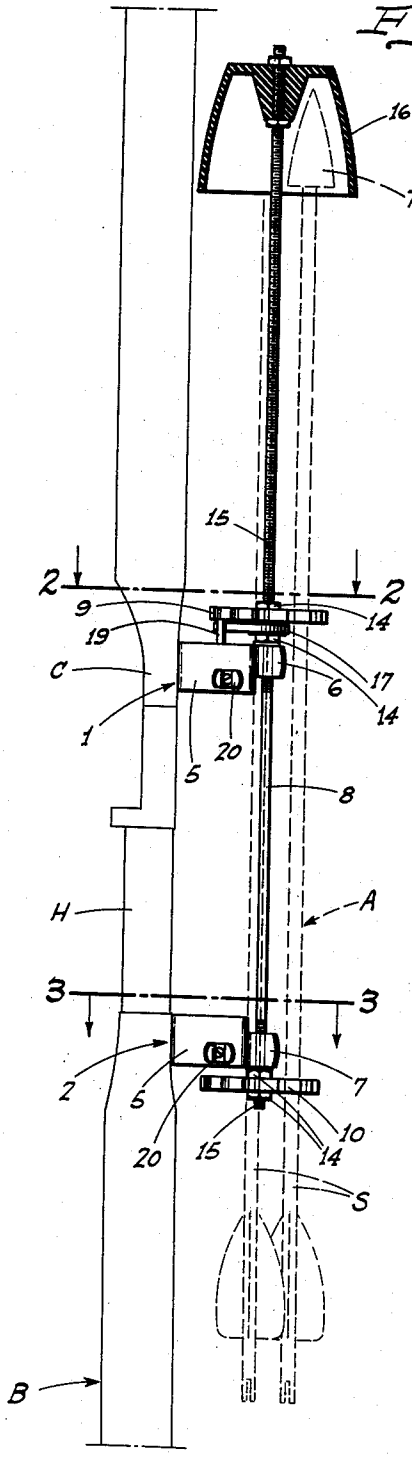


Fig. 2

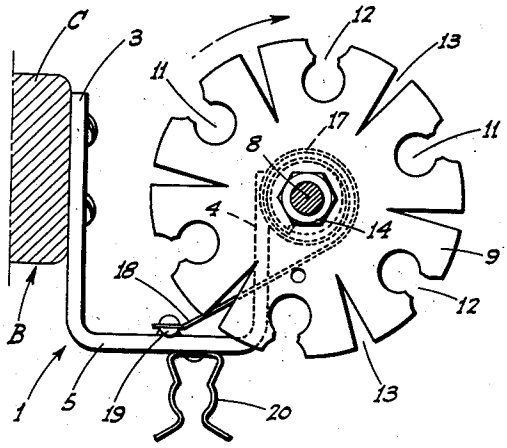
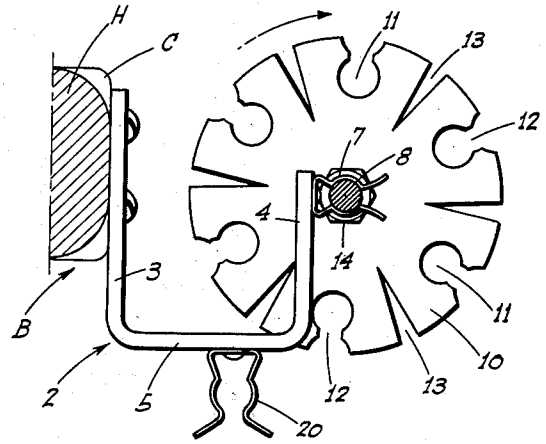


Fig. 3



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3,116,730

Patented Jan. 7, 1964

3,116,730

QUIVER ASSEMBLY FOR BOW ATTACHMENT

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Filed June 12, 1961, Ser. No. 116,604

6 Claims. (Cl. 124—24)

This invention relates to archery equipment, and particularly to a quiver for a supply of arrows.

A major object of my invention is to provide a quiver arranged to be mounted on or supported by the bow with which the arrows are to be used.

Another object of the invention is to provide a quiver; brackets separate from the quiver adapted to be mounted on the bow on one side thereof; and cooperating elements on the quiver and brackets removably supporting the quiver from the brackets so that a quiver when empty can be easily and quickly replaced by a full quiver.

A further object of the invention is to provide a quiver so constructed that the varrious arrows are frictionally but releasably held and maintained in spaced relationship so that each arrow may be readily withdrawn from the quiver without disturbing the remainder.

The quiver comprises essentially a central vertical spindle turnably mounted in the brackets, and arrowshaft retaining members on the spindle arranged to hold a plurality of arrows in a circular row about and concentric with the spindle. In connection with these features of construction, it is another and important object of the invention to provide means, mounted in connection with the quiver and brackets, arranged so that an arrow to be withdrawn from the quiver will be disposed in a position most convenient to the archer, and when such arrow is so withdrawn the quiver will be immediately and automatically rotated so that the next arrow is then disposed in said convenient position, and so on until the quiver is empty.

An additional object of the invention is to provide a quiver assembly for bow attachment which is designed for ease and economy of manufacture.

It is also an object of the invention to provide a practical and reliable quiver assembly for bow attachment, and one which will be exceedingly effective for the purpose for which it is designed.

These objects are accomplished by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claims.

In the drawings:

FIG. 1 is a fragmentary rear outline of an archery bow, showing my improved quiver mounted thereon.

FIG. 2 is an enlarged cross section on line 2—2 of FIG. 1.

FIG. 3 is a similar view on line 3—3 of FIG. 1.

Referring now more particularly to the drawings, and to the characters of reference marked thereon, the improved quiver comprises separate upper and lower brackets 1 and 2, respectively, both of which being preferably U-shaped form in plan. Each bracket thus includes spaced legs 3 and 4 connected at one end by a cross arm 5.

The legs 3 of the brackets are abutted against and suitably secured to the right-side face of the central and substantially inflexible portion C of the bow B at suitable points above and below the handle H of the bow; the brackets being disposed so that the cross arms 5 face rearwardly of the bow B or in the direction of the archer holding such bow.

Swivelly mounted on the legs 4 of the upper and lower brackets on the laterally outer faces of such legs are bearing members 6 and 7, respectively, for a vertical spindle 8 which is part of the quiver and is turnable in said members 6 and 7; the latter being axially alined and of conventional spring-clip form, as shown in FIG. 3, so

that the spindle 8 may be pulled laterally therefrom and out of supported and bearing engagement therewith.

Mounted on the spindle 8 above and below but adjacent the bearing members 6 and 7 are spider discs 9 and 10, respectively, of identical form. Each disc is made of flexible rubber or similar material, and is formed with a circumferential row of evenly spaced openings 11, each of a size to snugly engage about and grip the shaft S of a conventional arrow A.

A passage 12, restricted at each opening 11, leads radially of the disc to such opening from the periphery of the disc so that the arrow may be inserted into or withdrawn from the opening by lateral pressure on the arrow which distorts and temporarily widens the passage 12. Ready widening of any passage is aided by reason of radial V-slits 13 cut in the disc between adjacent openings and passages. Each opening and passage therefore forms a spring clip in effect.

The discs 9 and 10 are non-turnably secured on the spindle 8, so that the various openings 11 in the discs are in axial alinement, by means of clamping nuts 14 on the spindle above and below each disc; the adjacent portions of the spindle being threaded, as indicated at 15.

A hood 16, preferably of rubber or the like, is mounted on the upper end of the spindle 8 some distance above the upper disc 9. This hood is of a size such as to receive and shield the metal tips T of the various arrows held by the spider discs, so that neither the tips can be damaged, nor can the archer be possibly injured by inadvertent contact with said tips while manipulating the bow with the quiver thereon, or the filled quiver alone.

The quiver therefore comprises the spindle 8, the two arrow-holding discs 9 and 10, and the hood 16. It should be noted that the spindle bearing members 6 and 7 are preferably in the form of spring clips, as shown, opening away from and at right angles to the bracket legs 4.

By reason of this mounting of the quiver it may be detached from its connection with the bow whenever desired by merely pulling the spindle away from the bearing members. By reason of this fact, another already loaded quiver may be instantly mounted on the bow, and said other quiver may—if desired—have arrow-holding discs arranged to support arrows of a different size from those used in the quiver initially mounted.

The swivel mounting of the bearings 6 and 7 on the respective brackets enables said bearings to accommodate themselves to any possible bending of the central portion of the bow and remain in the necessary vertical spindle-engaging alinement.

It is desirable that an arrow in the quiver shall always be disposed where most convenient for engagement by the archer, or in other words in direct rearwardly facing position.

I have therefore provided means to automatically rotate the quiver in one direction, upon removal of such rearwardly facing arrow, so as to dispose each arrow in turn in such convenient position.

To this end I provide a spiral spring 17 about the spindle 8 between the upper disc 9 and the adjacent bracket 1 and bearing member 6. At its small end the spring is fixed in connection with said disc, and at its outer end the spring is formed with an elongated, generally straight portion 18 which detachably engages a stop 19 fixed on and upstanding from the arm 5 of bracket 1.

The spring is arranged so that when unwinding it tends to rotate the disc 9, and hence the quiver as a whole, in a clockwise direction, as indicated by the arrow in FIG. 2. The length of the bracket leg 4 is such relative to the radius of the circle of the arrow-shaft openings 11 in the disc 9 that a quiver-mounted arrow, when facing directly to the rear, will be engaged by said leg 4 as a stop; thus

preventing unwinding of the spring 17 and the resultant rotation of the disc 9.

Since the arrow holding discs 9 and 10 are both the same size, as are the brackets 1 and 2, and the openings 11 in the discs are alined, such arrow will also engage the arm 4 of the lower bracket 2.

When one arrow is pulled from the quiver, the same will immediately rotate of itself until the next arrow engages the brackets, and so on until the quiver is empty. When a fresh quiver is installed the spring 17 is of course wound up before the arrows are inserted and the installation is made; the projecting portion 18 of the spring being engaged with the stop 19 as the spindle 8 is alined with and pressed into the bearing clips 6 and 7 by the archer.

If desired, a pair of holding clips 20 for the shaft of an extra arrow may be mounted in vertically alined relation on the rear surface of cross arms 5 of the brackets 1 and 2; such extra arrow being possibly of a different size or type from those mounted in the quiver, as may be desirable for certain purposes.

From the foregoing description it will be readily seen that there has been produced such a device as will substantially fulfill the objects of the invention, as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations therefrom may be resorted to as do not form a departure from the spirit of the invention as defined by the appended claims.

Having thus described the invention the following is claimed as new and useful, and upon which Letters Patent are desired:

1. A quiver assembly for an archery bow comprising, with a pair of brackets mounted on a bow in laterally projecting and vertically spaced relation with the handle portion of the bow therebetween, a vertical spindle, bearing elements on the brackets turnably supporting the spindle intermediate its ends laterally out from the brackets, and a pair of discs of elastic material fixed on the spindle in vertically spaced relation, each disc being formed with a plurality of arrow-shaft gripping clips arranged in a row about and concentric with the spindle; each clip opening to the periphery of the disc and the clips in the two discs being vertically alined and each disc being formed with radially deep V-shaped slits between adjacent clips, said slits opening to the periphery of the disc.

2. A quiver assembly for an archery bow comprising a pair of brackets each including a portion to flatly engage and be secured to the bow above and below the handle thereof, and another portion disposed outwardly from the first named portion, a vertical spindle, bearing elements on the brackets turnably and removably supporting the spindle intermediate its ends laterally out from the brackets, a pair of discs fixed on the spindle in vertically spaced relation, each disc being formed with a plurality of arrow-shaft gripping clips arranged in a row about the spindle, one of the discs being immediately adjacent one of the brackets, a spring operatively connected to a disc and a bracket tending to rotate the spindle and discs as a unit in one direction, and stop means formed with said one bracket engageable with an adjacent quiver-mounted arrow to prevent such rotation.

3. A quiver assembly for an archery bow comprising, with a pair of brackets mounted on a bow in laterally projecting and vertically spaced relation with the handle portion of the bow therebetween, a vertical spindle, bearing elements on the brackets turnably supporting the spindle intermediate its ends laterally out from the brackets, means rigid with the spindle to removably and frictionally hold a row of arrow shafts in surrounding relation to the spindle and parallel thereto and arranged to allow any arrow to be removed upon the application of pressure in a radially outward direction, and means swivelly mounting the bearings on the brackets.

4. A quiver assembly for an archery bow comprising, with a pair of brackets fixed on the bow above and below the handle portion thereof, upper and lower arrow-shaft locating and supporting members, a circular spindle connecting the members in rigid relation, and bearing members on the brackets removably and turnably supporting the spindle at spaced points in its length.

5. An assembly, as in claim 4, in which the bearings are of spring-clip form whereby the spindle may be moved laterally into or out of supported engagement with the bearings.

6. A quiver assembly for an archery bow comprising, with a pair of brackets fixed on the bow above and below the handle portion thereof, upper and lower arrow-shaft locating and supporting members, a circular spindle connecting the members in rigid relation, and bearing members on the brackets removably and turnably supporting the spindle at spaced points in its length; the brackets being disposed between said arrow-shaft supporting members and each bracket including a leg on which one of the spindle bearing members is mounted, said leg being disposed in a plane at right angles to the spindle and projecting into the path of the arrow-shafts as the spindle and arrow supporting members rotate.

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