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F. B. BEAR

3,415,241

HANDGRIP ADAPTER FOR ARCHERY BOW

Filed May 28, 1965

FIG. 1.

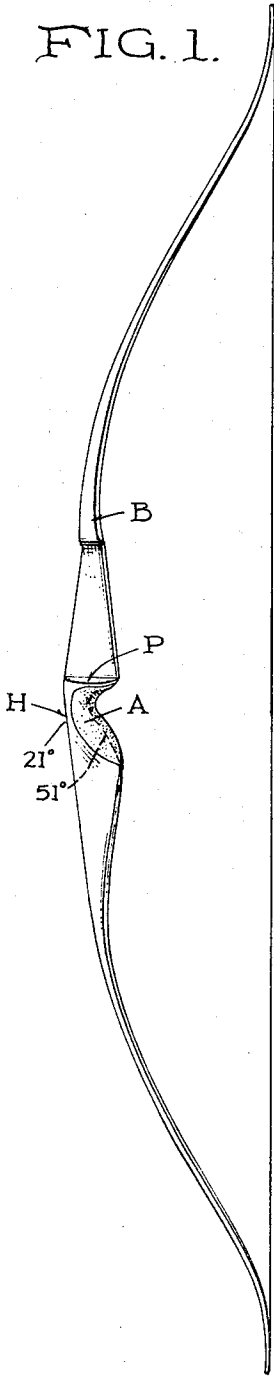


FIG. 6.

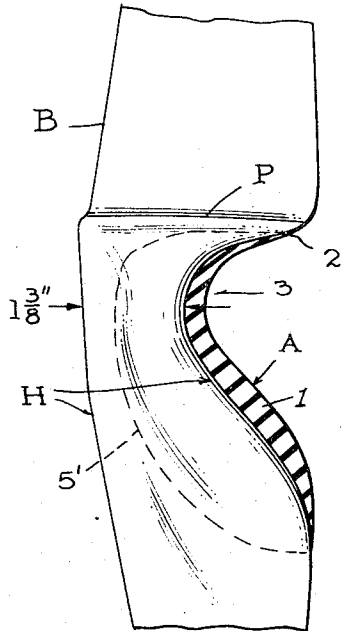


FIG. 2.

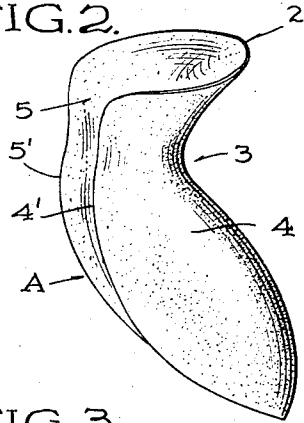


FIG. 3.

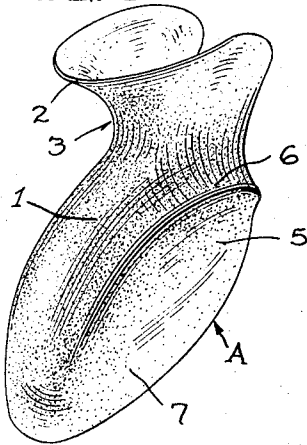


FIG. 4. FIG. 5.

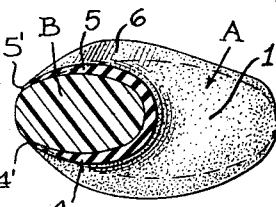
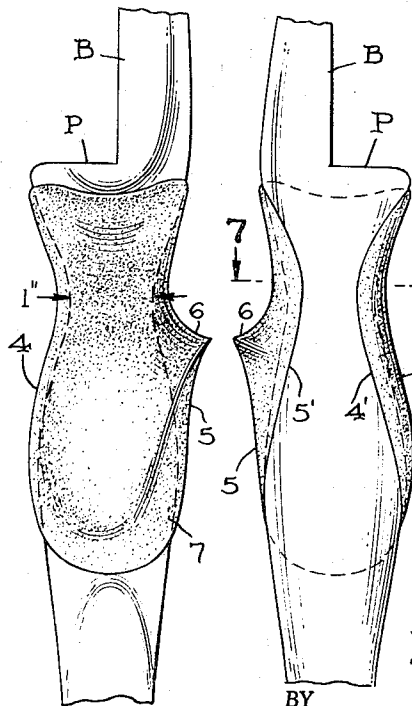


FIG. 7.

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HANDGRIP ADAPTER FOR ARCHERY BOW

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1 Claim. (Cl. 124-24)

ABSTRACT OF THE DISCLOSURE

A handgrip member adapted to be snap-fitted upon the handle section of an archery bow and including, a body of resilient material provided with a central cavity undersized with respect to the handle section to permit ready attachment and removal therefrom.

This invention relates to archery accessories, and more particularly to means for selectively providing a range of comfortable, custom-fit handgrips for bows having handle sections of varying designs. One form of handle section in common use has the back and face sides of the section disposed in a substantially vertical plane and parallel to each other. Another form of handle section is commonly referred to as a pistol grip type where both the back and face sides are inclined from the vertical within a range of approximately 20° to 60°. The shape of the handle section herein illustrated and described by way of example, lies between the handle shapes just referred to.

One of the objects of the invention is to provide the bow with which the handgrip is to be used, with minimum dimensional characteristics in the handle area at the time the bow is manufactured so that by the application of a selected handgrip adapter of a predetermined thickness, the individual archer's particular sized hand may be properly accommodated. In other words, with the handle section of the bow produced in a small, but uniform and dimensionally stable shape, then by the utilization of a handgrip adapter having a selected thickness, not only can an archer having an extremely small sized grip be accommodated, but if the archer has a very large hand, then a selected handgrip adapter of appropriate thickness would be used in order to build up the grip portion of the bow to the proper size.

Another object is to provide a saddle shaped handgrip made of a fairly firm type of plastic, or other suitable material such as rubber which may be retained upon the bow section merely by its inherent resiliency and particular molded shape through providing a snap-on type of fit. In this manner, various archers may utilize the same bow by merely exchanging and attaching their own custom-sized handgrip adapter. Alternatively, the handgrip may be secured to the handle section by adhesives or other appropriate means if desired according to the individual's preference.

Also, due to the nature of the material from which the handgrip adapter is made, an individual archer may, if he desires, further customize any one of a wide selection of shapes and sizes of handgrips by carving, grinding, or filling the grip to suit his own particular need.

With the above and other objects in view, the invention consists in the novel combination and arrangement of parts hereinafter more fully described, illustrated, and claimed.

A preferred and practical embodiment of the invention is shown in the accompanying drawing, in which:

FIG. 1 is a side elevation of the improved bow, showing in dotted lines a pre-formed handle section which in itself constitutes the minimum size grip, with the adapter in place.

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FIG. 2 is a perspective view of the adapter as it appears from one side.

FIG. 3 is a perspective view of the adapter shown in FIG. 2, taken from the opposite side.

5 FIG. 4 is a rear elevation of a portion of the bow and adapter, as it would appear to the archer.

FIG. 5 is a front elevation of the adapter illustrating the constricted gripping throat whose flexible feathered edge portions assist in holding the adapter on the bow.

10 FIG. 6 is a detail enlarged portion of the handle section of the bow with the medial portion of the adapter shown in section.

FIG. 7 is a cross-section taken on the line 7-7 of FIG. 5.

15 Similar reference characters designate corresponding parts throughout the several figures of the drawing.

Referring first to FIG. 1, the complete bow B is shown as having a permanent minimum basic size handle section H with the face of the handle section shown in dotted lines with the present adapter A applied thereto. Typical dimensions of a handle section made in a minimum size would be approximately 1 3/8 inches from the back to the face of the handle section as indicated by arrows in FIG. 6, and approximately 1 inch from side to side as indicated by arrows in FIG. 4. The handle section H without the adapter may be suitable for use by some archers with small hands, but the average archer would use an approximately sized and shaped adapter.

20 For example, as shown, the contour of the handle, using the arrow rest platform P as a horizontal line, has an outer finger gripping face disposed at approximately 21° thereto and an inner face disposed at approximately 51° to said platform, thereby to provide a socket-like hand hold which will comfortably receive the palm of the hand and fingers.

25 The adapter A is of generally saddle shaped formation, conveniently arranged for snapping on and off the bow at the location of the permanent grip area, thus rendering the accessory a solitary article of personal possession to fit the similarly shaped hand grip portion of more than one bow if it is desired to be used in this manner. As previously mentioned, the adapter may be permanently secured to the bow by means of adhesive if the archer so desires. The particular shape of the adapter is equally important for this mode of use since it snugly fits the contour of the handle section as well as the archer's hand.

30 As shown in FIGS. 2 and 3, the adapter A includes a body which is preferably thicker in the mid-wall portion 1 as shown in FIGS. 6 and 7 than at its opposite ends and side edges. One end, namely the top, is in the general form of a collar or horn 2 which forms a non-slip cavity 3 to receive the forefinger and thumb of the user's hand.

35 The flanges or side walls 4 and 5 feather off from the relatively thick mid-wall portion 1 of the body and their outer edges 4' and 5' taper inwardly to provide a mouth or space therebetween of less width than the width of the related portion of the handle section to thus ensure that the adapter snugly embraces the handgrip area H, as shown to advantage in FIGS. 5, 6 and 7.

40 The contour of the inner surface of the adapter conforms to the shape of the handle to which it is attached, and the thickness of the mid-wall portion 1 of the body is formed on a longitudinally symmetrical compound curve and feathers off at its upper and lower extremities so as to comfortably fit the palm of the archer's hand. However, the side wall 5 which is adjacent to the intended user's thumb, is not longitudinally symmetrical in thickness to the extent that it has an offset shoulder portion 6 adjoining the relatively flat outer face 7. The purpose of

this arrangement is to provide a convenient and comfortable gripping surface for the thumb and fingers of the archer's hand, and, in particular, the shoulder 6 provides a support for the user's thumb and, together with the outwardly flared horn 2 provides a stop or abutment to prevent the archer's hand from slipping upwardly and downwardly when his grip is tightened. In the embodiment illustrated in the drawings, the bow and adapter are for use by a right-handed archer; however, it is understood that the invention is equally applicable to either right or left-handed bows by a lateral reversal of the construction thereof.

It will thus be seen that the present adapter is not only useful as a personalized handgrip, but also because the thumb and forefinger and the crotch therebetween fit easily and snugly in the cavity 3, while the remaining digits grip the surfaces of the side walls 4 and 5, whereby a firm and sure grip is ensured for the archer to steady the bow and enhance the aim of the arrow at the target.

Another advantage which may be obtained by making the adapter of a rubber or plastic material is that it provides a cushioning effect for the archer's hand and by forming the surface thereof so that it is slightly roughened, a non-slip effect is obtained which results in a more positive and steady grip.

Without departing from the spirit of the invention and the scope of the appended claims, the handgrip adapters of my invention may be of a molded size and shape to fit handle sections of bows of various designs and are not necessarily restricted to the size and shape of the adapter illustrated in the drawing which shows a preferred embodiment thereof. For example, the interior contour of the adapter may be so proportioned as to fit a handle section whose back and face areas are substantially parallel and are disposed in a vertical plane relative to the bow string while the outer hand gripping portion may take the shape illustrated in the drawings.

I claim:

1. In combination with an archery bow provided with an undersized handle section comprising front and side walls of compound curvature and including an undercut portion at the top thereof on the front of said bow, a handgrip adapter comprising, an integral body of resilient material substantially C-shaped in section to provide a bow handle engaging cavity of lesser transverse dimension than the corresponding dimension of said bow handle section, said body including a mid-wall portion and a pair of spaced apart side walls, the top of said mid-wall portion and said side walls flared outwardly to provide a horn at the top of said body cavity, one of said side walls including a laterally projecting shoulder intermediate the top and bottom edges thereof, the thickness of the top and bottom edges of said mid-wall portion and the free edges of each of said side walls decreasing to a feather, whereby, said resilient adapter body may be snap-fitted about said bow handle section with said horn engaging said handle undercut portion, said side wall free edges tightly engaging the back of the bow handle section, and said feather edges providing a smooth transition between the curvature of said body and said handle section.

References Cited

UNITED STATES PATENTS

1,690,312	11/1928	Rosan	-----	273—81
2,842,113	7/1958	Roper	-----	124—24
3,136,063	6/1964	Stebbins	-----	124—23
3,161,189	12/1964	Chessman	-----	124—24
3,176,674	4/1965	Smith	-----	124—23

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U.S. Cl. X.R.

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