April 24, 1956 R. F. WILLIAMS 2,742,702

BOW SIGHT

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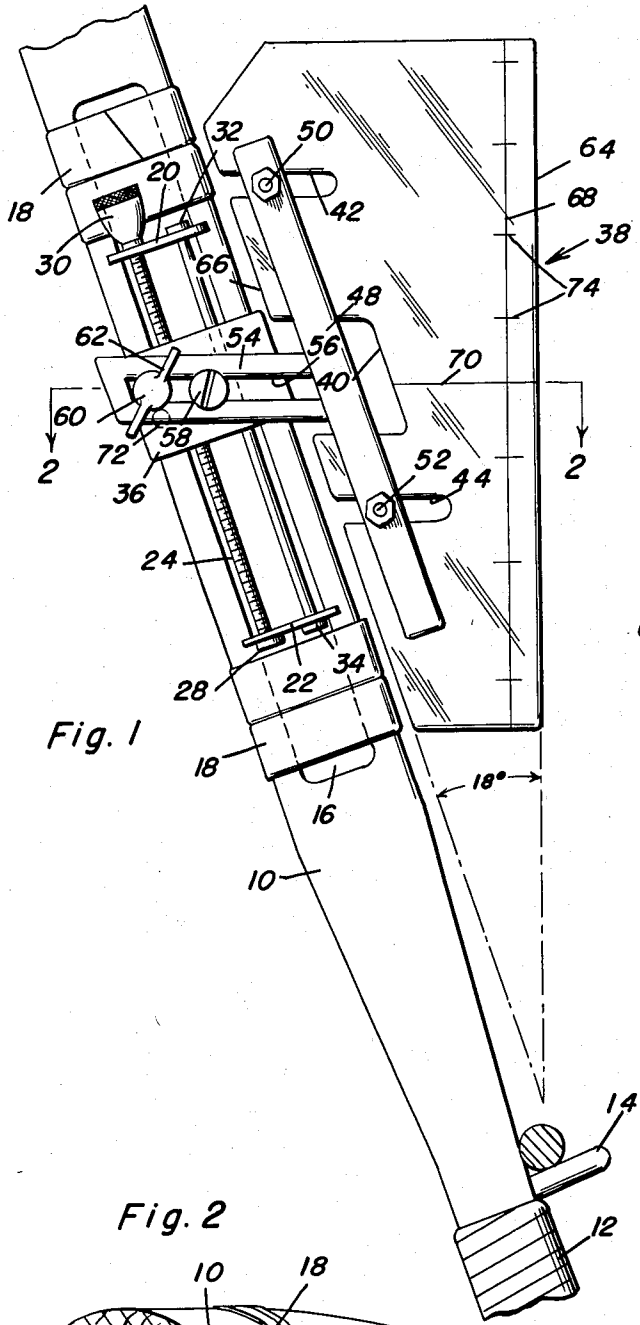



Fig. 1

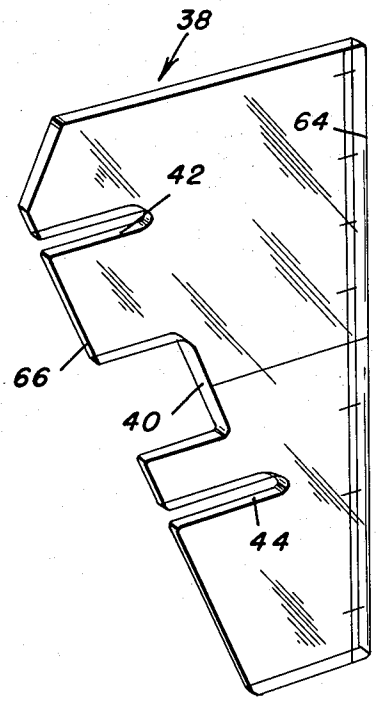



Fig. 3

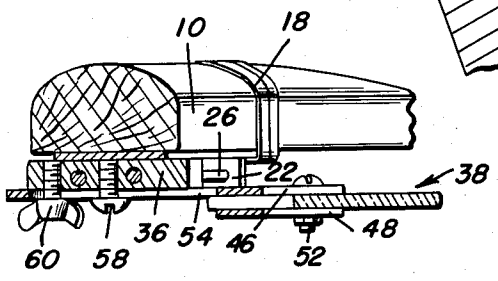



Fig. 2

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# BOW SIGHT

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2 Claims. (Cl. 33—46)

This invention relates generally to archery equipment, and pertains more particularly to an improved form of bow sight.

A primary object of this invention is to provide an improved form of bow sight which may be readily and quickly adjusted to suit the needs of the individual archer and which will, when once adjusted, for all practical purposes, obviate the necessity for further adjustment thereof.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a front elevational view showing a portion of a bow with the improved sight mounted thereon;

Figure 2 is a horizontal section taken substantially along the plane of section line 2—2 in Figure 1; and

Figure 3 is a perspective view of the sight window.

Referring now more particularly to the drawings, reference numeral **10** indicates an archery bow which is provided with the usual hand grip portion **12** and the arrow support member **14**. The improved bow sight consists essentially of an elongated mounting plate or strap **16** which has its opposite ends secured to the bow above the hand grip portion **12** by means of tape **18**, a clamp or any other suitable means. A pair of bracket ears **20** and **22** are secured to the mounting plate adjacent opposite ends thereof and extend laterally therefrom for the purpose of mounting the elevation adjusting screw **24** and the guide rod **26** thereon parallel relative to said mounting plate. In this respect, it will be noted that the adjusting screw has a headed end portion **28** bearing against the bracket ear **22** and has at its opposite end a knurled knob member **30** bearing against the bracket ear **20**. In this manner, the adjusting screw is journaled in the bracket ears and is held against longitudinal displacement. Similarly, the guide rod **26** is provided with enlarged headed end portions **32** and **34** at its opposite ends cooperating with the bracket ears so as to affix the guide rod with respect thereto.

An adjusting block **36** is mounted on the adjusting screw and the guide rod and for this purpose, it is to be noted that the block is provided with a pair of parallel bores, one of which is threaded for reception of the adjusting screw and the other of which is smooth for sliding engagement on the guide rod **26**. Therefore, manipulation of the knob **30** of the adjusting screw will effect movement of the mounting block **36** parallel with the mounting plate and bow between the bracket ears **20** and **22**, as desired.

The sight window is indicated generally by the reference character **38** and will be seen to consist of a plate of transparent material, such as clear plastic or the like, and it will be noted that this window is provided along one edge thereof with an enlarged notch **40** disposed substantially medially along that edge and a pair of slots **42** and **44** on opposite sides of the notch **40**. A pair of clamping plates **46** and **48** are disposed on opposite sides of the window and fasteners **50** and **52** cooperate therewith to urge the plates together to clamp the window therebetween, the purpose of this construction being presently apparent. The fasteners **50** and **52**, of course, extend through the slots **42** and **44**, respectively.



The plate **46** is provided with a lateral arm **54** having a longitudinally extending elongated slot **56** therein through which the fastening members **58** and **60** project. The fastening member **58** may be in the form of a screw threadedly engaged in the mounting block **36** and the fastener **60** is in the form of a screw also, but is provided with the wing portions **62** for ease in manipulation. The fastener **60** is also received within a tapped hole in the mounting block.

The outer edge **64** of the sight window is disposed at an angle of approximately 18° to the inner edge **66** thereof, and a vertical line **68** is scribed in the surface of the window in parallelism with the outer edge **64**, as will be readily apparent. A horizontal base line **70** is scribed in the surface of the plastic window and extends thereacross from the region of the notch **40**.

In operation, the block **36** is positioned substantially midway between the bracket ears **20** and **22**, and the unit is placed on the bow so that the horizontal line is approximately at the right elevation for the range chosen by the archer. This will be the 40 or 50 yard range, depending on the cast of the bow. The unit is then taped securely to the back of the bow by wrapping tape **18** around the opposite end portions of the mounting plate and the bow, and when thus securely mounted, the unit is then ready for proper adjustment to line and cant. The adjustments for line and cant are made simultaneously by loosening the fasteners **50** and **52** and sliding the sight window back and forth and at the same time, tilting it in the desired direction until the vertical line **68** is disposed vertically with the bow canted at the angle most natural to the user. This, in most cases, will be approximately 18° or thereabouts.

Since the slots **42** and **44** are of substantially greater width than the diameter of the fasteners **50** and **52**, quite a large degree in variation of tilt may be attained from the 18° setting to which the unit is built as positioned as shown in Figure 1. Since some archers hold the bow with substantially no cant at all, a further threaded or tapped hole **72** is provided in the mounting block **36** for reception of the fastener **60** so that the initial cant of the assembly is zero.

Further adjustment of the line **68** may be made by shifting the arm **54** back and forth with respect to the mounting block **36**, this being accomplished by loosening the fastening means **60**, the fastening means **58** being loosely engaged with the arm **54** at all times. Adjustment is correct when the vertical line **68** is vertical to and in line with the target. This feature assures the archer of a consistent cant.

It will be noted that the arm **54** is mounted on the fastener members **58**, **60** obliquely of the screw **24** and guide rod **26** so that the window **38** can be adjusted longitudinally relative to the bow **10** parallel therewith and horizontally with the bow **10** canted edgewise as shown in Figure 1.

The various short horizontal lines **74** are scribed on the sight window to correspond to any arbitrarily chosen increment of range, say, 10 yards. Since the cast of each bow is different, and further, since the weight and resistance of different arrows also vary, it is not intended to originally provide the short horizontal lines 74 inasmuch as they may be correctly positioned by the individual user by means of first marking the sight window and, by trial and error, determining the correct position for the various horizontal lines and then scribing them on the sight window.

Slight variations in elevation which will be required

when a bow string is changed or the weight of the arrows is changed may be made by manipulating the adjusting screw 24.

The provision of the vertical line 68 is an extremely important feature of this invention inasmuch as it enables an archer to align this line vertically to thus assure him of the proper cant at all times, which enables very accurate shooting.

From the foregoing, the construction and operation of the device will be readily understood, and further explanation is believed to be unnecessary. However, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the appended claims.

What is claimed as new is as follows:

1. An archery bow sight comprising an elongated mounting plate adapted to be attached to an archery bow above the handle portion thereof parallel therewith, a pair of laterally projecting bracket ears secured adjacent the opposite ends of said mounting plate, a threaded elevation adjusting screw extending between and journaled in said bracket ears parallel with said mounting plate, an elongated guide rod secured to said bracket ears and parallel to said screw, a carrier block, said block having an internally threaded bore receiving said screw and a second bore parallel thereto receiving said guide rod whereby said block is adjustable longitudinally of said mounting plate by said screw and parallel with said bow, a transparent sight window, an arm secured at one end to said window, said arm having an elongated slot therein, a pair of fastening members secured to said block and projecting through the slot in said arm and retaining the arm in oblique position relative to said screw and rod for adjustment of said window by said block parallel with said bow and horizontally by said arm when the bow is canted edgewise out of the vertical.



2. A bow sight comprising an elongated mounting plate adapted to be mounted on a bow above the handle portion thereof, a carrier block means mounting said plate for longitudinal movement on said block, a pair of fastening members secured to said block, an elongated arm having a longitudinal slot therein receiving said fastening members, a sheet of transparent material having opposite side edges disposed in acute angular relation, said sheet of material being notched at a point substantially medially of one edge and being provided with a pair of slots disposed on opposite sides of the notch, one end of said arm projecting into the notch in said sheet and having a clamping plate secured thereto extending generally parallel to said one edge of the sheet and overlying one face thereof, a second clamping plate overlying said sheet oppositely of the first clamping plate, a pair of fastening elements projecting through the slots in said sheet and urging said clamping plates together to frictionally hold the sheet, and the sheet having a vertical base line scribed therein parallel to and adjacent its other edge.

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