Dec. 5, 1967 G. B. GUYTON 3,355,809

SIGHTING DEVICE

Filed April 6, 1964 2 Sheets-Sheet 1

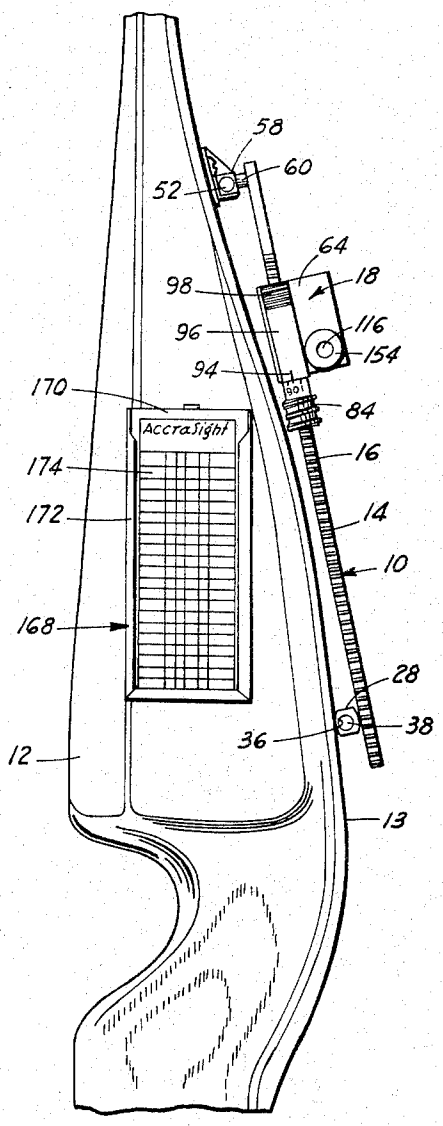


Fig. 1

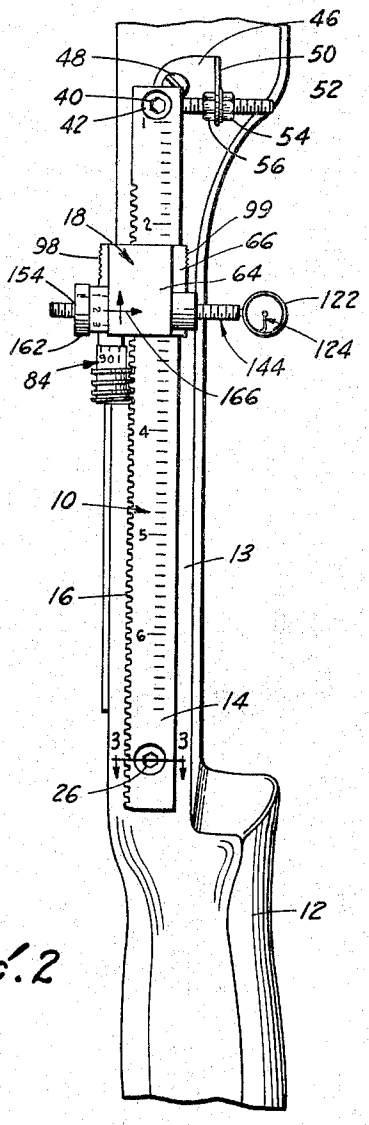


Fig. 2

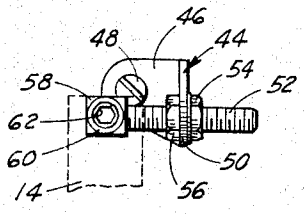


Fig. 4

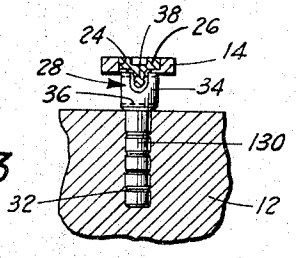


Fig. 3

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SIGHTING DEVICE

Filed April 6, 1964 2 Sheets-Sheet 2

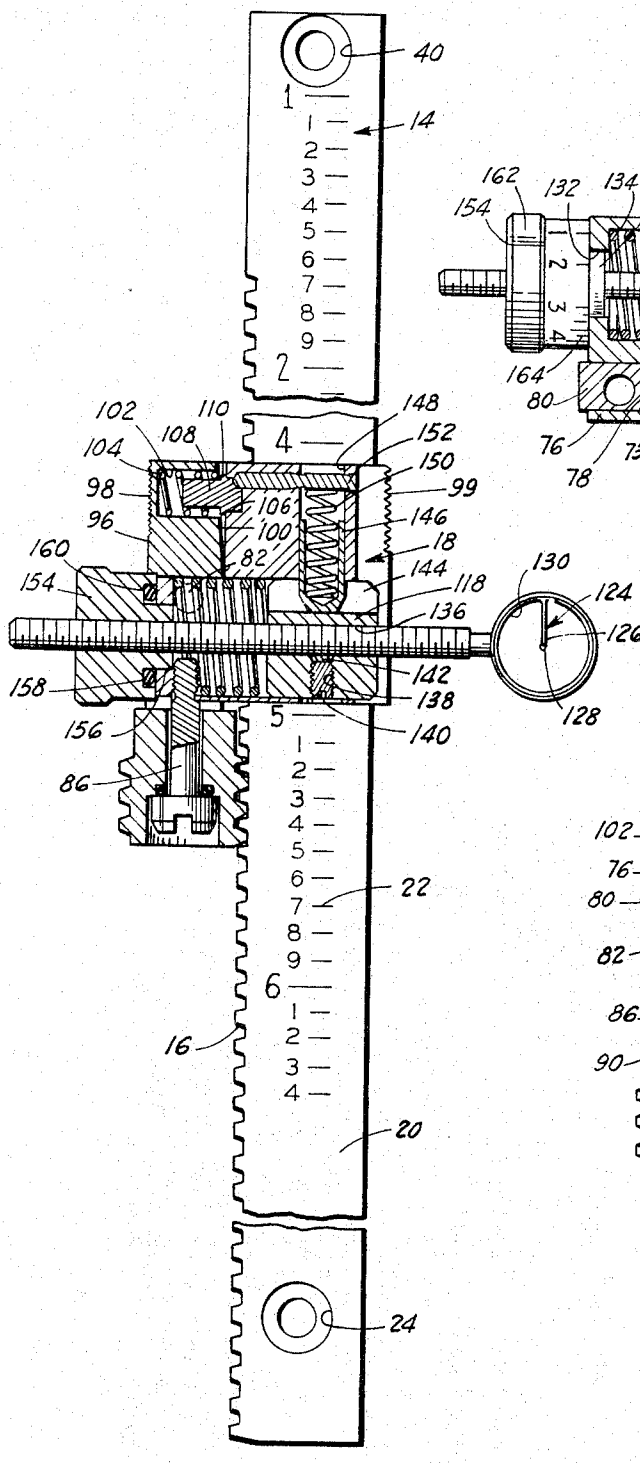


Fig. 5

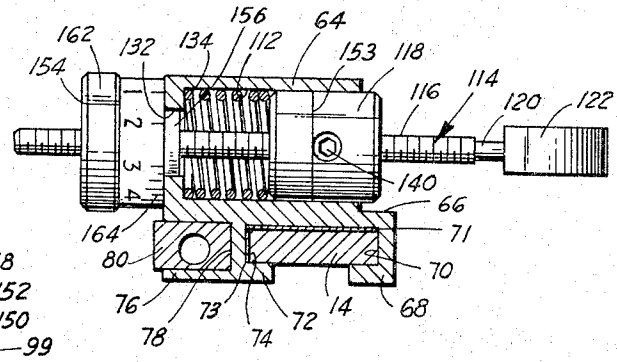


Fig. 6

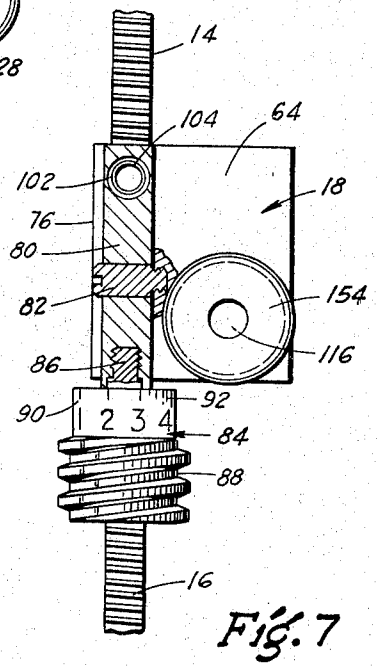


Fig. 7

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3,355,809

SIGHTING DEVICE

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4 Claims. (Cl. 33—46)

This invention relates to improvements in sighting devices and more particularly, but not by way of limitation, to a sighting device for utilization in archery for facilitating the accuracy of shooting with a bow and arrow.

There is an increasing interest today in archery as a sport and as a result, there have been increasing demands for bow and arrow structures having more accurate shooting qualities. Many devices have been developed for use in archery and in combination with a bow and arrow for improving the efficiency of operation. For example, many sighting devices have been designed for use with a bow in order to improve the accuracy of the shot or flight path of the arrow. The sighting devices commonly in use at the present time usually comprise a sighting member or element slidably mounted on the bow in such a manner as to be orientated thereon in accordance with the particular shooting requirements of the moment. It is the common practice to make a particular setting of the sighting element in accordance with the current shooting conditions and mark the setting on the bow or on a portion of the sighting device by manually drawing a pencil line thereon, using a portion of the sighting device as a guide. This process is followed with each separate setting for the sighting element as determined by the particular shooting conditions. When it is desired to return the sighting element to a previous setting, the respective pencil mark is relied upon for aligning or positioning of the sighting element to the earlier setting. It will be readily apparent that the pencil mark is subject to human error at the time of the original marking and, in addition, the return of the sighting element to the mark may not be extremely accurate due in part to the thickness of the pencil line itself.

In addition, the present day sighting devices usually provide means for adjusting the sighting member for windage. This windage adjustor usually provides for a very fine adjustment and during the windage adjustment, it is relatively easy to overadjust the device. When this occurs, it is usually necessary to return to some previous setting and begin the windage adjusting process again. Furthermore, many of these windage adjusting devices have a certain amount of backlash in the operation thereof which is detriment to the accurate adjustment for windage. Thus, whereas the present day sighting devices may increase the shooting accuracy of a bow and arrow, there are many disadvantages in the use thereof.

The present invention contemplates a novel sighting device for use on substantially any bow structure. An accurate setting may be readily attained for the sighting element in accordance with the conditions existing for the particular shooting to be accomplished. This setting may be numerically recorded on a chart utilized in association with the sighting device, thus providing a substantially permanent record of each setting. Thus, when a resetting of the sight element is to be made, the sight member may be quickly returned to substantially the exact position first achieved through the use of the corresponding numeric recording. Repeat settings may be made with a maximum error of .0015 inch. In addition, the windage adjustment device is particularly designed and constructed to preclude backlash and to facilitate the windage adjustment.

The novel sighting device comprises a sight bar arranged for installation on a bow of substantially any design or construction and having a means for range alignment adjustment. A sight body slidably disposed on the sight bar may be easily adjusted or moved therealong to the desired position in accordance with the current shooting operation. The first and second digits of the numerical recording of a particular setting may be read directly from the indicia on the sight bar and the third digit, which is determined by a fine adjustment device, may be read from the fine adjustment knob. A fourth digit may be interpolated or estimated between the graduations on the fine adjustment knob, thus providing an accurate reference number for the setting. These digits may be recorded on a suitable chart disposed within a card holder which is secured to the bow in association with the sight bar. This particular setting may be repeated at any time by moving the sight body along the sight bar to the position corresponding to the recorded numbers and by adjusting the fine adjusting knob accordingly. The windage adjustment knob is provided on the sight body in association with the sight element and is provided with a braking means for substantially eliminating accidental rotation of the knob due to vibrations and, in addition, is provided with means for substantially eliminating backlash during the windage adjustment.

It is an important object of this invention to provide an improved sighting device for use in archery to increase the accuracy of operation of a bow and arrow.

It is another object of this invention to provide a novel sighting device wherein each setting of the sighting element may be quickly and accurately accomplished.

Another object of this invention is to provide a novel sighting device wherein each setting of the sighting element corresponds to a numeric reference which permits a recording of the setting to maintain a substantially permanent record thereof.

A further object of this invention is to provide a novel sighting device wherein the setting of the sighting element is correlated with a numeric reference system whereby settings of the sighting element may be repeated with great accuracy.

A still further object of this invention is to provide a novel sighting device wherein the sighting element may be efficiently adjusted for windage with a substantial elimination of backlash during the windage adjustment operation.

Still another object of this invention is to provide a sighting device for use in archery which is particularly designed and constructed for universal mounting on substantially any type of bow.

Still another object of this invention is to provide a novel sighting device which is simple and efficient in operation and durable in construction.

Other and further objects and advantageous features of the present invention will hereinafter more fully appear in connection with a detailed description of the drawings in which:

FIGURE 1 is a side elevational view of a portion of a bow having a sighting device embodying the invention mounted thereon.

FIGURE 2 is a front elevational view of a portion of a bow having a sighting device embodying the invention mounted thereon.

FIGURE 3 is an enlarged sectional view taken on line 3—3 of FIGURE 2.

FIGURE 4 is an enlarged elevational view of a mounting member utilized in the invention.

FIGURE 5 is an enlarged front elevational view of the sight bar with a sight body depicted in section thereon.

FIGURE 6 is a sectional view of the sight body with portions thereon depicted in elevation for purposes of illustration.

FIGURE 7 is a side view of the sight body mounted on the sight bar with portions depicted in section for purposes of illustration.

Referring now to the drawings in detail, reference character **10** generally indicates a sighting device adapted

for installation on a bow 12 for improving the shooting accuracy thereof. The bow 12 may be of any suitable type and the sighting device 10 is particularly adapted to be mounted on substantially any bow structure. The sighting device 10 comprises an elongated sight bar 14 having a plurality of notches or teeth 16 extending along one edge thereof. It is to be noted that whereas the sight bar 14 depicted herein is provided with the notches 16 extending along the left hand edge thereof as viewed in the drawings it may be desirable to provide the notches 16 on the right hand edge of the bar 14 depending upon whether the sighting device 10 is to be disposed on the near side or far side of the bow 10. A sight body generally indicated at 18 is slidably disposed on the sight bar for longitudinal movement therealong as will be hereinafter set forth.

One face 20 of the sight bar 14 is provided with suitable indicia 22 which cooperates with the sight body 18 to provide a numerical reference for each setting of the sight body 18 with respect to the sight bar 14 for a purpose as will be hereinafter set forth. The lower end of the bar 14 as depicted in the drawings, is provided with an aperture 24 for receiving a suitable screw 26 which extends therethrough for threaded engagement with a mounting device generally indicated at 28. The lower mounting device 28 comprises a shank 30 having a plurality of spaced circumferential grooves 32 provided thereon for anchoring of the shank 30 in the body of the bow 12. The upper end of the shank 30 is enlarged at 34 to provide a head portion which extends outwardly from the surface of the bow 12 when the shank 30 is embedded therein. The head 34 is bifurcated as clearly shown in FIGURE 3 and is provided with a transversely extending bore 36 extending therethrough. A trunnion nut 38 extends through the bore 36 and is suitably journalled therein for rotation about the longitudinal axis thereof. The screw 26 is threadedly engaged with the trunnion nut 38 as shown in FIGURE 3 for securing the sight bar 14 to the head member 34 whereby the angular disposition of the sight bar 14 with respect to the exposed or mounting surface 13 of the bow 12 may be adjusted in accordance with the configuration of the bow.

A second bore or aperture 40 is provided in the upper end of the sight bar 14 as shown in the drawings for receiving a suitable screw 42. The screw 42 extends through the bore 40 into connection with an upper mounting device generally indicated at 44. The mounting device 44 comprises a substantially L-shaped mounting bracket 46 secured to the mounting surface 13 in any suitable manner such as by the screw 48 whereby one leg 50 of the bracket 46 extends upwardly from the mounting face 13 at substantially right angles with respect thereto. A threaded shank 52 extends through an aperture (not shown) provided in the upstanding leg 50 and may be locked in variable longitudinal positions therein by means of complementary lock nuts 54 and 56, as is well known. An enlarged mounting block portion 58 is provided on the left end of the threaded shank 52 as viewed in FIGURES 2 and 4 and is provided with an upstanding boss member 60 having a threaded aperture 62 extending therethrough. The screw 42 extends into threaded engagement with the bore 62 for securing the sight bar 14 to the threaded shank 52. Manual rotation of the stud 52 in one direction will move the stud 52 in a left hand direction with respect to the leg 50 whereas rotation of the stud 52 in an opposite direction will move the stud in a right hand direction as viewed in FIGURES 2 and 4. It will be apparent that this left and right hand longitudinal movement of the stud 52 provides for a corresponding movement of the upper end of the bar 14. This permits an angular adjustment of the sight bar 14 with respect to the bow 12 and the pin or screw 26 is a pivot point for the bar 14 during the lateral angular adjustment thereof.

The sight body 18 comprises a substantially rectangular housing 64 having an outwardly extending shoulder portion 66 (FIGURES 2 and 6) provided with a downwardly and inwardly directed extension member 68 forming a groove 70 extending through the lower portion of the housing 64. A complementary downwardly and inwardly extending element 72 is provided on the lower portion of the housing 64 as viewed in FIGURE 6 providing a complementary groove 74 in substantial alignment with the groove 70 for slidably receiving the bar 14 therein. A flat spring 71 is interposed between the housing 64 and adjacent upper surface of the bar 14 and a similar flat spring 73 is provided in the groove 74 between the body 64 and one edge of the bar 14. The springs 71 and 73 facilitate the slidable movement of the sight body 18 along the bar 14. An outwardly extending flange or shoulder portion 76 is provided on the element 72 for cooperating with the housing 64 to provide a groove 78 for receiving a substantially rectangular pivotal lever 80. The lever 80 is pivotally secured in the groove 78 by means of a substantially centrally disposed screw 82 (FIGURE 7) for a purpose as will be hereinafter set forth.

A worm gear generally indicated at 84 is threadedly secured to one end of the lever 80 by a screw 86 which extends longitudinally through the gear 84. The gear 84 is provided with a toothed portion 88 having a spiral groove or thread of a configuration complementary to the notches or teeth 16 provided on the bar 14 for engagement therewith in the setting of the sight body 18 on the sight bar 14 as will be hereinafter set forth in detail. A cylindrical portion 90 is provided on the worm gear 84 conterminous with the toothed portion 88 and is provided with a plurality of circumferentially spaced reference lines 92 for cooperation with an indexing line 94 (FIGURE 1) provided on the lever 80. As clearly shown in FIGURE 7, reference numerals are provided on the cylindrical portion 90 for identifying each of the reference lines 92 as is well known in calibrating devices. The gear 84 is journalled on the screw 86 in any suitable manner for free rotation with respect thereto.

As hereinbefore set forth, the lever 80 is pivotally secured to the housing 64 by means of the screw 82. The exposed side portion 96 of the lever 80 is provided with a knurled portion 98 in the proximity of the end thereof oppositely disposed from the gear 84. The inwardly directed side portion of the lever 80 is tapered slightly as shown at 100 (FIGURE 5) whereby manual pressure against the knurled portion 98 will urge the tapered portion 100 in a right hand direction as viewed in FIGURE 5 for pivoting the lever 80 whereby the gear 84 will be disengaged from the teeth 16 in order to facilitate movement of the sight body 18 along the sight bar 14 as will be hereinafter set forth in detail. A recess or bore 102 is provided on the tapered portion 100 of the lever 80 for receiving a suitable spring 104 therein. A complementary bore 106 is provided in the housing 64 for receiving a spring guide member 108 which extends into the bore 102 and the spring 104 is disposed around the outer periphery of the guide pin 108 as clearly shown in FIGURE 5. The guide pin 108 is provided with an outwardly extending circumferential flange 110 and the spring 104 has one end thereof bearing against the flange 110 and the opposite end thereof bearing against the closed end of the bore 102 for constantly urging the pivot lever 80 in a counterclockwise direction around the pivot pin 82 as viewed in FIGURE 5 in order to retain the gear 84 in a normally engaged position with the teeth 16. A complementary knurled portion 99 may be provided on the outer edge of the shoulder portion 66 for facilitating manipulation of the sight body 18 during movement thereof along the bar 14.

A bore 112 is provided in the housing 64 and extends therethrough substantially perpendicularly with respect to the grooves 68, 74, and 78 for receiving a sighting element generally indicated at 114 therethrough. The sighting element 114 comprises a threaded shank member 116 ex-

tending through a stabilizing sleeve **118** which is slidably disposed in the bore **112** as particularly shown in FIGURES 5 and 6. A neck portion **120** is provided on the right hand end of the threaded shank **116** as viewed in the drawings and terminates in an annular sight receiving member **122**. A sight member **124** is disposed within the ring **122** and may be of any suitable type. As depicted herein, the sight member **124** comprises a radially inwardly extending arm **126** having bulbous portion **128** on the outer extremity thereof which functions as the sighting point. The radial arm **126** is carried by or integral with a cylindrical sleeve **130** (FIGURE 5) movably disposed within the ring **122**. The cylindrical member **130** is preferably constructed of a suitable flat spring stock for facilitating insertion thereof within the ring **132** and may be rotated therein as desired for orientation of the arm **126** as best suits the operator of the device **10**. It will be apparent, of course, that a stationary sight may be utilized if desired in lieu of the sighting device **124** depicted herein.

The bore **112** is reduced at **132** (FIGURE 6) to provide a shoulder for supporting a spring **134** disposed within the bore **112** for constantly urging the stabilizer **118** in a right hand direction as viewed in FIGURES 4 and 6. The stabilizer **118** is provided with a centrally disposed threaded bore **136** for receiving the shank **116** therethrough. A transverse bore **138** extends through the stabilizer **118** into communication with the central bore **136** for receiving a suitable set screw **140** therein. The set screw **140** is provided for bearing against the outer periphery of the threaded shank **116** in order to secure the stabilizer **118** thereto and a protective pad **142**, which may be made of nylon or the like, is interposed between the screw **140** and the threads of the shank **116** for precluding damage to the threads. The screw **140** is preferably sufficiently tightened against the shank **116** for securing the stabilizer **118** thereto for movement simultaneously therewith, as is well known, but is retained sufficiently loose against the shank **116** whereby the shank **116** may be manually rotated against the force of the screw and independently of the stabilizer **118** in certain instances as will be hereinafter set forth. A longitudinally extending slot **144** is provided on the outer periphery of the stabilizer **118** for receiving plunger **146** therein whereby rotation of the stabilizer **118** within the bore **112** is precluded. The plunger **146** is slidably disposed in a bore **148** provided in the housing **64** and a suitable spring **150** is disposed within the bore **148** for constantly urging the piston **146** in a direction toward the stabilizer **118**. A retaining pin **152** extends through a portion of the housing **64** substantially perpendicular with respect to the plunger **146** for retaining the spring **150** and plunger **146** in position within the bore **148**. An indexing line **153** (FIGURE 6) is provided on the outer periphery of the stabilizer **118** and may be viewed through an aperture (not shown) provided in the housing **64** whereby reference may be made to the longitudinal position of the stabilizer **118** within the bore **112**.

A windage adjustment knob **154** is threadedly secured on the shank **116** and disposed outwardly of the housing **64**. The knob **154** is provided with a reduced neck portion **156** which extends through the bore **132** of the housing **64** for assuring proper alignment of the knob **154** with respect to the stabilizer **118**. An annular groove **158** is provided on one face of the knob **154** disposed adjacent the housing **64** for receiving an O-ring **160** therein. The O-ring **160** bears against the adjacent surface of the housing **64** and provides an inherent braking action between the knob and the housing for substantially precluding accidental rotation of the knob **154** due to vibrations which usually occur during operation of the bow **12**. In other words, as the knob **154** is rotated, the O-ring **160** provides a certain amount of resistance and positively retains the knob in the selected position without permitting free rotation of the knob when the manual pressure is released therefrom. In addition, the spring **134** acting against the stabilizer **118** substantially precludes any backlash during rotation of the knob **154** when the sighting element **114** is being adjusted for windage. The knob **154** is provided with a knurled portion **162** on the outer periphery of the end thereof for facilitating manual grasping and rotating of the knob and a plurality of circumferentially spaced reference marks or lines **164** (FIGURE 2) are provided around the outer periphery of the knob in the proximity of the housing **64** for cooperation with an indexing line **166** provided on the housing **64** as is well known in calibrating devices. Each of the reference markings **164** is identified by a reference numeral as shown in FIGURE 2 and, as is well known, manual rotation of the knob **154** in one direction causes the threaded shank **116** to move longitudinally in a right hand direction as viewed in FIGURES 5 and 6 whereas rotation of the knob **154** in an opposite direction causes the shank **116** to move longitudinally in a left hand direction. Of course, the stabilizer **118** moves or slides within the bore **112** simultaneously with the longitudinal movement of the shank **116** and thus guides or stabilizes the movement of the shank **116** as the sight element **114** is being adjusted for windage as will be hereinafter set forth in detail.

A bracket or holding member **168** which may be of any suitable type is secured to the bow **12** in any convenient location and preferably in the proximity of the sight device **10** as shown in FIGURE 1. The holder **168** as depicted herein comprises a substantially flat rectangular back member **170** having inwardly directed flange member **172** spaced slightly therefrom and extending around approximately in the distance of three edges thereof. This provides a pocket for receiving suitable recording charts or cards **174** therein. The holder **168** is preferably secured to the bow by a suitable cement and is of an extremely light weight construction whereby there will be no hindrance to the normal use of the bow **12**. The cards **174** are ruled in any suitable manner for providing a plurality of longitudinally and transversely extending columns whereby the reference numerals relating to each setting of the sight body **18** with respect to the sight bar **14** may be recorded thereon.

Installation

In order to install the sighting device **10** on a bow **12**, the sight body **18** is preferably removed from the sight bar **14** and this may be accomplished by manually gripping the oppositely disposed knurled portions **98** and **99** for disengaging the knob **84** from the teeth **16**. This permits the slide body to be manually moved longitudinally along the bar **14** and removed therefrom. The upper mounting bracket **44** may be assembled with the stud **52** extending therethrough and the block **58** may be secured to the upper end of the bar **14** by the screw **42**. The sight bar may be positioned with respect to the bow in the most desirable location for the operator of the device **10** and the mounting bracket **44** may then be secured to the bow in a corresponding position. If it is found that the sight bar will not clear any structural portion of the bow **12** when thus mounted thereon, suitable spacers (not shown) may be interposed between the bracket **44** and the bow in order to elevate the position of the upper end of the bar **14** as required. The lower mounting device **28** may be secured to the bar **14** by the screw **26** and bar **14** having the lower mounting **28** secured thereto may be pressed in place on the bow with a suitable closed chuck jaw (not shown) for embedding the shank **30** within the body of the bow **12**. It is to be noted that the sight bar **14** may pivot in directions both substantially parallel with and perpendicular to the bow surface **13**, thus providing a substantially universal mounting for the bar **14** on a bow of any desired structure.

The sight bar **14** may be aligned with either the bow string (not shown) or the bow. This may be done by manual rotation of the stud **52** for adjusting the angular

position of the bar **14** as desired. The sight body may now be replaced on the bar in a reverse manner to that hereinbefore set forth and the card holder **168** may be cemented in a convenient place on the bow.

Calibration

The first step in the calibrating of the sighting device **10** is to shoot a plurality of arrows (not shown) in the usual manner in groups with a range of approximately 80 to 100 yards, setting the sighting element **114** to center the groups of arrows laterally. The sighting element **114** is adjusted laterally by rotation of the knob **154**. Of course rotation of the knob **154** in one direction moves the sighting point **128** in a right hand direction whereas rotation of the knob **154** in an opposite direction moves the sighting point **128** in a left hand direction. It is preferable that there be no wind blowing whatsoever when this first calibrating step is being accomplished.

The second step in the calibrating of the sighting device **10** is to alter the shooting range to approximately 20 yards and shoot a plurality of groups of arrows without rotation of the knob **154**. In this step, the lateral angular position of the bar **14** is adjusted by means of rotation of the screw **52** in the proper direction for moving the bar **14** for positioning the sighting point **128** in the lateral center of the groups of shots.

Operation

The sighting device **10**, now installed on the bow and properly calibrated, is ready for use in normal shooting. The vertical position of the sight body **8** may be altered by manual rotation of the worm gear **84**. As hereinbefore set forth, the teeth **88** are normally retained in engagement with the teeth **16** whereby rotation of the worm gear **84** in one direction will move the sight body upwardly along the sight bar **14** and rotation of the knob **84** in an opposite direction will move the sight body downwardly along the sight bar **14**. If it is desired to move the sight body through a relatively great distance along the sight bar the two oppositely disposed knurled portions **98** and **99** may be manually gripped for pivoting the lever **80** and releasing the engagement between the teeth **88** and **16** whereby the sight body **18** may be readily moved along the bar.

When the sight body has been moved along the sight bar to the desired position for locating the sighting point **128** for the particular shooting requirements, the position of the sighting body will have a relatively numeric value. This number consists of the digits provided on the sight bar in combination with the digits on the knob **84**. By way of example, as clearly shown in FIGURE 5, the indicia on the sight bar includes spaced relatively long lines having groups of relatively short lines interposed therebetween. Reference numerals are applied to each of the relatively long lines and reference numerals are also applied to each of the relatively short lines. The first number in the reference digit for the particular setting of the sight body will be the number in association with the relatively long line disposed in the closest proximity to the upper end of the sight body. The second number in the reference digit will be the number associated with the relatively short line disposed immediately above the sight body. The third number in the reference digit will be the number provided on the knob **84** which is positioned in the close proximity of the reference line **94** provided on the pivot lever **80**. The fourth number of the reference digit may be estimated in accordance with the spacing distance of the indexing line **94** between the two adjacent reference numerals closest thereto on the knob **84**. This number may be recorded on the chart **174** and if at any time it is desired to reset the sight body to this same location, the sight body may be moved to an identical position by reference to the recorded information.

The lateral position of the guiding point **128** may be adjusted by rotation of the windage knob **154**. As the knob **154** is rotated in one direction, the shank **116** and the stabilizer **118** are moved in a right hand direction within the bore **112**. As the knob is rotated in an opposite direction, the shank **116** and stabilizer **118** are moved in a left hand direction within the bore **112**. The reference line **153** provided on the outer periphery of the stabilizer **118** is visible through an aperture (not shown) provided in the housing **64**. The position of the stabilizer **118** within the bore **112** may thus be noted through at least a portion of the adjusting distance and the position of the stabilizer may be recorded on the chart by reference to the number on the knob **154** in association with the reference line **166** provided on the body **64**, if desired, as is well known in calibrating devices. Thus, the lateral setting of the sight element **114** may be repeated with great accuracy as well as the vertical adjustment thereof. In addition, if the stabilizer **118** is moved in a right hand direction as viewed in FIGURE 6, a sufficient distance to bring the index line **153** into view beyond the body **64**. Further adjustment of the knob **154** should be stopped in order to preclude accidental loss of the stabilizer from the bore **112**. In this position it may be desirable to move the stabilizer **118** in a left hand direction while retaining the lateral position of the sighting point **128**. In order to accomplish this the knob **154** may be manually held stationary and the shaft **116** may be manually rotated through any given number of complete revolutions. The knob **154** may then be rotated in an opposite direction from the thread **116** through an identical number of complete rotations which will move the stabilizer in a left hand direction and bring the sighting point **128** back to the original position thereof.

From the foregoing, it will be apparent that the present invention contemplates a novel sighting device wherein both vertical and lateral adjustments may be readily accomplished with great accuracy. In addition, repeat settings of the sighting device may be achieved with extreme accuracy since each setting of the sight corresponds to a reference numeral which is recorded on the chart carried in association with the sighting device. The sighting device is provided with universal mounting means whereby the apparatus may be utilized on substantially any bow structure. The novel sight device is simple and efficient in operation and durable in construction.

Changes may be made in the combination and arrangement of parts as heretofore set forth in the specification and shown in the drawings, it being understood that any modification in the precise embodiment of the invention may be made within the scope of the following claims, without departing from the spirit of the invention.

What is claimed is:

1. A sighting device comprising a slide bar having a plurality of notches provided along at least one edge thereof, means providing for universal mounting of the bar on a device to be sighted, means providing for lateral angular adjustment of the bar relative to the device to be sighted, a sight body slidably disposed on the slide bar and comprising a housing having a recess extending therethrough for slidably receiving the slide bar therein, a spring urged pivotal lever carried by the housing, first adjustment means journalled on the lever and having a spiral groove thereon of a configuration complementary to the notches on the slide bar, said pivotal lever urging said first adjustment means in a direction toward the bar whereby the spiral groove is in normal engagement with the notches, a sighting element disposed within the housing and laterally movable with respect to the movement of the sight body along the sight bar, second adjustment means carried by the sighting element to provide for lateral adjustment thereof, stabilizing means disposed within the housing for stabilizing the movement of the sighting element, reference indicia provided on the slide bar and first and second adjustment means whereby a permanent reference number is obtained for each position of the sight body and sighting element whereby the reference numbers may be recorded to increase the accuracy

of resetting the sight body and sighting element to substantially any previous position.

2. A sighting device as set forth in claim 1 wherein braking means is interposed between the second adjustment means and the housing for substantially precluding backlash during operation of the said second adjustment means.

3. A sighting device comprising a sight bar having a plurality of longitudinally spaced notches extending along one edge thereof, a sight body reciprocally disposed on the bar and comprising a housing having a groove extending therethrough for slidably receiving the bar therein, a pivotal lever carried by the housing, a worm gear journalled on the lever, spring means disposed in the housing for urging the pivotal lever in a direction for maintaining the worm gear in a normally engaged position with the notches of the slide bar whereby rotation of the worm gear moves the slide body along the slide bar, means for releasing the engagement of the worm gear with the notches for facilitating manual movement of the slide body along the bar, said housing provided with a bore extending substantially perpendicular to the sight bar, a threaded shank extending through the bore, a stabilizer member secured to the shank and slidably disposed within the bore, spring urged means extending through the housing and into engagement with the stabilizer member for precluding rotation thereof, a sighting element carried at one end of the shank, an adjustment knob journalled on the housing at the opposite end of the shank and cooperating with the shank whereby rotation of the knob in one direction moves the shank longitudinally in one direction and rotation of the knob in an opposite direction moves the shank longitudinally in an opposite direction to provide lateral adjustment for the sighting element, and braking means interposed between the adjustment knob and the housing to substantially preclude accidental rotation of the knob, and spring means cooperating between the housing and stabilizer member for substantially precluding backlash during rotation of the knob.

4. A sighting device as set forth in claim 3 wherein complementary reference indicia is provided on the bar and worm gear and housing and adjustment knob to provide a numeric identification for each position of the sight body with respect to the bar and the sighting element with respect to the housing for increasing the accuracy of resetting thereof to substantially any previous position.

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