Jan. 30, 1968 R. F. CARELLA 3,365,800

ARCHERY BOW SIGHT ASSEMBLY

Filed Aug. 7, 1967

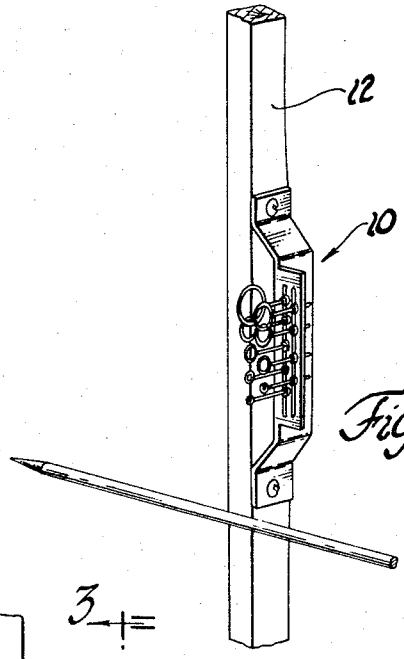


Fig. 1

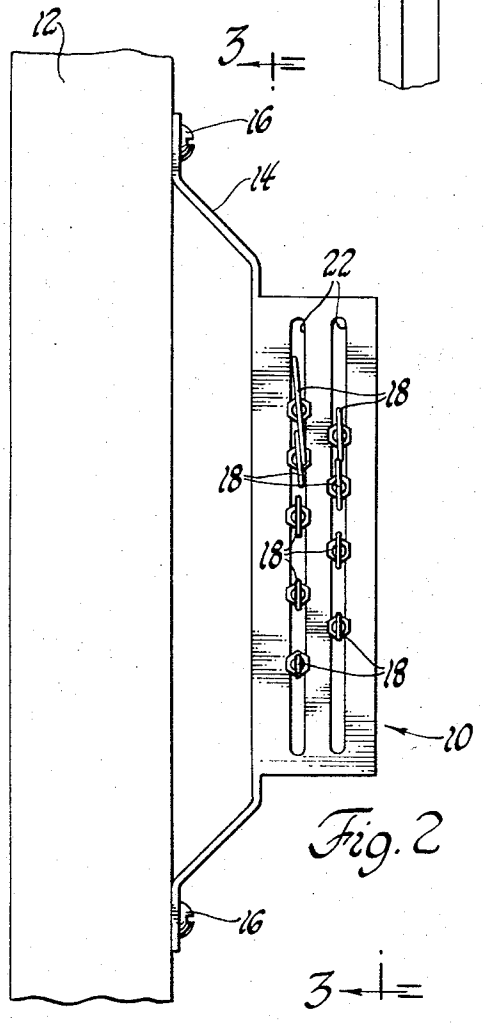


Fig. 2

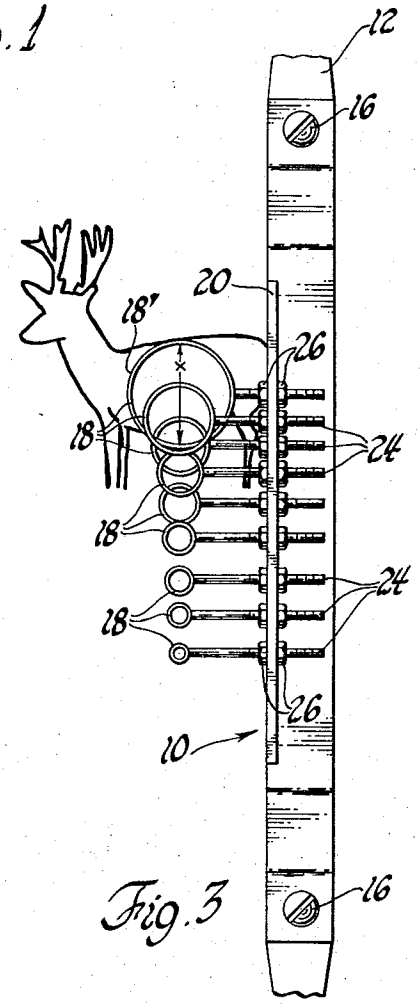


Fig. 3

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United States Patent Office 3,365,800
Patented Jan. 30, 1968

3,365,800

ARCHERY BOW SIGHT ASSEMBLY

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Filed Aug. 7, 1967, Ser. No. 658,774
10 Claims. (Cl. 33—46)

ABSTRACT OF THE DISCLOSURE

An archery bow sight assembly including a bracket adapted for attachment to an archery bow and having two spaced vertical slots with a plurality of individual circular sights disposed adjacent the bracket and attached thereto by support shafts which extend through the slots.

It is old to utilize a sight assembly in combination with an archery bow so that the target may be viewed through the sight to position the bow properly to provide the proper trajectory of the arrow whereby it will reach the target. In one prior art assembly, a bracket is adapted to be attached to an archery bow and has a sighting ring attached thereto so that it may be adjusted vertically. The problem with such a device is that it does not tell the archer the range to target and is not well suited for quick sighting which is necessary in a hunting situation. For example, an individual hunting deer must be able to rapidly sight and release the arrow toward the target which is the deer. In such a prior art assembly, the sight must be adjusted relative to the bracket for each different distance from the target whether it be known or guessed.

In another prior art assembly, a plate-like member is adjustably secured to the archery bow and includes a plurality of open-ended vertically-spaced gauge-acting-sighting slots. The vertical distance presented by each sighting slot is different than that presented by all of the other sighting slots and the vertical distance presented by each slot coincides with the apparent vertical height of a particular target when viewed through the slot at a particular distance. For example, the average deer has approximately twelve inches of vertical height in the chest area, which is the target. This twelve inches of vertical distance has a different apparent vertical height at different distances from the deer. In using the aforementioned prior art sight, the apparent vertical height of the deer is matched to a particular slot in the sight so that the archery bow is in the position to give the arrow the trajectory for reaching the target. The problem with such a sight is that the relative positions between the different sighting slots cannot be changed to compensate for various bow characteristics and different operators of the bow. Furthermore, in some instances, the apparent height of a given target at one distance will overlap with the apparent height of the target at a different distance and obviously the slots in such a plate device cannot overlap. In addition, a special adjustment plate is required to compensate for different operators and bow characteristics. This means that the hunter would sight through the fixed slots to find correct range. Then he would have to adjust the fixed slots to precalibrated marks on the adjustment plate to give his arrow its correct position. This means a hunter would have to adjust his fixed slots each time he saw a deer at a different distance.

Accordingly, an object and feature of the instant invention is that once calibrated, it requires no adjustment, range finding, or computing while hunting and nothing more is required than for the hunter to match the correct circle to the deer's apparent vertical height and shoot.

Accordingly, it is an object and feature of this invention to provide an improved sight assembly adapted to be attached to an archery bow including a plurality of

individual sights which may be calibrated and positioned relative to one another to compensate for the various characteristics of a given archery bow and the operator and which may be repositioned in the event the bow characteristics or operator change.

Another object and feature of this invention is to provide an improved sight adapted for attachment to an archery bow and including a support means with a plurality of independent sights respectively connected to the support means with each of the sights defining a vertical distance different than the vertical distance defined by the other sights so that each sight may be independently positioned relative to the support means for properly aiming the bow by moving the bow to view a target at a distance from the bow through the respective sights until the apparent vertical height of the target equals the vertical distance defined by one of the sights, thereby to properly aim the bow for the particular target.

Other objects and attendant advantages of the present invention will be readily appreciated as the same becomes better understood by reference to the following detailed description when considered in connection with the accompanying drawings wherein:

FIGURE 1 is a fragmentary perspective view of the bow sight assembly of the instant invention in combination with a bow and illustrating an arrow;

FIGURE 2 is an enlarged fragmentary elevational view of the sight assembly of the instant invention attached to an archery bow; and

FIGURE 3 is a fragmentary view taken substantially along line 3—3 of FIGURE 2.

Referring now to the drawings, a bow sight assembly is generally shown at **10** in combination with an archery bow **12**. The bow sight assembly includes the support means comprising the bracket **14** and a plurality of independent sights **18**. The bracket **14** is attached to the archery bow by the screws **16**. The independent sights **18** are respectively connected to the bracket **14**. The bracket **14** includes a flange **20** having a pair of spaced vertical slots **22** disposed therein. Each sight includes a support shaft **24** which extends through one of the slots **22** and adjustment means comprising threads on each support shaft **24** and a pair of nuts **26** threaded thereonto and clampingly engaging opposite sides of the flange **20**. The nuts **26** allow the adjustment of the vertical position of each support shaft **24** relative to the bracket **14** and archery bow **12**. The sights **18** are, therefore, attached to the bracket **14** in a plurality of spaced vertical rows as best illustrated in FIGURE 2.

Each sight **18** defines a vertical distance, as illustrated by the distance X for the sight **18'**. The vertical distance defined by each sight is different than the vertical distance defined by the other sights and each sight **18** may be independently positioned relative to the bracket **14** for properly aiming the bow by moving the bow to view a target at a distance from the bow through the respective sights until the apparent vertical height of the target equals the vertical distance defined by one of the sights **18**. More specifically, the individual sights **18** are positioned vertically relative to one another and relative to the bow **12** depending upon the various characteristics of the bow and the operator so that when the target is viewed through the proper sight, the bow will be positioned to compensate for the distance from the target so that the arrow will follow a trajectory to hit the target.

The means defining the vertical distance for each sight presents an aperture having an endless periphery and, more specifically, is a circular ring, the circular rings of the various different sights having different diameters. As illustrated in FIGURE 3, various of the individual sights **18** are disposed in overlapping relationship. As alluded

to above, this is a very important advantage of the instant invention.

Once the sight assembly has been calibrated so that the individual sights 18 are in the proper position, the operator will view the target through the sights until the apparent height of the target matches the vertical distance defined by one of the respective sights **18**, see FIGURE 3. Once in this position, the bow will be in the correct position to compensate for the distance from the target so that the arrow will follow the proper trajectory to reach the target.

Thus, the sight assembly of the instant invention has versatility in calibration not afforded by the prior art assemblies in that the respective individual sights may be positioned relative to one another to compensate for the various characteristics of the archery bow as well as the operator so that once calibrated, no further positioning is needed and a target may be very rapidly sighted.

The invention has been described in an illustrative manner and it is to be understood that the terminology which has been used is intended to be in the nature of words of description rather than of limitation.

Obviously, many modifications and variations of the present invention are possible in light of the above teachings. It is, therefore, to be understood that within the scope of the appended claims, the invention may be practiced otherwise than as specifically described.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. An archery bow sight assembly comprising: support means adapted for attachment generally parallel to the length of an archery bow, and a plurality of independent sights respectively connected to and each independently adjustable longitudinally along said support means, each of said sights defining a longitudinal distance different from the longitudinal distance defined by any one of the other sights so that said assembly may be attached to an archery bow and each sight independently positioned relative to said support means for properly aiming the bow by moving the bow to view a target at a distance from the bow through the respective sights until the apparent vertical height of the target equal the longitudinal distance defined by one of said sights, thereby properly aiming the bow for the particular target.

2. An archery bow sight assembly as set forth in claim **1** wherein at least two of said sights are disposed in overlapping relationship with one another.

3. An archery bow sight assembly as set forth in claim **1** wherein each of said sights includes a support shaft and means supported thereby and defining said vertical distance.

4. An archery bow sight assembly as set forth in claim **3** wherein said means defining said vertical distance presents an aperture having an endless periphery.

5. An archery bow sight assembly as set forth in claim **4** wherein said means defining said vertical distance comprises a circular ring with the ring of each respective sight being of a different diameter than the others.

6. An archery bow sight assembly as set forth in claim **5** wherein at least two of said rings are disposed in vertically overlapping relationship with one another.

7. An archery bow sight assembly as set forth in claim **6** wherein said sights are attached to said support means in a plurality of spaced vertical rows.

8. An archery bow sight assembly as set forth in claim **6** including adjustment means for allowing the adjustment of the vertical position of each support shaft relative to said support means.

9. An archery bow sight assembly as set forth in claim **8** wherein said adjustment means comprises threads on each support shaft with a pair of nuts threaded thereonto and clampingly engaging said support means.

10. An archery bow sight assembly as set forth in claim **9** wherein said support means comprises a bracket having two spaced vertical slots, said support shafts being disposed through one of said slots.

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