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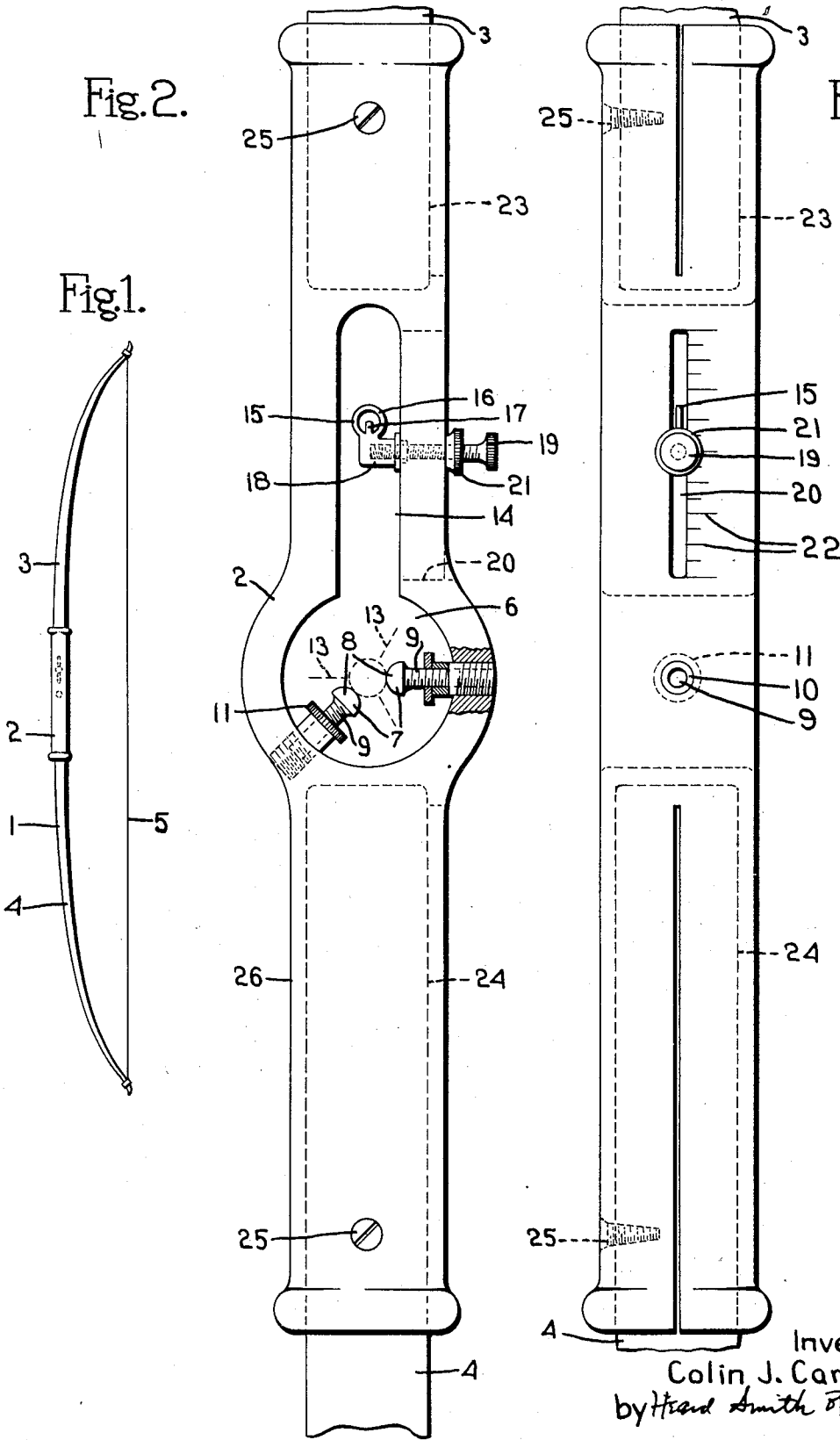
ARCHER'S BOW

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Fig. 2.

Fig. 3.

Fig. 1.



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# UNITED STATES PATENT OFFICE

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## ARCHER'S BOW

Application filed January 8, 1931. Serial No. 507,363.

This invention relates to an archer's bow and particularly to that type of bow which is provided with an opening through the handle portion through which the arrow to be shot is projected.

An advantage of this type of bow over the ordinary bow wherein the arrow is projected along the side of the bow when the string is released is that the arrow during the entire time that it is being propelled forward by the string is located in the direct line of the application of the propelling force of the string so that the arrow will not be subjected to any lateral strain such as occurs when the arrow is projected along the side of the bow.

One feature of my improved bow relates to adjustable means for supporting the arrow as it is being discharged whereby arrows of different diametrical size can be always held in substantially the axial line of the bow.

Another feature of the invention relates to a bow of this type which has an improved sighting device by which the archer can readily and accurately obtain the proper elevation of the bow hand and can also readily obtain the correct alignment of the arrow with the target.

In order to give an understanding of the invention, I have illustrated in the drawings a selected embodiment thereof which will now be described after which the novel features will be pointed out in the appended claims.

Fig. 1 is a view of a bow embodying my invention;

Fig. 2 is a view of the handle portion of the bow looking from the belly side;

Fig. 3 is a side view of Fig. 2.

In the drawings 1 indicates generally the bow and this is formed with the handle portion 2, the two limbs 3 and 4 and the usual string 5. The handle portion of the bow is provided with an opening 6 through which the arrow is discharged, said opening being large enough to permit the feathers of the arrow to freely pass therethrough. This opening 6 is in the axial line of the bow and hence when the arrow is discharged it moves in a path which is in exact alignment with

the direction in which the propelling force is applied to the arrow by the string.

Projecting into the opening 6 are two adjustable arrow rests 7. Each rest is provided with a rounded arrow-engaging face 8 and is formed with a screw-threaded stem 9 which screws into a sleeve 10 that is secured in the bow at the side of the opening 6.

11 indicates lock nuts which are screw threaded to the stems 9 and by which the arrow-supporting posts may be locked in any adjusted position.

I will preferably employ two such arrow rests, one of which extends horizontally at one side of the opening 6 and the other of which is located at about 120° therefrom on the other side of the center of the bow, the latter rest projecting upwardly and inwardly as shown. These two arrow rests thus positioned make a proper guide for the arrow (which is indicated in dotted lines at 12) as it is projected when the string is released but they do not interfere with the feathers 13 of the arrow.

Another feature of my invention relates to certain improvements to assist the archer not only in getting the correct elevation for the bow arm for targets placed at different distances but also to assist him in getting his arrow properly lined up with reference to the target.

These improvements consist in a sighting slot 14 which is formed in the bow and which extends through the bow from the belly to the back in the line of the axis of the bow and through which the target is visible for all ranges except very long ranges at which the arrow is shot with a high trajectory. In the construction herein shown the sighting slot 14 extends from the opening 6 but it is not necessary that this sighting slot should communicate with the opening 6. In fact, this sighting slot feature might be embodied in an ordinary bow which was not provided with the opening 6 through which the arrows are projected.

When shooting according to the conventional "point of aim" method with an ordinary bow pulling forty or fifty pounds and at distances of sixty yards or under the "point

of aim" on which the tip of the arrow is sighted when the bow is fully drawn usually is between the target and the archer so that the target is visible above the arrow.

8 When my improved bow is used in shooting the shorter ranges, that is, ranges of sixty yards and under, the archer may obtain the correct alignment by drawing the bow and holding it so that the target will be visible through the sighting slot 14. For obtaining 10 the correct elevation for any predetermined distance the bow arm (that is, the arm by which the bow is held) will be raised or lowered so that the target will appear at different portions of the slot 14 depending upon 15 the distance being shot.

In order to assist in obtaining the correct elevation I propose to use a sight 15 which is adjustable vertically of the sighting slot 20 and with which the archer sights the gold or bull's eye of the target. While any desired sighting device may be used that herein shown is in the form of a peep sight, it comprising a ring portion 16 through which 25 the archer sights the center portion of the target, said sight having a sighting finger 17 rising from the bottom of the ring to approximately the center thereof. This sighting device is provided with a hub portion 18 which 30 is screw threaded to the end of a clamping screw 19 that extends through a vertical slot 20 formed in one side of the bow.

21 is a clamping nut screw threaded to the clamping screw 19 and which engages the 35 outside of the bow. By tightening the clamping nut 21 the sighting device may be rigidly retained in any position up and down the slot 20.

The side of the bow may be graduated with 40 suitable graduation marks 22 which give the archer an indication as to the proper setting of the sight 15 for different distances. The setting for any distance will vary for different archers and also for different bows and 45 arrows of different weight but the correct setting for any bow and any set of arrows can be readily determined by experimentation.

In using the bow for shooting at any given 50 distance the archer will adjust the sight 15 to the proper point for such distance and in drawing the bow he will adjust his bow arm so that the sighting point 17 comes in the direct line of vision between the eye and 55 the center of the target. In other words, he will sight the point 17 on the center of the target. This will give not only the proper elevation but also the proper alignment of the arrow to make a perfect shot.

60 While it is within my invention to incorporate this improvement in a self bow yet I prefer to make the handle portion 2 of the bow separate from the limbs 3 and 4. The handle portion may be made of any suitable 65 material such as metal, fibre or hard rubber,

etc., and I will preferably construct it with sockets 23 and 24 at opposite ends into which are set the limbs 3 and 4 of the bow. These limbs may be secured in the sockets 23, 24 in any appropriate way.

In the construction shown, the limbs are 70 retained in place by means of screws 25 or clamps but any other means for this purpose may be employed to make them adjustable. One advantage of this construction is that 75 either of the limbs may be readily disconnected from the handle portion to facilitate storage or carrying of the bow and the limbs can be readily adjusted to place the string in perfect alignment with the bow. 80

The portion 26 of the handle member 2 constitutes the portion which is grasped by the archer when using the bow.

I claim:

1. An archer's bow having an opening 85 through the handle portion thereof through which the arrow to be shot is projected, which opening is large enough to permit the feathers of the arrow to freely pass there-through, and adjustable rests extending into 90 the opening from the outer wall thereof and on which the arrow is supported as it is projected.

2. An archer's bow having an opening 95 through the handle portion thereof through which the arrow to be shot is projected, said bow also having a sighting slot extending through the bow from the belly to the back thereof above said opening and through 100 which the target may be sighted when discharging an arrow, and a sight located in said slot to assist in obtaining proper elevation of the arm holding the bow.

3. An archer's bow having an opening 105 through the handle portion thereof through which the arrow to be shot is projected, said bow also having a sighting slot extending through the bow from the belly to the back thereof above said opening and through 110 which the target may be sighted when discharging an arrow, and a sight located in said slot and adjustable toward and from said opening.

4. An archer's bow having a sighting slot 115 formed therein and extending through the bow from the belly to the back thereof above the point from which the arrow is discharged and through which the target may be sighted when discharging the arrow, and a sight carried by the bow and visible through said slot 120 when the archer is aiming with the bow.

5. An archer's bow having a sighting slot 125 formed therein and extending through the bow from the belly to the back thereof above the point from which the arrow is discharged and through which the target may be sighted when discharging the arrow, and a sight located in said slot and adjustable longitudinally of the bow.

6. An archer's bow having a handle por- 130

tion and limbs extending therefrom, said handle portion having an opening there-through through which the arrow to be shot is projected, and an adjustable sight carried  
5 by the handle portion above said opening.

7. An archer's bow having a sighting slot formed therein and extending through the bow from the belly to the back thereof above the point from which the arrow is discharged  
10 and through which the target may be sighted when discharging the arrow, and a sight adjustably carried by the bow and visible through said slot when the archer is aiming with the bow.

15 8. An archer's bow having an opening through the handle portion thereof through which the arrow to be shot is projected, said bow also having a sighting slot communicat-  
20 ing with the arrow opening and extending upwardly therefrom, and through which the target may be sighted when discharging the arrow in varied elevated positions of the arm holding the bow.

In testimony whereof, I have signed my  
25 name to this specification.

COLIN JAMES CAMERON.

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