

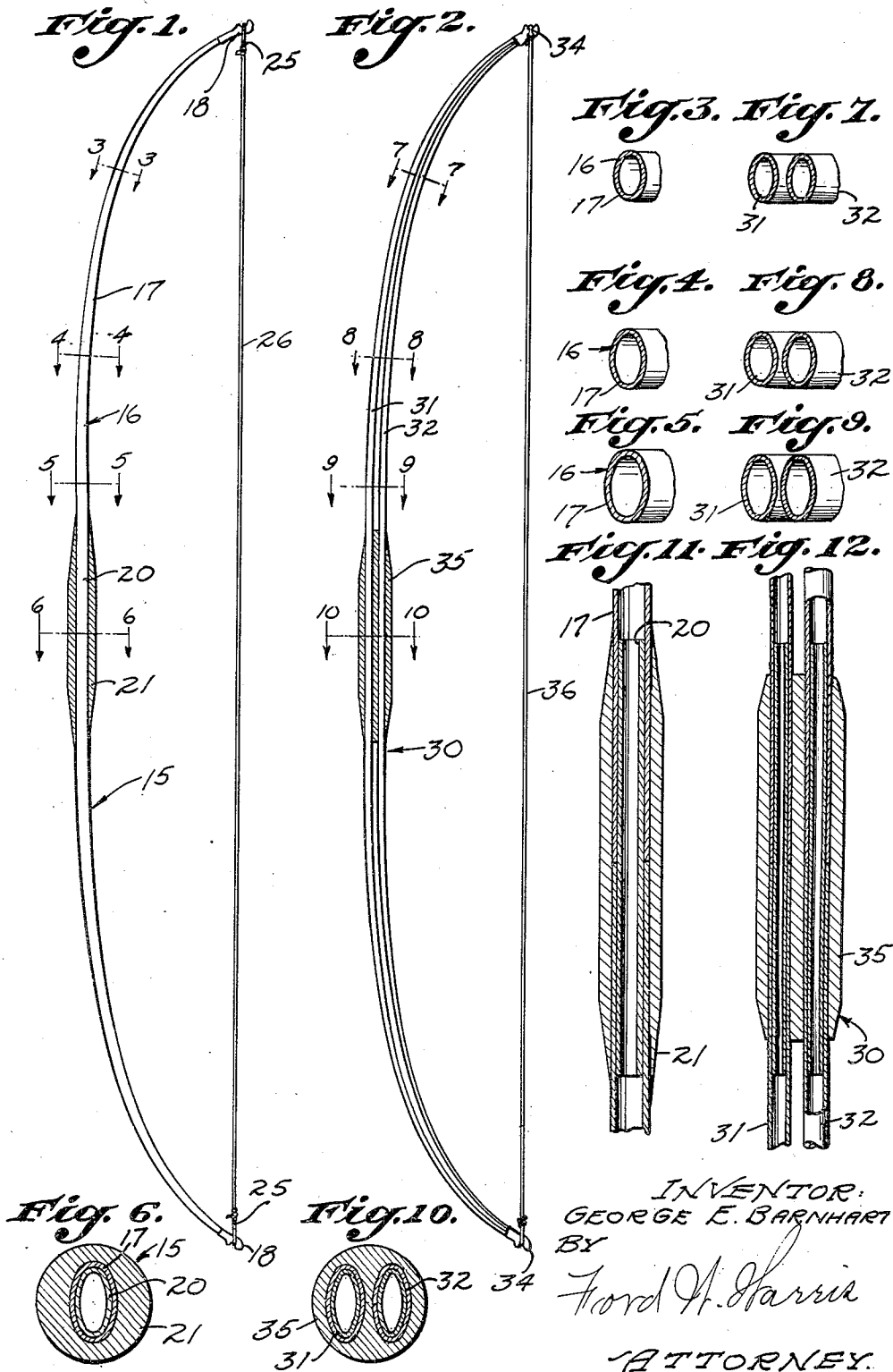
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ARCHER'S BOW

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UNITED STATES PATENT OFFICE

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ARCHER'S BOW

Application filed October 15, 1927. Serial No. 226,295.

My invention relates to archery and has for its object the provision of an improved bow for use in this sport.

The bows formerly used in archery were made of wood and the springiness or elasticity of the bow varied from time to time with changes in the weather. This made it necessary for the archer to judge and make allowance for the elasticity of the bow each time he first took up his bow to shoot. There are so many factors, such as elevation, aim, windage, and steadiness in holding the bow and discharging the arrow therefrom, which must be taken into account in archery that it is of great importance to the improvement of this sport that changes in the elasticity of the bows used be eliminated if possible.

It is, therefore, an object of my invention to provide a bow, the elasticity of which remains practically constant through all normal conditions of use.

The wooden bows formerly in common use are very expensive to make, and deteriorate comparatively rapidly.

It is a further object of my invention to provide a bow which will be relatively inexpensive to make and which will have a practically unlimited life.

Further objects and advantages will be made manifest in the following description and in the accompanying drawings which illustrate a preferred embodiment of my invention. In the drawings,—

Fig. 1 is a full length side elevational view of one form of my invention.

Fig. 2 is a full length side elevational view of another form of my invention.

Figs. 3, 4, 5, and 6 are horizontal sectional views taken on the correspondingly numbered lines of Fig. 1.

Figs. 7, 8, 9, and 10 are horizontal sectional views taken on correspondingly numbered lines of Fig. 2.

Fig. 11 is an enlarged vertical sectional view of the medial portion of the bow member of the bow, shown in Fig. 1.

Fig. 12 is an enlarged vertical sectional view of the medial portion of the bow members of the bow, shown in Fig. 2.

Referring specifically to the drawings, 15

indicates a bow constituting one form of my invention, which has a bow member 16 formed of a pair of metal tubes 17, each of which is preferably tapered from the inner end toward the outer end thereof. Each of the tubes 17 has a string hook 18 provided on its outer end. The two tubes 17 are placed with their inner ends abutting against each other so that opposite end portions of a connector bushing 20 extend into the adjacent ends of the tubes 17. Separation of the tubes 17 and the bushing is prevented by any suitable means, such as solder run in between the bushing 20 and these tubes. Formed of any suitable material, such as rubber, cork, or the like, about the medial portion of the bow member 16 is a handle 21. The outer ends of the tubes 17 are bent a uniform distance in the same direction from the axis of the central portion of the body member 16. As clearly shown in Figs. 3 to 6 inclusive, the tubes 17 are oval in cross-section so as to give the bow member 16 a maximum springiness or elasticity. Caught over the hooks 18 are loops 25, formed on the opposite ends of a bow string 26, so that the bow member 16 is bent under a slight tension.

Referring now to Fig. 2, 30 indicates another form of the bow of my invention which has a pair of bow members 31 and 32, each of which is constructed in substantially the same manner as the bow member 16 of the bow 15 except that each pair of corresponding ends of the bow members 31 and 32 is connected together by one of a pair of hooks 34. Formed medially about the bow members 31 and 32 so as to hold these in spaced relation is a handle 35 which may be formed from any suitable material such as rubber or cork.

Caught over the hooks 34 are loops formed on the opposite ends of a bow string 36 which is of such length as to draw the hooks 34 toward each other and maintain the bow members 31 and 32 under constant compression.

As clearly shown in Figs. 7 to 10 inclusive, the tubular bow members 31 and 32 are oval in cross-section. While this construction is not essential to the proper op-

eration of the bow 30, it is highly desirable as the tubes of oval cross-section have a maximum elasticity.

While I have illustrated but two forms of my invention, it is to be understood that one skilled in the art might make numerous changes in the actual structure illustrated without departing from the spirit of the invention or the scope of the appended claims.

I claim as my invention:

1. In an archer's bow, the combination of: a bow member including a pair of tubes disposed end to end and connected by a tubular bushing extending into adjacent ends of said tubes; a handle surrounding the connected ends of said tubes; and a string joining outer ends of said tubes.

2. In an archer's bow, the combination of: a plurality of bow members, each including a pair of tubes disposed end to end and connected by a tubular bushing extending into adjacent ends of said tubes; a handle surrounding the connected ends of said tubes; means for connecting pairs of corresponding ends of said bow members; and a string extending from one of said pairs to the other of said pairs.

3. In an archer's bow, the combination of: a bow member tapering toward its extremities and including a pair of tubes disposed end to end and connected by a tubular bushing extending into adjacent ends of said tubes; a handle surrounding the connected ends of said tubes; and a string joining outer ends of said tubes.

4. In an archer's bow, the combination of: a plurality of bow members, each tapering toward its extremities and including a pair of tubes disposed end to end and connected by a tubular bushing extending into adjacent ends of said tubes; a handle surrounding the connected ends of said tubes; means for connecting pairs of corresponding ends of said bow members; and a string extending from one of said pairs to the other of said pairs.

5. A combination as in claim 1 in which said bow member is oval in cross-section.

6. A combination as in claim 2 in which said bow members are oval in cross-section.

7. In an archer's bow, the combination of: a bow member including a pair of metallic tubes disposed end to end and connected by a tubular bushing extending into adjacent ends of said tubes; a handle surrounding the connected ends of said tubes; and a string joining outer ends of said tubes.

8. A combination as defined in claim 7 in which said metallic tubes are oval in cross-section, and become smaller in outer dimensions near the extremities of said bow member.

9. In an archer's bow, a handle portion, a pair of spaced, tubular metal limbs extending from each end of said handle por-

tion, and a tip connecting the outer ends of each pair of limbs.

10. In an archer's bow, the combination of: a plurality of bow members, each including a pair of tubes disposed end to end and connected by a tubular bushing extending into adjacent ends of said tubes; a handle surrounding the connected ends of said tubes; means for connecting pairs of corresponding ends of said bow members; and a string extending from one of said pairs to the other of said pairs.

11. An archer's bow, comprising: a handle portion; a pair of spaced, tubular members extending from each end of said handle portion; and a tip connecting the outer ends of each pair of members.

12. An archer's bow comprising: a handle portion; a pair of tubular metallic members held in spaced relation in and extending from each end of said handle portion; and a tip connecting the outer ends of each pair of members.

In testimony whereof, I have hereunto set my hand at Los Angeles, California, this 7th day of October, 1927.

GEORGE E. BARNHART.