Sept. 27, 1949. R. J. MENNE 2,483,145

ARCHERY BOW

Filed Oct. 11, 1945

FIG. 1.

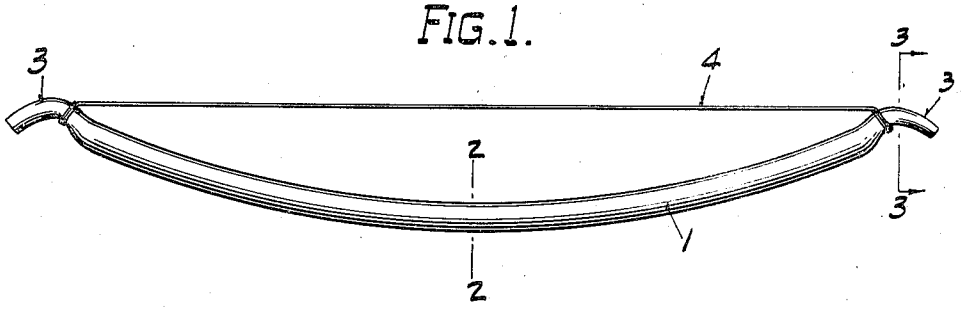


FIG. 2.

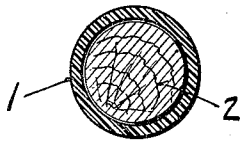
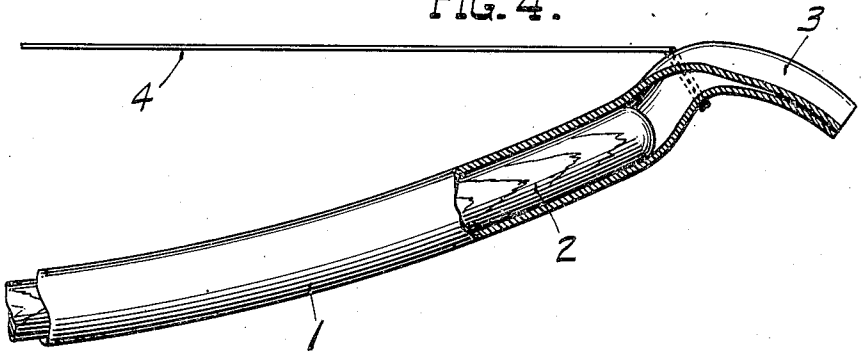


FIG. 3.



FIG. 4.



Ray J. Menne
INVENTOR.

BY Elvin C. Andrus
ATTORNEY.

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ARCHERY BOW

Ray J. Menne, East Troy, Wis., assignor to Menne Developments, East Troy, Wis., a partnership

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3 Claims. (Cl. 124—23)

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This invention relates to a bow for bow and arrow sets.

One of the objects of the invention is to provide a low-cost durable bow adapted particularly for use by children.

Another object of the invention is to eliminate the requirement of close specifications in seasoning and grain of the wood employed in a bow.

Another object is to provide a more permanent and attractive coloring for a bow, that does not deteriorate by reason of the flexing of the bow or leaving it in the damp grass and the like as children are wont to do.

Other objects and advantages will be set forth in the description of an embodiment of the invention illustrated in the accompanying drawing.

In the drawing:

Figure 1 is a side elevation of the bow;

Fig. 2 is an enlarged transverse section taken centrally of the bow on line 2—2 of Fig. 1;

Fig. 3 is a similar section taken near one end of the bow on line 3—3 of Fig. 1; and

Fig. 4 is an enlarged side elevation of one end of the bow showing the crimped end in longitudinal section.

The bow comprises a tubular body or case 1 extending the full length of the bow and consisting of a suitable synthetic resin material. A resilient dowel 2 is disposed inside the case 1 and is of a diameter sufficient to fit reasonably close therein, and is preferably of a length short of that of the case to provide for crimping the ends of the case as at 3.

The case 1 is preferably constructed of a thermo-plastic material which may have a brilliant color permanently combined therein for the full thickness. This avoids the necessity of painting the outside of the bow and provides a substantially permanent and attractive color for the bow regardless of handling.

The thickness of the outer case may vary depending upon the material and the size of the bow, a suitable thickness generally being between about $\frac{1}{32}$'' and $\frac{1}{16}$''.

The dowel 2 is preferably of wood and need not be selected with care as to seasoning or grain. It need not be treated in any way prior to its insertion in the bow other than warping the same on the curve of the bow, if desired. It may be left relatively loose in the bow and is held in place by the crimped ends 3.

The ends 3 are crimped after insertion of the dowel 2, as shown in Figs. 3 and 4. For this purpose, with thermo-plastic, the end need only be

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heated in steam or hot water and then manually crimped by a tool, an operation that is quick and of extremely low cost.

The crimping of the ends provides a substantially U-shaped cross section which is reinforced by double wall thickness and which constitutes a strong support for the bow string 4, fastened thereto. For this purpose the crimped end 3 has a shoulder adjacent the end of the dowel 2 and is bent reversely from the main curvature of the bow to receive the string 4. The U-shape of the crimped end may be disposed either upright as shown or upside down.

The initial curvature of the bow may be provided by warping either the case 1 or dowel 2 or both prior to assembly, or by applying a warping treatment after assembly.

The bow may either be considered as having a tubular plastic body strengthened and given resilience by a resilient center, or it may be considered as having a cheap wood body protected against splitting and breaking upon bending in use, by an outer plastic case gripping and supporting the same.

Various embodiments of the invention may be employed within the scope of the accompanying claims.

I claim:

1. A bow comprising a curved body constituted of a tubular plastic material encasing a central resilient member disposed therein and removed from the ends thereof.

2. A bow comprising a curved body constituted of a tubular plastic material encasing a central resilient member, and end members formed from the plastic case for holding the central member in place and providing a fastening for a bow string.

3. A bow comprising a curved body constituted of a tubular plastic material encasing a central wood dowel fitting therein, and end members formed from the plastic case for holding the dowel in place and providing a fastening for a bow string.

RAY J. MENNE.

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The following references are of record in the file of this patent:

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