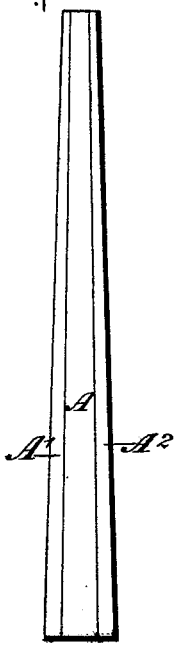
F. MALLESON.
Archery-Bow.

No. 213,434 Patented Mar. 18, 1879.

FIG. 1.



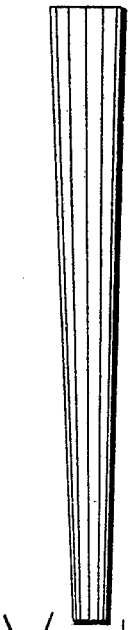


FIG. 2.

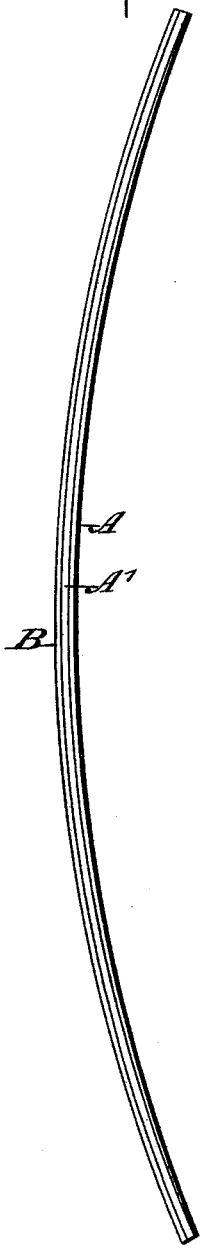


FIG. 3.

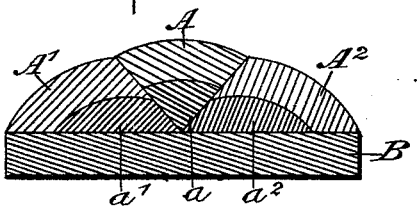


FIG. 4.

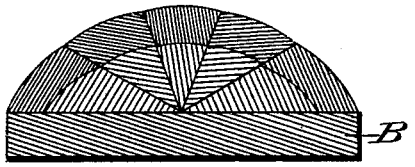
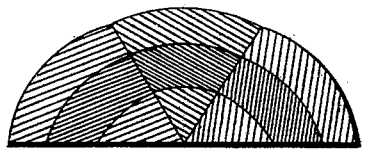


FIG. 5.



WITNESSES:—

E. R. Bolton
Chas. F. Stetson

INVENTOR:—

Frederick Malleson
by his Attorney
Thomas B. Stetson

UNITED STATES PATENT OFFICE.

FREDERICK MALLESON, OF NEW YORK, N. Y.

IMPROVEMENT IN ARCHERY-BOWS.

Specification forming part of Letters Patent No. **213,434**, dated March 18, 1879; application filed November 21, 1878.

To all whom it may concern:

Be it known that I, FREDERICK MALLESON, of New York city, in the State of New York, have made certain new and useful Improvements relating to Bows for use in Archery; and I do hereby declare that the following is a full and exact description thereof.

I have discovered that by dividing and applying properly together strips of sound bamboo, with a portion of lance-wood or other suitable wood, I can produce a bow of unusual strength, lightness, and elasticity.

The following is what I consider the best means of carrying out the invention.

The accompanying drawings form a part of this specification.

Figure 1 is an inner-face view. Fig. 2 is an edge view, representing the bow partially bent. Fig. 3 is a cross-section on a larger scale. The remaining figures show modifications. Fig. 4 shows the bow compounded of a greater number of sections. Fig. 5 shows a bow made of two thicknesses of bamboo with wood centers, but with the ordinary broad face of wood omitted.

Similar letters of reference indicate like parts in all the figures.

A A^1 A^2 are strips of bamboo properly tapered from the middle each way and beveled each way, so as, when applied together to form the sections, to be nearly or quite a half-circle. On the inner face of each is glued a center-strip, a a^1 a^2, of lance-wood. All the soft material on the inner surface of the bamboo is dressed away before the wood is glued thereon, and, care being taken to use the best glue and appliances, the work is very firmly put together. After properly beveling the edges the several parts are similarly glued together.

B is a strip of lance-wood or any other fine strong wood, upon which the compound parts of bamboo A A^1 A^2 and their accompanying wood centers a a^1 a^2 are glued to complete the whole.

It will be understood that the work should be so put together that the bow will have the natural curvature in the opposite direction to that which it will assume on being drawn. The ends may be fancifully tipped and the surfaces variously varnished or decorated.

When the bow is strongly bent the compressive strain is received almost entirely by the bamboo. The peculiarly dense and elastic nature of its surfacing material gives the bow extraordinary power. It may be made of less section and considerably lighter than other bows of equal strength. Modifications may be made.

I can use two coverings of bamboo, one exterior to the other, on each side of the centers a a^1 a^2, or the whole may be bamboo, dispensing with wood centers. Bamboo may be used in place of the wood B.

It is not essential to the success of my invention that the bow be made to stand naturally with a curvature the reverse of that which it will assume when bent. I have found such in some cases too severe on the strings, and have made the bow by preference about straight or slightly bent in the same direction which it will assume when strung.

I claim as my invention—

1. The within-described archery-bow formed of sections, the exterior of each section being of bamboo A A^1 A^2, with a filling, a a^1 a^2, and combined with a back, B, all substantially as and for the purposes herein specified.

2. An archery-bow having a facing formed in segmental sections, glued together and to a back, B, as and for the purposes herein specified.

In testimony whereof I have hereunto set my hand this 19th day of November, 1878, in the presence of two subscribing witnesses.

FREDK. MALLESON.

Witnesses:

THOS. E. MALLESON,

CHAS. C. STETSON.