J. B. ROBINSON.

Bow.

No. 224,043. Patented Feb. 3, 1880.



Fig. 1.

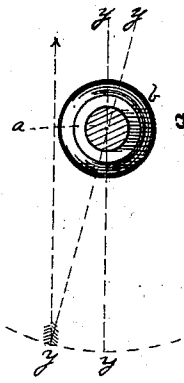


Fig. 4.

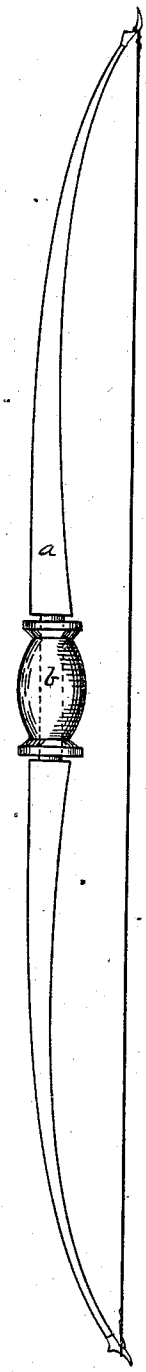


Fig. 3.

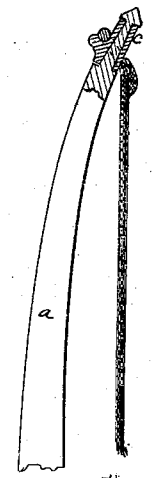


Fig. 5.

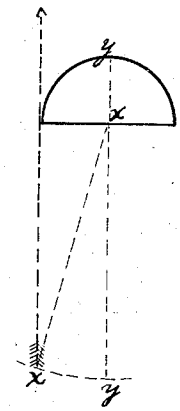


Fig. 2.

Witnesses.

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UNITED STATES PATENT OFFICE.

JAMES B. ROBINSON, OF KITTANNING, PENNSYLVANIA.

BOW.

SPECIFICATION forming part of Letters Patent No. 224,043, dated February 3, 1880.

Application filed December 2, 1879.

To all whom it may concern:

Be it known that I, JAMES B. ROBINSON, of Kittanning, in the county of Armstrong and State of Pennsylvania, have invented a new and useful Improvement in Bows; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a view of the old form of bow. Fig. 2 is a diagram indicating the position of the string and bow in the act of delivering the arrow. Fig. 3 is a view of my improved bow. Fig. 4 is a diagram indicating the position of the string and bow in the act of delivering the arrow. Fig. 5 is a view of a loose ferrule for attaching the string.

Like letters of reference indicate like parts in each.

This invention has for its object the construction of archers' bows which will enable them to shoot without lateral strain.

As heretofore constructed, the strings of bows have usually been fastened to the bow in such a manner that when the arrow was brought in line with the target or other object the bow was not only bent, but drawn rigidly slightly to one side, or, in other words, strained laterally. The effect of this was, that when released the string sprang in line with the bow, and delivered the arrow at a slight angle, which necessarily caused a greater or less divergence of the arrow before it reached the target or other object, requiring a considerable exercise of skill to overcome or correct it. By my invention the bow is not so strained, but is merely bent, and delivers the arrow in a true line.

To enable others skilled in the art to make and use my invention, I will describe its construction.

The bow is shown at *a*. It is provided, preferably, with a movable sleeve or handle, *b*, of leather, wood, or other material, which, being held rigidly, permits the bow to turn in the hand as the arrow is being brought into line with the target or other object. When the string is released, the bow, being permitted to turn in the handle or sleeve *b*, does not at once draw the string rigidly behind it, but simply straightens out and delivers the arrow without deflection from a straight line. The bow, instead of being strained laterally, adjusts itself in the handle so that it merely bends to the string.

Instead of the loose handle *b*, loose ferrules *c* may be used for the attachment of the string to the bow, the effect being the same.

The loose sleeves or ferrules *c*, applied to the tips or nocks of the bow, will also be found valuable aids in correctly stringing, as the movement of the sleeves will correct the position of the string and obviate any liability of straining or injuring the bow.

In Diagram 2, *x x* indicate the angle of lateral strain on the bow, and *y y* the direct strain. In Diagram 4 there is no such lateral strain, as the bow simple turns in the hand, so that the line *y y* of direct strain is always preserved.

This improvement enables the archer to shoot with greater ease and more accurately, and with stiff bows will prevent straining of the wrist and fore-arm.

I am aware that continuous bows have heretofore been provided with fixed grasp-sleeves for a handle or finish, and that such sleeves may occasionally wear loose, so as to allow of a limited motion between the bow and sleeve, and do not claim such devices; but I am not aware that a practically loose sleeve has heretofore been employed to permit the free rotation of the bow with relation to the sleeve for the purposes herein set forth; and, therefore,

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A continuous bow provided with one or more loose sleeves, which move upon the bow and permit the cord to align itself with the edge of the bow and deliver the arrow in a true line, substantially as specified.

2. In combination with the tip of a bow, a loose sleeve or ferrule capable of rotation, substantially as and for the purposes specified.

In testimony whereof I, the said JAMES B. ROBINSON, of Kittanning, county and State aforesaid, have hereunto set my hand.

JAMES B. ROBINSON.

Witnesses:
JNO. K. SMITH,
JAMES H. PORTE.