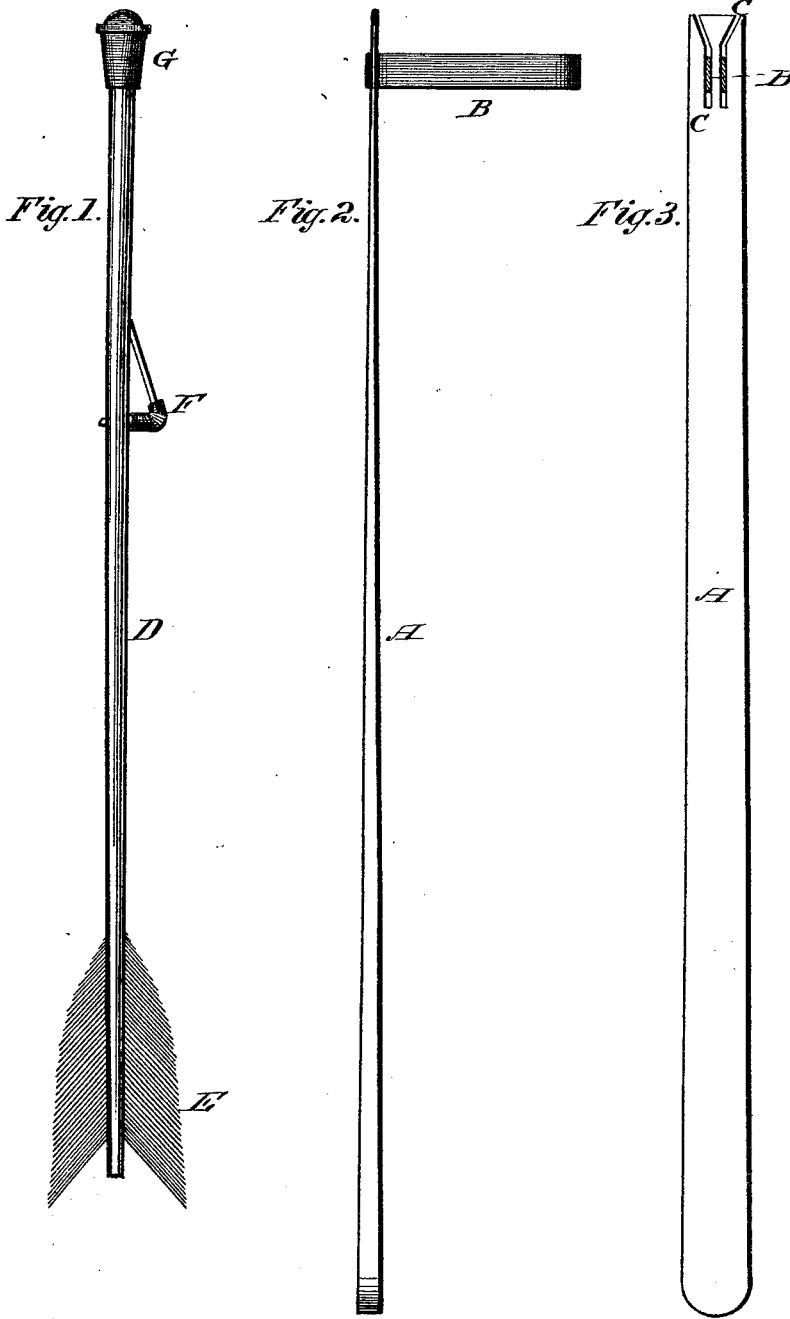


C. GOODWIN.
BOWS AND ARROWS.

No. 183,759.

Patented Oct. 31, 1876.



Witnesses:

L. L. Bond
A. W. Bond.

Inventor:

Chas Goodwin

UNITED STATES PATENT OFFICE.

CALEB GOODWIN, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN BOWS AND ARROWS.

Specification forming part of Letters Patent No. **183,759**, dated October 31, 1876; application filed March 6, 1876.

To all whom it may concern:

Be it known that I, CALEB GOODWIN, of the city of Chicago, Cook county, State of Illinois, have invented a new and useful Improvement in Bows and Arrows, of which the following is a full description, reference being had to the accompanying drawings, in which—

Figure 1 is an elevation of an arrow; Fig. 2, an edge view of a hand bar or spring; Fig. 3, a side view of the same.

The nature of this invention consists in providing a hand bar or spring with an elastic loop, and in providing the arrow with a side projection and an elastic head, as hereinafter more fully described.

In the drawings, A represents the hand bar or spring; B, the elastic loop; C C, the grooves for attaching the loop; D, the arrow; E, the feather; F, the side projection or catch; G, the elastic head.

The hand bar or spring A may be made either of wood or spring metal. At its outer end it is provided with slots C, for holding the loop B in place. The loop B is made of a rubber band of such size and strength as may be desired.

The arrow D may be made in the form shown, or it may be tapered both ways from the catch F. Its tip is provided with a pasteboard or other suitable feather, which may be attached to the side; or the shaft may be slit, so as to form both sides of the feather of a single piece.

The head of the arrow is provided with a rubber tip, G, to prevent the arrow from causing damage when used in the house; and this head furnishes a means of chalking or blacking the end of the arrow, so as to have a mark in shooting at targets.

The catch F may be made of a piece of bent wire, driven in as shown. When so made, it is wound with a piece of leather or cloth to prevent its cutting the rubber or elastic loop B.

In operation, the catch F is placed in the loop B, and the arrow drawn back till a sufficient strain is obtained, when it is released in the usual manner. By this arrangement a double spring is obtained, so that the arrow may be propelled with considerable force, if desired.

What I claim as new, and desire to secure by Letters Patent, is as follows:

1. The combination of the hand-bar A, provided with the slots or openings C, with the spring-loop B, constructed and attached together substantially as described.

2. The combination of the springing hand-bar A, provided with the detachable spring-loop B, with the arrow D, provided with the catch F, substantially as set forth.

CALEB GOODWIN.

Witnesses:

L. L. BOND,
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