N. R. STREETER.

Arrow.

No. 219,881. Patented Sept. 23, 1879.

Fig. 1.

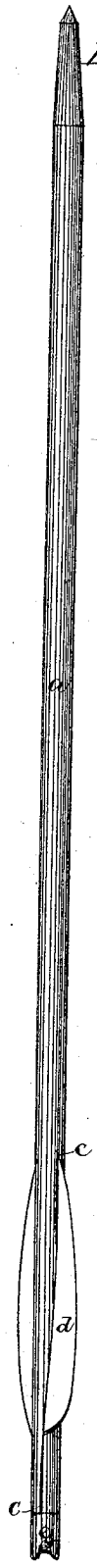


Fig. 2.

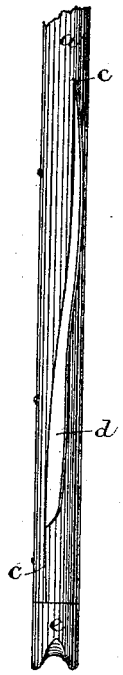
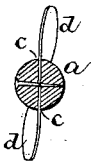


Fig. 3.



Witnesses:

J. W. Garner

W. S. D. Haines

Inventor:

N. R. Streeter

per

F. A. Lehmann,

Atty.

UNITED STATES PATENT OFFICE.

NELSON R. STREETER, OF GROTON, NEW YORK.

IMPROVEMENT IN ARROWS.

Specification forming part of Letters Patent No. **219,881**, dated September 23, 1879; application filed August 12, 1879.

To all whom it may concern:

Be it known that I, NELSON R. STREETER, of Groton, in the county of Tompkins and State of New York, have invented certain new and useful Improvements in Arrows; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in arrows; and it consists in making a spiral slit in the butt-end of the arrow, so that when the sheet of rubber or celluloid, which acts as a feather, is placed in the slit the sheet will be given a spiral curve, as will be more fully described hereinafter.

Figure 1 is a plan view of my invention, and Fig. 2 is an enlarged detail view. Fig. 3 is a vertical cross-section of the same, taken through the feather.

a represents an arrow of any suitable construction, and which has the spiral slit *c* cut in its butt-end to any desired distance. In this spiral slit is inserted the feather *d*, which, being made of a thin sheet of vulcanized rubber or celluloid, is easily bent. After the feather has been inserted into place a number of tacks are driven through the arrow, so as to hold the feather in place, and then the ferrule *e* is applied to the end of the arrow, as shown.

In thus securing the two divided parts of the arrow together, with the feather between them, the feather is given a spiral curve corresponding to the shape of the slit, so that when the arrow is flying through the air it will be caused to constantly revolve, and thus it will be made to fly straighter.

The feather is made from a thin sheet of vulcanized rubber or celluloid, on account of the toughness of the material and the small liability to being broken.

Where the feather is easily bent out of shape or broken the arrow soon becomes worthless, and has to be thrown away or else repaired.

Having thus described my invention, I claim—

As a new article of manufacture, an arrow, *a*, having a spiral slit, *c*, cut in its rear or butt end, in combination with a feather, *d*, made of a tough flexible material, the feather being given a spiral curve by placing it in the slit, and then clamping or securing the ends of the arrow together, substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand.

NELSON R. STREETER.

Witnesses:
MANLY P. GREEN,
CHAS. O. RHODES.