

F. SWAN.  
Barbed Fence Wire.

No. 216,358.

Patented June 10, 1879.



Fig. 1.

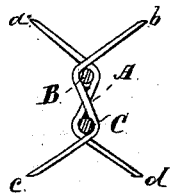


Fig. 2.

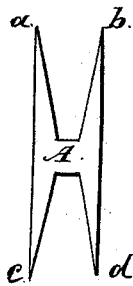


Fig. 4.

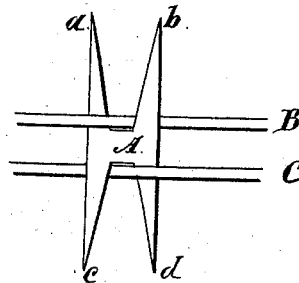


Fig. 3.

Witnesses:

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Inventor:

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# UNITED STATES PATENT OFFICE.

FRANK SWAN, OF JOLIET, ILLINOIS.

## IMPROVEMENT IN BARBED FENCE-WIRE.

Specification forming part of Letters Patent No. **216,358**, dated June 10, 1879; application filed January 27, 1879.

### *To all whom it may concern:*

Be it known that I, FRANK SWAN, of Joliet, Will county, State of Illinois, have invented new and useful Improvements in Barbed Fence-Wire, of which the following is a full description, reference being had to the accompanying drawings, in which—

Figure 1 is an elevation; Fig. 2, a cross-section. Fig. 3 shows a barb applied to two wires and before the wires have been twisted. Fig. 4 shows a single barb.

My invention relates to the securing of four-pointed sheet-metal barbs, of the form shown, to two wires.

In the drawings, A represents one of the barbs which I use. It is cut from sheet metal, and has four points or prongs *a b c d*. The bases of the two prongs *a b* are a little distance apart, to allow the wire to pass to the bottom of the space between them. The same is true of *c d*.

The barbs are secured to two wires, B C, as follows: The wire B is placed between the two prongs *a b* and the wire C between the two prongs *c d*, as shown in Fig. 3.

It will be observed that the prong *a* is behind the wire B, and the prong *b* is in front of the same wire, while the prong *c* is in front of the wire C, and the prong *d* is behind it. This arrangement of the barb on the two wires is important.

After a barb has been placed upon two wires, as described, the wires are to be twisted together, as shown in Fig. 1, and additional barbs are to be applied to the wires, one after another, at such distances apart as may be desired. Then the four prongs are to be bent over the wires, bringing them into the position shown in Fig. 2. Looking at Fig. 3, the prong *a* is to be bent forward over the wire B, and *b* is to be bent back over the same wire, while the prong *c* is to be bent backward over the wire C, and *d* is to be bent forward over the same wire. When thus secured to the wires the barb will be securely held thereon by four hooks, and the twist of the wires will prevent lateral displacement.

The barbs will be so securely held upon the wires that should the wires become bent or untwisted, the barbs could not fall off; in fact, they can only be removed by forcibly bending back the prongs, rendering it quite certain that none of the barbs will be removed from the wires in use under any ordinary circumstances.

The wires are spread apart considerably where the barbs are applied, adding materially to the strength of the completed fence.

The spreading of the wires by the solid center of the barb-plate also makes the fence more visible, and the spreading of the wires at the point of union with the barbs, so that they will not retain moisture, prevents rapid rusting.

When the barbs are applied as described, it is only necessary to twist the wires a little. When the barbs are six inches apart, one and a half twist between two barbs will be sufficient, while, as barbs are usually applied, the wires are twisted about seven times in the same distance. This is a great advantage, for the reason that much twisting injures the fibers of the wire and materially weakens the same.

I am aware that barbs have been made similar to that described.

I am also aware that sheet-metal barbs have been secured between two wires by twisting the wires. Therefore I do not claim, broadly, a barbed fence-wire consisting of two wires and sheet-metal barbs placed between such wires and held in place by twisting the wires.

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

The sheet-metal four-pronged barb A, having a solid center, in combination with the wires B C, and secured between them by crossing and bending, as described, whereby the wires are separated and the barbs locked, substantially as set forth.

FRANK SWAN.

Witnesses:

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