T. V. ALLIS.
Fence-Wire.

No. 205,029. Patented June 18, 1878.

Fig. 1.

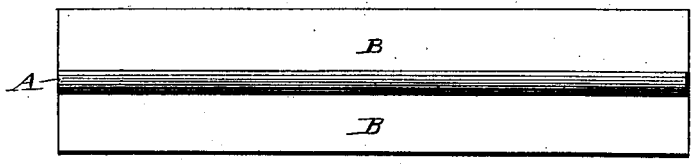


Fig. 2.

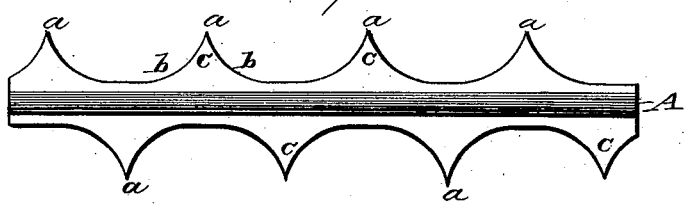


Fig. 3.

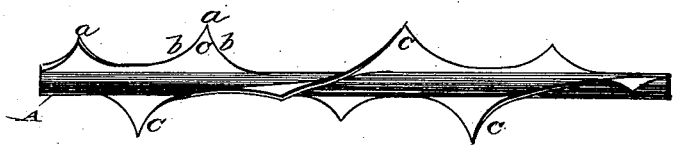


Fig. 4.

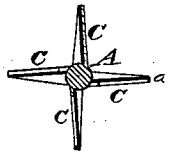
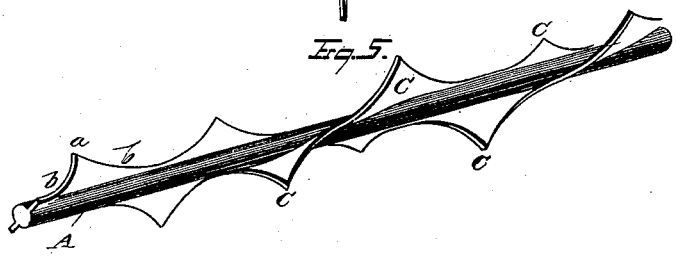


Fig. 5.



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THOMAS V. ALLIS, OF NEW YORK, N. Y.

IMPROVEMENT IN FENCE-WIRES.

Specification forming part of Letters Patent No. **205,029**, dated June 18, 1878; application filed May 13, 1878.

To all whom it may concern:

Be it known that I, THOMAS V. ALLIS, of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Fence-Wires; 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 barbed fence-wire.

Heretofore fence-wire has been manufactured with thick ribs extending out laterally from the opposite sides of the wire, and said ribs have been cut into sections and partially severed from the main wire and bent at right angles thereto to form barbs on opposite sides of the wire. This form of wire is defective, for the reason that the skin of the main wire is cut away beneath each barb equal to the length thereof, which allows the iron to corrode and rapidly deteriorate when subjected to the weather; also, the removal of the skin of the wire operates to impair its tensile and torsional strength.

The barbs on a fence-wire constructed as above set forth are not firmly supported, and are liable to become bent or broken when in use.

The object of my invention is to provide a barbed fence-wire of such construction that it may be readily manufactured at a small initial cost, and the barbs be formed thereon without cutting the skin of the main wire or bending any portion of the barb outwardly therefrom, and of such form that each barb shall be firmly braced on four sides, whereby the barbs, when made of thin metal, will possess the requisite strength for the desired purpose; and to this end my invention consists, first, in a barbed fence-wire consisting of a wire provided with fins on opposite sides thereof, said fins being equal in width to the desired length of barbs to be formed thereon.

My invention further consists in a barbed fence-wire provided with fins, which are scalloped or cut to form triangular-shaped barbs, the wire being twisted, whereby the base portion of each barb is disposed in spiral form on the wire, and thus affords a lateral support to the barb.

My invention further consists in certain details of construction, as will hereinafter be described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view of the wire before the barbs have been formed. Fig. 2 is a plan view of the wire after it has been scalloped or cut to form the barbs. Fig. 3 is a plan view of the wire after it has been twisted to dispose the barbs spirally about the same. Fig. 4 is a cross-section of Fig. 3, and Fig. 5 is a view in perspective of a portion of the wire.

A represents the main wire, provided with comparatively thin fins B B on opposite sides thereof, which are formed in the process of rolling. Fins B B are of sufficient width to enable the desired length of barbs to be cut therefrom.

C represents the barbs, which are of triangular shape, the apex or point *a* of the barb being located equidistant from the extremities *b b* of the base portions thereof, whereby the barbs are firmly supported and thus prevented from bending in a direction in line with the wire. The barbs are formed from the fins without cutting into or disturbing the skin of the main wire A, and thus the strength and durability of the latter are in nowise impaired.

After the barbs have been formed from the fins, as represented in Fig. 2, the wire then is twisted, and thus the barbs are caused to project radially in all directions from the wire. This operation not only renders the wire specially adapted for the purposes of a fence by furnishing any desired number of barbs placed at varying angles to each other, but in the case in hand it subserves another useful and important purpose—namely, to impart strength and stiffness to each one of the barbs.

As heretofore stated, the barbs, by reason of their triangular form, are thoroughly braced and supported in line with the wire, and, by twisting the barbs so that they shall be located spirally on the wire, it operates to brace each barb transversely to the wire, which will be readily observed by referring to Fig. 4, where it will be seen that the opposite extremities *b b* of the base portion of each barb are located on opposite sides of a line extending from the

apex *a* through the center of the wire. Hence, each barb is provided with end and side braces, and thus comparatively thin metal barbs, when cut and arranged in the manner heretofore described, will possess sufficient strength and rigidity for the purpose in view.

The wire may be galvanized to prevent corrosion, and iron or steel wire may be used. The barbs are preferably formed on the opposite fins in such a manner that they will intersect each other, and thus furnish a continuous series of sharp points along the wire.

It is evident that the form and arrangement of the barbs may be slightly varied without departing from the spirit of my invention; and hence I do not limit myself to the exact construction and arrangement shown and described; but,

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A wire for barb wire-fences consisting of a main wire provided with thin fins located on opposite sides of the wire, said fins being of sufficient width to form barbs of the desired length without bending the barbs, substantially as set forth.

2. A barb fence-wire consisting of a main wire provided with fins on opposite sides thereof, said fins being scalloped or cut, and the wire twisted to form triangular-shaped barbs, spirally arranged on the wire, substantially as set forth.

3. A barb fence-wire consisting of a main wire provided with triangular-shaped barbs, which are formed as an integral part of the wire, the barbs on opposite sides of the wire being arranged to intersect each other, substantially as set forth.

4. A barb fence-wire consisting of a main wire having barbs formed on opposite sides thereof, the base portions of the barbs on one side of the wire being of sufficient length to overlap the base portions of the barbs on the opposite side of the wire, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 10th day of May, 1878.

THOMAS V. ALLIS.

Witnesses:
M. A. POTTER,
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