

(No Model.)

W. A. ROOT.  
Barbed Fence Wire.

No. 237,130.

Patented Feb. 1, 1881.

Fig: 1

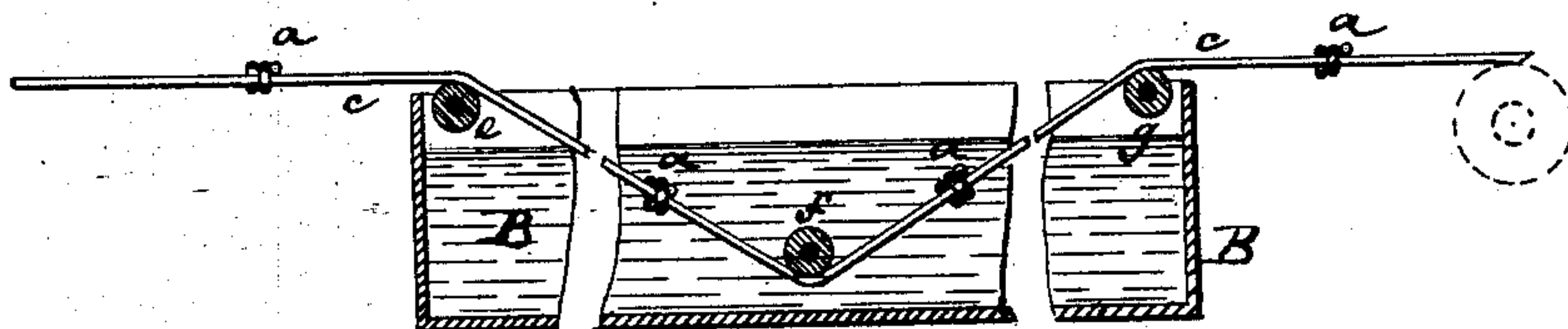


Fig: 2

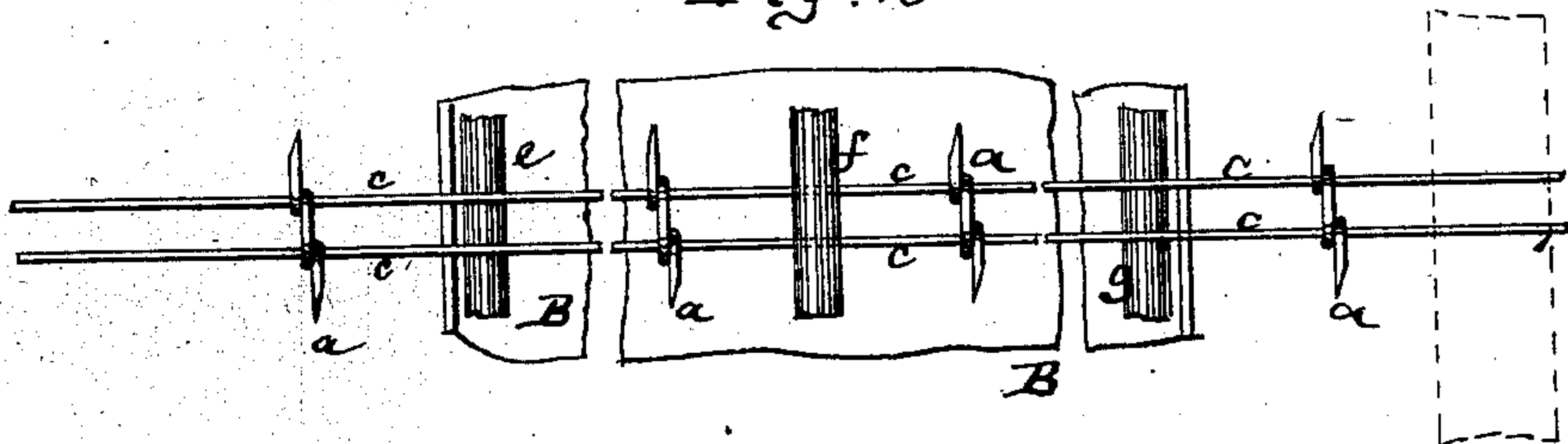


Fig: 3

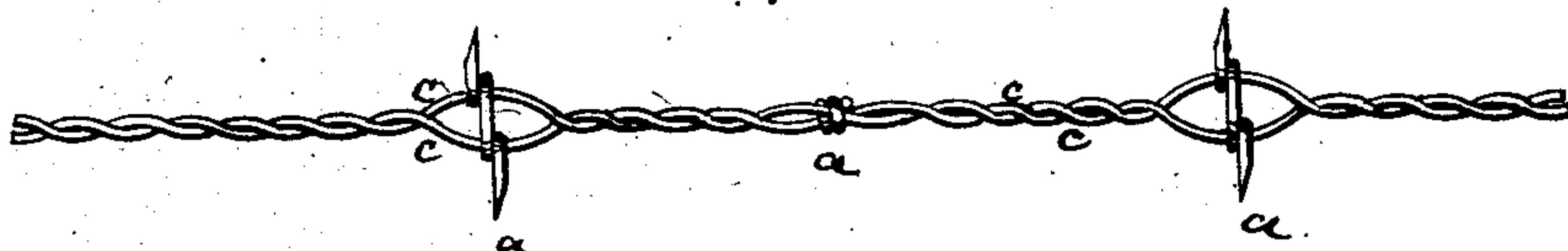
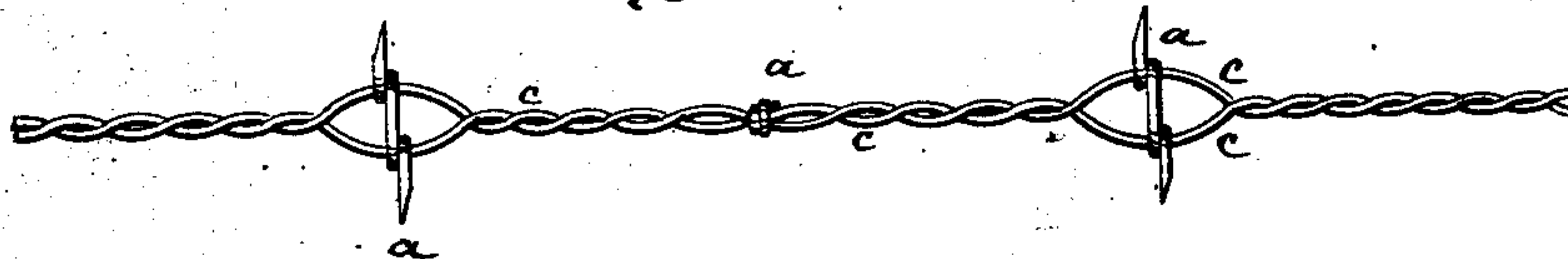


Fig: 4



Witnesses:

John C. Tunbridge  
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# UNITED STATES PATENT OFFICE.

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## BARBED FENCE-WIRE.

SPECIFICATION forming part of Letters Patent No. 237,130, dated February 1, 1881.

Application filed June 21, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM A. ROOT, of the city, county, and State of New York, have invented a new and useful Improvement in Barbed Fence-Wire, and in the process of making the same, of which the following is a specification.

Heretofore one method of producing barbed fence-wire, so treated or coated as to resist rusting, has been to use wire already galvanized or otherwise suitably coated, and then cut it up into barbs and attach to the main strands of wire. The objection to this is that the barbs made from such wire, and which have a diagonal cut at each end, are unprotected at the diagonal most exposed ends, and liable to rust. Another method has been to first manufacture the barbed fence-wire and then galvanize or coat the completed article; but under this method the two main wires which have been twisted together to make the finished fence-wire are not galvanized or coated at their points of contact, thus leaving surfaces unprotected and liable to rust if, by strain or otherwise, the twist is changed; and, again, the galvanizing process will solder the two twisted or main wires together, and thus diminish the elasticity of the finished wire.

The object of my invention is to avoid the above-mentioned difficulties, and produce barbed fence-wire galvanized at every point which is liable to damage by rust, and fully as elastic as the character of the wire itself will admit. I attain this object by the process hereinafter stated, thereby producing a new fence-wire.

In the accompanying drawings, Figure 1 is a vertical section of the galvanizing-tank, showing the second step of my process. Fig. 2 is a top view of the same; and Figs. 3 and 4 show the finished wire, with a right and a left twist, respectively, given to the two main wires.

My process is as follows: Barbs *a a*, Fig. 2, are first placed upon and looped around two main wires, *c c*, Fig. 2, at suitable intervals, said barbs holding the main wires apart. The main wires remain parallel, or nearly so, while thus joined by the barbs, but connected

by the barbs. The barbed wire thus produced is then drawn through or dipped in a bath, *B*, to galvanize the wire, or give it some other coating desired, the effect varying with the quality of the bath. After being treated in the bath the two main barbed wires *c c* are twisted together, with either a right or left twist, giving as a final product the barbed fence-wire as shown in Figs. 3 and 4 of the drawings respectively.

I prefer the method of passing the barbed wires through the bath which is shown in vertical section in Fig. 1 of the drawings, and of which a top view is given in Fig. 2, where the wires descend into the bath *B* over the guide *e*, pass under the guide *f*, and out again over the guide *g*; but any other method by which the barbed wire may be galvanized or properly coated is suitable and sufficient.

I also prefer the method of interlacing the barbs with the wires shown in the drawings, where the barbed ends are parallel to one another, pointing in opposite directions, and with the thickness of the wire composing the middle portion of the barb between them; and this special structure of barb and barbed wire forms the subject of a separate application by me for a patent; but I do not limit myself to this form, as any form of barb which will keep the wires apart during the galvanizing process and still join them is sufficient.

My above-described process produces barbed fence-wire which is free from the objections mentioned in the first part of this specification as inherent in former processes, in that my product of barbed fence-wire is regularly and equally galvanized or coated upon every important portion, including the faces of the sharpened barb-points and those portions of the main wire which are brought into contact by the twisting.

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

1. The process of manufacturing barbed fence-wire which consists in first placing barbs upon two separate main wires, *c c*, so that the wires *c c* shall be held apart and

alongside each other and still joined by the  
barbs; in then placing the wires so barbed  
and held in a bath to galvanize the same; and,  
lastly, in twisting the two main wires *c c* to-  
5 gether after galvanizing, all substantially as  
described.

2. As a new article of manufacture, a barbed  
fence-wire which is galvanized at the ends

and upon the body of the barbs and also  
along the entire extent of the twisted part of *ic*  
the main wires *c c*, substantially as herein  
shown and described.

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Witnesses:

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