

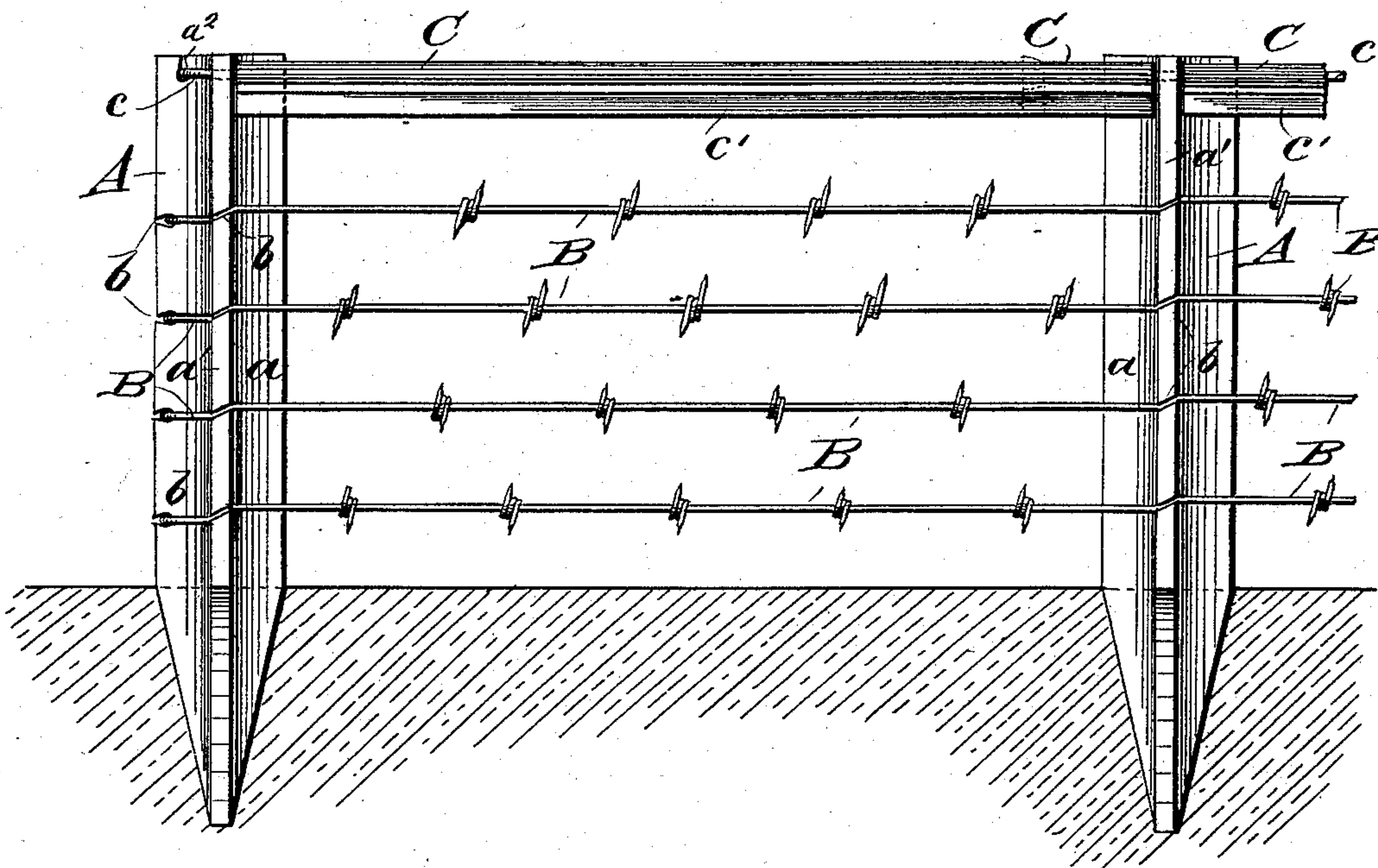
(No Model.)

J. HIGGINS & J. SULLIVAN.  
FENCE.

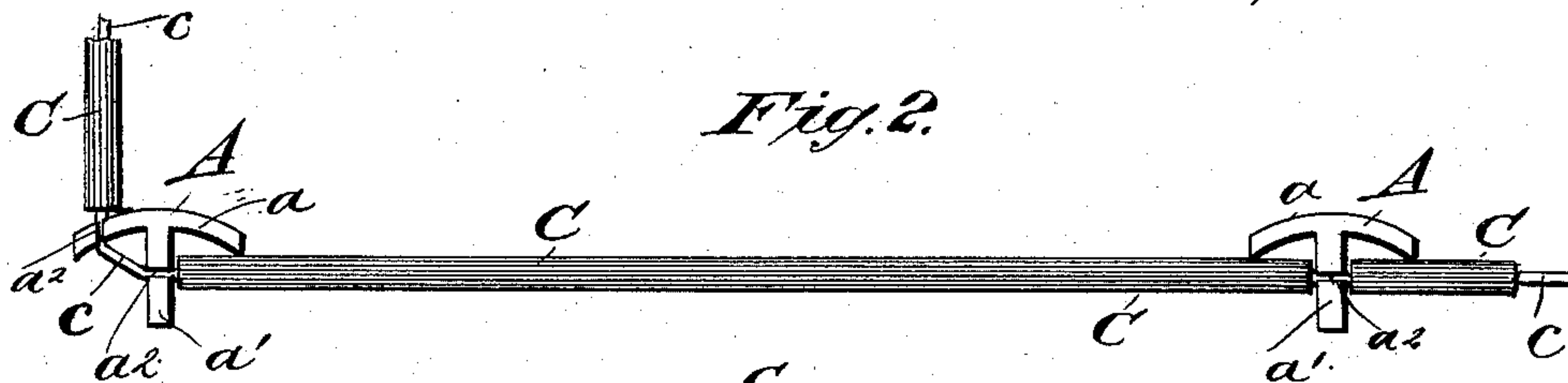
No. 406,645.

Patented July 9, 1889.

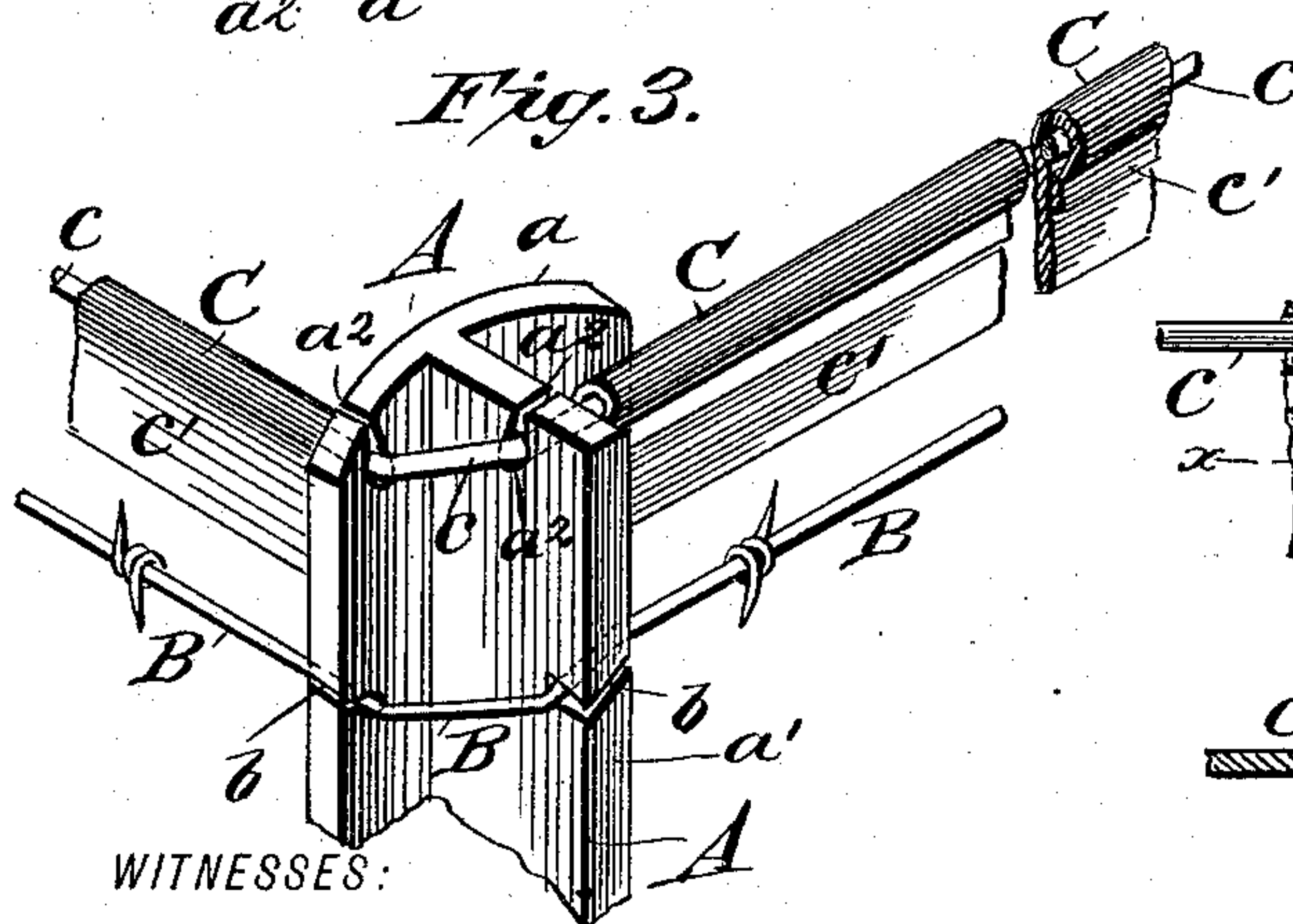
*Fig. 1.*



*Fig. 2.*



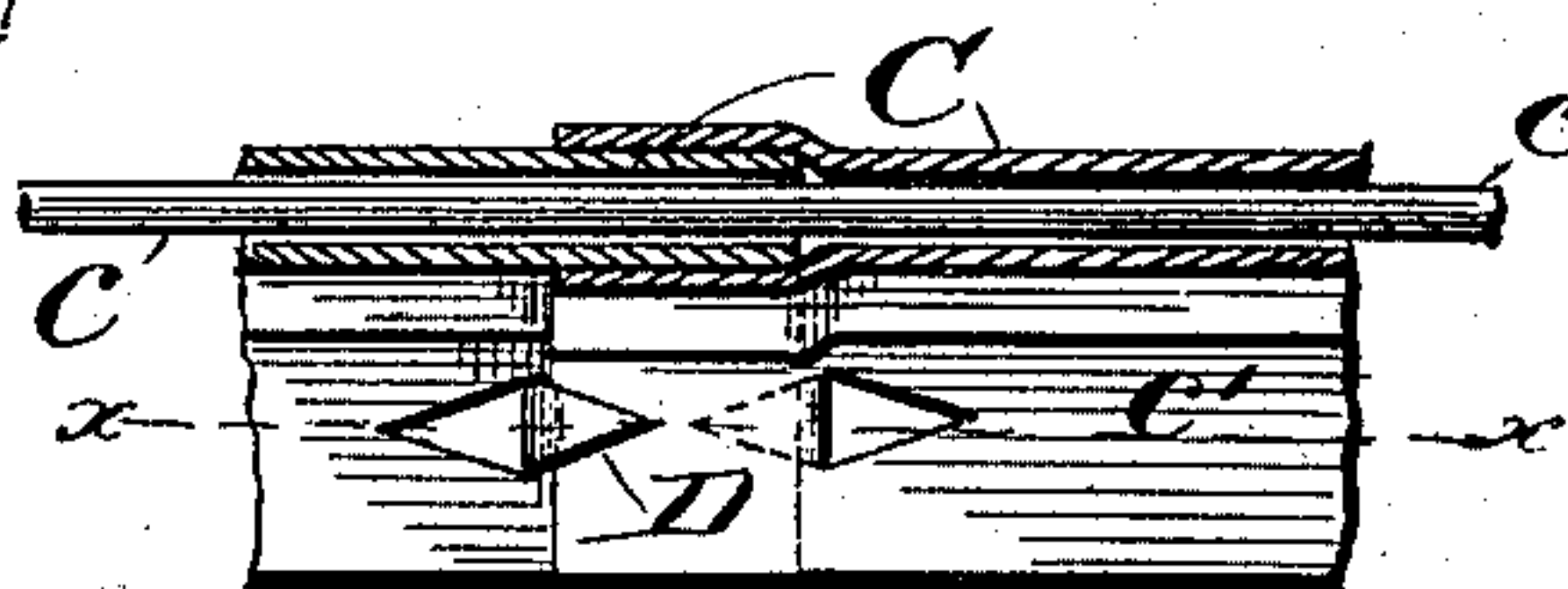
*Fig. 3.*



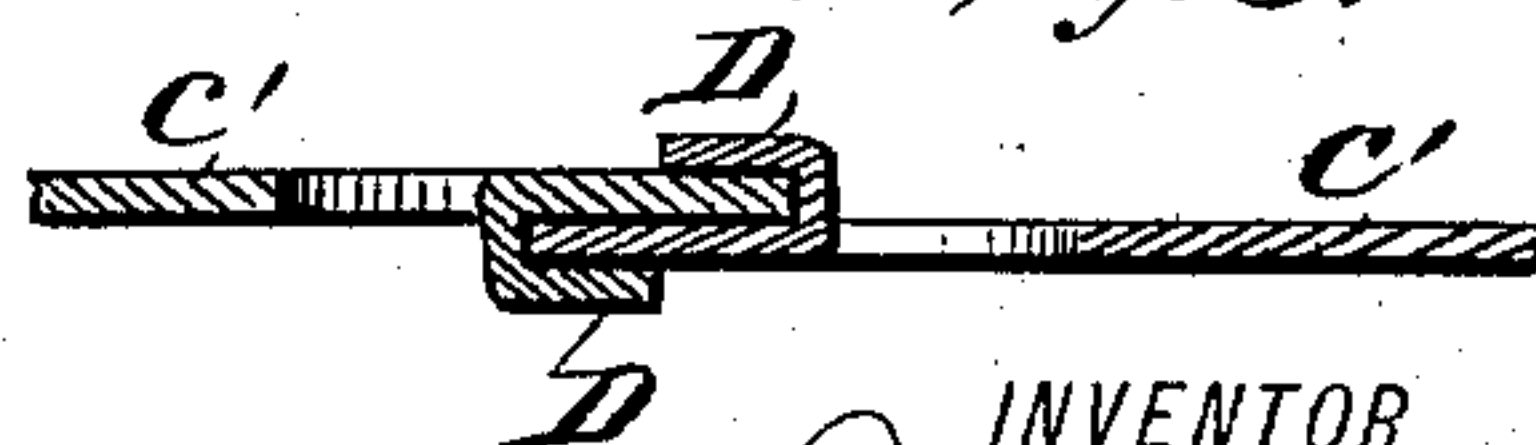
WITNESSES:

*Phil. C. Dietrich.*  
*C. Sedgwick*

*Fig. 4.*



*Fig. 5.*



INVENTOR  
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# UNITED STATES PATENT OFFICE.

JAMES HIGGINS AND JOHN SULLIVAN, OF GRAND RAPIDS, MICHIGAN.

## FENCE.

SPECIFICATION forming part of Letters Patent No. 406,645, dated July 9, 1889.

Application filed January 26, 1889. Serial No. 297,700. (No model.)

*To all whom it may concern:*

Be it known that we, JAMES HIGGINS and JOHN SULLIVAN, of Grand Rapids, in the county of Kent and State of Michigan, have  
5 invented a new and Improved Fence, of which the following is a full, clear, and exact description.

Our invention relates to fences for lands, and has for its object to provide an inexpensive, substantial, and fire-proof fence structure more especially adapted for use on stock-farms along railways, but available elsewhere, and constructed to prevent injury to animals  
15 fences of this character.

The invention consists in certain novel features of construction and combinations of parts of the fence, all as hereinafter described and claimed.

20 Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a view of a panel of a fence next the corner of a field and constructed in accordance with our invention. Fig. 2 is a plan view thereof. Fig. 3 is a detail perspective view of the fence at the top of the corner-post. Fig. 4 is a face view of a joint of the guard-rail or head-board of the fence, and Fig. 5 is a sectional plan view taken on the line  $x x$  in Fig. 4.

The fence-posts A are substantially the same as the posts shown in our recent patent, No. 35 392,334, granted November 6, 1888, each post having a face-plate  $a$ , from which a flange or rib  $a'$  projects, both the face-plate and flange being sharpened at the lower end to allow the posts to be readily set by driving them into the ground with a maul applied at their rounded upper ends. The post-ribs  $a'$  and one edge of the plate  $a$  of the corner-posts are provided with slits  $b$ , which receive the lower barbed-wire stringers B of the fence, these slits being  
45 preferably made diagonally to the plane of the stretched wires, which are fastened in the slots by a few blows of a hammer or tool closing the slits a little outside of the inserted wires.

Our present improvement relates more particularly to the construction of the composite upper guard-rail or head-board C of the fence,

which is provided to make the fence clearly visible to animals approaching it and prevent their injury, which otherwise might happen did they run unawares against the lower  
55 barbed wires of the fence. In making or building this guard-rail C we now use a central plain head-wire  $c$ , preferably round, and a bent plate or plates  $c'$ , which are formed of strips of metal doubled over on themselves  
60 and slipped onto the head-wire  $c$ , and then pressed or clamped tightly around and to the wire by a suitable machine or implement something like a beading-machine, which is run along the strip over the wire. It will be noticed that the plain head-wire  $c$  is slipped into  
65 open slots or slits  $a^2$ , made in the tops of the fence-post flanges  $a'$ , and that the head-board or guard-rail plate  $c'$  extends along the fence-panel and fits snugly at its ends between the  
70 flanges or ribs of two adjacent posts, and the face of the guard-rail rests against the face of the main plates  $a$  of the posts. The guard-rails thus also serve to brace or stay the tops of the posts one from the other. A blow or  
75 two of a hammer at the tops of the slots  $a^2$  closes them a little to lock the wire  $c$  therein and consequently lock the entire guard-rail down to the fence-posts.

Should the nature of the ground require any  
80 two posts of the fence to be set farther apart than the length of one of the guard-rails C, the guard-rail between these two posts may be easily joined or pieced out to fill in the space between the two posts and stay them, as above  
85 described. This we prefer to do by lapping the two parts of the rail-plate  $c'$  onto each other a little—say for about one-half an inch—and then punching or pressing tongues D D  
90 back out of the metal of each plate and bending or pressing these tongues over the ends of the two parts of the rail, as most clearly shown in Figs. 4 and 5 of the drawings, thus making a simple and substantial joint which will not  
95 allow independent endwise motion of the two parts of the guard-rail, and will thus preserve the post-staying quality of the rail, and does not require waste of guard-rail material, and allows the posts to be set any required distance apart.

We find in practice that this fence, made entirely of metal, and therefore fire-proof, is

100



5 specially serviceable along lines of railway or  
around large stock-farms or tracts of land ad-  
jacent thereto; but the fence may be built ad-  
vantageously where any fence of this charac-  
ter is needed, as it presents a neatly-finished  
appearance and is capable of various styles  
of ornamentation.

10 Having thus described our invention, what  
we claim as new, and desire to secure by Let-  
ters Patent, is—

15 1. The combination, in a fence, of posts pro-  
vided with upper slots, a wire run along the  
posts and into said slots, and guard-rail plates  
clamped to said wire and abutting adjacent  
posts, substantially as herein set forth.

20 2. The combination, in a fence, of posts made  
with a face-plate and a flange or rib, said flange  
provided with an upper slot, a wire stretched  
along the posts and in their flange-slots, and  
a guard-rail plate clamped to the wire between  
and abutting adjacent posts, substantially as  
herein set forth.

3. The combination, in a fence, of posts A,  
made with face-plate *a* and flange or rib *a'*,  
said flanges provided with slots *b* *a*<sup>2</sup>, barbed- 25  
wire stringers B, set into the post-slots *b*, and  
an upper guard-rail C, consisting of a plain  
wire *c*, stretched along the posts in their slots  
*a*<sup>2</sup>, and plates *c'*, clamped to the wire *c* and  
abutting adjacent posts, substantially as here- 30  
in set forth.

4. In a fence, the combination, with adja-  
cent slotted posts, a head-wire stretched be-  
tween them in the slots, and a guard-rail plate 35  
consisting of two parts end-lapped and hav-  
ing bent tongues clasped over and upon the  
extremities of the parts at their joint, substan-  
tially as herein set forth.

JAMES HIGGINS.  
JOHN SULLIVAN.

Witnesses:

FRANK W. HINE,  
CYRUS E. PERKINS.