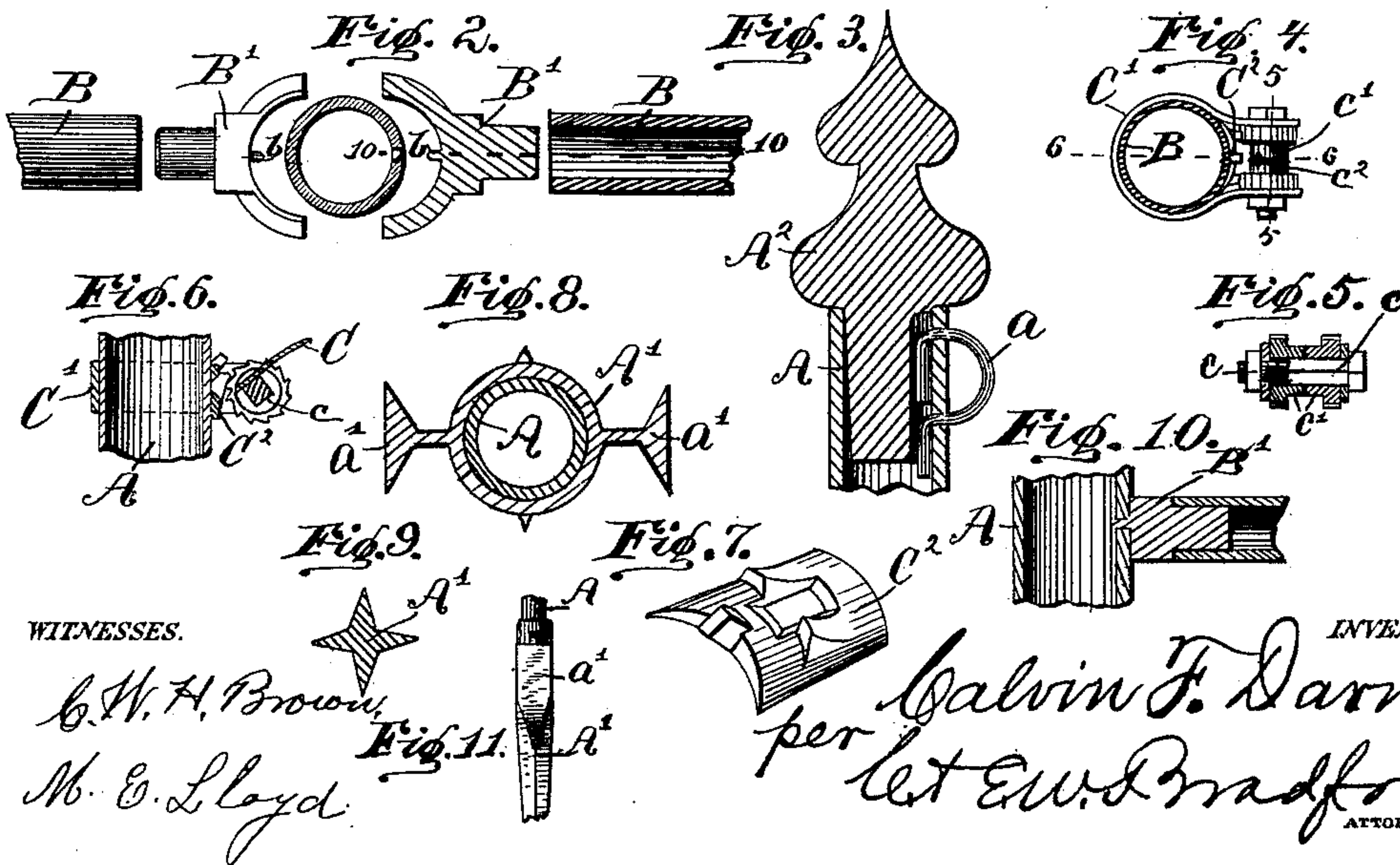
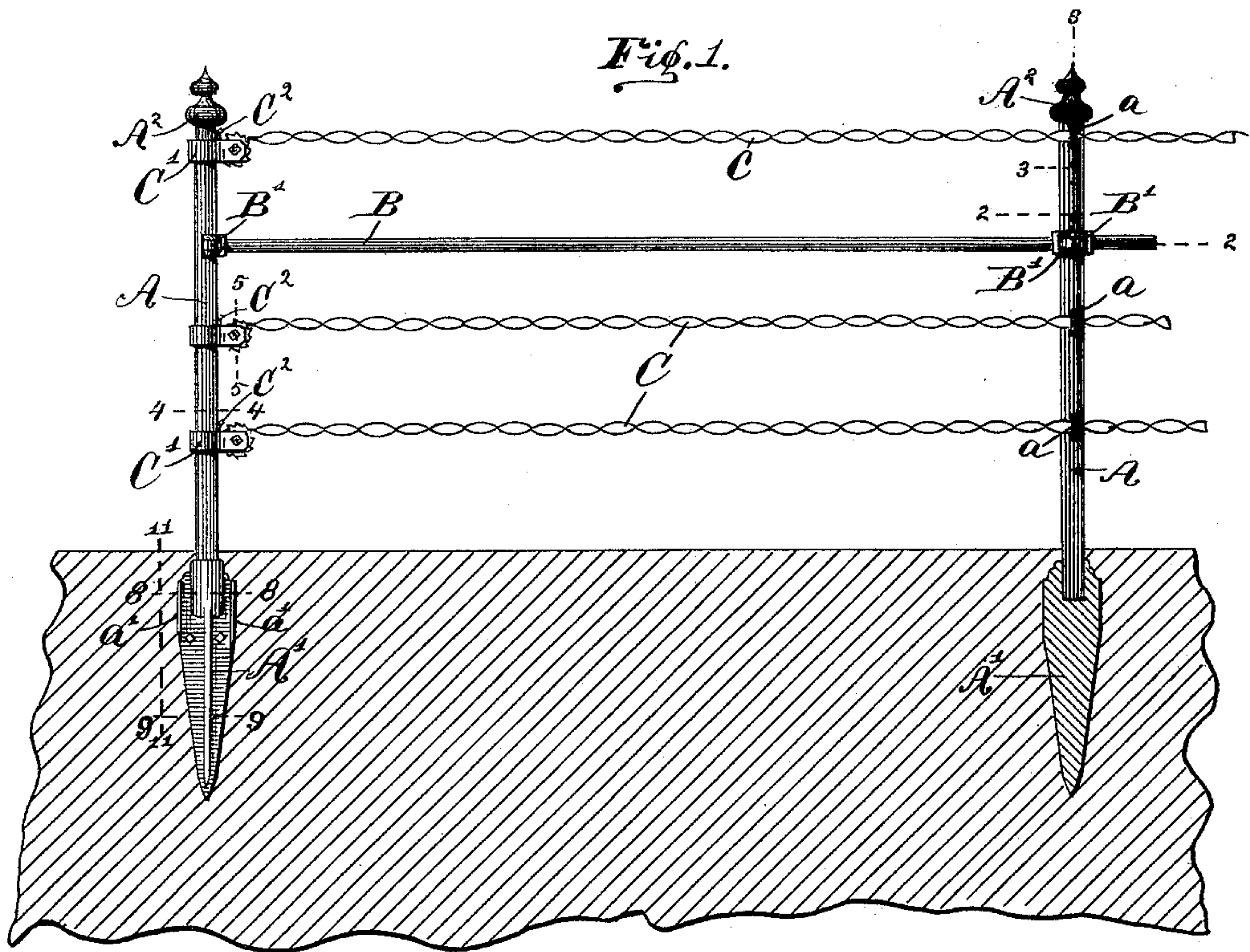


(No Model.)

C. F. DARNELL.
FENCE.

No. 415,382.

Patented Nov. 19, 1889.



UNITED STATES PATENT OFFICE.

CALVIN F. DARNELL, OF INDIANAPOLIS, INDIANA, ASSIGNOR OF ONE-HALF
TO WILLIAM L. TAYLOR, OF SAME PLACE.

FENCE.

SPECIFICATION forming part of Letters Patent No. 415,382, dated November 19, 1889.

Application filed May 14, 1889. Serial No. 310,731. (No model.)

To all whom it may concern:

Be it known that I, CALVIN F. DARNELL, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Fences, of which the following is a specification.

My said invention relates to that class of fences which are composed principally of metal pipe and wire; and it consists in certain details of construction and arrangements of parts by which such a fence is cheapened and improved, as will be hereinafter more particularly described and claimed.

Referring to the accompanying drawings, which are made a part hereof, and on which similar letters of reference indicate similar parts, Figure 1 is a side elevation of a section of a fence embodying my improvements, the foot of one of the posts being shown in section; Fig. 2, a horizontal sectional view looking downwardly from the dotted line 2 2 in Fig. 1, the parts being shown separated to illustrate their individual construction more clearly; Fig. 3, a vertical sectional view on the dotted line 3 3 in Fig. 1; Fig. 4, a horizontal sectional view looking downwardly from the dotted line 4 4 in Fig. 1; Fig. 5, a vertical sectional view looking toward the left from the dotted line 5 5 in Fig. 1, (see also Fig. 4;) Fig. 6, a vertical sectional view looking upwardly from the dotted line 6 6 in Fig. 4; Fig. 7, a perspective view of the pawl-wedge by which the ratchets are held to position; Fig. 8, a transverse sectional view of the post-foot on the dotted line 8 8 in Fig. 1; Fig. 9, a similar view on the dotted line 9 9; Fig. 10, a vertical sectional view on the dotted line 10 10 in Fig. 2 when the parts are in engagement, and Fig. 11 a detail view of a portion of the foot in elevation on the dotted line 11 11 in Fig. 1.

In said drawings, the portions marked A represent the fence-post, B the rail, and C the wire.

The post A consists, preferably, of a section of pipe of suitable size and length provided with a cast foot A' and cap A², as shown. Each foot A' is preferably formed with a socket in its top to receive the lower end of the section of pipe, and is tapered to a point,

with four laterally-projecting wings, two of which, on opposite sides, are formed with short tapered wings *a'* on their edges near the top, which extend out in each direction at substantially right angles with the main wing. Each post is provided with a series of staples *a*, arranged in position to support the wires, the prongs of which are inserted through perforations in one side of said post to its interior and there clinched by driving a rod of suitable size down into the post against the portion of said prongs which extends therein. This rod is then withdrawn and the cap A² put in position by inserting its shank into the top of the post, which shank preferably extends to below the top staple *a* and has a vertical groove in one side to receive the turned-down ends of said staple, as shown in Fig. 3, and thus lock and secure these several parts securely in position. When only the top wire is used in the construction, as is common, of course only this one staple would be used, and its ends would be clinched by the driving of the shank of the cap into the post.

The rail B is ordinarily a section of gas-pipe of suitable size and length, and is coupled to the post A by a coupling B', which is formed with a concave or semicircular inner face adapted to embrace and fit closely against the post and provided with a projecting lug *b*, which fits into a perforation in the post provided for the purpose. On its opposite or outer end is formed a shank adapted to fit inside the end of the rail. Each end of the rail being thus connected to its post, and the post being secured from spreading apart by the wires, as will be presently described, it is very firmly secured in position. In the drawings but one of these rails is illustrated, but any number desired could be used, as will be readily understood.

The wires C are shown as flat twisted wire, but may be of any form desired, this particular form being preferred for many kinds of fences because of its size, which renders it easily perceptible. Said wires run through the staples *a* on the intermediate posts, and are connected to the end post by means of tightening devices secured thereto by means of clips C', which surround the post and have

transverse bolts *c*, supported in bearings formed in the projecting ends of each. Each bolt is formed square between the bearings, and has a spool *c'* mounted thereon, the flanges of which are formed as ratchet-wheels. Said spool is divided at the center and a notch *c²* is cut in the adjacent ends, forming a hole in which to insert the end of the wire and connect it to the spool, as shown in Figs. 4, and 6. The wire being thus connected, the bolt is turned, by means of a wrench applied to its head, until the wire has been wound up to the desired tension, when the wedge *C²*, formed especially for this position, is inserted between the spool and the post. Each of the ratchet-flanges of the spool engages with a pawl formed thereon, and thus the device is locked securely in position, the strain being directed against the wedge, tending to force it more tightly in place, and preventing any possibility of its becoming disengaged until loosened up by means of a wrench or forcibly removed.

I am aware that fences of this same general plan of construction have before been made, and I do not therefore desire to be understood as claiming the same, broadly, but limit myself to the various improvements in the details of construction herein shown and claimed, by which a very cheap and durable fence is provided. By the flanges *a'* on the wings of the feet of the post a large resisting surface is provided, and the earth becoming closely packed around all these flanges the post is made very rigid and secure. By clinching the staples on the interior of the post its outside surface is left smooth, and no projecting parts are left to catch and tear the clothing, and the removal of said staples is rendered practically impossible.

The rail-couplings are not only cheap and easily put in place, but secure the rail beyond movement or displacement in any direction.

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

1. The combination, in a fence, of the posts, hollow or hollow-ended stay-rods extending between said posts, and couplings or joint-irons for uniting the posts and the stay-rods, said posts having perforations in their sides, and said couplings being formed upon one

side to fit against the sides of said posts, with projections adapted to enter the perforations therein, and provided also with other projections adapted to enter the hollow ends of the stay-rods, substantially as set forth.

2. The combination, in a fence, of the hollow posts *A*, having perforations therein, staples *a*, inserted through said perforations to the interior of said posts and there bent down, as shown, the rails or stay-rods *B*, extending between the posts, the couplings or joint-irons *B'*, uniting said rails and said posts, as described, and the wires or flexible members *C*, secured at the ends and passing through said staples *a* at intermediate points, all substantially as set forth.

3. The combination, in a fence, of the posts *A*, the staples *a*, inserted through one side to within said posts, and clinched caps *A²*, which pass down into said posts alongside the upper one of said staples, which are thereby held securely, rails *B* between the posts, couplings uniting said posts and rails, and wires *C* passing through said staples, substantially as set forth.

4. The combination of the posts *A*, rails *B*, connected therewith, the couplings *B'*, uniting said posts and said rails, the wires *C*, and the tightening device supported on one post by a clip, consisting of the bolt *c*, the divided spool *c'*, with notches in the adjacent ends thereof to receive the wire, and with ratchet ends, and the pawl-wedge or locking-plate *C²*, all substantially as set forth.

5. The combination, in a fence, of the rails, the posts, couplings *B'*, uniting said rails and posts, and wires also passing along said posts and connected thereto, said posts being provided with post-bases, which post-bases have laterally-projecting tapered wings, a portion of which are formed with outwardly-projecting flanges upon their edges, all substantially as shown and described, and for the purposes specified.

In witness whereof, I have hereunto set my hand and seal, at Indianapolis, Indiana, this 10th day of May, A. D. 1889.

CALVIN F. DARNELL. [L.S.]

Witnesses:

E. W. BRADFORD,
C. W. H. BROWN.