

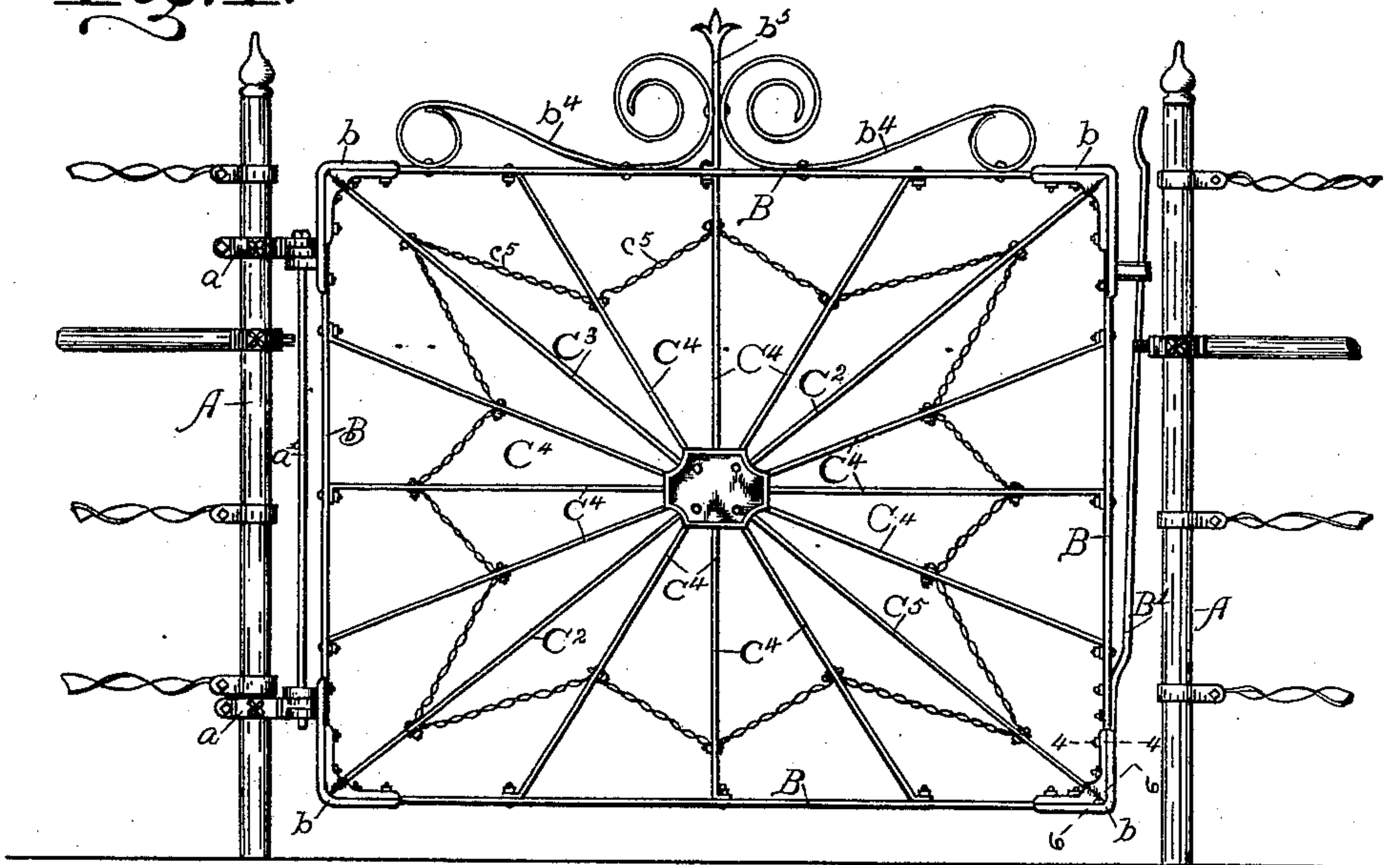
(No Model.)

C. F. DARNELL.  
GATE.

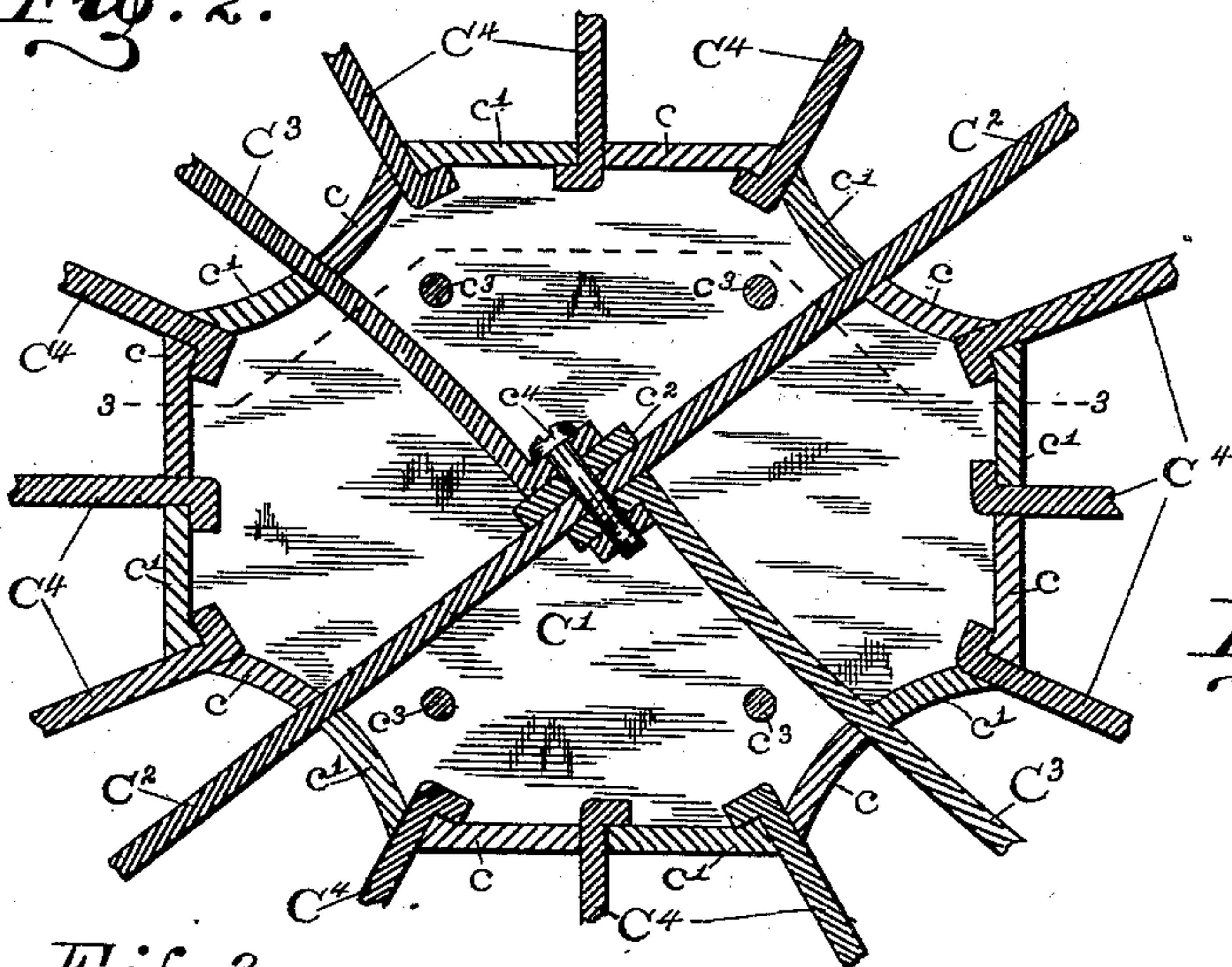
No. 428,716.

Patented May 27, 1890.

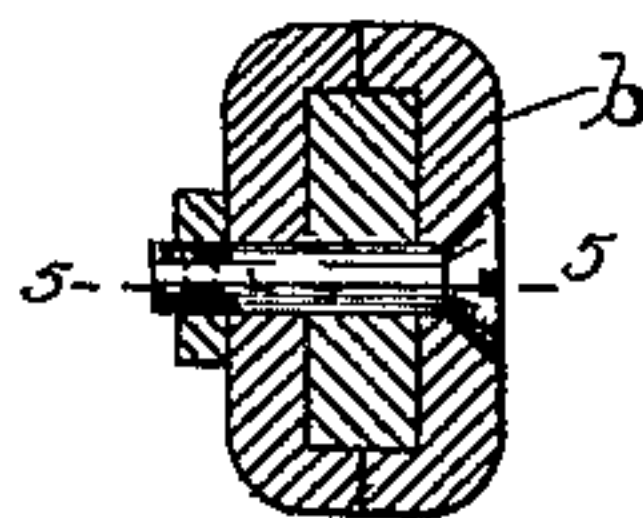
*Fig. 1.*



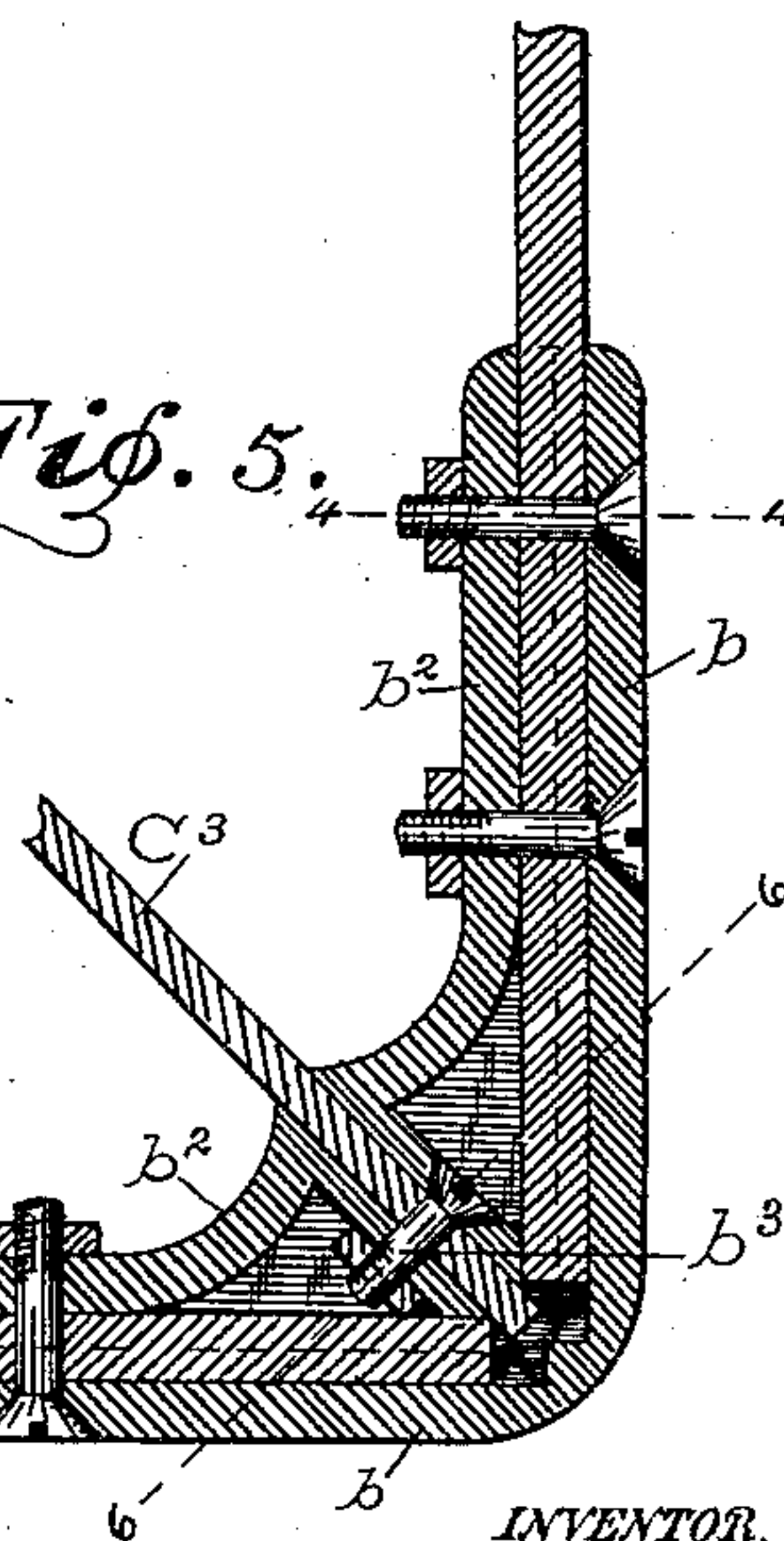
*Fig. 2.*



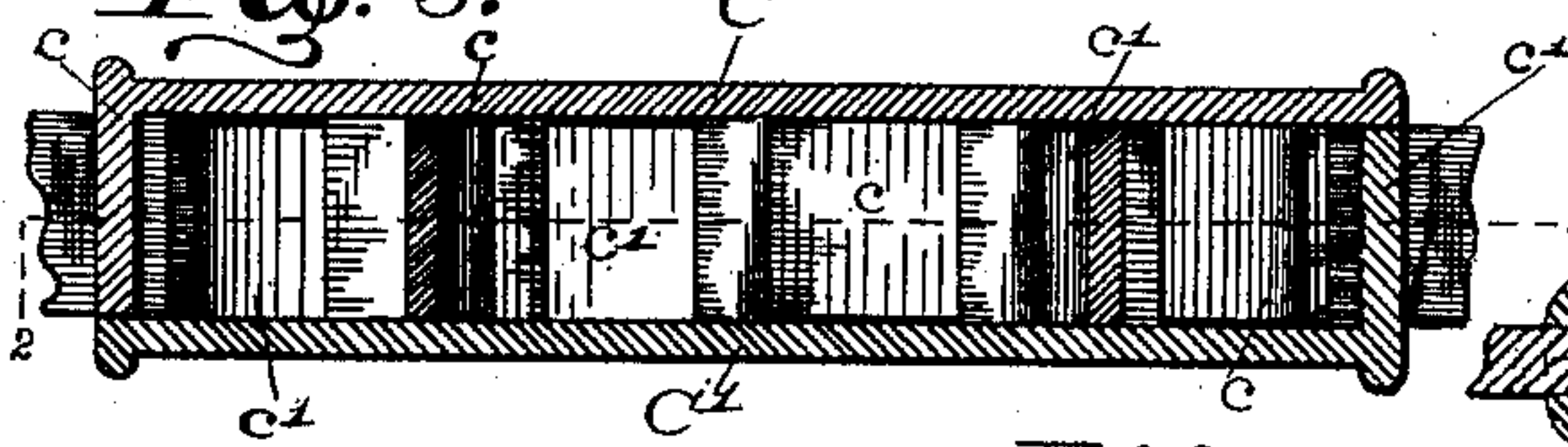
*Fig. 4.*



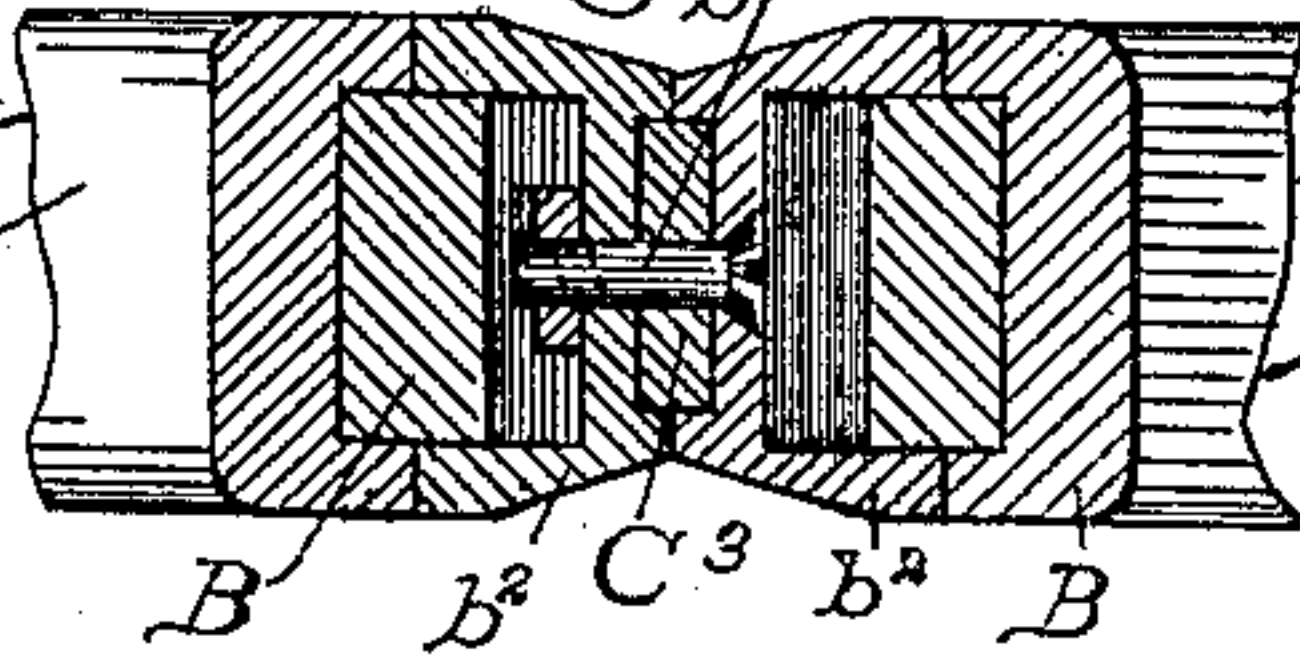
*Fig. 5.*



*Fig. 3.*



*Fig. 6.*



WITNESSES.

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# UNITED STATES PATENT OFFICE.

CALVIN F. DARNELL, OF INDIANAPOLIS, INDIANA, ASSIGNOR TO THE  
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## GATE.

SPECIFICATION forming part of Letters Patent No. 428,716, dated May 27, 1890.

Application filed November 15, 1889. Serial No. 330,391. (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 Gates, of which the following is a specification.

The object of my said invention is to provide a cheap, and yet a very strong, durable, and neat-appearing gate for fences, it being particularly adapted for metal fences of that character composed principally of iron pipe and ribbon wire; and it consists of a construction by which this object is accomplished, as will be hereinafter 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 view in elevation of a gate embodying my said invention in the position it occupies when in use; Fig. 2, a vertical section through the central portion thereof, on an enlarged scale, on the dotted line 2 2 in Fig. 3; Fig. 3, a sectional view through the same portion, as seen looking upwardly from the dotted line 3 3 in Fig. 2; Fig. 4, a cross-section on the dotted line 4 4 in Figs. 1 and 5; Fig. 5, a vertical section on the dotted line 5 5 in Fig. 4, and Fig. 6 a cross-section on the dotted line 6 6 in Figs. 1 and 5.

In said drawings, the portions marked A represent the post on which the gate is hinged; B, the bars composing the outside frame of the gate; C, C', C<sup>2</sup>, C<sup>3</sup>, and C<sup>4</sup>, the parts within said outside frame.

The post A is of a common form, being a round metallic post, and needs no special description. It is provided with hinge portions *a*, clamped thereon, which are of a peculiar construction, but will not be particularly shown or described herein, as they constitute the subject-matter of a separate application.

The bars B are preferably of iron, secured together at the corners by angle-irons *b*, on two of which are cast the half-hinges, which, with the hinge part *a* and the rod *a'*, complete the hinge on which the gate is supported. Said angle-irons *b* fit upon the out-

side of said bars, being preferably formed with flanged edges to embrace said bars. On the edge of the gate opposite the hinges a spring-latch B' is provided of a common form, which is adapted to engage with a catch provided for the purpose on the adjacent post.

The central portion of the gate consists of a casting, within which the several bars composing the interior of the gate are secured, and from which they extend to the outside frame in radial directions, as shown. This central casting is composed of two parts C and C', having fingers *c* and *c'*, respectively, extending from their adjacent faces, one set of fingers interlocking within the other, with just sufficient intervening space to permit the ends of the bars to be inserted and clamped between them. A flat lug *c<sup>2</sup>* is formed at or near the center of one of said plates with its edges extending in a diagonal direction, and when the parts are together the two plates are secured together by bolts or rivets *c<sup>3</sup>*.

The bar C<sup>2</sup> extends entirely across the gate from one corner to the other diagonally opposite, passing on one side and resting against the flat lugs *c<sup>2</sup>* in the central casting. The bars C<sup>3</sup> each extend from diagonally-opposite corners into said central casting, where their ends are bent up, one resting against the side of the bar C<sup>2</sup> at the center thereof, and the other resting against the opposite side of the lug *c<sup>2</sup>*, a perforation being provided through said several parts, and a bolt *c<sup>4</sup>* inserted therein, by which they are rigidly secured together. The outer ends of each of said bars C<sup>2</sup> and C<sup>3</sup> are securely clamped between the two parts composing the corner-irons *b<sup>2</sup>*, each of which parts is provided with a diagonal face, which faces are arranged adjacent to each other and recessed sufficiently to receive and completely embrace the outer end of the one of said bars which is inserted between them, to which they are then tightly clamped by means of a bolt *b<sup>3</sup>*, passing through said adjacent diagonal parts, and the end of the bar which is inserted in the recess formed therein. The two irons *b<sup>2</sup>* thus secured together form a complete corner-iron, one of which is bolted in each inside corner of the gate opposite the irons *b* on the outside, and which are formed with recesses in their outside faces of suf-



ficient depth to meet the flanges of the irons *b*, and completely embrace the ends of the bars composing the outside frame of the gate.

There are preferably several of the short bars *C*<sup>1</sup> in the space intervening between the adjacent sides of the bars *C*<sup>2</sup> and *C*<sup>3</sup>, each of which extends just through the casting, its inner end being bent over against one of the fingers of said castings, by which it is held therein. Each extends out in a radial direction to the outer frame, to which its outer end is secured by means of a bolt, as shown. Each bar is thus rigidly secured in the central casting, as they preferably fit in the places provided for them between the fingers very tightly, so that when the two parts composing said casting are drawn together they are clamped very tightly and rigidly, and being securely bolted at their outer ends to the frame, said frame is braced and tied together in all directions, making it very stiff and durable, while at the same time it is light and cheap.

A wire ribbon *c*<sup>5</sup> preferably extends around the gate intermediately between its middle and outer frame, which extends in and out, and, as shown, forms the outline of a star of eight points, which ribbon, being preferably galvanized and of a light color, contrasting with the main parts of the gate, not only braces and strengthens the gate, but gives it a very neat and tasty finish.

A scroll *b*<sup>4</sup> is secured on the top of the gate on each side of the short central post *b*<sup>5</sup>, which is bolted to the frame by the same bolt which secures the end of one of the bars *C*<sup>1</sup> thereto, thus bracing the top of said gate and making it very stiff, and at the same time giving it an ornamental appearance.

I am aware that gates have heretofore been constructed with bars running from the center thereof, where they are secured, to the corners of their frames; but I am not aware that the construction as herein claimed has ever been known or used until my invention thereof.

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

1. In a gate, the combination of the outside frame composed of bars connected at the corners by corner-irons formed with recessed adjacent faces to receive and inclose the ends of said bars, the inside corner-irons being formed in two parts with diagonal adjacent faces, and the brace-rods secured at their outer ends between said adjacent faces, of

the two-part inside corner-irons and connected together at the center of the gate, substantially as set forth.

2. In a gate, the combination of the outside frame composed of bars secured together by corner-irons, bars secured to said frame and extending from its several sides to a central casting within said frame, and a clamping device consisting of plates formed with parts adapted to engage with and secure the inner ends of said bars together, substantially as set forth.

3. In a gate, the combination of the frame composed of bars connected at the corners by means of corner-irons, substantially as described, and the diagonal bars extending between the diagonally-opposite corners thereof, the ends of which are clamped between the adjacent faces of the two-part inside corner-irons *b*<sup>2</sup>, substantially as set forth.

4. In a gate, the combination of the outside rectangular frame, a central casting provided with a central lug, and the diagonal bars extending between the diagonally-opposite corners of said frame and secured to said central lug, substantially as set forth.

5. In a gate, the combination of the radial bars and the central casting or clamp securing them together, consisting of two plates having fingers projecting from the adjacent faces thereof, which interlock and clamp said bars between them, substantially as set forth.

6. In a gate, the combination of the outside frame, the radial bars secured thereto at their outer ends and secured together by a central casting at their opposite ends, and a brace-wire extending between said radial arms at a point intermediate between the center of the gate and its frame, substantially as set forth.

7. In a gate, the combination of a frame composed of bars secured together by corner-irons, bars running from the diagonally-opposite corners of said frame and connected to each other at the center, intermediate bars running from the outside frame to near the point of contact between said diagonal bars, and a central plate, to which the inner ends of said several bars are secured, substantially as set forth.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 6th day of November, A. D. 1869.

CALVIN F. DARNELL. [L. S.]

Witnesses:

E. W. BRADFORD,  
C. BRADFORD.