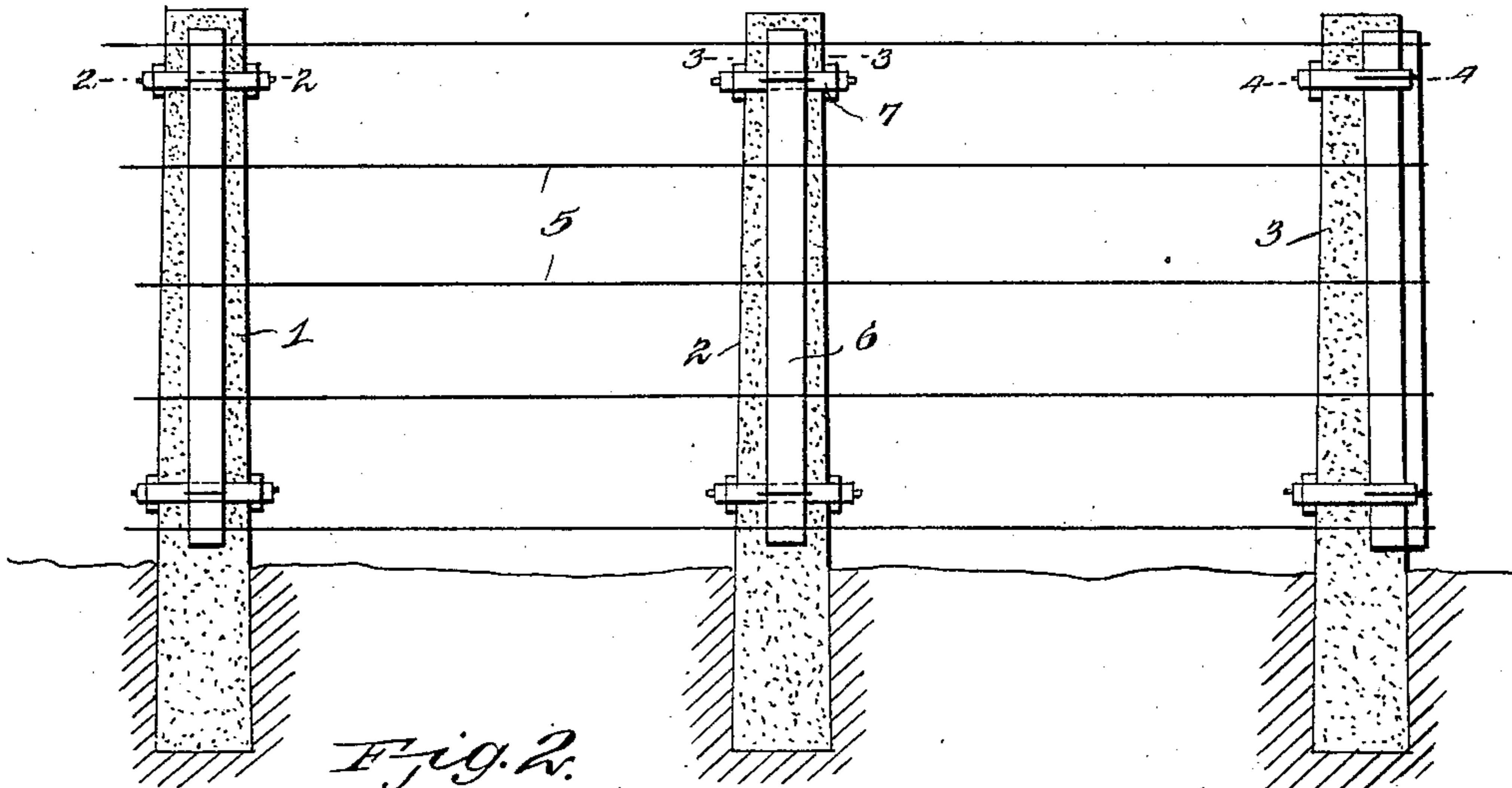


No. 831,918.

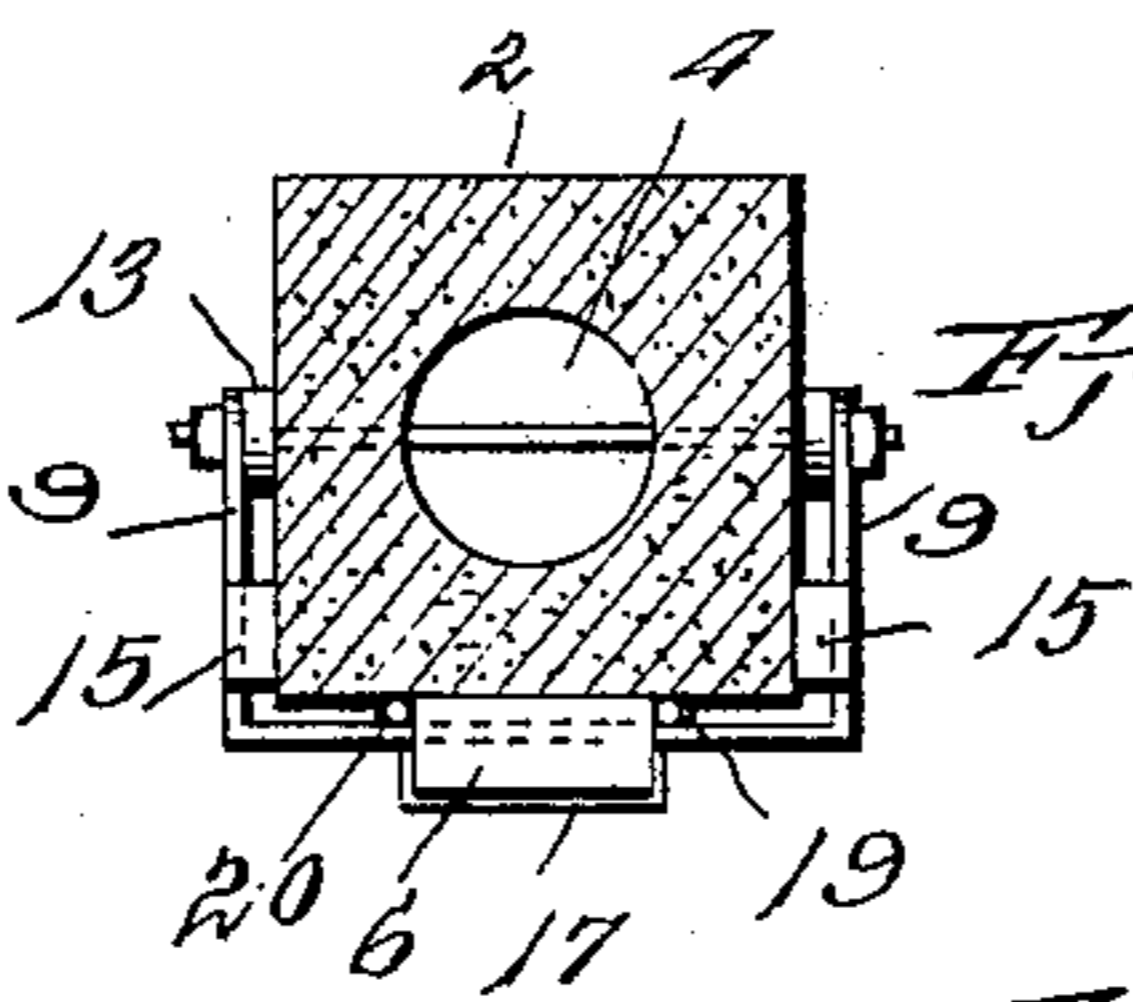
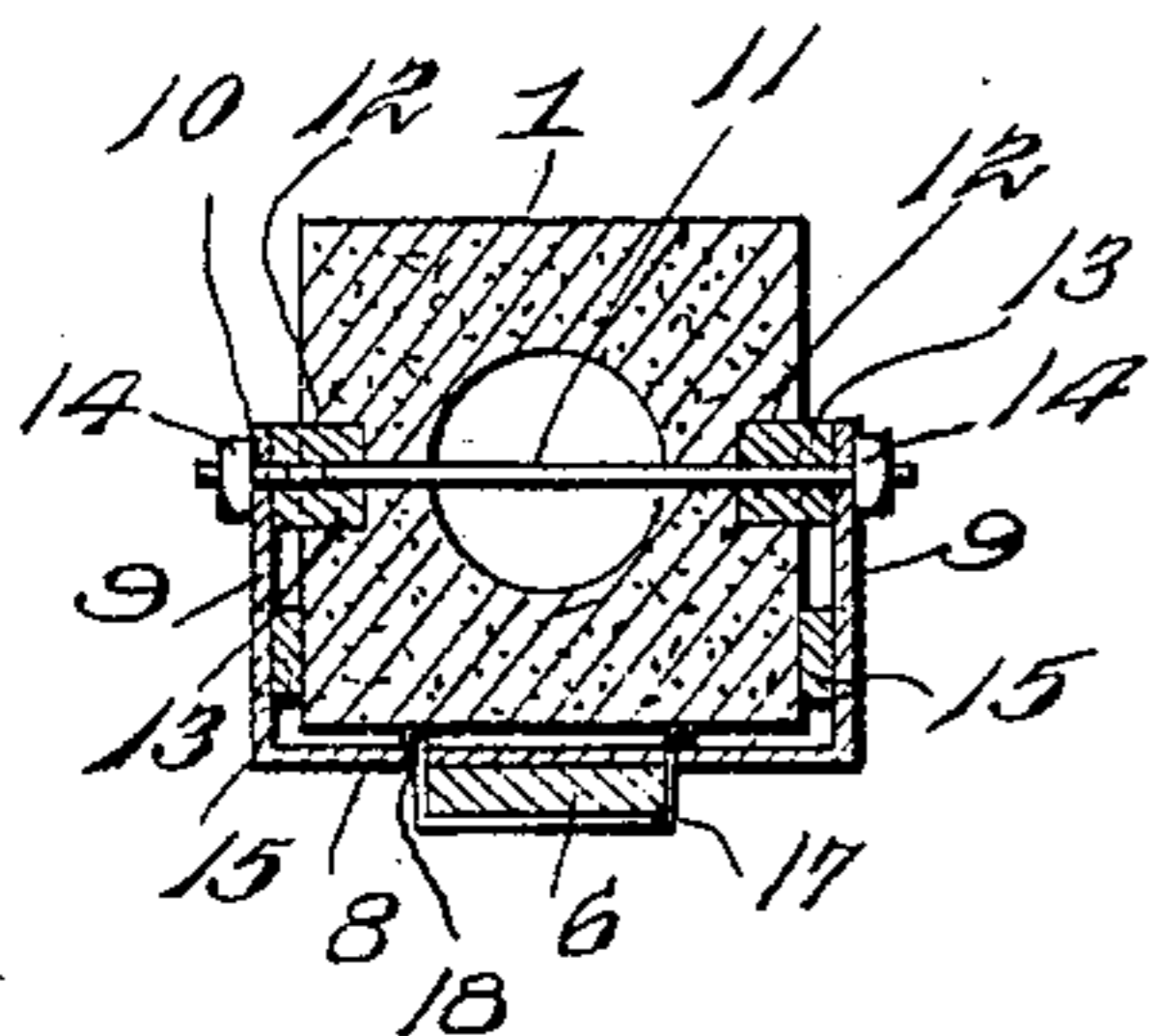
PATENTED SEPT. 25, 1906.

E. D. ZINNINGER.  
FENCE STRUCTURE.  
APPLICATION FILED DEC. 16, 1905.

*Fig. 1.*

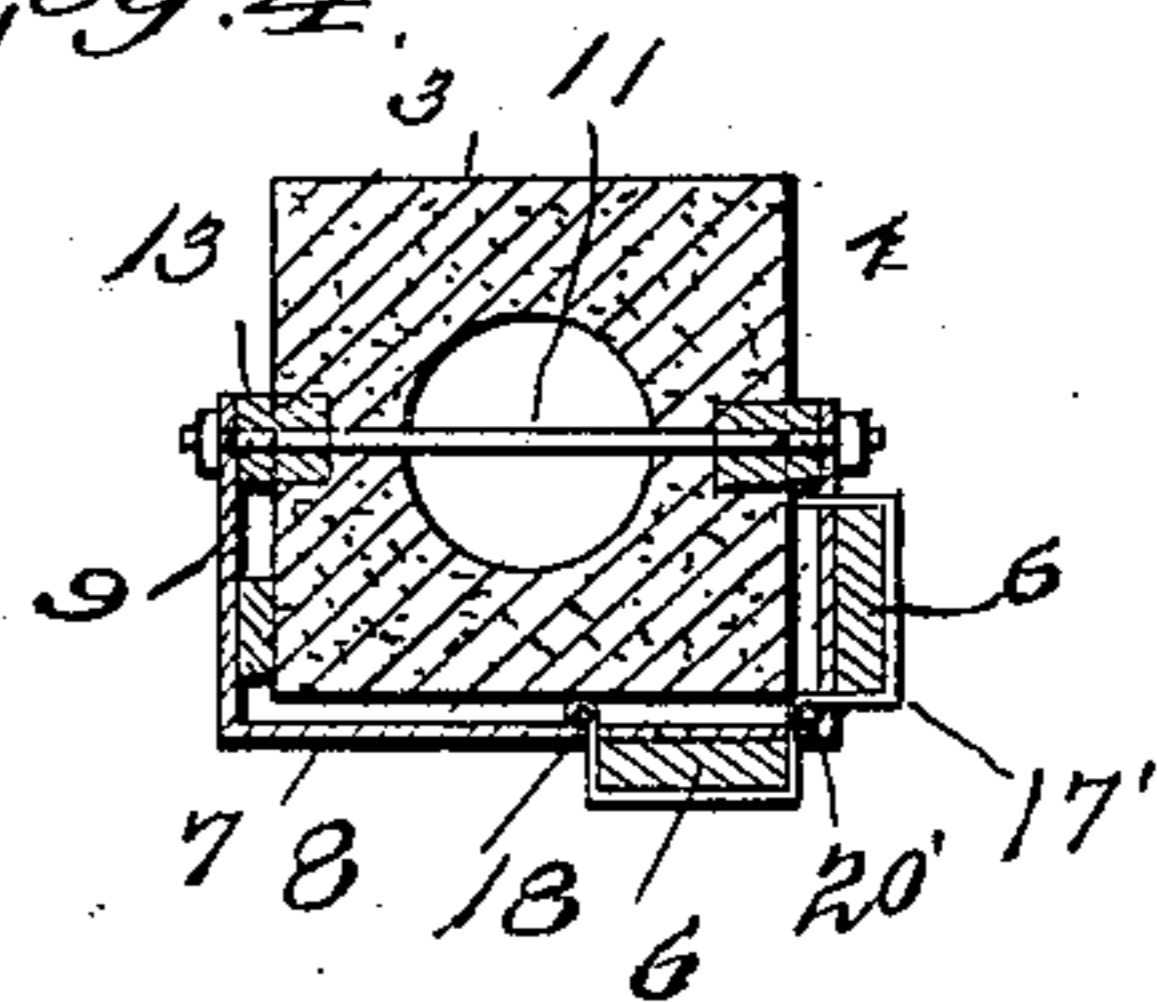


*Fig. 2.*

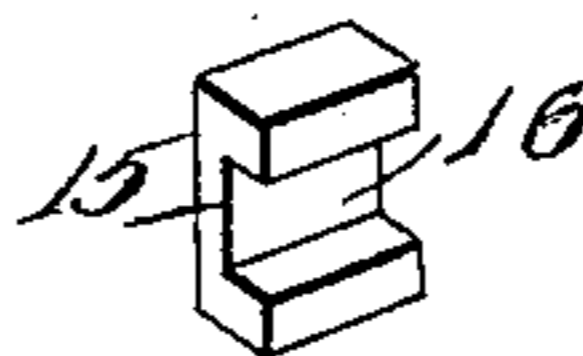


*Fig. 3.*

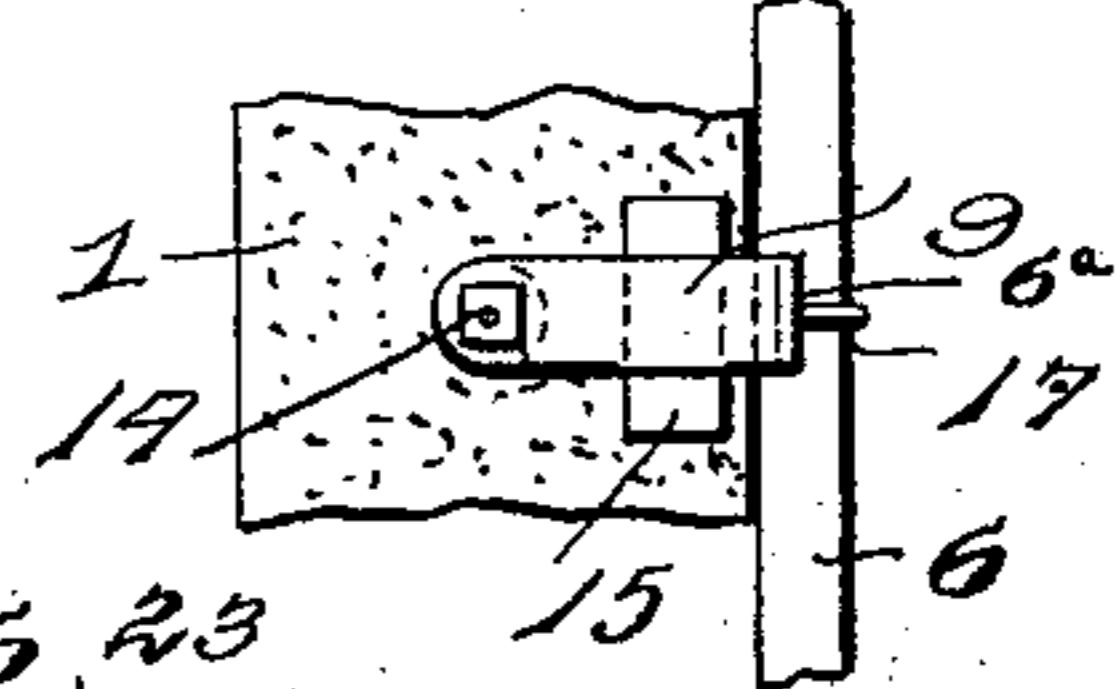
*Fig. 4.*



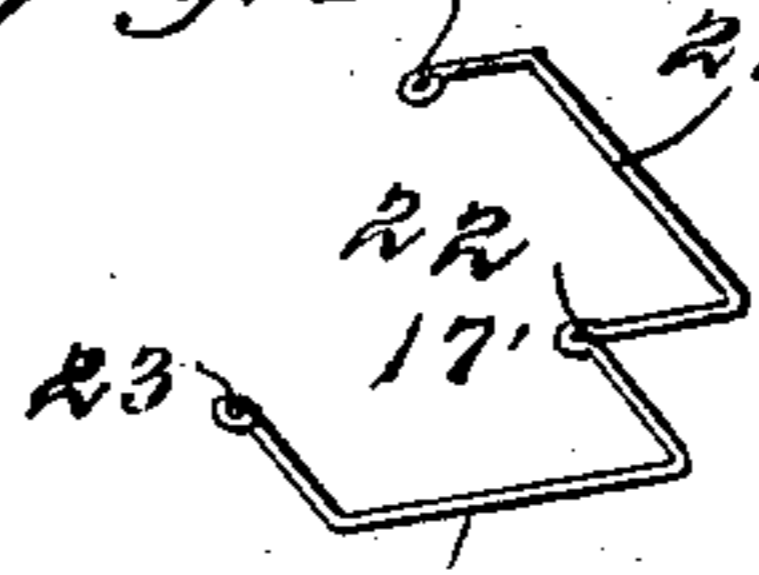
*Fig. 5.*



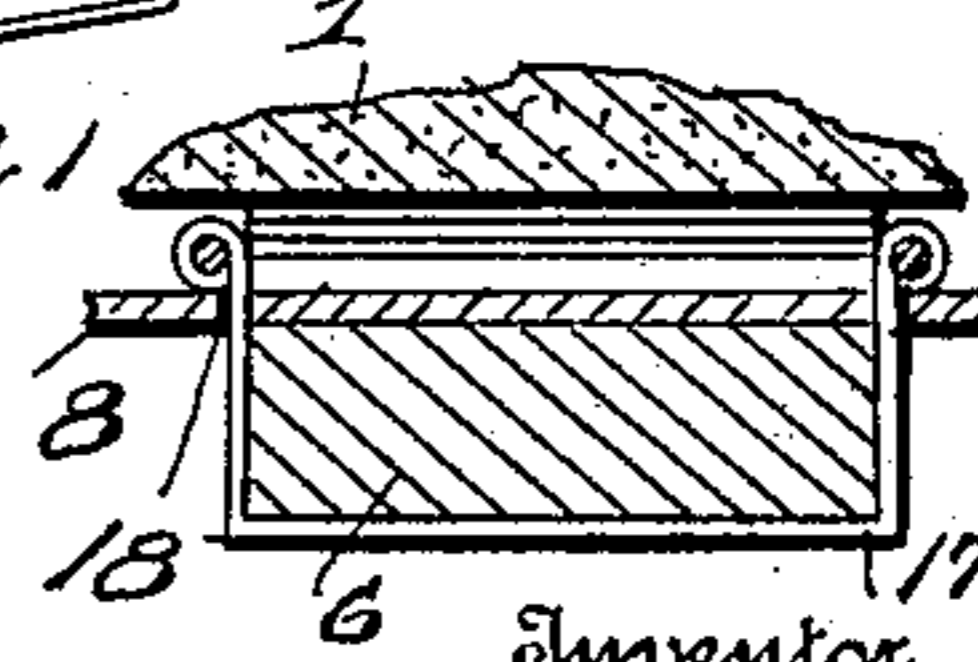
*Fig. 6.*



*Fig. 7.*



*Fig. 8.*



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# UNITED STATES PATENT OFFICE.

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## FENCE STRUCTURE.

No. 831,918.

Specification of Letters Patent.

Patented Sept. 25, 1906.

Application filed December 16, 1905. Serial No. 292,065.

*To all whom it may concern:*

Be it known that I, EDWARD D. ZINNINGER, a citizen of the United States of America, residing at Vancouver, in the county of Clarke and State of Washington, have invented new and useful Improvements in Fence Structures, of which the following is a specification.

This invention relates to improvements in fences designed for farms and other inclosures, the invention having for its primary object the production of a fence structure in which means are provided for connecting the elements of the fence-body in such manner as to secure a durable and inexpensive construction of fence.

A further object of the invention is to provide a cement or other plastic post so constructed as to be employed in the production of a picket or wire fence.

In the accompanying drawings, Figure 1 is a view in elevation of a section of a wire fence embodying my invention and showing one of the corner-posts and adjacent intermediate posts. Figs. 2, 3, and 4 are horizontal sections taken through the respective posts on the lines 2 2, 3 3, and 4 4 of Fig. 1. Fig. 4<sup>a</sup> is a detail section showing, on an enlarged scale, the mode of application of the clip. Fig. 5 is a fragmentary detail side elevation of one of the posts and the means for securing the supporting-strip thereto. Fig. 6 is a detail view of the corner clip or tie. Fig. 7 is a similar view of one of the spacing or distance blocks.

Referring to the drawings, 1 and 2 represent intermediate posts, and 3 a corner-post, of a fence structure. These posts are preferably formed of cement or other similar plastic material and are adapted to be embedded at their lower ends in the ground. The posts may be of any preferred form in horizontal section, but are preferably rectangular and hollow or provided throughout their length with a longitudinal bore or passage 4, providing an air-space to equalize the expansion and contraction of the post from climatic changes, and thereby prevent cracking or disintegration thereof.

The fence-body is shown as consisting of longitudinal strand or line wires 5, which are stapled or otherwise secured to supporting-strips 6, fastened to the post. Arranged upon the top and bottom portions of each

post are brackets 7, each consisting of a U-shaped strip of metal. The brackets upon the intermediate posts have their body portions 8 extending across the face of the post and their side arms 9 projecting in parallel relation to the sides of the post and formed with terminal apertures 10 for the passage of the threaded ends of a tie-bolt 11. The arms 9 form fence-body-supporting elements connected by the portions 8, to which the panel of the fence-body is attached. Each post is provided in its sides with registering sockets 12, in which are fitted bushing-plugs 13, forming, in effect, tenons to engage said sockets. These bushing-pieces or tenons extend beyond the sockets and bear at their outer ends against the extremities of the arms 9 of the bracket and hold the same spaced from the sides of the post to prevent contact between these parts and wear and strain upon the material of which the post is composed. The tenons or bushing-pieces are formed with longitudinal openings for the passage of the tie-bolt 11, the ends of which extend there-through and through the apertures 10 in the arms 9 and are provided with nuts 14 for securing the bolt against disconnection and clamping the arms of the bracket in applied position. Between the secured ends of the arms and the body portion 8 and in the spaces between said arms and the sides of the post are spacing or distance blocks 15, which hold the forward ends of the arms from independent movement and properly space the same from the post. Each of these blocks is of the construction shown in Fig. 7—that is, of oblong rectangular form—and provided with a transverse notch or recess 16 to receive the adjacent bracket-arm, the upper and lower walls of said recess serving as stop-shoulders or engaging portions bearing against the upper and lower edges of the bracket-arm to hold the block from vertical displacement.

The supporting-strip 6, carried by each intermediate post of the fence structure, is secured to the body portion 8 of each bracket by a clip or tie 17, the same consisting of a single length of wire bent into U form to embrace the outer face and sides of the strip, the free ends of the side arms of said clip extending through openings 18 in the bracket and bent to form eyes 19, lying between the

bracket and the face of the post and receiving pins or other suitable fastening members 20 to hold them from disconnection. By this means the supporting-strips are securely attached to the post in an effective and ornamental manner, and by painting the posts and strips in like or contrasting colors an exceedingly attractive and ornate fence structure will be secured. Preferably the inner faces of the strips 6 are notched, as at 6<sup>a</sup>, (see Fig. 5,) to receive and engage the brackets to hold them from vertical displacement, while the clips or ties prevent any longitudinal movement thereof. This construction not only provides an effective means for securing the wires 8 to the post, but also permits of the ready removal of the strips or supporting elements 6, when the latter, if formed of wood, are injured or are rendered unserviceable in other ways.

The brackets upon the corner-posts 3 are similar in structure to the brackets upon the intermediate post and are arranged thereon in the same manner; but one of the side arms, as well as the body portion of each bracket on said corner-post, is utilized as a support for the strips 6, one of which is arranged upon each face portion of the post for the extension of the line-wires around the corner-post.

Instead of employing a single clip for each supporting-strip carried by the corner-post a double clip or corner-tie 17' of the form shown in detail in Fig. 6 is employed. This consists of a single piece of wire bent to form two substantially U-shaped clip portions 21, arranged at right angles to each other and having their adjacent arms integrally connected and formed with an eye 22 and their free ends or arms formed with eyes 23. These clip portions respectively engage the strips 6, bearing against the body portion and outer side arm of the bracket, and have their free ends passed through openings in said portions of the brackets and their meeting ends passed through openings in said portions adjacent to the corner angle or angle of intersection thereof, pins 20' being engaged with the eyes to hold the clip in position. It will of course be understood that the eyes are formed upon the clips after their application to the brackets and that, if desired, the pins 20' may be dispensed with and the eyes utilized to hold the arms of the clips from outward movement and disengagement. The supporting-strips may be applied to the brackets prior to the application of the same to the hooks; but any suitable mode of assembling the parts may of course be employed. It will be apparent that the mode of applying the supporting-brackets to the post will prevent objectionable strain upon the angular portions

and walls of the openings in the post, and thereby obviate chipping or breaking of said angular portions and enlargement of the openings.

Having thus described the invention, what is claimed as new is—

1. In a fence structure, a post provided in its sides with mortises, alined tenons engaging said mortises, a tie-bolt passing transversely through the body of the post and longitudinally through the tenons, and fence-body-supporting members attached to the projecting ends of the bolt.

2. In a fence structure, a post provided in its opposite sides with mortises, alined tenons fitting in said mortises and provided with alined axial passages, a tie-bolt extending transversely through the body of the post and through the passages of the alined tenons and having projecting threaded ends, fence-body-supporting members apertured to engage said threaded ends, and nuts upon said threaded ends holding the supporting members in operative position and the tenons seated in said mortises.

3. In a fence structure, a post provided in its opposite sides with mortises, tenons fitting in said mortises, fence-body-supporting brackets, and tie-bolts extending transversely through the body of the post, longitudinally through the tenons and through the brackets and holding the same in assembled relation.

4. In a fence structure, a post provided in its opposite side with mortises, a U-shaped bracket embracing the post, tenons fitting in said mortises and bearing against the arms of the bracket, and a tie-bolt extending transversely through the body of the post, longitudinally through the tenons, and through the arms of the bracket and holding the parts in assembled relation.

5. In a fence structure, a post provided in its opposite sides with mortises, a bracket, tenons fitting in said mortises and spacing the free ends of the arms of the bracket from the sides of the post, distance-pieces disposed between the sides of the post and the arms of the bracket at a point between said tenons and the body of the bracket, and tie-bolts passing through the body of the bracket-arms and holding the parts assembled.

6. In a fence structure, a post, a bracket applied thereto, a supporting-strip, and a wire clip securing said strip to the bracket.

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD D. ZINNINGER.

Witnesses:

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M. R. SPARKS.