

(No Model.)

L. G. BEERS.  
WIRE GATE AND FENCE.

No. 417,971.

Patented Dec. 24, 1889.

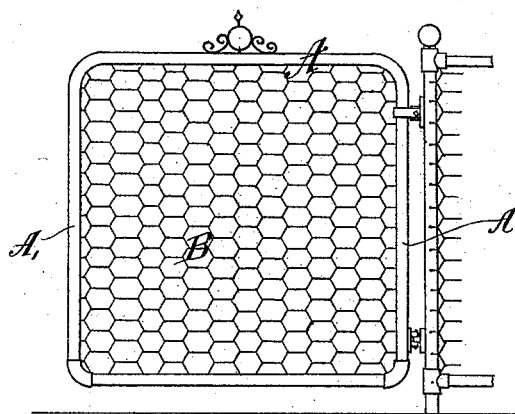


Fig. 1.

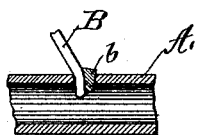


Fig. 2.

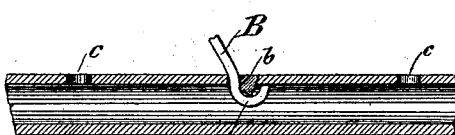


Fig. 3.

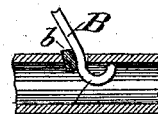


Fig. 4.

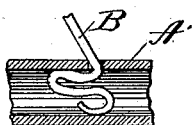


Fig. 5.

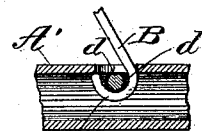


Fig. 6.

Witnesses:  
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Louis G. Beers.

# UNITED STATES PATENT OFFICE.

LOUIS G. BEERS, OF CHICAGO, ILLINOIS.

## WIRE GATE AND FENCE.

SPECIFICATION forming part of Letters Patent No. 417,971, dated December 24, 1889.

Application filed April 11, 1889. Serial No. 306,885. (No model.)

*To all whom it may concern:*

Be it known that I, LOUIS G. BEERS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Wire Gates and Fences, of which the following is a specification.

My invention relates to wire gates and fences, and especially to that class of gates and fences in which tubular or hollow iron frames or posts and rails are employed for sustaining, securing, and supporting the wire or body; and it consists in certain peculiarities of the construction and arrangement of the same, and also in the novel method of securing the wire or body to the frame or posts and rails, all of which will be hereinafter more fully set forth and specifically claimed.

The objects of my invention are to afford a gate or fence which will be neat and attractive in appearance, light, strong, and durable, without increasing the expense of the construction of the same, and also one which may have the wire or body entirely within the frame, thus avoiding the present method of securing the wire to the frame by wrapping or tying around it, or which may have the body secured to the face or front of the frame or posts and rails.

In order to enable others skilled in the art to which my invention pertains to make and use the same, I will now proceed to describe it, referring to the accompanying drawings, in which—

Figure 1 is a front view of my gate and a portion of a panel of fence, showing the wire body secured within the gate-frame and to the front or face of the fence-post. Figs. 2, 3, 4, 5, and 6 are longitudinal sections of my tubular or hollow gate-frame or fence post or rail, showing modifications of my method of securing the body to the frame.

Similar letters refer to corresponding parts throughout the several views of the drawings.

A represents a gate or fence having a frame or posts and rails A', preferably of metal and tubular in form.

B is the wire or other material which forms the body of the gate or fence, and is secured to the inner side of the frame, thus leaving the other side smooth and free, and ready to

receive such polish, finish, or paint, as may be desired, and as will be more fully explained.

The frame A' is made hollow, and is provided at suitable distances on its inner side with holes *c* in the wall thereof, for the reception and retention of the wire B, which is inserted in said holes and firmly secured there by a metallic wedge *b*, as is seen and readily understood from the drawings. I have shown in the different views of the drawings several modifications of the manner of securing the wire in the post or frame, either of which I may employ without departing from my invention.

In Fig. 2, I have shown the straight end of the body B driven into the hole *c* and secured by the retaining-wedge *b*.

In Figs. 3 and 4 the ends of the wire are shown formed with a loop *e* and likewise driven into the hole and secured. As shown in Fig. 3, the wedge *b* is driven into the bend of the loop and when the shorter portion thereof has passed the shell or wall of the hollow frame it rests against the inner surface of the tube, which renders it impossible to draw the wire out. The same effect is obtained by driving the wedge on the opposite side of the wire from the short end of the loop, as seen in Fig. 4.

In Fig. 5 the straight end of the wire is inserted into the hole and driven against the opposite side of the shell, where it will crinkle or form itself into an irregular shape, as seen, and thus form a very secure fastening.

Fig. 6 illustrates another modification of my method of securing the wire body to the frame. It consists in inserting the looped end of the wire in the hole *c* and passing a pin *d* through said loop, and for this purpose I provide a hole *d'* in the face and back of the tubular or hollow frame at right angles with the hole *c* for the insertion of said pin *d*. Sometimes I may provide at about the middle of each piece of the frame such holes *d'* at right angles with the holes *c* and employ the method of fastening at these points illustrated in Fig. 6 and just described. In this construction I prefer to use the retaining-wedges and straight ends of the body at the intermediate points of connection.

It is apparent that any of the modifications

of my method of securing the wire to a hollow gate-frame is quite as applicable to a hollow metallic fence post or rail, and that I am enabled to secure the wire body to the side of the post or gate-frame or to the front or face of either, as I may elect; but I prefer to secure it within the gate-frame, as shown, so that there will be no projections on the outer surface to mar the appearance or be subject to rust.

I have found from experiment and practice that the wire body or fabric possesses considerable elasticity and spring, and that by cutting it to the proper dimensions and inserting the ends in the holes the spring of the entire body will hold it in place without the use of the retaining-wedges; but of course the wedges will secure it more rigidly. I may insert the ends of the wire into the holes and galvanize or metal-coat the connections, which treatment will fill the crevices and firmly secure and solder the wire.

I may sometimes employ for the body of my gate what is termed "expanded metal," and in using this I form the body with projecting ends, which are inserted in the holes and retained by the wedges and galvanizing, as before.

In using the retaining-wedges with any of the foregoing modifications it will be understood that the wedge not only retains the wire in the holes of the frame, as it would if the frame or rail were solid with a hole in it; but, the frame or rail being hollow and formed with a very thin shell, the holes therein will have a sharp knife-like edge, which will cut into or indent the wire on the opposite side from the wedge and form a very secure fastening.

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

1. In a wire gate or fence, the combination of the hollow frame A', having the holes c, the wire-fabric body B, having its ends inserted in the holes c, and the retaining wedge or pin b, substantially as shown and set forth.

2. In a wire gate or fence, the combination of the hollow frame A', having the holes c, with the wire-fabric body B, having its ends looped, as at e, and secured in the holes c by retaining wedges or pins b, substantially as shown and set forth.

3. In a wire gate or fence, the combination of the hollow frame A', having holes c, the wire-fabric body B, and securing-wedges b, the whole galvanized or metal-coated, substantially as and for the purpose set forth.

4. In a gate or fence, the combination of the hollow frame A', having holes c, the body B, having its ends inserted in the holes, and the retaining-wedges b, substantially as shown and described.

5. In a wire gate or fence, the combination of the hollow frame A', having holes c, with the wire-fabric body B, having its ends looped, as at e, and inserted in the holes, and the retaining-wedges b, the whole galvanized or metal-coated, substantially as shown and described, and for the purpose set forth.

In testimony whereof I have hereunto set my hand and affixed my seal, at Chicago, Illinois, this 9th day of April, 1889.

LOUIS G. BEERS. [L. s.]

In presence of—

DANIEL A. RAY,  
CHAS. C. TILLMAN.