(No Model.)

C. HANIKA.

METHOD OF CONSTRUCTING METALLIC FENCES.

No. 346,544. Patented Aug. 3, 1886.

Fig. 1.

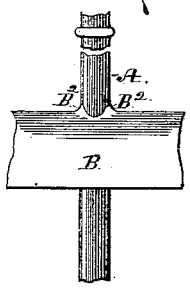


Fig. 2.

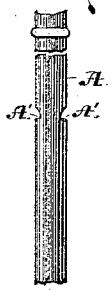


Fig. 3.

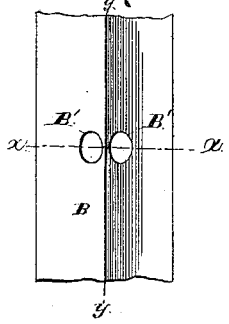


Fig. 4.

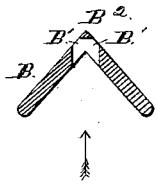


Fig. 5.

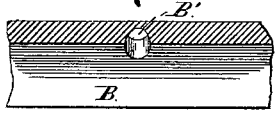


Fig. 6.

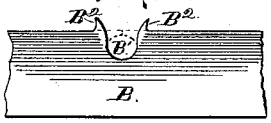


Fig. 7.

Fig. 8.

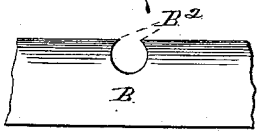


Fig. 9.

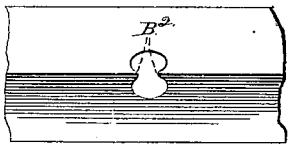


Fig. 10.

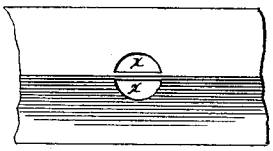


Fig. 11.

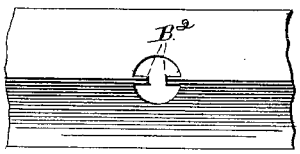
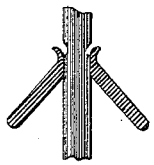


Fig. 12.



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Attorneys

UNITED STATES PATENT OFFICE.

CHRISTIAN HANIKA, OF SPRINGFIELD, OHIO.

METHOD OF CONSTRUCTING METALLIC FENCES.

SPECIFICATION forming part of Letters Patent No. 346,544, dated August 3, 1886.

Application filed February 20, 1884. Serial No. 121,415. (No model.)

To all whom it may concern:

Be it known that I, CHRISTIAN HANIKA, a citizen of the United States, residing at Springfield, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in the Method of Constructing Metallic Fences; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in the method of constructing iron fences.

In the drawings, Figure 1 is a side view of a portion of a rail with the picket secured in position. Fig. 2 is a side view of the picket. Fig. 3 is a plan view of a part of the rail. Fig. 4 is a section on line *x x*, Fig. 3. Fig. 5 is a section on line *y y*, Fig. 3. Fig. 6 is a side view of the rail; and Fig. 7 shows a modified form of rail, all of which will be described; and Figs. 8, 9, 10, 11, and 12 are detail views.

In carrying out my invention, I first procure a picket, as A, provided at suitable points with notches A′, as most clearly shown in Fig. 2. In the second step, a rail, B, is provided, which is preferably made in the inverted-V shape shown. By this form the rail will more readily shed water and snow, will dry more quickly, and is not so likely to rust as the ordinary flat rail. This form of rail also presents a broad face on both sides. A picket-opening is formed vertically through the crown or apex of the rail. I prefer to form this opening in the manner shown, which I will now describe.

In forming the opening I preferably use a drill having a rounded or oval point, and I bore from the inner side of the rail, as indicated by the arrow in Fig. 4. As the hole is formed, it will be seen, it will cut through the sides of the rail at B′ B′ before it cuts the crown or apex, and as the boring is continued these openings B′B′ will enlarge until they meet at the crown and cut the small bridge or portion which heretofore has separated them. Now, by suitable means—cold-chisel or punch—I turn back these wings or lugs B^2, about as indicated in Fig. 6, when, if desired, the drill may be turned entirely through the rail between said wings, in order to form the picket-opening of even size throughout.

Instead of drilling the bridge apart when the tool has about reached the point shown in Fig. 4, the bridge may be cut by a tool and forced apart, as will be readily understood. The picket is now inserted until its notches A′ come opposite the wings B^2, when the latter are forced into said notches and the picket is firmly secured, as will be seen.

It will be seen that my invention may be practiced, without any departure from its principle, on a flat rail, as shown in Fig. 7, or what is commonly called a "channel-rail;" but I prefer the inverted-V form shown.

Instead of forming wings B^2 and forcing the same into the notches A′, heretofore it was common to punch the holes in the usual manner and force the metal on the opposite sides into the notches in the picket. This, however, involves the mutilation of the rail, and often considerable difficulty in swaging a sufficient quantity of the metal into the notches to properly hold the pickets.

In the construction of wire articles where wires or rods extend across and are bound by transverse strips, these latter strips are punched or bored, and the metal surrounding such opening is upset, and the wire or rod passed therethrough and secured by compressing the upset metal about the rod or wire.

In my improvements, it will be seen, the metal which is forced into the notches is that which in the ordinary operation is forced or cut out of the rail.

Where so desired, the ordinary drill may be employed instead of a round-pointed one, as described; but I prefer the rounded form, as thereby better results are given, and less care is required in using it for the particular purpose in question.

It is manifest that instead of drilling the opening, as before described, the said opening might be punched, in which case it would be punched from one or the other side, as will be understood from Fig. 8, and would leave the wings or lugs B^2, as shown in Figs. 8 and 9. It is also understood that instead of punching a single hole, and that horizontally, as shown and described, two openings, *x x*, might be

cut, as shown in Fig. 10, leaving the intervening rib, which could be cut centrally, as shown in Fig. 11, to form the two wings or lugs B^2.

In Fig. 7 I have shown the rail made flat, instead of in the preferred inverted-V shape.

In Fig. 12 I show the rail as provided with the fastening wings or lugs on the diameter of the opening at right angles to the length of the rail on line of fence. In the other figures the said wings are formed on the diameter of the opening in line with the length of the rail, and I show said Fig. 12 to more broadly indicate the principles of my invention.

I am aware that heretofore iron fence-rails have been made with longitudinal flanges depending from their under faces on opposite sides of and close to the picket-openings, said flanges being of equal length with the rails and bent inward at proper points to enter notches formed in the pickets. I do not claim such construction as my invention; but

What I claim, and desire to secure by Letters Patent, is—

1. The herein-described method of constructing rail or picket fences, which consists in, first, notching the sides of the picket; second, removing a portion of the metal from the rail to form an opening, having wings projected into said opening, then turning said wings back to form an unobstructed passage for the picket, which is then inserted with its notches opposite the wings, and then forcing the wings into the notches to lock the rail in place, substantially as set forth.

2. The herein-described method of securing a picket to an inverted-V-shaped rail, consisting of notching the picket, then boring a hole through the apex of the rail, leaving ribs or wings extended into the opening, then turning said ribs or wings back to permit the passage of the picket, which is afterward inserted in the opening of the rail with its notches opposite the ribs or wings, which are then forced into the notches and lock the picket, substantially as set forth.

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

CHRISTIAN HANIKA.

Witnesses:
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JOHNSON P. WEAVER.