J. H. VAN DORN.

IRON FENCE.

No. 189,543. Patented April 10, 1877.

Fig. 1.

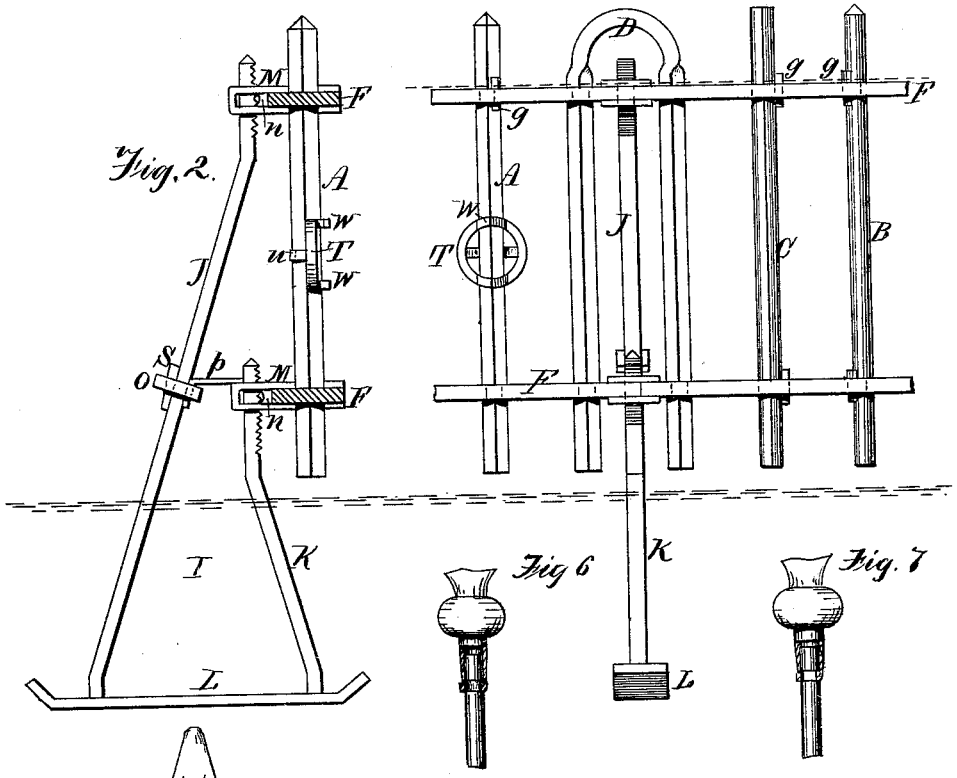


Fig. 2.

Fig 6

Fig. 7

Fig. 3.

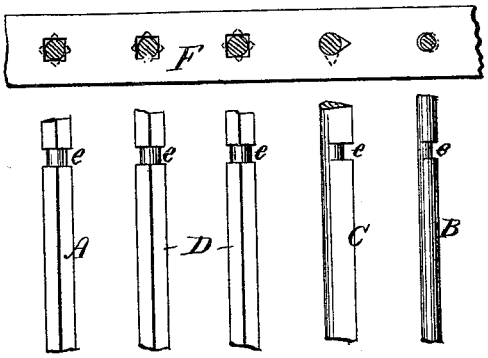


Fig 4

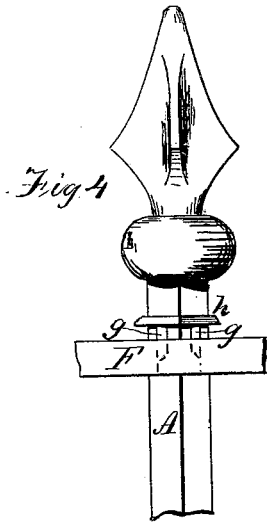
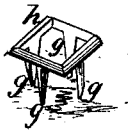


Fig. 5.



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UNITED STATES PATENT OFFICE.

JAMES H. VAN DORN, OF CLEVELAND, OHIO.

IMPROVEMENT IN IRON FENCES.

Specification forming part of Letters Patent No. **189,543**, dated April 10, 1877; application filed October 30, 1876.

To all whom it may concern:

Be it known that I, JAMES H. VAN DORN, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Iron Fences; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of a fence, showing my improvements. Fig. 2 is a transverse section, showing the fence-post in elevation. Fig. 3 is a view of one fence-stringer and several modifications in the form of the pickets. Fig. 4 is an enlarged view of a picket. Fig. 5 is a perspective view of one form of wedge by which certain of the pickets are fastened to the stringers; and Figs. 6 and 7 are views showing the method of fastening the picket-heads to the pickets.

Similar letters of reference in the accompanying drawings denote the same parts.

My invention relates to the construction of iron fences; and the improvements consist—

First, in the construction of the pickets and the method of applying them to the stringers.

It also consists in the construction of the fence-posts, and the method of attaching the fence thereto.

It also consists in the construction of the base-plates upon which the fence-posts are mounted.

It also consists in the method of securing the heads to the pickets.

It also consists in the method of securing ornaments to the pickets; and it,

Lastly, consists in the combination of certain parts to be hereinafter described.

In the accompanying drawings several different forms of pickets are shown, one, A, being square in cross-section; one, B, round in cross-section; one, C, oval in cross-section; and one, D, formed with two legs like A, but joined together at the top. Other forms are, of course, included in the invention, those shown being used simply to illustrate the principle, which consists in making notches or recesses *e* in the sides to form shoulders, which shoulders, when the pickets are inserted in the metal stringers F, bear against the latter to hold them the requisite distance apart, and, at the same time, fasten the pickets firmly in place. The shape of the holes in the stringers corresponds to the shape of the pickets in cross-section, and to apply pickets of the form shown at A C D, they are first inserted within the holes until the notches *e* coincide with the edges thereof, when they are turned partly round, usually about one-quarter, so as to engage the notches with the stringers. The oval form of picket needs to be notched only upon one side, as shown.

After the legs of the picket D have been inserted in the stringers they are clamped by any suitable instrument and twisted one-quarter round, more or less, to engege the stringers, as shown in Fig. 2.

The round picket B is also recessed in one side only; but, after being inserted in the stringers, instead of being turned it is moved laterally to engage the notches with the edges of the holes, in which position it is held by metal wedges *g* driven between it and the stringers on the side opposite the notches.

The pickets C may be locked in place by wedges applied in the same manner; but it is not absolutely necessary to use wedges with the square forms, although they may be used if desired. Instead of employing wedges the pickets may be calked in place by striking up the stringers, at any suitable point or points, against the sides of the pickets. In some cases one or more wedges are used joined to a collar, *h*, as shown in Fig. 4, the collar being placed upon the picket, so as to slide freely when the wedges are to be forced into the spaces between the pickets and stringers, and when they are to be removed therefrom.

This method of constructing and applying the pickets not only secures them in place, but also serves to space the stringers, thereby bracing the whole structure, and rendering it strong and rigid.

I is the post, consisting of two metal uprights, J K, screwed to a base-plate, L, let into the ground, the two uprights inclining toward each other and extending, one, J, to the upper stringer, and one, K, to the lower stringer of the fence, at which points they are passed vertically through looped plates or bars M secured to the rear sides of the stringers. The upper straight faces of the pickets

are corrugated transversely to receive the edges of grooved wedges or keys *n*, which are driven laterally into the looped plates between the stringers and uprights. By this means the fence is locked firmly to the posts against all danger of being casually displaced vertically, as would be the case if wedges were driven in vertically between the posts and stringers. By loosening the wedges the fence may be adjusted vertically, as will be readily understood. It may also be adjusted laterally by loosening the upper wedges and pulling the top of the fence backward or forward, when the wedges are again tightened to secure it in the proper position.

The two ends of the base-plate are turned upward somewhat, as shown in Fig. 1, for the purpose of preventing the plate from sliding longitudinally in the ground, and thereby changing the position of the posts and disarranging the line or inclination of the fence.

The inclination of the two uprights serves to strengthen and brace them, but they are still further strengthened and braced by connecting the lower stringer to a collar, O, on the upright J, by means of a metal dog, *p*, as shown. The collar O is secured to its upright by a wedge, S, which is loosened when the fence is to be vertically adjusted.

To fasten the picket-heads X to the pickets, the latter near the top, are formed with lateral notches *y*, as shown in Figs. 6 and 7, and the edges at one or more points are driven into these notches by any suitable means. This is easily done, because the picket-heads are made of malleable instead of cast iron, and form a secure and permanent fastening.

T is a circular ornament, which may be applied to the pickets when desired. It is made with a diametrical or cross bar, *u*, so that, when strung or fitted upon a picket, the cross-bar shall fit within a notch in one side or corner of the latter, and the struck-up portions *w w* of the ornament shall bear against the opposite side or corner. To secure the ornament in place the cross-bar is struck into the recess, thereby drawing the parts *w w* against the opposite side, as shown in Figs. 1 and 2.

I claim as my invention—

1. The iron fence-picket, constructed with the lateral recesses and applied to the fence-stringers by being inserted therein and then moved laterally or turned partly round, substantially as described, for the purpose specified.

2. The combination of one or more wedges, *g*, with the recessed pickets and the stringers F, substantially as described, for the purpose specified.

3. The picket-collar *h*, provided with one or more wedges, *g*, substantially as described, for the purpose specified.

4. The combination of the uprights J K of the post, with the upper and lower fence-stringers united thereto by suitable means, substantially as described, for the purpose specified.

5. The fence-post, consisting of the inclined uprights J K of unequal length mounted upon the base-plate L, substantially as described, for the purpose specified.

6. The grooved lateral wedges *n*, and looped plates or bars M, in combination with the fence-stringers and the corrugated uprights of the fence-post, substantially as described, for the purpose specified.

7. The combination of the dog *p* and collar O, with the long upright of the fence-post and the lower fence-stringer, substantially as described, for the purpose specified.

8. The base-plate L of the fence-post, having its ends turned upward to prevent it from slipping longitudinally in the ground, substantially as described.

9. The picket-heads, constructed substantially as described, secured to the pickets by forcing their lower edges into the recesses of the pickets at one or more points, substantially as described.

10. The picket-ornament T, constructed with the cross-bar *u* to fit into a notch in one side or corner of the picket, substantially as described, for the purpose specified.

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