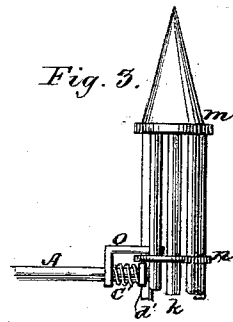
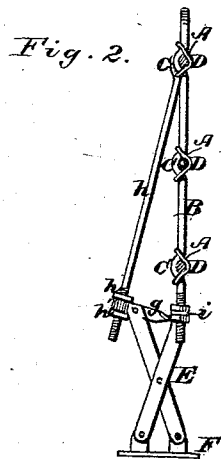
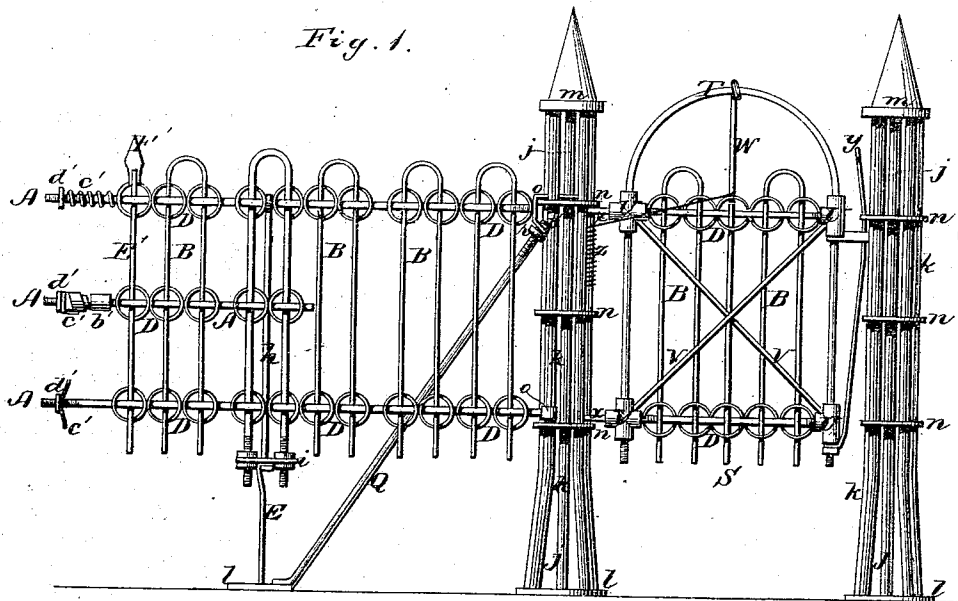


JAMES H. VAN DORN.
Improvement in Fences.

No. 126,167.

Patented April 30, 1872.



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UNITED STATES PATENT OFFICE.

JAMES H. VAN DORN, OF AKRON, OHIO.

IMPROVEMENT IN FENCES.

Specification forming part of Letters Patent No. 126,167, dated April 30, 1872.

To all whom it may concern:

Be it known that I, JAMES H. VAN DORN, of Akron, in the county of Summit and State of Ohio, have invented an Improved Iron Fence; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a side elevation of my improved fence. Fig. 2 is a transverse section of the same taken in the line *x x*, Fig. 1; and Fig. 3 is a detached view, showing the spring connection of the string-pieces and fence-posts.

Similar letters of reference in the accompanying drawing indicate the same parts.

My invention has for its object to provide for public use an iron fence which shall be strong and durable, and at the same time light, and economical in construction, the various parts being so disposed as to produce an ornamental appearance. To this end the invention consists, first, in the peculiar construction of the pickets or palings, and in the means employed for securing them to the string-pieces. It consists, secondly, in the construction of the panel-supports, and the method of securing the panels thereto. It consists, thirdly, in the method of connecting the string-pieces to the fence-posts for the purpose of providing for the expansion and contraction of the string-pieces. It consists, fourthly, in the construction of the fence-posts and in the means for attaching and adjusting the panels thereto.

In the accompanying drawing, A are the parallel string-pieces at the top and bottom of the fence-panel, consisting of iron rods with a screw-thread cut upon each end. B are U-shaped pickets or palings, also composed of iron rods, and applied to the stringers with their bent portions uppermost. At their points of contact with the stringers they are struck up or bent outward to form recesses *c*, in which the stringers fit, to prevent the pickets from dropping down. D are ornamental rings, clasps, or loops of metal pressing against the legs of the pickets, upon the outside, above and below the outward projections formed by the recesses *c*. Their sides extend forward toward the stringers so as to form loops between themselves and the pickets, through which the stringers are passed to hold the pickets in

place, as clearly shown in the drawing. The rings D not only hold the pickets upon the stringers, but serve also to space them with relation to each other and prevent them from being bent. The fence-panel thus constructed is held above the ground and in a position to connect with the fence-posts by means of a metal support composed of two cross-bars, E, pivoted together centrally, with their ends spread apart to form braces, and pivoted or otherwise secured at their lower ends to a cast-iron base-plate or sill, F. The upper ends of the braces are secured together by a strap, *g*, which is looped or drilled at one end to receive a brace-rod, *h*, from the upper stringer of the panel, its lower end being held to the strap by the nuts *h'*. *i* is a small plate, secured at right angles to the opposite end of the strap *g*, the ends being perforated to receive the two ends of a long picket, which are provided each with two nuts, one above and the other below the plate, as shown. This connection supports the fence-panel in an upright position and renders it adjustable, so that it can be raised or lowered at pleasure. The fence-posts are each composed of a central rod, *j*, surrounded by a series of outer rods, *k*, the whole mounted upon a cast-iron base-plate or sill, *l*, and held together laterally by the cap *m* and the intermediate plates *n*, through which the rods pass. The various parts of the posts are held together by means of screw connections formed between the rods and the cap or sill. To apply the fence-panel to a post the ends of the string-pieces are passed through plates *o* attached to the posts, where they are held in place by the nuts *p*. The plates *o* are fitted upon the rods of the fence-posts above the upper and lower plates *n*, to prevent the end of the panel from dropping down. Q is a brace, extending from the base-plate F of the panel-support to the top of the fence-post, where it enters the plate *o*. A nut, *r*, is placed upon the upper end of this rod, outside the plate, by the adjustment of which against such plate the post is held in an upright position and prevented from sagging under the weight of the panel.

The stringers of the fence may be in several pieces, if desired, one piece being secured to an adjoining piece by a screw-coupling, *b'*, as shown in Fig. 1. In some instances an addi-

tional string-piece or pieces may be employed in the fence, although this is not absolutely essential.

C' are springs placed upon the ends of the string-pieces, three different forms being shown in the drawing, either of which may be employed, at pleasure. When the stringers are applied to a post, or to a plate affixed thereto, as shown in Fig. 3, their ends receive the springs, which are held in place by the nuts d'.

As the stringers expand under the influence of heat the springs expand correspondingly and prevent the stringers from sagging or being otherwise displaced. The effect is the same, of course, when the springs are compressed by the contraction of the stringers.

If desired, springs may be employed upon the stringers at each post, although this is not necessary, as one set to each panel is sufficient.

In some cases I employ single pickets, as shown at E', instead of the double ones, and affix to their upper rings ornamental heads F'. The shanks of the heads, where they join the rings, are provided with a shallow groove, so as to fit snugly against the end of picket and present a uniform and unbroken appearance.

My invention is applicable to veranda, counter, and other railings, as will be readily understood, the only changes required to adapt it to different positions being those of size or proportion.

Having thus described my invention, what I claim is—

1. The pickets B, constructed with recesses c to receive the string-pieces A of the fence, combined with the ornamental fastenings D, constructed to embrace the pickets and fit over the string-pieces to hold the pickets in place, substantially as described.

2. The panel-supports, consisting of the sill F, pivoted cross-braces E, the strap g, and the perforated plate i, adapted to receive the leg of a picket, substantially as described, for the purpose specified.

3. The fence-panel, adapted for vertical, lateral, and longitudinal adjustment upon its supports by means of the adjustable picket and the adjustable braces h Q, as herein shown and described.

4. The fence-posts, consisting of the central rod j, exterior rods k, base and cap plates l m, and the intermediate plates or rings n, the parts being held together by screw connections, substantially as described.

5. In combination with the fence-post and panel-support, I claim the adjustable brace Q, substantially as described, for the purpose specified.

JAMES H. VAN DORN.

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