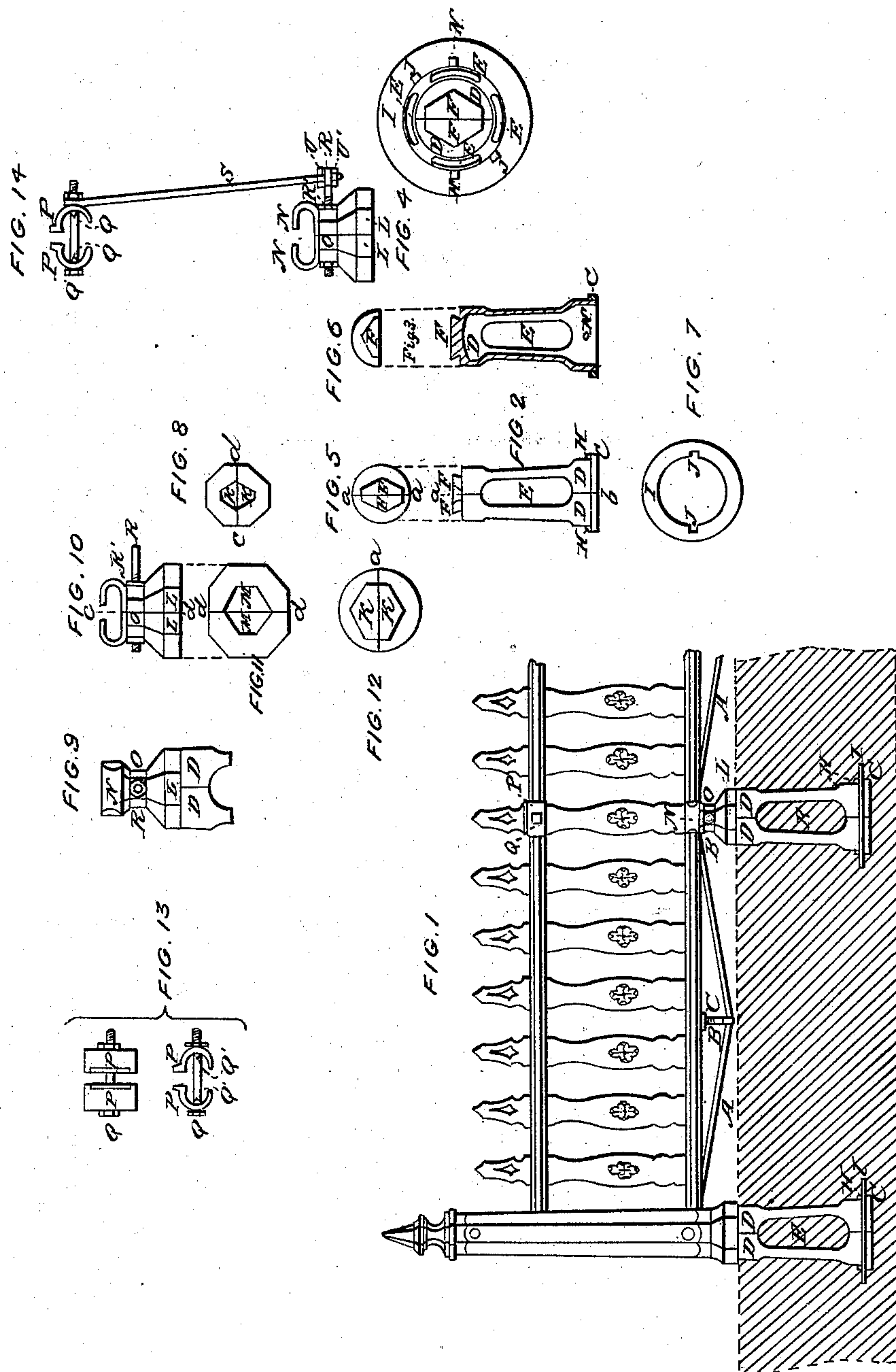


W. PETTINGELL.

Iron Fence.

No. 67,902.

Patented Aug. 20, 1867.



WITNESSES:

J. F. Single
R. b. Patton

INVENTOR:

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United States Patent Office.

WILLIAM PETTINGELL, OF PAINESVILLE, OHIO.

Letters Patent No. 67,902, dated August 20, 1867.

IMPROVEMENT IN FENCE.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, WILLIAM PETTINGELL, of Painesville, in the county of Lake, and State of Ohio, have invented certain new and useful improvements in Fences for Dwelling-Houses; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which the principal elevation, Figure 1, exhibits a portion of a fence having my said improvements embodied; and the details thereof by Figures 2 to 14, inclusive; figs. 4 and 9 to 14 inclusive being drawn on an enlarged scale.

The primary feature of my invention is in the peculiar construction of the base which supports the posts and the lower coupling-clips for the joinings of the sections or panels; the said base being formed of two similar sections, each provided at its top with an angular dove-tailed half tenon or tongue, which fit into corresponding angular dove-tailed half mortises in the bottom of the halves of the post and coupling-clip, which, by means of a screw-bolt through them, are made to lock the top of the said sections of the base, and at the same time secure the post or coupling-clip firmly thereto; the lower portion of said sections being locked and confined in place by a broad, flat ring, which also serves as a sole to steady and confine the whole base in the ground, as will be explained.

The second feature is the employment and adaptation of the inverted arch-brace principle to and under the lower rail of the panel for counteracting its sag or depression, whereby I am enabled to dispense with the expensive and objectionable bottom board or panelling now generally employed in wooden fences for supporting the sections, and to use in place thereof rails of thin and light construction, sufficiently braced as to allow the section to be supported vertically its whole length without any additional base.

The third feature is the manner of coupling and sustaining the sections by means of the peculiarly constructed coupling-clips, in combination with the base before mentioned, and a brace, as will be explained.

The following is a description of the construction of the several parts constituting my said improvements, and the manner of erecting the fence: As my improvements do not relate to any particular form of rails or pickets, it is unnecessary to mention how they are constructed; it is sufficient to state that my said improvements are adapted to any of the known modes or forms for constructing fence sections of pickets and rails. But, in order to support vertically a panel or section, similar to or of the kind shown in the drawing, fig. 1, which shows two thin and light rails, say one and one half by three inches, I employ an inverted arch-brace, A, extending to about the whole length of it, or as much as is necessary. This brace is made rigid by turning the nut C of the vertical rod B, the said nut impinging on the under side of said rail. Said brace may be of seven-sixteenths rod iron, and although light, will be sufficient for the support of the sections commonly adopted; and being near the ground, and in most cases partially buried in it, it will not prove an objection, when its cheapness and great utility are considered. The next improvement I will proceed to describe is the cast-iron base which supports the posts and the coupling-clips. Fig. 2 is an elevation of said base; it is of a conical form, as shown. It consists of two similar halves, D and D, joining at the line *a b*; one of these halves is shown in fig. 3. It is hollow or concave, and is headed solid at the top, fig. 6, and open at the bottom. When put together they present a hollow cone, with four open longitudinal spaces E E E E, fig. 4. On the top of each half is cast solid with the head an angular dove-tailed half tenon, F, so that when said halves are put together a whole angular dove-tailed tenon is formed, as at F F, in the top view, fig. 5. The lower part of the said base has a projecting rim, G, and just above it two lugs H H, located as shown in fig. 3. I, fig. 7, is a thin, flat ring, having a broad surface, as shown in the plan view; it is provided with notches J J.

The foregoing is a full description of the base of the post. The one which supports the coupling-clip, hereafter described, is exactly similar in all its parts. The post, which is of hollow cast iron, is moulded in halves; the bottom of each half is closed solid, the under side of which has an angular dove-tailed half mortise, K, fig. 8, which represents a plan view of the under surface of the post, so that when said halves are closed in the line of junction, *c d*, which is at right angles to the joining line *a b* of the head, of fig. 5, it will correspond with and fit the said angular dove-tailed tenon F F. The coupling-clip before alluded to, and which is used on the lower rails, consists of two corresponding halves, L L, fig. 10 being an end elevation thereof; fig. 11 shows a plan view of its under surface. M M are similar halves making an angular dove-tailed mortise when closed; it is similar to that of the post just described, and fits in the same way on the head, fig. 12, of the base.

In the said clip, as will be seen, the upper portion of each part, when put together, forms a pair of jaws, N N, a jaw being cast solid on each part. The contracted portion O, fig. 10, is a neck, through which are bolt-holes.

Fig. 13 represents a plan and end view of the upper coupling-clip, through which passes a bolt, Q', to which the lateral brace, hereafter mentioned, is secured. It consists of two similar jaws P P, perforated with bolt-holes, and the inside provided with spurs Q Q. Fig. 14, which exhibits an end elevation, shows the arrangement for securing the lateral brace before mentioned for sustaining the sections laterally. R is an eye-bolt, provided with a stop-nut, R'; it passes through the bolt-holes in the neck of the lower coupling-clip, as seen. Said eye-bolt can be of any length to meet the required angle for bracing the sections. The lateral brace S is constructed with an eye at the top and screw at the bottom, and is provided with nuts U U' for adjusting and securing it in place.

Before putting up my said improved fence, the posts are first to be attached to the bases; thus: The halves of the base are brought together at the line of junction, and the ring I slipped on and down to the lower part, turning it so as to allow it to pass under the lugs H H, through the notches J J; this locks the said halves together. The halves of the posts are next placed on the top of the said base, with their line of junction at right angles to that of the base, so as to allow the tenon of one to lock into the mortise of the other. A bolt, as seen in fig. 1, is then passed through the said halves of the post, and made secure by the nut. Of course the securing of whatever head or cap the said post is to be completed with must be attended to at the time of closing up the said halves.

The coupling-clip, figs. 10 and 11, which is to be attached to its base after it is placed in the ground, is secured in a similar manner by the eye-bolt R.

In setting up the fence I proceed thus: After the required number of bases, with the posts secured thereto, and the bases for the coupling-clips, are properly placed in the ground, the holes are filled up, taking due care that the earth is well filled into the hollow of said bases, and properly disposed on and around the ring. The panels or sections are then put in their places by passing the ends of the rails through holes provided in the side of the posts, and temporarily supported whilst the halves of the coupling-clips, figs. 10 and 11, are being put in place. The eye-bolt R, with its stop-nut, is then passed through the neck O, and secured by the nut, as seen in fig. 10. The jaws P and P' of the upper coupling-clip are then put in place and secured in like manner by bolt Q'. The spurs Q Q biting into the wood serve to give them a firm and steady hold. The braces are now to be attached; this is best done after the panelling or sections between posts are all in place; then unscrewing the nut of the bolt Q' of the upper coupling-clip, and passing the end of the brace S, with the nut U on it, through the eye of bolt R, and the eye of its upper end on the bolt Q', the said brace is adjusted and secured, and the fence brought in line by the nuts, as seen in fig. 14.

The advantages I claim for my improved fence are as follows:

First. The skeleton or open form of the conical base admits the earth, &c., being well packed or tamped within and around it; and the broad, flat surface of the ring bearing the superincumbent earth will give it all the firmness and stability of a heavy stone base.

Second. The body of the said conical base, and upper and lower coupling-clips, being formed from corresponding halves, only half patterns of each are required for moulding. And as this fence is intended to be made up in manufactories, and to be transported in separate pieces to distant parts of the country, it is an evident advantage that the various parts of the said base and coupling-clips are so shaped as to be packed in a compact space.

Third. The mode adopted for securing the post and lower coupling-clips to their bases by means of the peculiar dove-tailed arrangement described, and requiring only a single bolt to fasten them, is believed to impart all the hold that could possibly be required, and affording the firmest and most efficient mode of any in use.

Fourth. The facility with which the base is formed, by locking the halves composing it with the broad, flat ring, constructed and operating as shown.

Fifth. The simple and efficient manner employed for supporting a fence section or panel, of the "picket and rail" character, whereby heavy rails are dispensed with; the sag or depression being counteracted by the single contrivance shown in fig. 1, and which will admit of its being straightened up if found necessary.

In this description the posts are understood as being of cast iron. But it is evident that wood can be substituted therefor if cheapness is an object with the user. In such case the halves can be constructed hollow, which will materially aid in keeping them from twisting or checking; and they can be coated with coal tar on the inside for preventing decay or the attacks of vermin.

I do not lay claim to dove-tailed tenons and mortises in themselves, nor to posts in halves, nor to hollow bases for posts; neither do I claim breadth of sole, as shown in my broad, flat ring I, nor to jaws or clips in themselves; neither do I claim a lateral or an adjustable brace, as such; all have been heretofore in use in a variety of ways. But what I claim, and desire to secure by Letters Patent is—

1. I claim the base herein described and constructed as shown in figs. 2, 5, 3, 6, and 7, viz, the skeleton or open halves D D, angular dove-tailed tenons F F, lugs H H, rim G, broad, flat ring I, provided with notches J J, combined, arranged, and operating a and for the purpose set forth.

2. The said described base, in combination with the halves of the post herein described, provided with angular dove-tailed mortises K K, fig. 8, and the bolt shown in fig. 1, as and for the purpose set forth.

WM. PETTINGELL.

Witnesses:

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M. S. HARVEY.