(No Model.) 2 Sheets—Sheet 1.

A. L. KITSELMAN.

FENCE.

No. 444,753. Patented Jan. 13, 1891.

Fig. 3.

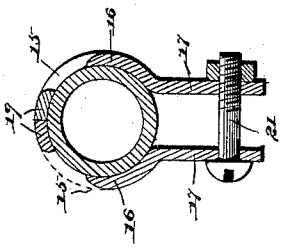


Fig. 4.

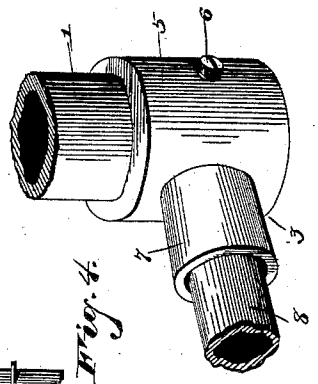


Fig. 1.

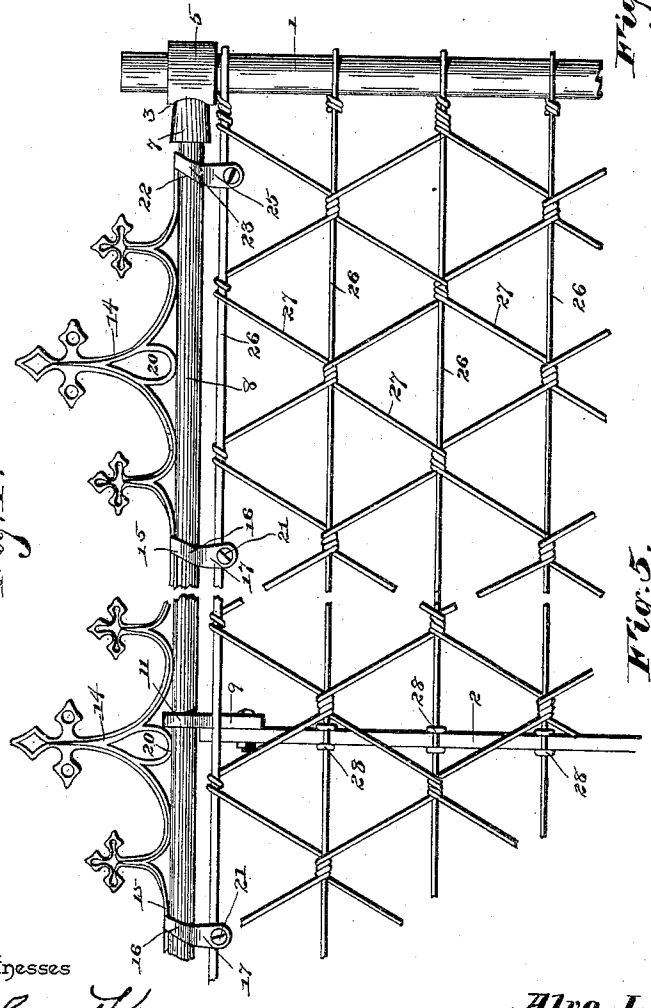
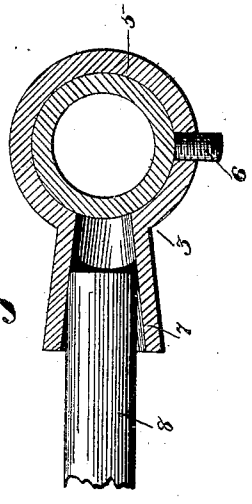


Fig. 5.



Witnesses

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

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Fig. 2.

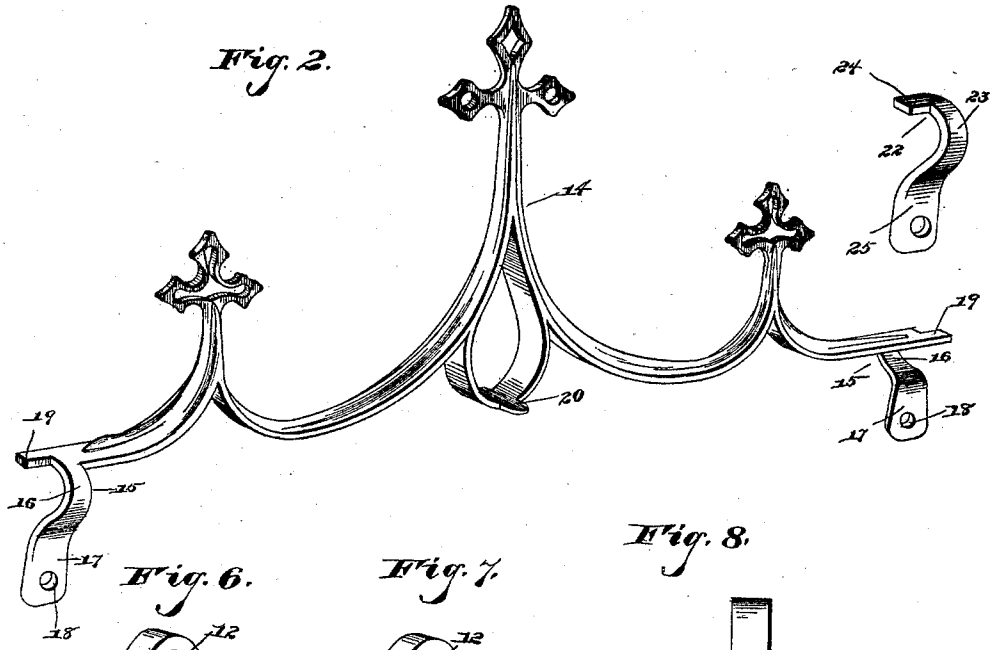


Fig. 6.

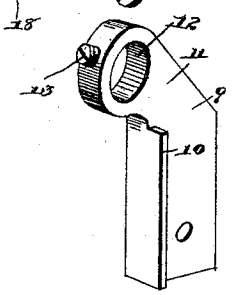


Fig. 7.

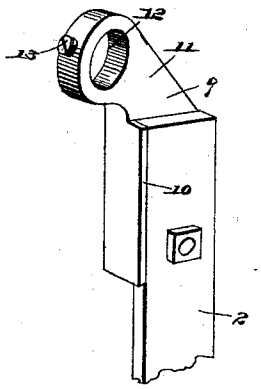


Fig. 8.

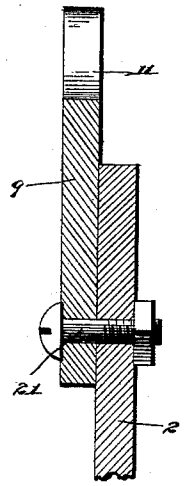
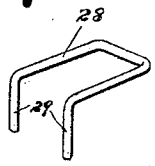


Fig. 9.



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UNITED STATES PATENT OFFICE.

ALVA L. KITSELMAN, OF RIDGEVILLE, INDIANA.

FENCE.

SPECIFICATION forming part of Letters Patent No. 444,753, dated January 13, 1891.

Application filed July 26, 1890. Serial No. 360,041. (No model.)

To all whom it may concern:

Be it known that I, ALVA L. KITSELMAN, a citizen of the United States, residing at Ridgeville, in the county of Randolph and State of Indiana, have invented a new and useful Fence, of which the following is a specification.

This invention relates to fences, and it has especial reference to that class of fences which are constructed with metallic posts supporting a netting of woven wire.

The present invention has a special reference to certain improved means for securing the top rails to the metallic posts, for securing ornaments to the said top rails, and for connecting the woven fencing material to the posts and rails.

The invention consists in the improved construction, arrangement, and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings hereto annexed, Figure 1 is a side view showing a portion of a fence equipped with my improvements. Fig. 2 is a perspective view, on a larger scale, of one of the top irons, showing also one of the separate connecting-clamps. Fig. 3 is a sectional view, taken vertically through the top rail and through the meeting ends, of two adjacent top ornaments. Fig. 4 is a perspective detail view, illustrating the manner, of connecting the top rail to one of the corner-posts. Fig. 5 is a horizontal sectional view taken on the line 5 5 in Fig. 4. Fig. 6 is a perspective detail view of the clamp for connecting the top rail to one of the intermediate posts. Fig. 7 is a perspective detail view showing one of these clamps attached to one of the intermediate posts. Fig. 8 is a sectional view taken vertically through the upper end of one of the intermediate posts. Fig. 9 is a perspective view of one of the staples for connecting the fencing material with the posts.

Like numerals of reference indicate like parts in all the figures.

1 designates a corner-post, and 2 an intermediate post, of my improved fence. The corner-posts are constructed, preferably, of tubular metal, such as ordinary gas-pipes of suitable dimensions, and the intermediate posts are of a construction shown and claimed in an application for Letters Patent filed by me of even date with the present application, Serial No. 359,554. Said intermediate posts are constructed of bars of iron or steel, rectangular in cross-section and supported by inclined braces.

One object of my invention is to attach the top rails and the fencing material to the posts without weakening the latter by drilling or boring. To this end I avail myself of clamping devices designated, respectively, as 3 and 4. The clamps 3 consist of rings or bands 5 of suitable size to be slipped over the upper ends of the corner-posts, to which they may be attached by means of set-screws 6, although such fastening devices are not always deemed necessary or essential. The rings or bands 5 are provided with laterally-extending tapering sockets 7, adapted to receive the ends of the top rails 8, which consist of ordinary gas-pipe of suitable dimensions. The ends of said top rails are secured by simply driving them into the tapering sockets 7, with which they will thus be firmly connected.

The clamping devices 4, by means of which the top rails are secured to the upper ends of the intermediate posts 2, consist of flat metal plates 9, provided at their front edges with ribs or flanges 10, adapted to bear against the front edges of the posts or uprights 2. One such clamp is secured to the upper end of each of the posts 2 by means of a single bolt passing transversely through perforations formed for its reception. The plates 9 are provided at their upper ends with necks or brackets 11, extending slightly in a forward direction, and provided with eyes or perforations 12 of sufficient size to admit the tubular top rail, which is thus supported slightly in front of the posts or uprights 2. This construction is necessary in order to support the fencing material in contact with the front edges of the said uprights 2. Set-screws 13 are provided for the purpose of retaining the tubular top rails securely in the eyes or perforations 12 of the supporting flanges or brackets.

The top ornaments, which are designated by 14, are made in lengths or sections of about twelve inches, it being understood, of course, that the dimensions may be varied to any desired extent. Each of said top irons, which

may be of any suitable and appropriate design, is provided at its ends with clamping-brackets 15, depending from opposite sides thereof, each of said clamping-brackets being composed of a curved or segmental upper portion 16 and a downwardly-extending lug or lip 17, having a transverse perforation 18 for the reception of the connecting-bolt. The ends of the top ornaments are also provided with outwardly-extending lips 19, formed on opposite sides and at the upper edges of the depending clamping devices. Each of said top ornaments is also preferably constructed with one or more seats 20, adapted to rest upon the upper side of the top rail. The manner of attaching these ornaments to the tubular top rail, hereinbefore described, will be readily understood when reference is had to the drawings hereto annexed. The lips 19 at the meeting ends of the said top ornaments will engage each other, and the clamps 15 will extend downwardly on opposite sides of the tubular top rail, thus admitting of the insertion of the connecting-bolt 21, by means of which the meeting ends of the said ornaments are securely connected together and clamped upon the top rail. It will be noticed that by tightening the nut upon the bolt 21 the lower ends of the clamps will be drawn tightly together and the lips 19 be caused to hug each other tightly, thus forming a very simple and secure means of attachment. As will be seen by reference to the drawings, the holding-clamps 15 do not extend straight in a downward direction, but rather downwardly and outwardly, this being obviously for the purpose of causing the bolt-holes at the lower ends of said clamps to align when the meeting ends of the top ornaments are braced together.

For the purpose of securing the top ornaments at the starting-points I avail myself of the separate flanges 22, each of which is composed of the upper curved portion 23, having the laterally-extending lip 24 and the downwardly-extending perforated lug 25. These separate clamps are adapted to engage either end of any of the top irons which may thus be secured at the starting and finishing points. By means of these separate clamps I am also enabled, whenever desired, to mount the top ornaments upon the top rail of a fence separately or any desired distance apart from each other, thus economizing the material and sometimes attaining a more satisfactory result when individual tastes are to be consulted.

The fencing material which is preferably used in connection with my improved fence is composed of horizontal wires 26, interlaced or interwoven with other wires 27. It is obvious, however, that I do not restrict myself to the use of this particular form of fencing material, but reserve the right to the use of any fencing material that may be found to operate successfully in connection with my invention. The top wires 26 of the fencing material are inserted between the lower ends of the clamps 15 at the meeting ends of the top ornaments and are suspended upon the bolts 21, connecting said clamps. To secure the intermediate wires 26 to the posts or uprights 2, I avail myself of the staples 28, straddling said posts and provided at their ends with downwardly-extending arms 29, which are simply bent under the said wires 26, which latter are thereby firmly connected with the posts. It should be distinctly understood that the staples 28 are to be constructed of wire considerably heavier than that of which the fencing material is composed, so that the attachment may be made by simply bending the depending ends 29 under the horizontal wires of the fencing material without necessity for twisting such depending ends around the wires of the fencing material. By this construction the work of connecting the fencing material with the posts may be more speedily and effectually acomplished than by devices heretofore used for a similar purpose.

From the foregoing description, taken in connection with the drawings hereto annexed, the operation and advantages of my invention will be readily understood by those skilled in the art to which it appertains.

The improved fence which constitutes my invention is simple in construction, durable, and may be very easily erected. The individual parts composing the fence are also of such a nature that they may be very conveniently and compactly packed for shipment.

Having thus described my invention, I claim—

1. In a fence, the combination, with a fence-post, of a rail-clamp comprising a flat plate having a rib or flange adapted to bear against the front edge of the post, and provided with a forwardly-extending neck or bracket having an eye or perforation to receive the tubular top rail, substantially as set forth.

2. The rail-clamping device consisting of a flat plate provided at its front edge with a rib or flange and having a forwardly-extending neck or bracket provided with an eye or opening to receive a tubular top rail, in combination with the set-screw or binding-screw adapted to secure such tubular rail against turning, substantially as set forth.

3. In a fence, the combination of the corner-posts, the intermediate posts, the rings or bands mounted upon the corner-posts and having laterally-extending tapering sockets, the rail-clamps attached to the upper ends of the intermediate posts and having ribs or flanges bearing against the front edges of said posts, and forwardly-extending necks or brackets perforated to receive the tubular top rails and having the set-screws or binding-screws, and the tubular top rails mounted in the perforations of the rail-clamps and having their ends inserted into the tapering sockets of the corner-post clamps, substantially as set forth.

4. In a fence, the combination, with a tubular or cylindrical top rail, of the top ornaments provided at their meeting ends with outwardly-extending lips and with depending clamps connected beneath the rail by transverse connecting-bolts, substantially as and for the purpose set forth.

5. In a fence, the herein-described top ornaments, provided at their meeting ends with downwardly-extending curved clamps to engage the tubular rail, having downward-extending perforated lips to be connected by transverse bolts under the said rail, substantially as set forth.

6. The top ornaments provided at their meeting ends with outwardly-extending lips and with clamping devices depending on opposite sides, said clamping devices consisting of the upper curved portions and the downwardly-extending perforated lips, substantially as and for the purpose set forth.

7. The top ornaments provided at their meeting ends with clamping devices engaging the tubular top rail of a fence and connected by transverse connecting-bolts under said fence-rail, said top ornaments being provided at points intermediate the ends with seats adapted to rest upon the top rail of the fence, substantially as and for the purpose set forth.

8. The top ornaments provided at their ends with clamping devices comprising the depending clamps and the outwardly-extending lips, in combination with the separate clamps consisting of the upper curved portions, the laterally-extending lips, and the downwardly-extending perforated lips, substantially as and for the purpose herein set forth.

9. In a fence, the combination of the posts, the top rail, the ornaments having clamping devices mounted upon said top rail and connected under the latter by transverse bolts, and the fencing material having horizontal top wires suspended upon the said connecting-bolts, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

ALVA L. KITSELMAN.

Witnesses:

J. H. SIGGERS,

R. W. DAYTON.