2 Sheets—Sheet 1.

A. J. NELLIS & D. C. GUTTRIDGE.

IRON FENCE.

No. 186,362. Patented Jan. 16, 1877.

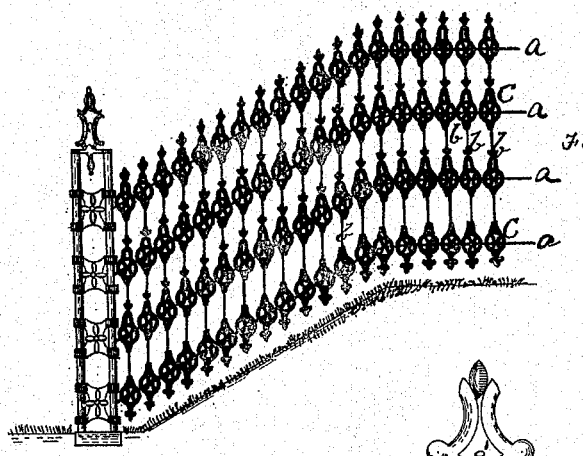

Fig. 1.

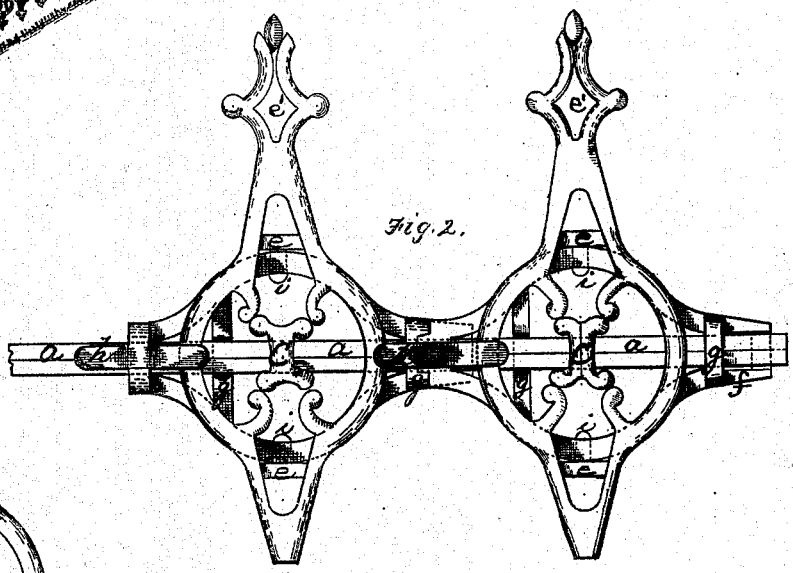

Fig. 2.

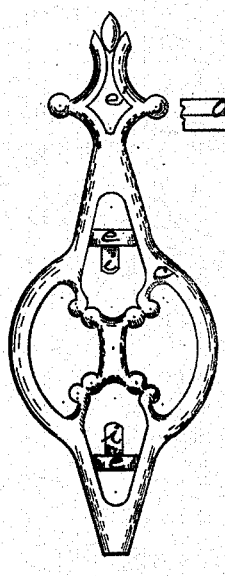

Fig. 3.

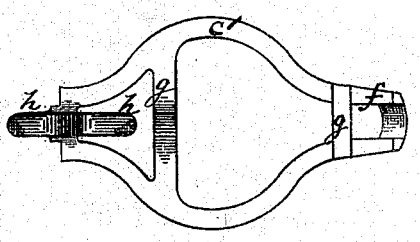

Fig. 4.

Witnesses.

James K. Bakewell

James L. Kay

Inventor

Aaron J. Nellis

David C. Guttridge

by Bakewell & Kerr

attys

2 Sheets—Sheet 2.

A. J. NELLIS & D. C. GUTTRIDGE.

IRON FENCE.

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Fig. 8.

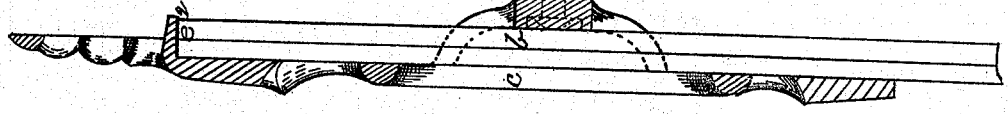


Fig. 7.

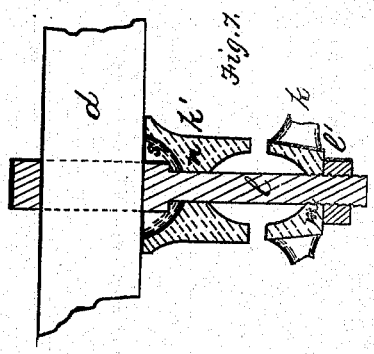


Fig. 6.

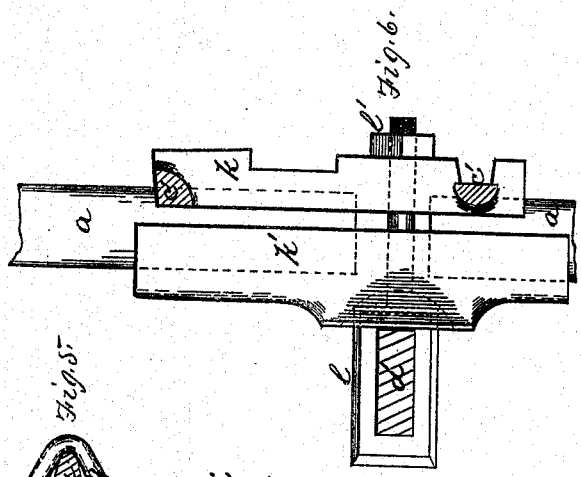
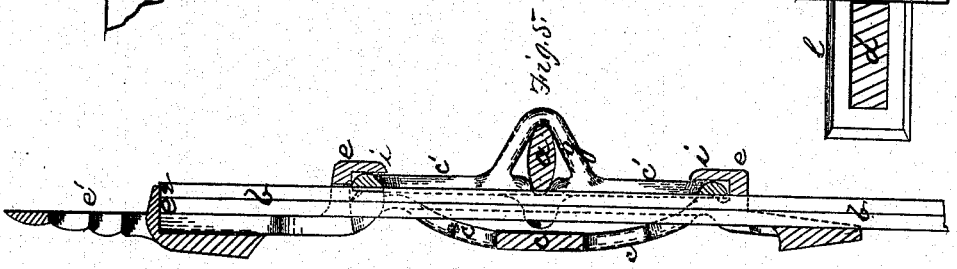


Fig. 5.



Witnesses.

James K. Bakewell
James L. Kay

Inventor.

Aaron J. Nellis
David C. Guttridge
by Bakewell & Kerr
Attys

UNITED STATES PATENT OFFICE.

AARON J. NELLIS AND DAVID C. GUTTRIDGE, OF PITTSBURG, PA.

IMPROVEMENT IN IRON FENCES.

Specification forming part of Letters Patent No. 186,362, dated January 16, 1877; application filed November 24, 1876.

To all whom it may concern:

Be it known that we, AARON J. NELLIS and DAVID C. GUTTRIDGE, both of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Iron Fences; and we do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 is an elevation of a section of our improved fence as set up upon a sloping surface. Fig. 2 is an enlarged partial view. Figs. 3 and 4 are detached views of the parts of a swiveling picket-clamp or rosette. Fig. 5 is a sectional view of the picket-clamp. Fig. 6 is a detached view of a section-clamp. Fig. 7 is a sectional view of the same, and Fig. 8 is a modification of the swiveling rosette.

Like letters refer to like parts wherever they occur.

Our invention relates to fences generally, but especially to iron fences.

Heretofore, in the manufacture of iron fences, whenever the grade over which the fence passed changed, it has been common to make special patterns adapted to each grade, and where fence-sections of irregular form, such as crested gates, &c., were desired, special patterns therefor were likewise made, all of which greatly enhance the labor and cost of manufacture. Furthermore, where the sections of a metallic fence or the stringers thereof are connected, as is commonly the case, directly to each other by riveting or screw-connections, the expansion and contraction of the fence caused by changes of temperature, in course of time, alter the position and derange the foundation-stones, in order to avoid which we employ a coupling for the sections, which, while firmly securing, yet permits of sufficient end play of the stringers and sections to avoid the objections specified.

The object, therefore, of the present invention is to obtain such a construction of fence as will admit of adaptation to all grades and desired forms of fencing, and such section-connection as will neutralize the effects of varying temperature.

We will now proceed to describe our invention, so that others skilled in the art to which it appertains may apply the same.

In the drawing, *a* indicates the stringers or rails for the support of the pickets or palings *b*, the connection between the pickets and stringers being made by the clamps C, (sometimes termed links and rosettes,) and the stringers being connected, at the usual distances, to suitable posts *d*.

The swiveling connection between the rail or stringer and picket is preferably made by means of clamps or rosettes C, composed of two parts, *c c'*, which turn upon each other. The part *c* has loops or eyes *e* for the reception of the (rod or) picket *b* and hooks or lugs *i*, which take over the circle of the part *c'*. It may be finished with an ornamental head, e^1, and socket e^2, or not, accordingly as it is to be used for an outer or intermediate rosette or clamp. The back or stringer piece *c'* of the clamp has likewise loops or eyes *g* for the reception of the rail or stringer *a*, and lugs or hooks *h*, which take over the circle of piece *c*, and also form with lap *f* a finish between the clamps of the pickets. The clamp or rosette is thus formed of two circle-plates capable of turning upon each other; but the same result may, to a certain, extent be obtained by securing the rosette or picket to the stringer by an eye having swivel-connection, as shown in Fig. 8, though this latter construction does not give as steady and substantial a connection between the picket and stringer as the one first noted.

The sections of the fence are connected to each other and to the posts *d* by section-clamps composed of the two plates *k k'* and an eyebolt, *l*. One of the section-clamp plates *k* is preferably formed with, or connected to, the back or stringer piece *c'* of a picket-clamp or rosette, and is perforated, as shown at *m*, for the passage of the end of eyebolt *l*. The other plate, *k'*, of the section-clamp is formed independently, is perforated, as at *n*, for the passage of the eyebolt *l*, and may be countersunk, (or provided with lugs,) as at *s*, to facilitate the wedging and securing together of post *d* and the fence-sections by means of the eyebolt. *l* indicates the eyebolt, by means of which the several parts are

held together. It is slotted at one end to receive the post *d*, and is provided at the other with the usual nut *l'*.

The above description includes the preferred devices, which, in constructing a fence, are set up or connected as follows: The picket-clamp or rosette C is formed by slipping circle-plate *c* upon circle-plate *c'*, so that the lugs or hooks upon one take over the rim of the opposite plate. The picket-clamps or rosettes are then strung upon the rails or stringers *a*, (clamps without tips or heads e^1 and sockets e^2 being used for the intermediate stringers or rails,) and (rods or) pickets *b* are then passed through loops or eyes *e*, and a section of fence is obtained. The end rosettes or picket-clamps of the fence-sections should have the plate *k* of the section-clamps connected thereto. The sections of the fence are then secured to each other and to the post *d* by inclosing the ends of the rails or stringers *a* between the section-clamp plates *k k'*, slipping the end of post *d* through the eye or slot of bolt *l*, passing bolt *l* through the holes *m n* of the clamp-plates, and tightening up the whole by means of nut *l'*.

Where a change of grade occurs, or it is desired to change the form, or give an irregular form to the top of a fence-section, gate, or like part, all that is necessary is to bend or incline the stringers or rails to correspond, and the swiveling connections of the pickets will permit them to adjust themselves to the angle taken by the stringer, while retaining their vertical and parallel relations. By altering and varying the length of the pickets any one or more of the rails or stringers may be straight, while the other stringer or stringers may be curved to give a finish, as in the case of a rounded or peaked gate-top or fence-section.

Having thus described the nature and advantages of our invention, and the best construction known to us, what we claim, and desire to secure by Letters Patent, is—

1. The fence-picket clamp or rosette composed of the swiveling sections, substantially as and for the purpose specified.

2. In combination with the sections of a metallic fence, and the post for supporting the same, the section-clamps, one of which is countersunk or provided with lugs, as at *s*, and the eye or slotted bolt, substantially as and for the purpose specified.

3. In combination with the sections of a metallic fence, the section-clamps *k k'*, the plate *k'* being connected to the swivel-piece *c'*, and a clamp-bolt for securing the whole, all substantially as and for the purpose specified.

4. The fence-picket clamp or rosette, composed of the swiveling sections, in combination with a fence-picket and stringer, substantially as specified.

In testimony whereof we, the said AARON J. NELLIS and DAVID C. GUTTRIDGE, have hereunto set our hands.

AARON J. NELLIS.
DAVID C. GUTTRIDGE.

Witnesses:
JAMES I. KAY,
L. C. FITLER.