

1,235,333.

Patented July 31, 1917.

2 SHEETS—SHEET 1.

Fig. 1.

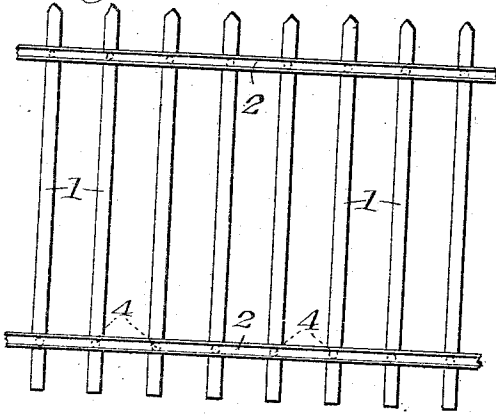


Fig. 2.

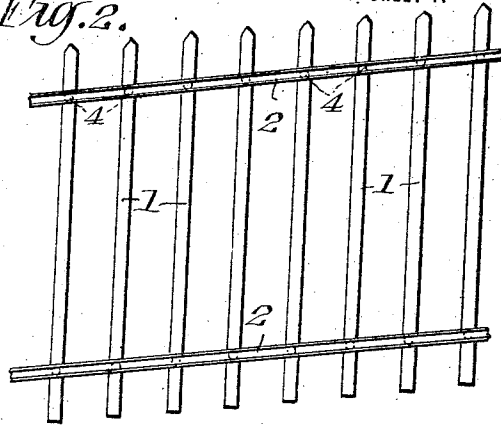


Fig. 3.

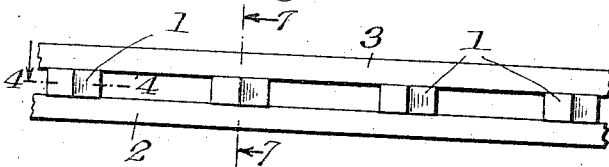


Fig. 5.

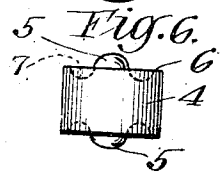
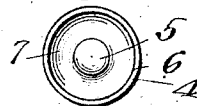


Fig. 4.

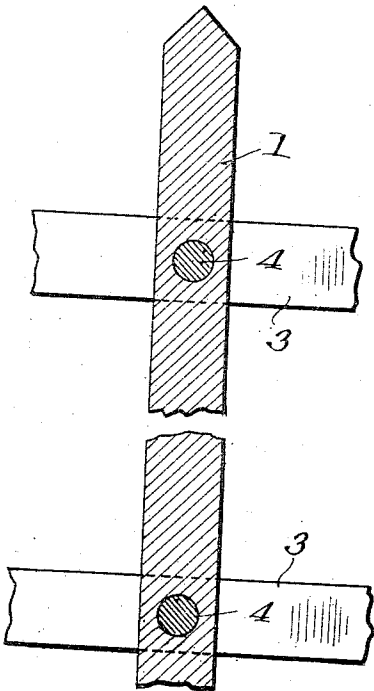


Fig. 7.

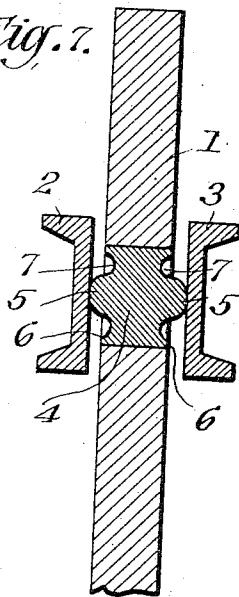
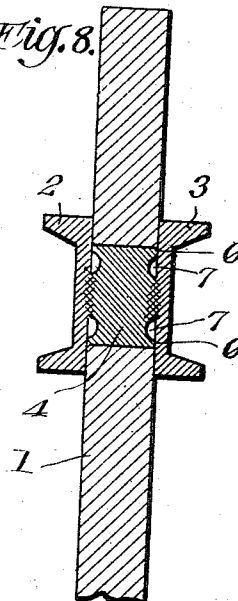


Fig. 8.



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2 SHEETS—SHEET 2.

Fig. 9.

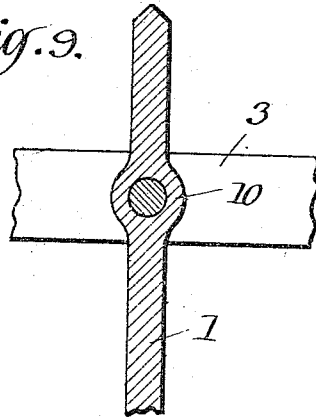


Fig. 10.

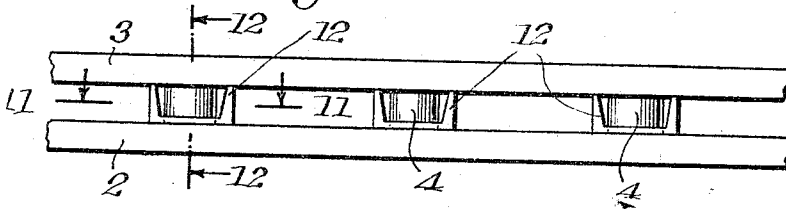


Fig. 11.

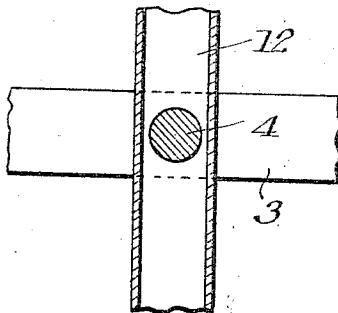
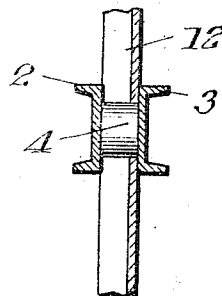


Fig. 12.



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LAURENCE S. LACHMAN, OF NEW YORK, N. Y., ASSIGNOR TO UNIVERSAL ELECTRIC WELDING COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

GRADEABLE FENCE.

1,235,333.

Specification of Letters Patent.

Patented July 31, 1917.

Application filed October 19, 1915. Serial No. 56,660.

To all whom it may concern:

Be it known that I, LAURENCE S. LACHMAN, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Gradeable Fences, of which the following is a specification.

This invention relates to metallic fence construction and particularly to that type known as "gradeable fence" in which type the completed fence is adapted to conform itself to the grade or slope of the ground upon which it is to be erected.

The object of the invention is to simplify and cheapen the manufacture of this type of fence and at the same time maintain its rigidity and strength.

To these ends the invention consists in the improved construction hereinafter more particularly described and then specified in the claims.

In the accompanying drawings, Figure 1 is a front elevation of a fence section constructed in accordance with this invention.

Fig. 2 is a similar view of the same section illustrating the same as applied to a grade.

Fig. 3 is a plan view of the same.

Fig. 4 is an enlarged vertical cross-section through one of the pickets, being taken on the line 4—4 Fig. 3.

Fig. 5 is a plan view of the spacing and pivoting member preferably used.

Fig. 6 is a side elevation of the same.

Fig. 7 is a transverse cross-section taken on the line 7—7 Fig. 3 and shown further enlarged over the scale used in Fig. 4, the view showing the parts prior to welding.

Fig. 8 is the same cross-section after the welding operation.

Fig. 9 is an enlarged cross-section through a slightly modified picket.

Fig. 10 is a plan view illustrating a modification.

Fig. 11 is a cross-section of the same taken on the line 11—11 Fig. 10 and Fig. 12 is a cross-section taken on the line 12—12 Fig. 10.

In the drawings 1 indicates metal pickets preferably of flat stock and rectangular in shape and arranged to intersect the rails at any desired distance apart. The rails, of which there may be any desired number, consist of two parallel bars 2, 3, spaced apart

for the reception of the intervening transverse members such as pickets 1. The bars 2 and 3 are preferably for reasons of strength made of channel-shaped material or metal bars having longitudinal flanges along the edges and are arranged with their bases back to back as shown in Figs. 7 and 8.

The pickets 1 located in the space between the rail bars 2 and 3 are pivotally connected thereto by spacing members 4, which unite the bars 2 and 3 and are integrally united therewith as will be presently described. The spacing members are preferably formed as shown in Figs. 5 and 6 and in section in Fig. 7; that is they consist of a round block of metal having oppositely projecting central nibs or protuberances 5 which project beyond the plane surfaces of the block. The nib 5 is surrounded by an annular flange 6 at the edge of the block which connects with the nib by an annular groove 7.

The spacing block 4 passes loosely through a suitably formed opening in the picket and the nibs or projections engage the surfaces of the bars 2 and 3 as indicated in Fig. 7. By placing the intersecting members between the electrodes of an electric welding machine and current passed from one electrode to the other and pressure applied the nibs 5 are welded at the contacting points to the bars 2 and 3, the parts being forced together until the surfaces of the bars engage the flanges 6 which serve to space the bars the proper distance, which is determined by the thickness of the spacing member. The attendant bur caused by the upsetting of the nib 5 during the welding operation is taken in the groove 7 so that the bars 2 and 3 seat against the edges of the flanges of the block and at the same time a smooth bearing for the pivoted connection of the picket 1 is maintained.

The disposition of the parts after welding is shown in Fig. 8. The electric welding process is now so well understood in the arts that no further detailed description of the feature of welding the spacing members to the bars is deemed necessary herein.

The picket 1 is preferably of slightly less thickness than the block or spacing member 4 taken in the dimension from one flange to the other so that freedom to the pivotal action of the picket relative to the rail is

maintained although there is not enough difference to cause the picket to be wabbly or liable to rattle.

It will be seen that by forming the pivotal joint described at each intersection of the pickets and rails that a structure is obtained in which the relative angular relation between the pickets and rails can be readily varied so that the fence can be erected on any grade or slope of ground and the pickets maintained vertical for any grade.

By the construction shown and described the spacing members 4 while providing the pivotal connection for the picket also serves to properly space the bars of the rail apart so they will not bind against the picket and hold it rigid as well as forming the function of securing the bars together and the picket thereto.

In Fig. 9 the picket 1 is shown as provided with an enlargement 10 around the pivotal point to strengthen the picket at this place if desired.

Referring to the modification shown in Figs. 10, 11 and 12 the picket 12 is formed of channel-shaped material, the spacing member 4 passing loosely through an opening in the base thereof. The picket is disposed in the space between the bars 2 and 3 of the rail with the base of the channel section presented to the bar 3, while the bar 2, the spacing member 4 in this case, as previously described, determining the distance so that the picket will not be wedged or bound between the bars.

It will be understood that the invention is not limited to the described manner of securing the spacing member to the rail nor to the details of construction specified except as may be expressed in the appended claims.

What I claim as my invention is:—

1. A fence comprising a pair of spaced

bars forming the rail, a spacing member permanently united to and securing the bars together and spacing the same apart by engagement of its end with the inside of said bars, and a picket pivoted to said spacing member.

2. A fence comprising a pair of spaced bars forming the rail, a circular block intervening between said bars and spacing the same apart by engagement of its ends with the inside of said bars, the ends of said blocks being likewise united with the bars to secure them together, and a picket pivoted to said block.

3. A fence comprising a pair of spaced bars forming the rail, a picket located in and substantially filling the space between said bars and a combined spacing and pivoting member on which said picket is mounted, said spacing member being engaged by its ends with the inside of said rails to hold the same apart in fixed relation and being likewise permanently united with said bars to secure the bars together.

4. A fence comprising a pair of spaced bars forming the rail, a spacing member welded to both said bars and a picket pivoted to said spacing member and located in the space between said bars.

5. In a fence or like structure, the combination of a pair of bars, a spacing member integrally united to said bars and having the upset metal of the union located in a cavity within the end of said spacing member and an intervening transverse member pivoted on said spacing member between said bars.

Signed at New York in the county of New York and State of New York this 6th day of October A. D. 1915.

LAURENCE S. LACHMAN.

Witnesses:

F. B. TOWNSEND,
REMINGTON SCOTT.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."