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J. F. SOUCY

1,811,370

METAL FENCE

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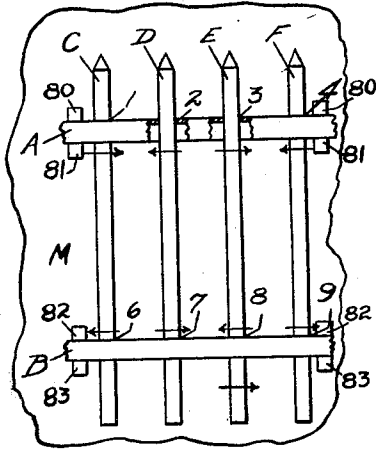


Fig. 1.

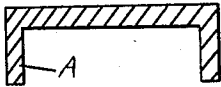


Fig. 3.

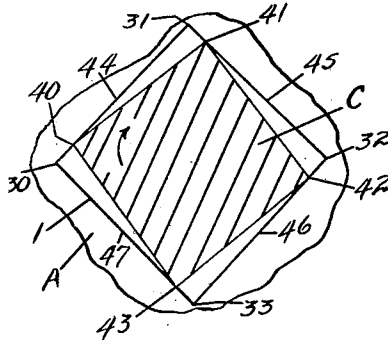


Fig. 4.

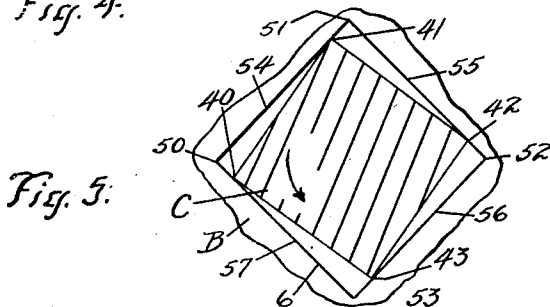


Fig. 5.

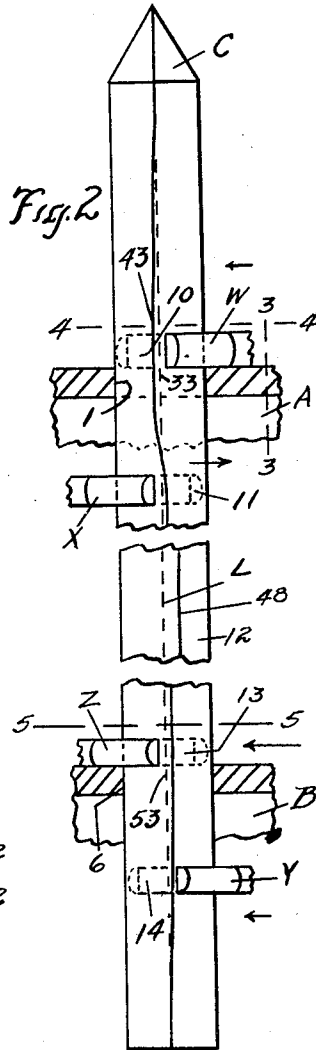


Fig. 2.

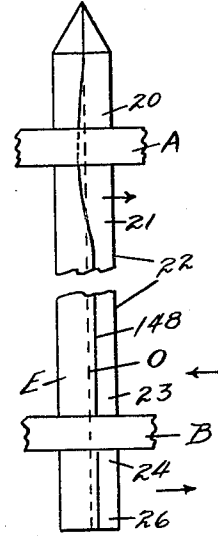


Fig. 6.

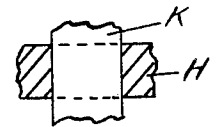


Fig. 7.

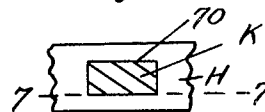


Fig. 8.

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METAL FENCE

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This invention relates to a certain type of metal picket fence built up of at least one top and one bottom bar each of metal and each having spaced picket holes, each hole being of the angular as distinguished from the curved type.

Through these picket holes are passed pickets, each picket being of the same shape in cross section as the holes in the bars which they fit snugly.

To hold the assembly together, various methods such as the use of pins, set screws, spot welding and upsetting the metal of the picket with a tool above and below the bars have been used.

It is also possible to permanently twist the pickets to form permanent bends above and below the bars whereby the pickets are held in place. This is objectionable, however, particularly on the standard type of such fence wherein pickets of a rectangular cross section are used and are positioned so that an edge will run up and down at the front and another edge at the back.

Any material twist in the front edge is unsightly and objectionable.

The purpose of this invention is to provide means to hold the assembly firmly in place without pins, screws or welding and without making the resulting fence unsightly.

This fence is cheaper to manufacture and while the bars cannot slip up nor down on the pickets, the whole assembly can be slightly distorted to fit a grade so that the angles between the bars and pickets become acute and obtuse instead of right angles without weakening the construction.

In the drawings, Fig. 1 is a front elevation showing a fence of my construction.

Fig. 2 is an enlarged elevation of a picket with the adjoining part of the bars, the line of the front edge being shown as greatly distorted and exaggerated to bring out the construction.

Fig. 3 is a cross section on the line 3—3 of Fig. 2.

Fig. 4 is an enlarged sectional view looking down on the line 4—4 of Fig. 2, the construction being shown as exaggerated and distorted.

Fig. 5 is a view similar to Fig. 4 looking down on the line 5—5 of Fig. 2.

Fig. 6 is a front elevation of another picket, the middle edge being shown as exaggerated and distorted.

Fig. 7 is a fragmentary cross section on a vertical plane of a modified type of bar and picket on line 7—7 of Fig. 8.

Fig. 8 is a plan view as if looking down on Fig. 7.

The sizes and proportions in the various views are exaggerated in order to show the actual construction.

All the views may be regarded as to some extent diagrammatic.

In the drawings, A represents a top rail of substantially U shape in cross section having spaced square picket holes 1, 2, 3 and 4, and B represents a bottom bar also of substantially U shape having the spaced square picket holes 6, 7, 8, 9 in line with those in the top bar.

C, D, E and F are pickets of a usual type each shown as pointed at the top and each of square cross section having the four edges 40, 41, 42 and 43.

The parts are assembled by placing the top and bottom bars A and B in suitable guides indicated by 80, 81, 82, 83 on floor M and then passing a picket through a hole such as 6 in the bottom bar and a hole such as 1 in the top bar, evening up the pickets so that they will project the same distance and then when all are in position, proceeding as follows.

With any suitable wrench or other tool W, each bar such as C is held firmly at the part 10 which projects above the top bar and then with a similar instrument X grasping the bar at 11 below the top bar, turning it, as shown, in the direction of the arrow to the right until the elastic limit of the metal of the picket where it is in contact with the bar is exceeded.

The picket is then grasped at the point 14 below the bottom bar and firmly held by a wrench Y while at the point 13 just above the bottom bar it is grasped with a suitable tool Z and turned to the left in the direction

of the arrow, which is in the opposite direction from which it was turned at 11.

The tools are then removed and the picket is allowed to spring or twist as it will when released.

The result of this twisting and springing is shown exaggerated in Figs. 4 and 5.

30, 31, 32, 33 represent the four corners of a top hole 1 and 50, 51, 52, 53 represent the corners of a bottom hole 6.

On account of the twist given the picket in opposite directions near the top and bottom bar, when the tools W, X, Y, Z are removed the elasticity of the metal in the picket causes great pressure in each case in the opposite direction to the twist.

In other words, as shown in Fig. 4, the edges such as 40, 41, 42, 43 of each picket are pressed with great force against the adjoining faces or walls 44, 45, 46 and 47 of the hole 1 and as the metal in both cases, especially the picket C, is somewhat rough, the friction alone holds the parts in place.

On the other hand, as shown in Fig. 5, the pressure at hole 6 is in the opposite direction as shown by the arrow, with the result that the edges 40, 41, 42, 43 are forced in the opposite direction against the walls or faces 54, 55, 56, 57 and picket C is thereby very firmly locked in place.

If a picket is removed, it will be found to have a slight bend or twist all in one direction but as shown by the straight dotted line L, while held in place by the top and bottom bars, there is a slight bowing as at 48 while in the assembled fence, but it is so slight that the front edge 43 appears to be perfectly straight.

The next picket D is treated in the same way except that it is twisted in the opposite direction, as shown by the arrows in Fig. 1, while the next picket E is twisted like C and F again is twisted like B.

An occasional picket such as E as shown in Fig. 6, besides being twisted below the top bar and above the bottom bar is also twisted below the bottom bar, as shown at 24, and 26 in the opposite direction to the twist above bar B, the twisting at the points 20, 21, 22 and 23 corresponding with the twisting at 10, 11, 12 and 13.

As shown in Figs. 7 and 8, I can use bars such as H in which are angular holes such as 70. These holes 70 and the pickets such as K are not square but may be of any shape except circular.

Preferably both holes and pickets are angular and there is a clearance of two or three one thousandths between picket and hole.

I claim:

1. The combination in a metal picket fence of a top metal bar of substantially U shape in cross section, such bar having spaced square picket holes each with a corner at the front and back and a bottom bar of substantially

U-shape having spaced square picket holes in line with those on the top bar; and a plurality of square metal pickets each of which passes through alined holes in the top and bottom bars and extends beyond each bar, each picket being slightly twisted in one direction under the top bar and in the other direction over the bottom bar, the adjoining pickets being twisted in opposite directions and occasional pickets being also twisted below the bottom bar in the same direction as the twist below the top bar.

2. The combination in a metal picket fence of a top metal bar, such bar having spaced angular picket holes each with a corner at the front and at the back and a bottom bar having spaced angular picket holes in line with those on the top bar; and a plurality of angular metal pickets each of which passes through alined picket holes in the top and bottom bars and extends beyond each bar, each picket being slightly twisted in one direction under the top bar and in the other direction over the top bar the adjoining pickets being twisted in opposite directions.

3. The combination in a metal picket fence of a top metal bar, such bar having spaced angular picket holes and a bottom bar having spaced angular picket holes in line with those on the top bar; and a plurality of angular metal pickets each of which passes through alined picket holes in the top and bottom bars and extends beyond each bar, each picket being slightly twisted in one direction under the top bar and in the other direction over the top bar.

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