Aug. 29, 1950 C. D. HARRIS 2,520,314

FENCE

Filed April 27, 1948

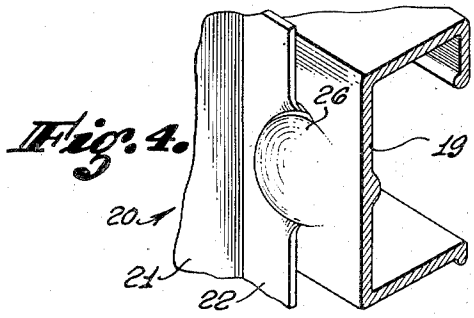


Fig. 4.

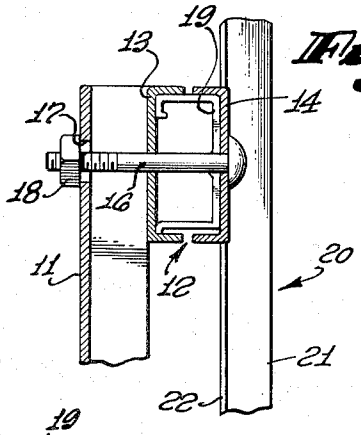
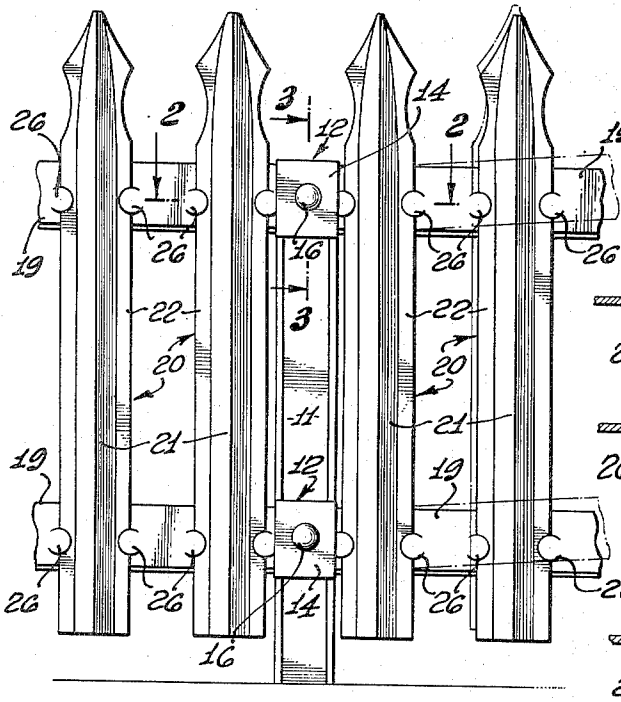


Fig. 3.



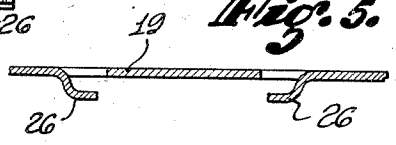


Fig. 5.

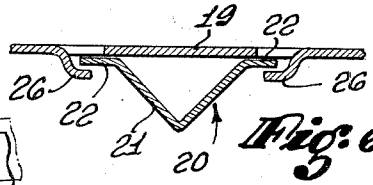


Fig. 6.

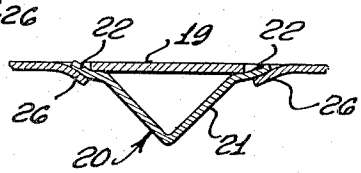


Fig. 7.

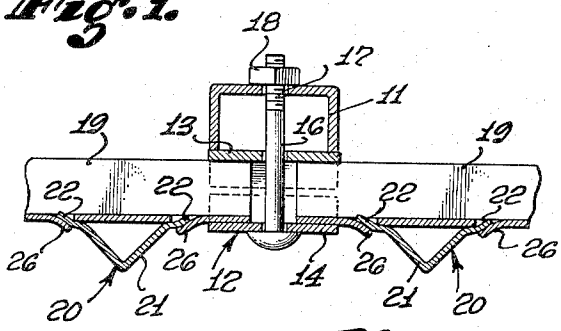


Fig. 2.

Fig. 1.

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UNITED STATES PATENT OFFICE

2,520,314

FENCE

Clarence D. Harris, Inglewood, Calif.

Application April 27, 1948, Serial No. 23,560

5 Claims. (Cl. 256—22)

1

The present invention relates generally to fences and to a new and novel method of fence fabrication. More specifically the invention comprises an improved prefabricated picket fence in which the pickets are adjustably locked in place upon their supporting rails themselves supported for angular adjustment upon posts to enable the fence to conform to the ground contour; and to a method by which such a fence is made.

Picket fences are barriers and must be suitable from the functional and from the appearance standpoints. The original picket fence was made of wood but today they are readily fabricated of light-weight metal. While earlier wooden fences were assembled upon the permanent site mass production methods make desirable the fabrication of sections at the factory which are joined and aligned at their permanent location. Because the ground is not always level the fence sections must be adaptable to interconnection at various angles, it being necessary, of course, that the pickets extend vertically and parallel under all conditions.

It is an object of the present invention to provide a new and improved fabricated fence.

It is another object of the invention to provide an improved metallic picket fence.

Still another object of the invention is to provide a new and improved picket fence in which the pickets are adjustably locked in place to permit relative tilting movement so that the fence may conform to the curvature of the supporting terrain.

A further object of the invention is to provide a new and improved picket fence in which the pickets are locked in place by struck-out tabs in the fence rail, and to a method by which such a fence is constructed.

These and other more specific objects will appear upon reading the following specification and claims and upon considering in connection therewith the attached drawing to which they relate.

Referring now to the drawing in which a preferred embodiment of the invention is illustrated:

Figure 1 is a front elevation of a section of a picket fence constructed in accordance with the present invention;

Figure 2 is a partial horizontal section upon the line 2—2 of Figure 1 illustrating the angularly adjustable mounting at the supporting post;

Figure 3 is a vertical section through the rail-supporting bracket upon the line 3—3 of Figure 1;

Figure 4 is an enlarged perspective showing of the relationship between a locking tab on the fence rail and a picket;

2

Figure 5 is a partial horizontal section in a fence rail showing the initial step in the method of fabrication in which the locking tabs are struck out;

Figure 6 illustrates the second step in the method of fabrication in which the picket is positioned against the rail and below the tabs; and

Figure 7 is a section similar to Figures 5 and 6 and shows the third step in the method of fabrication in which the tabs are deformed by a force sufficient to lock adjustably the picket in place.

Referring again to the drawing, a portion of a fence constructed in accordance with a preferred embodiment of the invention is illustrated and is seen to comprise a vertically extending post 11, preferably but not necessarily U-sectioned, extending into the supporting ground and carrying a pair of split clamp units 12 each of which is composed of opposed U-sectioned members 13 and 14, the back of the former contacting the post 11. A bolt 16 extends through the clamp elements 13 and 14, its headed outer end abutting the outer face of member 14, and its threaded end extending through a slot 17 in the post 11 to seat a nut 18 which, when tightened, draws the clamping unit against the post.

U-sectioned open-sided rails 19 of slightly smaller height than the interior vertical dimensions of the clamp elements 13 and 14 extend into the clamping units 12 to be supported thereby, their adjacent ends being positioned upon opposite sides of the bolt 16. The rail is sufficiently smaller than the clamp as to permit limited tilting movement, as indicated in the dotted lines in Figure 1. At spaced intervals along the rail are pickets, indicated generally by the reference character 20, each picket comprising a central V-shaped portion 21, at the edges of which are flat marginal portions or flanges 22. As is clearly illustrated in Figure 1, pickets 20 extend between and beyond the spaced rails 19, the spacing of the latter being a matter of choice and varying with the design of the fence. Each picket is retained in place relative to each rail 19 by means of overlying tabs 26 which are pressed from the face of the rail at spaced intervals and subsequently flattened, as will now be described.

Referring now to Figures 5 to 7, inclusive, the method by which the pickets 20 are locked to the rails 19 is disclosed. Each rail is punched to provide integral tabs 26 which extend outwardly of and parallel to the forward face of the rail. The

rail may have a length of 8, 10 or 12 feet or more, and these tabs are preferably punched simultaneously, although this is not essential. After the tabs have been punched the upper and lower rails 19 are positioned at the proper distance apart, each picket 20 is threaded into its proper position relative thereto, portions of its side marginal edges or flanges 22 underlying the tabs 26. This relationship is illustrated in Figure 6. When so positioned the tabs 26 are flattened by a blow or punching operation and with sufficient force as to deform them from their initial contour, illustrated in Figures 5 and 6, to the flattened condition shown in Figure 7. The force is sufficient that the underlying portions of the flange 22 of the picket are deformed and depressed into the openings left in the rail when the tabs were pressed therefrom. The tabs 26 may be deformed individually or, preferably, all the tabs in each rail section are deformed simultaneously to lock all of the pickets in position, this last being preferable from the standpoint of mass production economy.

The assembly and use of the picket fence fabricated in accordance with the present invention is believed to be clear. The post 11 is first set in the ground and the clamping units 12 positioned thereon by the bolt 16. The sections of fence, comprising the rails 19 and the pickets 20, are positioned relative to the posts, the ends of the rails 19 extending into clamps 12, which may then be tightened by the manual rotation of the nuts 18 until the rails are fixed relative to the post. In the event that the terrain is uneven and it is necessary to slope the fence the rails 19 can be tilted in their seats in the clamp 12, as for example, from the full line to the dotted line position illustrated at the right of the post in Figure 1. While the tabs 26 firmly lock the pickets against longitudinal displacement, they permit limited angular rotation or pivotal movement, the width of the pickets 21 being sufficiently less than the spacing between the inner surface of the tabs 26 as to make this adjustment possible. The construction makes it possible to fabricate the fence at the factory, transport it to location and position it, variations in slope and contour of the ground being readily accommodated.

While the particular apparatus herein shown and described in detail is fully capable of attaining the objects and providing the advantages hereinbefore stated, it is to be understood that it is merely illustrative of the presently preferred embodiments of the invention and that no limitations are intended to the details of construction or design herein shown other than as defined in the appended claims.

I claim:

1. In a fence of the type having a vertical post and a rail with its end tiltably supported at said post, a picket extended transversely of said rail, and an integral tab struck out from said rail pressing, without penetration said picket against the side of said rail, the edge of the picket retained by said tab being spaced slightly from the line of attachment of the tab to said rail to permit limited angular adjustment of the picket.

2. In a fence of the type having a vertical post and a rail with its end tiltably supported at said post, a picket extended transversely of said rail, and opposed integral tabs struck out from said rail positioned upon opposite sides of said picket and pressing it, by surface contact without penetration, against said rail, the width of the picket being slightly less than the space between the tabs at their lines of attachment to the rail, whereby limited angular adjustment of the pickets with reference to the rail is permitted.

3. The construction recited in claim 2 characterized in that said tabs extend sufficiently beyond the side edges of said picket to enable said picket to be adjusted angularly relative thereto.

4. The construction recited in claim 2 characterized in that said rail is formed with a plurality of apertures over which extend integral tabs and in that said picket is formed with a flange having depressed portions extended into said apertures and prevented from displacement therefrom by said tabs.

5. A fence section comprising parallel rails formed with spaced pairs of apertures and integral tabs extended thereover in spaced relationship, the tabs of each pair of apertures facing toward each other, spaced pickets extending transversely across said rails and formed with integral flanges having depressed portions extended into said apertures and prevented from displacement therefrom by said tabs, characterized in that said tabs contact said pickets without penetration and the pickets including said flanges are of slightly less width than the distance between the tabs at their line of attachment, to enable said depressed portions to make limited relative adjustment in said apertures and said pickets to make limited angular adjustment relative to said rails.

CLARENCE D. HARRIS.

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The following references are of record in the file of this patent:

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Certificate of Correction

Patent No. 2,520,314 August 29, 1950

CLARENCE D. HARRIS

It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction as follows:

Column 4, line 2, after the word "penetration" insert a comma;

and that the said Letters Patent should be read as corrected above, so that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 12th day of December, A. D. 1950.

[SEAL]

THOMAS F. MURPHY,
Assistant Commissioner of Patents.