

March 5, 1935.

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1,993,536

FENCE

Filed Aug. 3, 1933

2 Sheets-Sheet 1

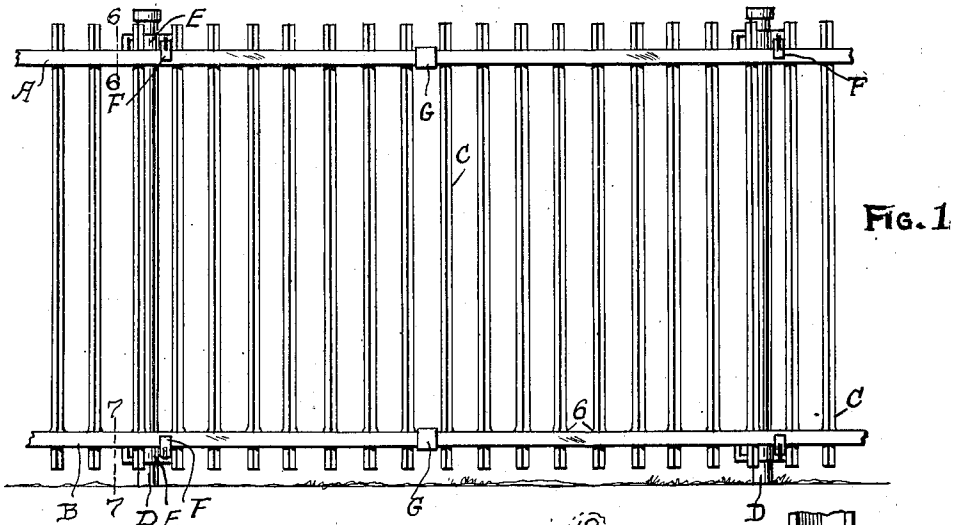


FIG. 1

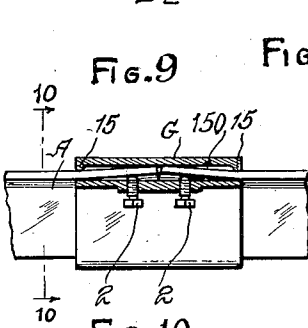


FIG. 9

FIG. 6

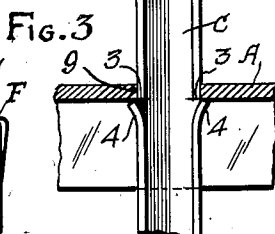
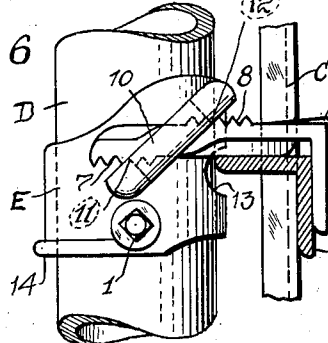


FIG. 3

FIG. 4

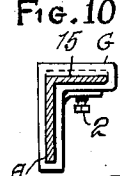
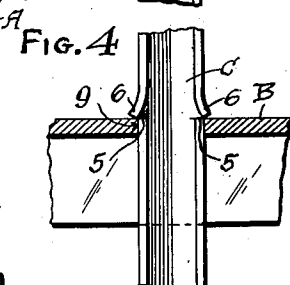


FIG. 10

FIG. 7

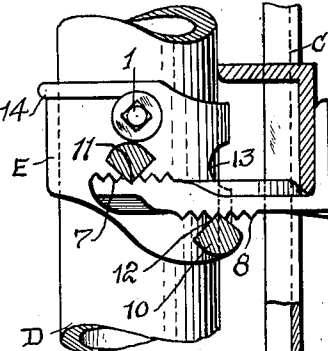


FIG. 5

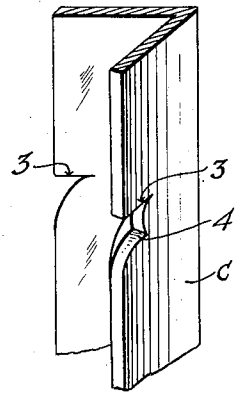
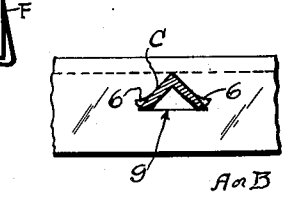


FIG. 2

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2 Sheets-Sheet 2

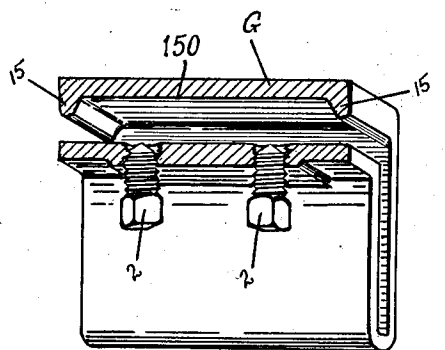


FIG. 11

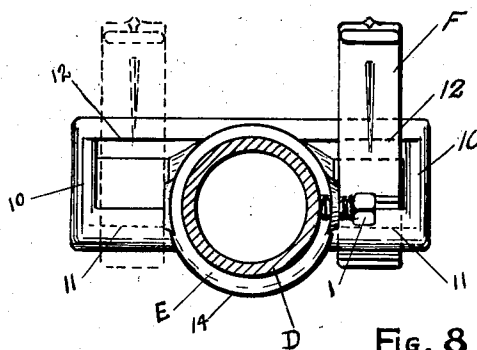


FIG. 8

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UNITED STATES PATENT OFFICE

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FENCE

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Application August 3, 1933, Serial No. 683,462

2 Claims. (Cl. 256—22)

This invention relates particularly to a fence, although the invention is susceptible of use in window guards, partitions and enclosures for various purposes. The invention is especially directed toward a structure of this general character which includes parallel rails to be connected to supports such as posts and having transverse bars or pickets mounted in and extending transversely of the rails.

One object of the invention is to provide such a structure embodying novel and improved features of construction whereby the various parts can be manufactured or fabricated at the factory, shipped conveniently in bundles ready for assembly and erection at the point of use and can be easily and quickly assembled and erected by relatively unskilled persons, without special consideration of varying grades and contours of the ground line or other surfaces upon or to which the structure is to be mounted or connected, so as to avoid the necessity for accurately forming the parts of exact dimensions and shapes and the partial assembly of the parts at the point of manufacture, as is now frequently necessary with known constructions.

Another object is to provide such a structure embodying novel and improved features whereby the various parts can be assembled without bolts, rivets, welding or caulking of pickets to the rails, and without the necessity of bolting the rails to posts or the like.

Further objects of the invention are to provide novel and improved pickets, transverse bars or upright members having integral lugs or projections to abut the rails for holding the pickets between the rails without the necessity of separate parts attached to the pickets, or separate fastening members for connecting the rails to the pickets, and thus to provide a metallic picket or transverse member having novel and improved integral lugs formed by slight deformation of the picket, to engage the rails.

Other objects are to provide novel and improved means for connecting the rails to the posts or the like without the use of separate bolts or rivets; to provide such a construction whereby the rails may be applied to the posts at one side thereof, instead of between adjacent posts, whereby the necessity for exact spacing of the posts may be avoided and the sections of the rails may be connected together and thereafter connected to the posts, so that erection of the fence shall be simple and can be rapidly performed; to provide an inexpensive and durable structure of the character described; and to obtain other

advantages and results as will be brought out by the following description.

Referring to the accompanying drawings in which corresponding and like parts are designated throughout the several views by the same reference characters,

Figure 1 is a front elevation of a portion of a fence constructed in accordance with our invention.

Figure 2 is an enlarged fragmentary perspective view of one of the pickets or transverse members.

Figure 3 is a fragmentary rear elevation of the upper rail and the upper portion of one of the pickets with portions of the rail broken away to show the manner of connection of the picket to the rail.

Figure 4 is a similar view of the lower rail and the lower portion of the picket.

Figure 5 is a top plan view of the construction shown in Figure 4.

Figure 6 is an enlarged fragmentary sectional view taken on the line 6—6 of Figure 1.

Figure 7 is a similar view taken on the line 7—7 of Figure 1.

Figure 8 is a top plan view of the construction shown in Figure 7 with the rail omitted.

Figure 9 is a rear elevation of one of the rails and the coupling member for connecting the two rail sections together.

Figure 10 is a transverse sectional view on the line 10—10 of Figure 9, and

Figure 11 is an enlarged sectional perspective view of the coupling.

For the purposes of illustrating the principles of the invention we have shown it as embodied in a metal picket fence comprising an upper horizontal rail A and a lower horizontal rail B, both of which are preferably angle bars formed of metal or other suitable material. A plurality of pickets or transverse members C are mounted on and extend transversely through and between the upper and lower rails A and B. As shown, these pickets are preferably angle bars formed of metal, and each picket has projections 4 integral with the picket adjacent the upper end thereof to cooperate with the upper rails A, and similar integral projections 6 at the lower portion of the picket to cooperate with the lower rail B. As shown, these projections 4 and 6 are formed by slitting or nicking the flanges of the picket transversely inwardly from their edges, as indicated at 3 and 5, and then bending the portions of the flanges adjacent the slits outwardly. These projections can be formed easily and inexpensively,

and are strong and durable. The projections 4 and 6 face in opposite directions; in other words, the free ends of the projections 4 face toward the upper end of the picket, while the free ends of the projections 6 face toward the lower end of the picket. Preferably each picket has a projection 4 and 6 on each flange.

The horizontal flange of each of the rails A and B is provided with a plurality of openings 9 to slidably receive the pickets. As shown, these openings are approximately triangular, and of such dimensions and shape as to nicely receive the angle bar picket C as shown in Figure 5.

In assembling the rails and pickets, the lower portion of each picket is inserted through one of the openings 9 in the lower rail, after which the upper ends of the pickets are inserted through corresponding openings in the upper rail, or inversely, the upper rail is slipped over the ends of the pickets. The rails are brought into snug contact with the respective projections 4 and 6 so that when the rails are connected to a fixed support, for example a post, the pickets will be locked in the rails. Moreover, each picket has a bearing at two spaced points upon both the upper and lower rails formed by the projections 4 and 6 in each flange to provide a rigid, stable structure and to resist tendency of the rails to move longitudinally relative to each other and cause the pickets to be disposed diagonally between rails.

The rails A and B are preferably formed of sections connected together at adjacent ends, and for the purpose of connecting the rail sections together we have provided a coupling G which is approximately a tubular member having its opening conforming to the cross-sectional shape of the rail, as shown in Figure 10.

In connecting the rail sections, one end of each section is inserted into the coupling G as shown in Figure 9 until the ends of the rails abut at approximately the middle of the coupling. The coupling is clamped to the rails by set screws 2 mounted in the coupling to frictionally engage the ends of the rail sections within the coupling. Preferably the coupling is provided with a recess 150 of greater cross-sectional area than the flanges of the rails which are engaged by set screws, so that ribs 15 are provided adjacent the ends of the coupling. With this construction, as the set screws 2 are tightened the end portions 2 of the flange sections are flexed about the ribs 15 as fulcrums, so as to positively secure the rails and coupling against relative longitudinal sliding.

It will be understood that in assembling the fence several of the lower rail sections will be connected together, according to the convenience of the builder of the fence, after which the pickets C will be inserted into the openings 9 of the rail sections. Thereafter, the rail may be connected to the posts or other support, after which the upper rail may be fitted over the pickets and attached to the posts or other support.

Any suitable means may be utilized for mounting the rails on the posts, and in Figures 6 and 7 we have shown one such means which includes a collar E slidable upon the post D and adapted to be clamped on the post in proper position by a set screw 1. This collar has at diametrically opposite sides outwardly projecting loops or eyes 10, the axes of the openings through which are parallel and at angles to the vertical. The edges of the openings through the eyes 10 are preferably angular as indicated at 11 and 12 to cooperate with notches 7 and 8 in opposite sides

of one arm of an angle clamp F which is adapted to clamp the rail between its arms and the post D.

In mounting the lower rail B the posts are of course spaced apart as desired, either in concrete bases or by driving the posts into the ground, and the collars E are mounted on the posts at the desired elevation. The angle clamps F are then fitted into the eyes 10 after which the rail is set into the angle clamp as shown in Figure 7. The angle clamp may then be driven through the opening of the eye 10, if necessary, to tightly clamp the rail between the angle clamp and the post.

In connecting the upper rail to the post, the collars E are inverted and the angle clamps F are similarly inverted and slipped into the opening of the eye 10. Then the collars and the angle clamps are slipped downwardly on the post into the proper position to cooperate with the upper rail after which the angle clamps may be driven into the eyes 10, if necessary to tightly clamp the rail against the post. To ensure direct contact of the rail with the post the collar is provided with an opening 13 through which the edge of the horizontal flange of the rail may contact with the post. With the collar in the position to mount the lower rail it will be observed that the horizontal flange of the lower rail engages the post beyond the upper end of the collar.

It will be observed that only one eye 10 is necessary for connecting the rails to a given post, but two eyes are preferably embodied in the collars E so that should a picket be located opposite one of the eyes, the angle clamp F may be placed in the other eye to clear the picket.

The fence may be ornamented in numerous ways; for example any number of rails may be used in addition to the two rails A and B so as to permit of the addition of rings, scrolls or other ornamental elements between or on the various rails.

It will be obvious to those skilled in the art that the shape and form of the pickets, rails, and other parts of the structure may be widely modified and changed without departing from the spirit or scope of the invention, and therefore we do not desire to limit ourselves in the construction of the invention except as may be required by the following claims when construed in the light of the prior art.

Having thus described our invention, what we claim is:

1. A fence comprising upper and lower rails, each having a plurality of openings spaced longitudinally thereof, and a plurality of pickets having their end portions extending through said openings of the respective rails, each picket consisting of an angle bar having the edge of one of its flanges laterally slit at its edges at spaced points longitudinally of the bar and a portion adjacent each said slit bent laterally outwardly to form lateral projections one abuttingly overlying the lower rail and another abuttingly underlying the upper rail.

2. A metallic fence picket comprising an angle bar having the edge of each of its flanges laterally slit at spaced points longitudinally of the bar and a portion adjacent each slit bent laterally outwardly to form integral lateral projections for the purpose set forth.

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