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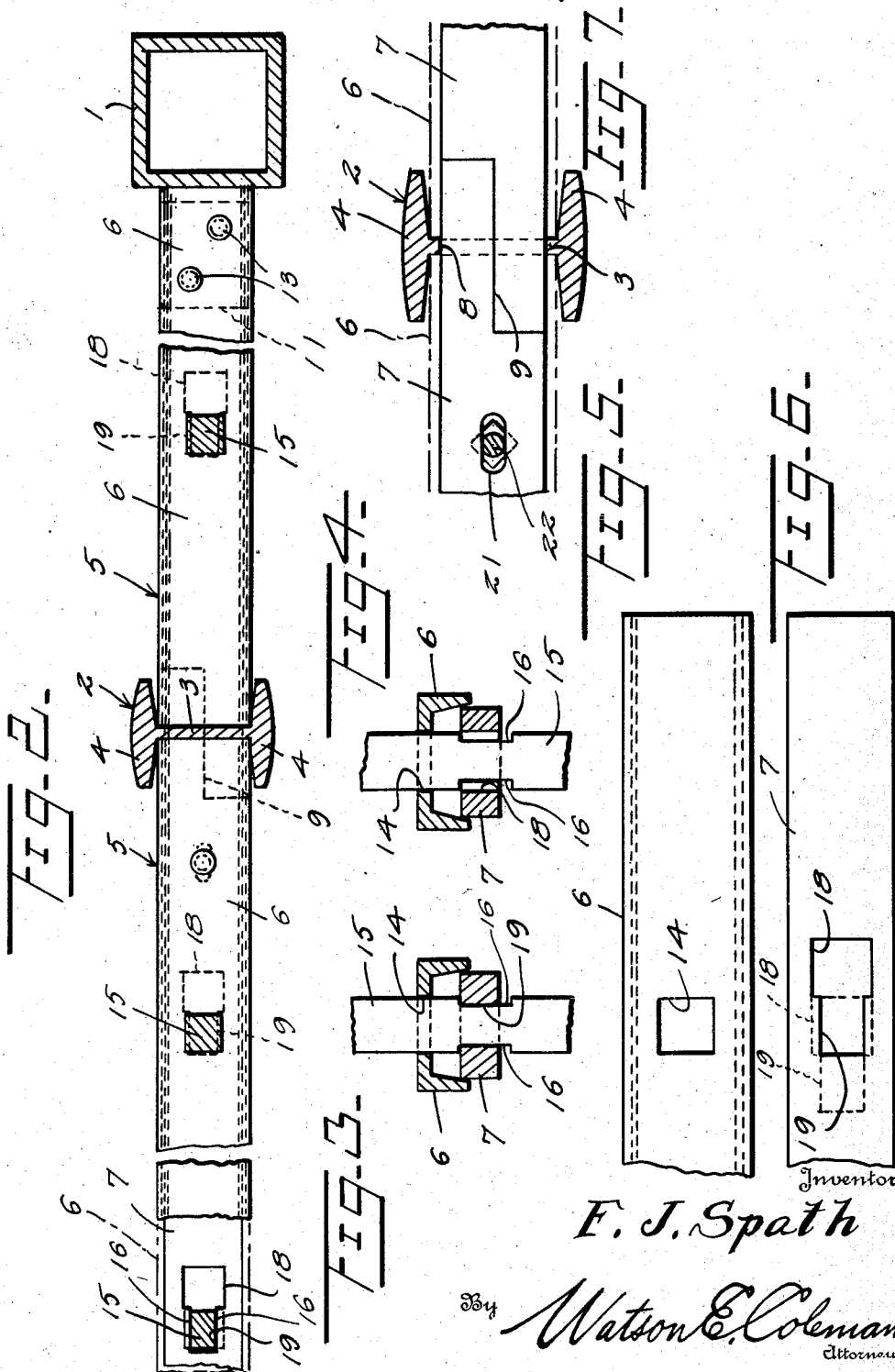
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FENCE CONSTRUCTION

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FENCE CONSTRUCTION

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This invention relates to improvements in picket fences and pertains particularly to improved means for constructing the same.

The primary object of the present invention is to provide an improved means for securing the pickets of an iron picket fence in place without caulking, welding or riveting.

Another object of the invention is to provide an improved means for connecting the rails which support the pickets with the intermediate and end posts of the fence structure.

Still another object of the invention is to provide a novel means for maintaining a close connection or joint between the picket supporting rails of the fence and the posts, when the fence is set up on an incline.

The invention will be best understood from a consideration of the following detailed description taken in connection with the accompanying drawings forming part of this specification, with the understanding, however, that the invention is not confined to any strict conformity with the showing of the drawings but may be changed or modified so long as such changes or modifications mark no material departure from the salient features of the invention as expressed in the appended claims.

In the drawings:

Figure 1 is a view in side elevation of a portion of a fence constructed in accordance with the present invention, parts thereof being broken away to show details of construction.

Figure 2 is a sectional view taken on the line 2—2 of Figure 1.

Figure 3 is a sectional view taken on the line 3—3 of Figure 1.

Figure 4 is a sectional view similar to Figure 3 but showing the relation of the shiftable portion of the rail to the picket before the picket is locked in place.

Figure 5 is a view in top plan of the top portion of a rail.

Figure 6 is a view in top plan of the bottom portion of a rail.

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

Referring more particularly to the drawings, wherein like numerals of reference indicate corresponding parts throughout the several views, the numerals 1 and 2 indicate respectively the end or terminal and intermediate posts of the fence structure constructed in accordance with the present invention.

The end or terminal posts are preferably of rectangular cross-sectional design while the intermediate posts 2, while they may be of any cross-sectional design, such as circular, square, channel shaped, etc., are preferably of I-beam construction or H-shaped in cross-section so that the web portions 3 thereof may support the picket rails of the fence, as hereinafter described, with the joined ends of the rails protected by the side flanges 4.

The posts of the fence are connected by one or more horizontal rails each of which is indicated generally by the numeral 5. Each of these rails is made up of two members, one of which is in the form of an inverted channel beam 6 while the other is a flat bar 7 which extends along the underside of and in the channel of the beam 6 as shown in Figure 3. As is shown in this figure the lower member 7 of the rail is of such a width that the side flanges of the channel beam extend partly over the sides thereof so that these flanges form a watershed for the underlying bar.

The webs 3 of the intermediate posts 2 are provided at the proper elevation with the transverse slots 8 and the adjacent ends of the members 7 of the fence rails are connected by a lap joint or splice, as indicated at 9, the reduced portions forming the splice being extended in side by side relation through the slot 8 in the manner illustrated.

The ends of the upper portions or units 6 of the rails 5 are chamfered or undercut, as indicated at 10, the top edge of the rail portion being in close contact with the web as shown.

This chamfered end of the portion 6 of the rail permits of the fence being set up on sloping ground so that the posts may be maintained in a vertical position while the rails may be disposed to substantially parallel the underlying ground. It will, of course, be un-

derstood that the recesses 8 must be of sufficient size to permit of a slight play in the spliced connection between the ends of the portions 7. The terminal posts 1 are provided with angular knee brackets 11, one portion of which is suitably secured, as by welding or otherwise, to the face of the post, while the other portion is disposed to extend horizontally from the post and upon this portion the ends of the members 6 and 7, making up the rail 5, rest. After the rails have been assembled in the intermediate posts they are positioned upon the brackets of the end posts in the manner illustrated and apertures 12 may then be drilled therethrough and through the brackets to receive securing bolts 13.

The upper members 6 of the rails are provided at properly spaced intervals with apertures 14 of the proper design to conform to the cross-sectional design of the pickets 15 of the fence structure. The pickets here shown are of rectangular cross-sectional design therefore the apertures 14 are rectangular. Each of the pickets 15 is notched upon opposite faces, as indicated at 16, and each of the bars 7 has formed therein keyhole slots 18, the larger ends of which are of the same configuration as the apertures 14, while the smaller ends 19 are of the same width as the pickets between the notched faces 16 thereof. The centers of the reduced portions 19 of the keyhole slots 18 are disposed in the bar 7 to position over the centers of the apertures 14 in the member 6 of the rail when the fence is assembled.

It will be seen from the foregoing that in the assembly of the fence structure the larger ends of the keyhole slots 18 of the bars 7 are disposed over the apertures 14 in the bars or portions 6 so that the pickets 15 may be inserted so as to bring the notched portions thereof into these aligned openings. After all of the pickets are so positioned the flat bars 7 of the rails are shifted longitudinally so as to bring the reduced portions 19 over into alignment with the apertures 14 and thus bring the edges of the reduced portions into close engagement with the faces of the notches 16 of the pickets. This movement of the bars 7 at the same time brings the reduced ends of the bars into overlapping relation within the recess 8 in which they are positioned and it also brings the ends of those rails which are adjacent the terminal posts of the fence into vertical alignment so that they may be placed on the supporting brackets 11 and be held thereby in close contact with the adjacent face of the terminal post.

In order to further secure the two bars 6 and 7 of the rails together, the upper bar 6 may be provided with a bolt hole 20 and the lower bar 7 may be provided with a longitudinally extending slot 21 in alignment with the bolt hole 20 so that a bolt 22 may be

passed through the rail bars in the manner shown. By providing the slot 21 the bolt 22 may be run through the rails and loosely held in position while the pickets are being put into place and the under bars 7 of the rails may be shifted to locate the pickets in place without interference by these bolts.

While there has only been described a single rail in the fence structure it will, of course, be understood that any number of rails may be employed in accordance with the size of the fence, and it is also to be understood that a fence constructed in accordance with the present invention is not to be restricted to pickets or posts of the cross-sectional configuration and the design shown, for it will be readily appreciated that pickets and posts of other shapes may be used if desired.

The posts 1 and 2 may be provided with suitable caps, such as is indicated by the numerals 23, and where long spans of rails 5 are employed there may be provided a central support, such as that indicated by the numeral 24, which may consist of a pipe of suitable weight disposed in upright position beneath the bottom rail with the lower end of a picket extending thereinto, as illustrated, and the other end may be split longitudinally and the halves thus formed turned laterally to provide supporting feet 25.

From the foregoing description it will be readily seen that a picket fence constructed in accordance with the present invention may be easily and quickly assembled and the pickets and rails thereof will be securely locked together in such a manner that a solid permanent structure is obtained. It will also be readily appreciated that the fence may be as easily set up on uneven ground as upon even ground and when it is set up on sloping ground the ends of the top members 6 of the rails will be maintained in firm contact with the posts by reason of the beveling or chamfering of the ends of these members.

Having thus described my invention, what I claim is:

1. In a fence structure of the character described, post bodies, a rail connecting said posts and formed in two sections, said rail sections having aligned apertures therethrough, picket members disposed in the aligned apertures of the rails, and means for locking the rails and picket members together by shifting one of the members of the rail.

2. In a fence structure of the character described, post members, a rail connecting said posts and formed of two members disposed one above the other, means for joining the other one of the members of the rail with the posts, said rail members having aligned apertures therethrough, picket members disposed in said apertures, and means for locking said picket members in position in the apertures by shifting the lower one of the members of the rail.

3. In a fence structure, spaced post members, rails connecting said posts, one of said posts being disposed between opposed ends of the rails and said rails each being formed of two members disposed one upon the other, corresponding ones of the members of adjacent rails being connected by a lap joint extending through an aperture in the post therebetween, aligned apertures formed through the members of the rails, picket members disposed in said apertures, and means for forming a locking connection between the picket members and the rails. 70
4. A fence structure, comprising a plurality of spaced posts in which one thereof constitutes a terminal or end post, the other or intermediate posts having apertures transversely therethrough, rails disposed between the posts, each of said rails comprising two members arranged one upon the other, a lap joint formed between adjacent ends of the lower members of the rails, the joined portions of said lower members passing through the apertures of the posts, means secured to a face of the terminal post for supporting an end of an adjacent rail, picket members extended through the members of the rails, and means for locking the rails and picket members together. 80
5. In a fence structure of the character described, spaced post members, a rail connecting said post members and formed of a pair of bars disposed one upon the other, means for joining the lower one of said bars with the post members, picket members carried by the rail, and means for facilitating the setting up of the fence upon inclined ground which consists in undercutting the ends of the upper bars so as to normally maintain only the top end edge thereof in contact with the adjacent post. 85
6. A fence structure, comprising spaced post members, a rail connecting said members and consisting of a pair of bars arranged one upon the other, aligned apertures formed through said bars, the aperture in the upper bar corresponding in configuration with the cross-section of a picket, the aperture in the lower bar being of keyhole formation, and picket members each adapted to be extended through an aperture in the upper bar and through the enlarged portion of the adjacent keyhole aperture in the lower bar, each picket being notched at opposite sides to receive the constricted portion of the keyhole aperture when the lower bar is shifted longitudinally in one direction. 90
7. A fence structure of the character described, comprising spaced post members, a rail connecting said post members and consisting of a pair of bars arranged one upon the other, the upper one of said bars being of channel formation with the channel thereof directed downwardly over the lower bar, picket members each having opposite faces thereof transversely notched, said bars having aligned apertures therethrough for the reception of the picket members, one of said apertures being in the form of a keyhole slot, the narrow portion of which is designed to receive the notched section of the adjacent picket when the bar is shifted longitudinally, and means for securing the bars against relative movement. 95
8. A fence structure, comprising spaced post members, a rail extending between said posts and consisting of two members disposed one above the other, the upper one of said members being of channel formation and arranged in inverted position, the lower one of said members being disposed partly within the channel of the upper member, aligned apertures formed through the members of said rail for the extension of pickets therethrough, picket members disposed in said aligned apertures, means for securing the lower one of the members to the upper member, said means facilitating the longitudinal shifting of the lower member, and the said apertures in the lower member being formed to engage the pickets when shifted to secure the pickets in position. 100
9. A fence structure, comprising a pair of posts of I-cross-section, rails disposed between said posts and each consisting of a pair of bar members arranged one over the other, the upper one of said bar members having its ends abutting the webs of the posts and further being undercut to facilitate its disposition at an angle with respect to the posts, the said posts having apertures in the webs thereof to receive the adjacent ends of the lower members of the rails, said rail members having aligned apertures therein for the reception of picket members, connecting bolts between the rail members whereby the latter may be secured together, picket members disposed in the aligned apertures of the rail members, and means for securing said pickets in said apertures through the longitudinal movement of the lower ones of the rail members. 105
- In testimony whereof I hereunto affix my signature. 110
- FRANK J. SPATH. 115
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