

[54] **FENCE**
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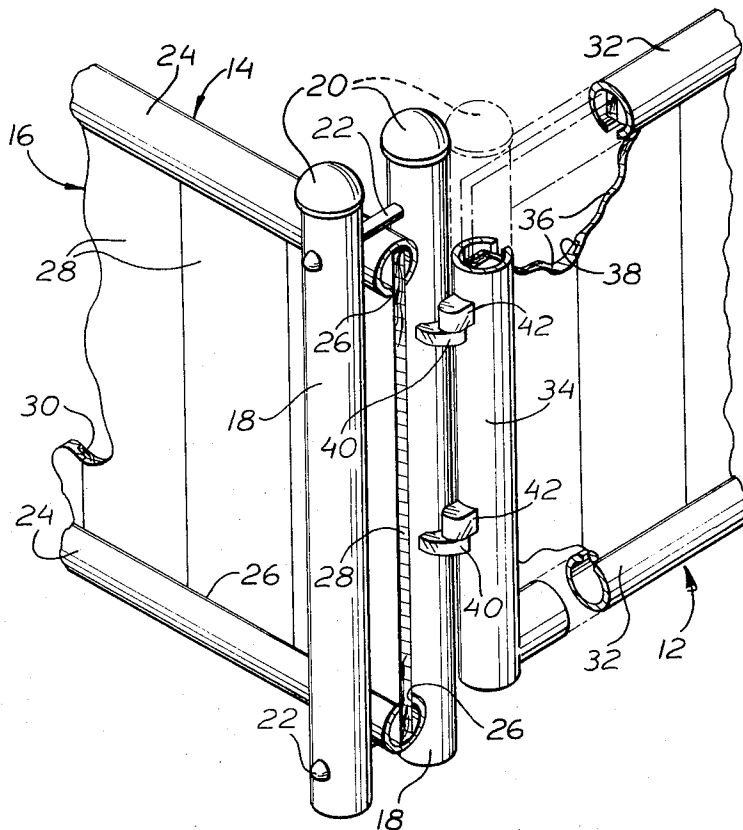
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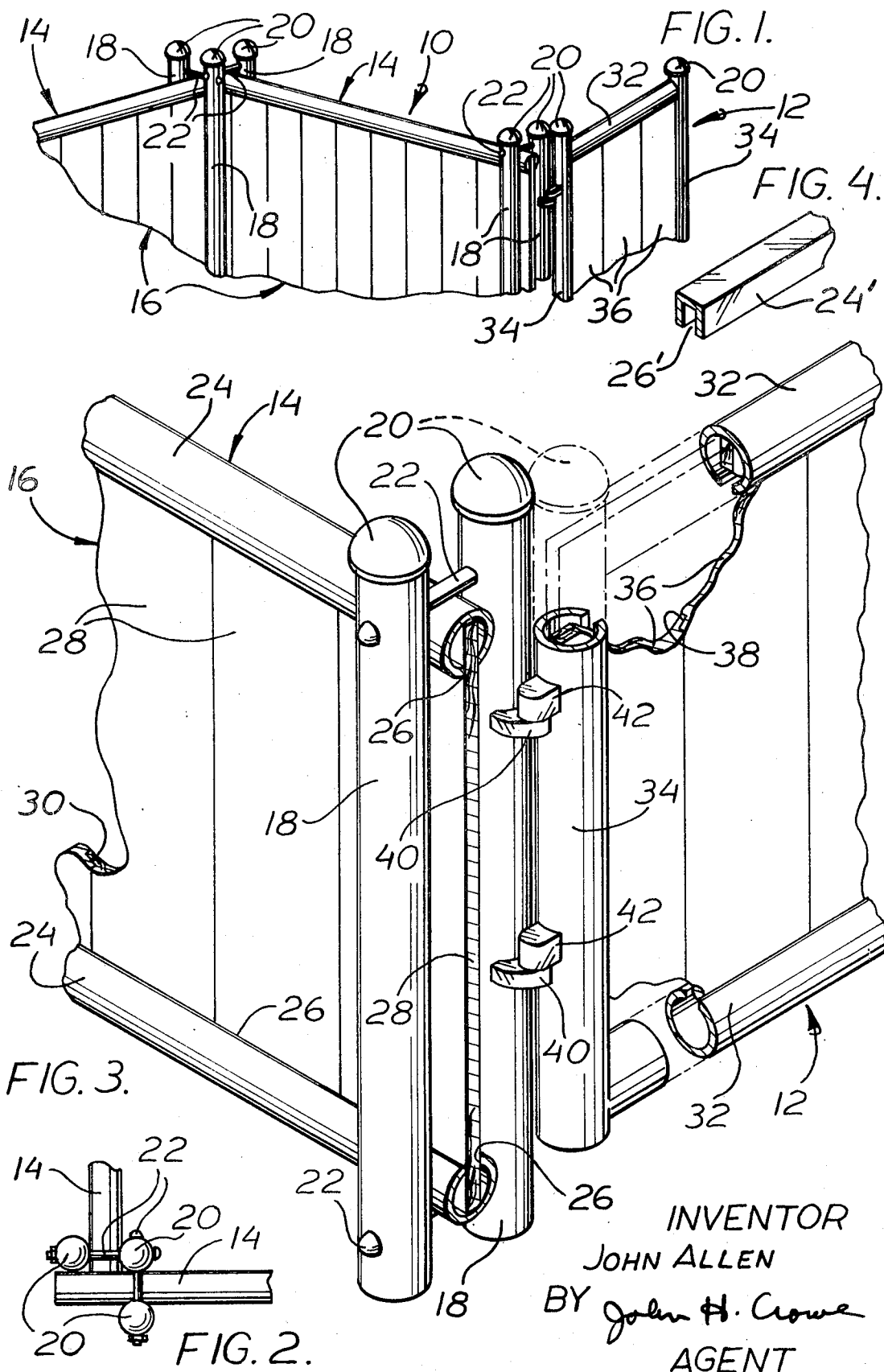
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[57] **ABSTRACT**

A fence with wooden panels having their upper and lower edges disposed in slotted rails supported between pairs of steel posts. The rails can be sections of channel or open seam pipe. The panels are held in place in the fence without nails, screws, bolts or other fasteners, and can be spaced apart like pickets, or have their side edges in contact for denying visual, as well as physical, access to the fenced-in area.

8 Claims, 4 Drawing Figures





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FENCE

BACKGROUND OF THE INVENTION

The present invention relates to fences and more particularly to a wooden panel fence constructed without nails, screws, bolts or the like, in which the panels can either be spaced apart as pickets or positioned edge to edge to make a solid visual and physical barrier.

The presence of a swimming pool in a neighborhood is a great attraction to neighbors and others. The pool is particularly attractive to small children and therefore constitutes a hazard from which the pool owner must protect them. This is generally accomplished by fencing the pool area against the entry of unauthorized persons. A chain link, concrete block or other fence of similarly strong and durable type is usually employed for this purpose. In the interests of greater privacy, and to reduce the visibility of the pool, strips or tapes of metal or plastic are frequently woven into the linkage of chain link fences installed around pools. While such fences are somewhat effective in denying entry to pool areas, they nevertheless provide finger and toe holds for adventurous children who try to climb them. The children can fall, or become entangled in such a fence structure, and, at least partly for this reason, solid fences, usually made of wood, are sometimes used in lieu of chain link fences for pool enclosing purposes. Typically, such solid fences are made up of wooden panels secured to railings by nails or the like. The exposure of the nails to the heat of the sun causes them to expand. At night the nails contract, but do not always return to their original positions. The alternate expansion and contraction of the nails causes their heads to work away from the panels and stand spaced therefrom. This creates a safety hazard to anyone passing close to the fence, and exposes the nail holes in the panels to permit the entry of moisture and lead to accelerated deterioration of the panels. Additionally, solid wood fences generally are built with one side "finished" and the other "rough," which means that they present an attractive appearance when seen from the finished side (usually the inside), but an ugly, unattractive appearance when seen from the other side. This is an obvious disadvantage of such fences, particularly where they must stand the close scrutiny of neighbors and passers-by. Still another disadvantage of these fences is their vulnerability to the onslaught of high winds. They are generally anchored to the ground by means of spaced posts which can be pushed over, or snapped off, by such winds because of the wind force against the panels exerting strong leverage against the unbraced posts.

SUMMARY OF THE INVENTION

The present invention is concerned with a novel fence and method of constructing same which provides for the support of fence paling without the use of nails or other piercing means. The fence structure includes a pair of vertically spaced, horizontally disposed rails, each having a longitudinal slot or groove. The rails are supported between pairs of upright steel posts with their slots in facing relationship. The upper and lower edges of a plurality of wooden panels, preferably having their side edges in contact to provide a visual, as well as a physical, barrier, are inserted in the rail grooves. The rails can be channel members or open seam pipe. The posts are drawn and held together by means of tightening bolts situated above and below the upper and lower rails, respectively. These bolts serve to secure the rails and fence panels and preserve the integrity of the fence without the aid of any panel-piercing nails, screws, bolts, or the like.

To install the novel fence of this invention, the lowermost of the aforesaid bolts are fitted in position on the fence posts and one of the slotted rails is placed on these bolts with its slotted side up. The lower edges of the wooden fence panels are next inserted in the slot in the rail, after which another of the rails is placed atop the panels with its slotted side down to receive the upper edges of the panels. Finally, the other (upper) bolts are inserted through receptive openings therefor in the fence

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posts, and all of the bolts are tightened to complete the fence installation.

The fence structure of the present invention has sufficient rigidity and durability to last a lifetime. The absence of nails and the like in the wooden panels adds to the safety and life of the fence. The wooden panels provide no finger or toe holds to lure potential fence climbers. The panels can be painted in different colors to provide a variegated background for ornamental or decorative effect. Or the fence can be painted to blend in with the surrounding vegetation. In either event, the paint adds to the life of the fence, by sealing the joint between the panels and the edges of the slots in the rails to prevent the passage of water. Furthermore, any moisture that finds its way into the rails, in spite of the paint, can easily drain out through the open ends of these rails to minimize the harmful effect of wet weather on the fence.

In addition to its above-indicated advantages over board fences of presently conventional type, the novel fence of this invention is, unlike the latter, of normally attractive (and generally similar) appearance from either side (although it can, if desired, be of intentionally varied pattern or texture from one side to the other). Also, the dual-post character of the fence gives it good anchorage against wind forces and thereby gives it a high degree of wind resistance.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a fragmentary perspective view of a fence structure embodying the principles of the present invention.

FIG. 2 is a fragmentary plan view, on a slightly larger scale, of one of the corner formations of the fence structure.

FIG. 3 is a larger scale fragmentary perspective view of the fence structure, with parts shown broken away or in section to illustrate certain structural details.

FIG. 4 is a fragmentary perspective view of an alternative form of railing for the fence structure.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now to the drawing, there is shown in FIGURE 1 a fence structure 10 embodying the principles of the present invention, and a gate 12 associated therewith. The fence structure includes railing 14 and paling 16. The railing 14 is confined between pairs of steel posts 18 topped by ball caps 20 and interconnected by several bolts 22.

As shown in FIG. 2, where sections of the railing 14 meet at a corner three posts 18 are employed, of which one is common to each of the pairs confining the railing sections therebetween. The bolts 22 are necessarily offset slightly and their heads are preferably disposed on the inside of the fence to avoid sharp projections within the fenced enclosure.

Inviting attention to FIG. 3, the railing 14 is seen to there comprise a pair of vertically spaced rails 24, which can be open seam pipe, each having a longitudinal slot or groove 26 extending the length thereof. If desired, the rails can take the form of channel members such as the member 24', having a channel or slot 26', of FIG. 4.

The paling 16 is made up of wooden panels 28, preferably of redwood or cedar for good weather resistance and long life. The panels are so dimensioned that their upper and lower ends fit snugly in the slots 26 of the rails 24. The side edges of the panels can abut or overlap in a lap joint, such as shown at 30, to provide a solid fence. However, the panels can, if desired, be narrow and spaced to provide a picket-like fence. When the panels and rails are painted, the joints therebetween can be effectively sealed by the paint.

The fence gate can be of any suitable shape or form, but in keeping with the motif or theme of fence structure 10, it is preferably made up of horizontal slotted members 32 and vertical slotted members 34 (topped by caps 20) suitably secured together, as by welding or the like, and several panels 36 mounted therebetween, all as shown at 12 in the drawing. Adjacent side edges of the panels overlap in a lap joint 38. These edges could, however, be made without the overlap, or spaced

pickets could be substituted for the panels, if desired. The gate is mounted for swinging on one of the posts 18. To permit this, the post is fitted with a pair of vertically spaced hinge parts 40. Fixed to one of the gate members 34 are complementary hinge parts 42.

The pairs of posts 18 of fence structure 10 are interconnected by the aforesaid bolts 22, and held the proper distance apart by means of cooperating spacers (not shown) therebetween. These spacers are sized to provide the necessary room between the posts for rails 24 but could, of course, be sized to provide more or less room than this (as, for example, for rails made from channel members such as channel member 24'). The pairs of posts are suitably anchored in the ground in properly spaced and aligned relationship.

To put the fence together, the lower of the bolts 22 are loosened and the upper bolts and spacers are removed. The lower rail is then laid on the lower bolts with its slot 26 facing upward. Preferably, the rail is positioned close to the ground to prevent crawling access to the fenced area thereunder. The lower ends of the fence panels are next fitted into the slot in the lower rail. The upper rail is then fitted, slotted side down, over the upper edges of the panels so that the panels extend into the rail slot. Finally, the upper bolts 22 are replaced in their openings in the posts 18 and all of the bolts are tightened to draw the posts and the edges of the slots toward each other until the latter are caused to grip the panels in tight engagement. The bolts are easily removable for replacement of the panels or rails as needed.

I have thus, by means of this invention, provided a novel fence structure which can be easily and fairly rapidly assembled using ordinary tools and requires no specialized techniques (or highly skilled workers) for such assembly. The fence can be made solid to deny visual and physical access to the enclosed area and can retain wooden panels in place, to that end, without the aid of panel-piercing nails, screws, bolts, or the like, which would shorten the life of the fence. Furthermore, the fence, unlike presently conventional wood panel fences, is equally attractive from either side, and possessed of a high degree of wind resistance. The fence owes its high wind resistance to the use of strong (preferably steel) fence posts anchored in pairs either side thereof. Steel posts do not rot in the ground, as wooden posts are prone to do, and this contributes to the inherent strength of the steel in enhancing the wind resistance (as well as durability) of the fence.

Although the present invention has been herein described and illustrated in what are believed to be its most practical and

preferred embodiments, it will be understood by those skilled in the art that the invention can take various other forms and embodiments, and that all such forms and embodiments encompassed by the language of the following claims fall within its scope. For example, my novel fence can be made with panels fabricated of plastic, painted aluminum, sheet iron or any other material, rather than the wood panels illustrated in the drawing. Finally, fences in accordance with this invention have potential utility other than the pool enclosure utility emphasized herein. Because of their strength and durability, such fences can, for example, be employed for sand or snow retaining purposes.

I claim:

1. Fence means comprising:
 - 15 a plurality of spaced post means, each post means including: a pair of adjacent posts; railing disposed between the posts and passing transversely thereof, said railing having facing edges between which fence paling is received and held; and
 - 20 adjustable fastening means interconnecting said posts, said fastening means being adjustable transversely of the railing and posts for drawing the posts toward each other and squeezing the railing therebetween for moving said railing edges toward each other and pressing them against fence paling.
2. The fence means of claim 1 wherein said fastening means includes an adjustable fastener at a fixed location on the posts, and said railing includes a rail supported on the fastener, said rail having transversely extending facing edges moved toward
 - 25 each other by adjustment of the fastener.
3. The fence means of claim 2 wherein said fastener includes a bolt passing through the posts.
4. The fence means of claim 3 wherein said posts are substantially parallel.
5. The fence means of claim 2 wherein said rail has non-planar sides engaged by the posts.
6. The fence means of claim 5 wherein said rail is a section of open seam pipe.
7. The fence means of claim 1 wherein said fastening means
 - 30 includes a pair of vertically spaced bolts, and said railing includes an upper rail having a downwardly facing slot and a lower rail having an upwardly facing slot, said lower rail resting on one of said bolts.
8. The fence means of claim 7 wherein said posts are substantially parallel sections of pipe, and said rails are sections of
 - 35 open seam pipe.

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