This invention relates to improvements in fence structures and has particular reference to sectional precast and preferably concrete fences.

It is an object of the present invention to provide a concrete fence formed of precast posts and precast rails, to be assembled and tied together in a manner to provide a very rigid, exceptionally strong, highly ornamental and economical structure.

An object of the invention is to provide a novel form of post that comprises a plurality of identical precast hollow blocks that are notched on their top and bottom edges to provide a seat for the ends of the associated rails, the blocks adapted to be laid one upon the other and in number corresponding to the number of rails to be employed, with the entire post after assembly of the rails, adapted to be completely filled with concrete that is suitably reinforced, after which, a novel form of cap is applied thereto.

Another object of the invention resides in the novel type of fence rails that are L-shaped and adapted to be seated at their ends in the post in a manner to dispose the rails at an angle, the rails being reinforced throughout their length with the reinforcing projecting at either end and subsequently bent to any desired form to have interlocking connection with the adjacent end of a rail from the opposite side of the post and, at assembly of the posts and rails, the ends of the rails and their interlocking reinforcing to be embedded in the concrete employed to fill the post.

A further object of the invention is the provision of a fence having the above noted characteristics, whereby all the rails are angularly arranged transversely and at such distance apart as to discourage sitting, climbing or otherwise using the structure for other than a fence.

Other novel features of construction will be readily apparent during the course of the following description, reference being had to the accompanying drawings, wherein has been illustrated a preferred example of the device and wherein like characters of reference are employed to denote like parts throughout the several figures.

Referring to the drawings:

Figure 1 is a fragmentary side elevation of a fence constructed in accordance with the invention,

Figure 2 is a transverse section view thereof, taken on line 2—2 of Figure 1,

Figure 3 is a vertical longitudinal sectional view, taken on line 3—3 of Figure 2,

Figure 4 is an enlarged perspective view of one precast block used to form the post,

Figure 5 is an enlarged perspective view of a precast cap block for the post,

Figure 6 is an enlarged perspective view of one post block, illustrating the manner of assembly of the rails therewith,

Figure 7 is an enlarged horizontal section through a completely assembled post and associated rails, taken on line 7—7 of Figure 1 and,

Figure 8 is an enlarged fragmentary perspective view of the end of a rail, illustrating a modified manner of bending the extended ends of the reinforcing.

Referencing specifically to the drawings, the numeral 5 indicates a complete post as a whole and 6 indicates the several rails as a whole. A footing 7 of concrete is preferably employed, upon which the post is constructed.

Each fence post is formed of a plurality of identical precast concrete blocks 8, clearly illustrated in Figure 4. The blocks are hollow and open at their top and bottom, as shown and may be formed of any particular dimensions desirable. Each block is preferably rectangular and the upper edges of its longitudinal side walls are provided with identical V-shaped notches 9, equidistantly spaced from the ends of the blocks.

The apex of the notches extend slightly above the top edges of the block, while the terminal ends of the V extend below the top edges of the block, forming right angled walls 10 having a length corresponding to the thickness of the walls of the rails, to be described. The lower longitudinal edges of the block 8 are identically notched, as at 11, of V-shape, with the angles of the notches 9 and 11 being formed on an exact right angle. The notches 11 are equidistantly spaced from the ends of the block, as shown. The depth of the notches 11 correspond to the combined transverse outer or top area of the rails 6, to be described, while the notches 9, terminating at the juncture of the walls 10, corresponds to the combined transverse inner area of the rails 6. While the blocks 8 have been shown as having smooth outer walls, it will be apparent that they can be cast with any desirable ornamentation.

Each rail 6 is identical and is precast in a conventional manner. The lengths of the rails may vary, but are identical in a particular spacing of the posts 5. Each rail is formed L-shaped, with each leg of the L being equal, providing legs...
or walls 13. Reinforcing steel 13 extends throughout the length of the rails and projects at both ends of the rail. The thickness of the walls 12 is identical to the length of the walls 10 of the block 8. At or prior to the assembly of the fence, the extended ends of the reinforcing 13 is bent to any desired configuration, as at 14, to provide interlocking means between the adjacent ends of the rails at assembly, shown more clearly in Figure 7. A slightly modified form of bending for the extended ends of the reinforcing 13, is indicated in Figure 8, wherein the ends are merely bent to a right angle, as at 15.

In the installation of the fence, the footings 7 are first poured at the required distance apart, depending on the length of rail to be employed. After sufficient setting, a block 8 is set upon each of the footings. Rails 6 are then laid upon the blocks, with their terminal ends projecting slightly into the opening of the blocks. It will be observed that the rails rest within the notches 9 with the terminal edges of the walls 12 lying flush with the upper edges of the blocks and with the inner area of the rails conforming to the angle of the notches 9. In this position, the slope of the rails will be arranged upward. The positioning of the posts and the length of the rails permit the bent ends of the extended reinforcing 13 to interlock, as in Figure 7. After the lower flight of rails have been laid, a second block 8 is engaged over the first block, with the notches 11 conforming to the angle of the rail and with the edges of the blocks beyond the notches in engagement. It is contemplated with this construction, that no mortar will be employed between the blocks. The progressive laying of the block 8 and rails continues until the fence is of the desired height. Reinforcing rods 16 which have previously been embedded in the footings, project upward through the entire tier of blocks and, when the uppermost rail has been set in position, the entire hollow post is then filled with concrete, which action securely anchors the blocks together and also anchors the ends of the rails therein against displacement. While the filling of the post with concrete will in most cases securely anchor the rails against displacement, the interlocking ends of the reinforcing 13 also embedded in the concrete will sustain practically any pressure against the rails.

Since it is desirable to provide a finished or ornamental top to the post, a cap block 17, Figure 5, has been provided. This block 17 has been shown as V-shaped for ornamental purposes, but it will be apparent that other configurations may be employed. The block 17 is likewise preferably cast of concrete and is provided in its bottom wall with a V-shaped notch 18, conforming in size and angularity to the notches 9. The block 17 is placed over the uppermost rail ends, resting upon the uppermost block 8, and is preferably cemented in position. The block 17, while being shown solid, may obviously be formed hollow.

It will be apparent, that a very novel and easily connected fence has been provided. The several parts, including the blocks 8, rails 6 and cap block 17 may be quickly and easily manufactured in considerable quantities and transported to the desired location. The blocks and rails are extremely cheap to manufacture and when assembled they provide a firm, strong and ornamental. The arrangement of the rails at an angle discourage persons sitting thereon and will further discourage climbing, since to do so, a person must engage his foot with the relatively sharp apex of the rails and, when he attempts to climb, the instep of the foot will sharply engage the outer edges of the rails. The construction of such a fence is relatively cheaper than wood and much cheaper than a solid fence of concrete or concrete blocks. Further, the structure is substantially rot proof and continually painting, as with wood fences. The fence further compares favorably with the conventional stock or cattle fences, since it is a permanent structure, needing no replacement and its strength will sustain without damage, any pressure placed thereon by cattle or the like.

It is to be understood, that the invention is not limited to the precise arrangement shown, but that changes in the shape, size and details of construction may be resorted to as fall within the spirit of the invention or the scope of the subjoined claims.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A precast concrete sectional fence that includes posts and a plurality of parallel precast concrete blocks comprising a plurality of precast concrete blocks that are adapted to be superimposed one upon another, each block being notched upon the upper and lower edges of two opposite side rails for the seating reception of the terminal ends of opposed rails and the rails are maintained in an angle with their apex uppermost and a precast concrete cap block for the posts that is notched to have seating engagement over the uppermost rail.

2. A precast concrete sectional fence that includes posts and a plurality of angle rails formed of reinforced concrete, the posts comprising a plurality of identical precast hollow concrete blocks open at top and bottom and with two opposite side rails having their upper and lower edges notched at identical angles to form seating recesses for the terminal ends of opposed angle rails, the angularity of the notches serving to maintain the rails angularly disposed with their apex uppermost, the depth of the notches permitting the blocks to seat one upon another, the reinforcing of the rails being maintained at an angle with the ends of the rails and bent to have interlocking engagement with the extended ends of the reinforcing of the opposed rail, reinforcing extending through the openings of the several blocks, the several blocks adapted to be filled with concrete whereby they are solidly joined together and solidly embed the ends of the rails therein and a precast concrete cap block provided with a transverse angular notch to have seating engagement over the uppermost rail.

3. A sectional precast concrete fence that includes a plurality of posts and a plurality of parallel connecting angle rails of reinforced concrete, each post adapted to be supported upon a concrete footing, each post formed of a plurality of identical hollow concrete blocks open at top and bottom and adapted one upon another, the upper and lower edges of two opposite side rails being notched to provide a seating engagement for the terminal ends of opposed rails, the upper notches being recessed into the edges of the blocks to cause the exposed surface of the block to be exitually disposed with their apex uppermost, the lower
notches being co-extensive with the transverse exposed faces of the rails whereby the edges of the blocks have contacting engagement, the reinforcing of the rails being extended at both ends and bent to form hooks for interlocking connection with the reinforcing of the opposed rail ends, reinforcing rods extending from the footing throughout the several blocks, the several blocks adapted to be filled with concrete for embedding the rods and the ends of the rails and precast concrete cap blocks for the posts that is provided with a lower angle notch to have seating engagement over the ends of the uppermost rails.

4. A structure of the character described, the combination of sectional concrete fence posts and precast reinforced concrete angle rails, the posts adapted to be supported upon concrete footings, each post formed of a plurality of identical hollow rectangular precast concrete blocks open at top and bottom, the upper and lower edges of the longitudinal sides of the blocks being angularly notched at points intermediate the ends of the blocks, the notches being a right angle with equal sides, the uppermost notches adapted to provide a seat for the terminal ends of opposed rails whereby the rails are maintained at an angle with their apex uppermost, the upper notches being recessed into the blocks a depth to cause the outer exposed surface of the rails to lie flush with edges of the blocks, the lower notches being co-extensive with the cross-sectional area of the outer exposed surface of the rails whereby the lower edges of the block will have contacting engagement with its next adjacent lower block, the rails being formed on an angle transversely having its exposed outer walls of equal width, the rails at assembly adapted to extend slightly into the opening of the blocks, the reinforcing of the rails being extended at both ends and bent to have interlocking engagement with the extended reinforcing of opposed rail ends, reinforcing rods extending from the footing upwardly throughout the several post blocks, the several blocks after assembly adapted to be filled with concrete whereby the rods and the inner ends of the rails and their interlocking reinforcing will be embedded therein and a cap block for the post that is angularly notched to have seating engagement over the uppermost rail and upon the uppermost block.

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REFERENCES CITED

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

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