H. A. LOSER.

MOLD AND METHOD FOR MAKING CONCRETE PICKET FENCES.

APPLICATION FILED JAN. 13, 1915.

1,202,298.

Patented Oct. 24, 1916.

2 SHEETS—SHEET 1.

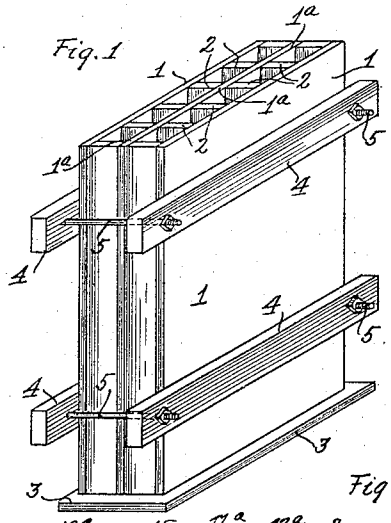

Fig. 1

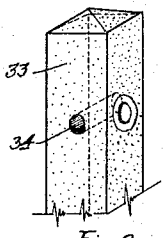

Fig. 9.

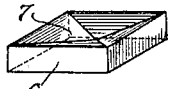

Fig 2.

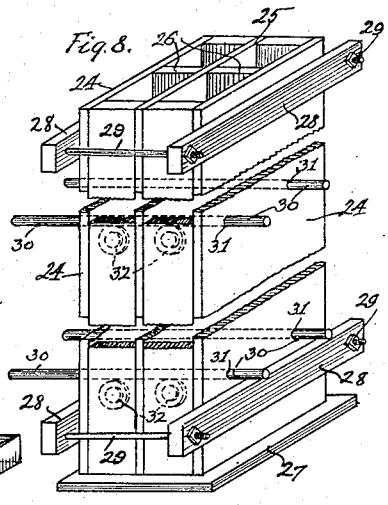

Fig. 8.

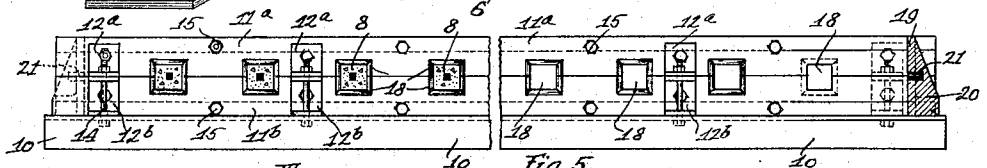

Fig. 5.

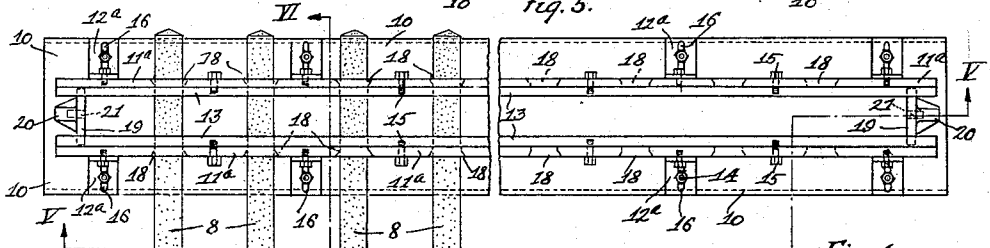

Fig. 4.

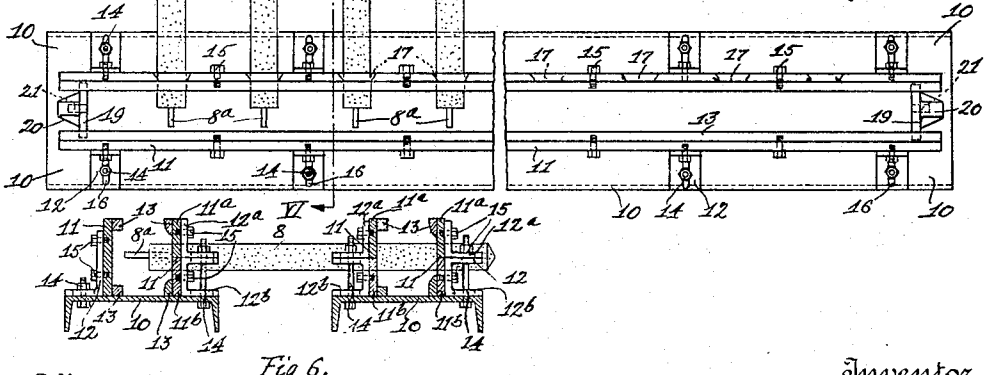

Fig. 6.

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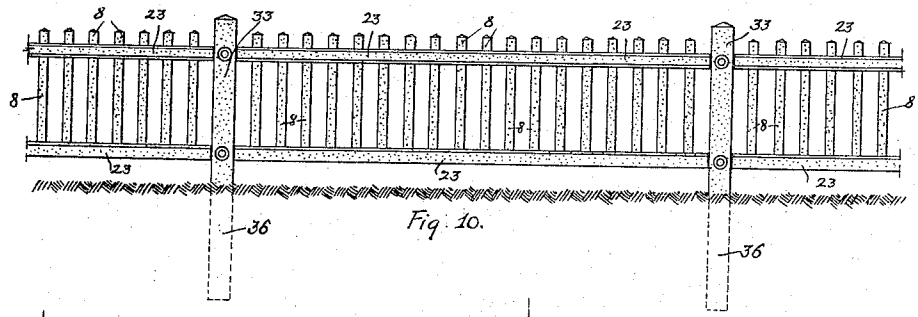

Fig. 10.

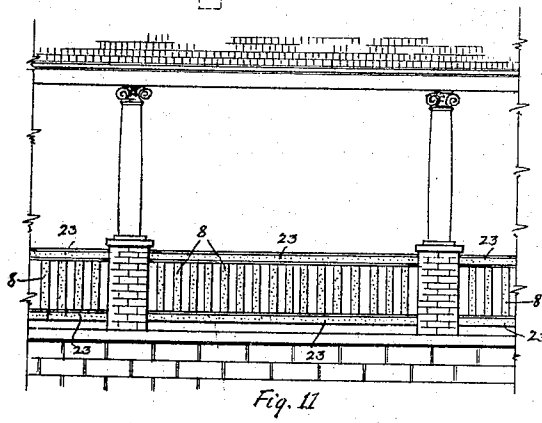

Fig. 11.

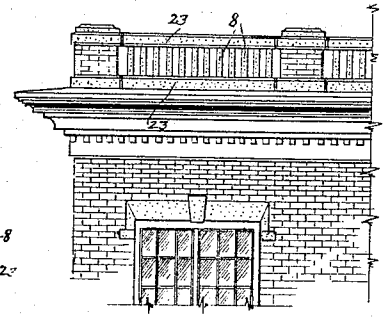

Fig. 12.

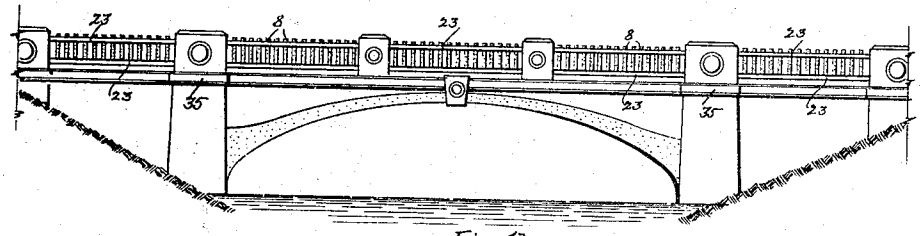

Fig. 13.

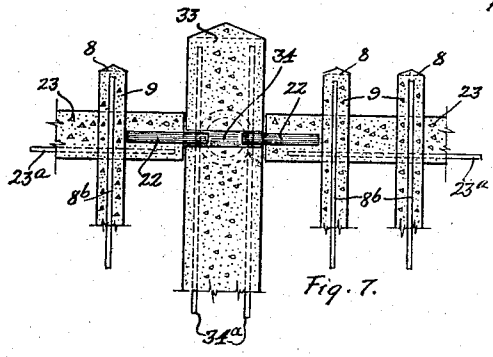

Fig. 7.

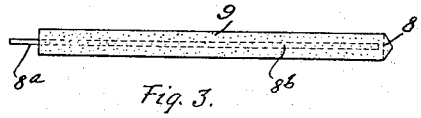

Fig. 3.

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UNITED STATES PATENT OFFICE.

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MOLD AND METHOD FOR MAKING CONCRETE PICKET-FENCES.

1,202,298. Specification of Letters Patent. Patented Oct. 24, 1916.

Application filed January 13, 1915. Serial No. 2,036.

To all whom it may concern:

Be it known that I, HARRY A. LOSER, a citizen of the United States, residing at South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Molds and Methods for Making Concrete Picket-Fences, of which the following is a specification.

This invention relates to mold and method for making concrete fences such as are used around inclosure of land, the peripheries of porches and the like, the roofs of houses and for the side rails of bridges and the like.

The invention especially relates to reinforced concrete fences for the above and other purposes.

The objects of the invention are: First, to provide an improved process for the construction of such a fence or guard; and second, to provide improved means for molding such a fence.

With the above objects in view, as well as others which will be hereinafter apparent from the specific nature of the appended description, the invention consists in general in the following features; first, an improved manner or process, consisting of a series of novel steps, suitable and designed for constructing a reinforced concrete fence or guard; second, an improved mold arrangement and construction for accomplishing the above purposes.

Moreover, the invention consists of certain novel arrangements of details and combinations of parts, to accomplish the desired results and special process steps hereinafter fully described, illustrated in the accompanying drawings, and specifically claimed.

In the accompanying two sheets of drawings, like characters of reference indicate like parts in the several views, and:—Figure 1 is a gang mold arranged to mold a series of pickets for the fence, balustrade or the like which it is desired to construct; Fig. 2 is a perspective view of a supplemental mold designed to be used with each picket to finish the top thereof; Fig. 3 is a side view of one form of finished picket; Fig. 4 is a plan view of the rail molds used with this invention; Fig. 5 is a sectional view on the line V—V of Fig. 4; Fig. 6 is a sectional view on the line VI—VI of Fig. 4; Fig. 7 is a sectional view showing a fence post and adjacent portions of the connected fence panels as constructed in accordance with this invention; Fig. 8 is a perspective view of a mold used for molding the fence posts; Fig. 9 is a perspective view of the upper part of one of the molded posts; Fig. 10 is a side elevation of a portion of a fence constructed in accordance with this invention and suitable for residence lawns, cemetery and park inclosures, gardens and the like; Fig. 11 shows the application of the fence to a porch balustrade; Fig. 12 shows the application of the fence to a building cornice; Fig. 13 shows the application of the fence to a bridge.

In carrying out the various objects of this invention, it is first of all necessary to cast or mold the pickets which make up the principal parts of a fence, balustrade or the like. The means to accomplish this is clearly illustrated in Fig. 1, wherein there is shown a mold structure consisting of side plates 1 and a center plate 1^a. Between the plates 1 and 1^a, are arranged dividing bars 2, which all rest on a bottom plate 3. These side and center plates and the dividing bars are held in position for molding by yokes 4 which extend along the side pieces 1, and have ends projecting beyond these side pieces. These yokes 4 are arranged in opposed pairs, so that the ends of each pair are also opposite and these opposed ends are stressed together by means of bolts and nuts indicated at 5. It is also to be understood that the yokes 4 are preferably attached to the plates 1, in any preferred manner although the yokes may, if desired, be separate from the side plates.

With this construction there is formed a series of cells and, in order to produce a pointed or an ornamental top on each picket there is inserted in each cell, just previous to placing the set of molds formed by such cells on the plate 3, a block 6, having therein an ornamental recess or depression 7, the blocks each being inserted at the bottom of a respective cell. It is to be understood that each picket is reinforced with one or more metallic rods and to accomplish this end the reinforcing bars are lowered into the concrete of the pickets while in the plastic state. It is also to be understood that the reinforcing of the pickets may take the form of a single bar or a plurality or series of bars as may be desired but for the purpose of illustration there has been shown in Fig. 3 a picket having a central metallic bar 8^b with a projecting lower end 8^a the concrete being

indicated at 9, the reference character 8 being understood in the general assembly figures, to indicate the picket in its entirety, whether reinforced by one or a plurality of bars.

When the pickets, made in the foregoing or any other suitable manner, are ready it is necessary, under the improved process, to assemble a series of such pickets in a fence or balustrade panel by connecting them with suitable railings or top and bottom rails. To this end there are provided, in the present invention, certain top and bottom rail molds wherein preformed or pre-molded pickets may be inserted for the purpose of connecting such pickets in panel groups. In order to accomplish this purpose, a bottom rail mold and a top rail mold are provided, the bottom rail mold being especially adapted to accommodate the lower ends of the reinforcing elements of the pickets, which project below the concrete, while the top mold may be applied to the pickets at any point above the bottom mold, so that there may be one or more top molds. However, in the present instance there will be described but one top mold although molds may be used between the top and bottom as will be obvious. Each of these upper rail molds and the bottom mold includes a base member or pallet 10 in the form of a channel iron. Extending upward from the channel irons 10 are spaced side members 11, which are supported in position by brackets indicated generally at 12. These members 11 have secured thereto molding members 13, and each member 11, is divided into upper and lower parts 11^a and 11^b, which are held together by the several connected elements of the brackets 12. Each of the brackets 12 consists of an upper angle iron element 12^a, and a lower channel element 12^b. Through the flanges of these elements 12^a and 12^b extend bolts 14, which clamp these elements to the base 10, while smaller bolts 15 secure the elements 11^a and 11^b to the brackets 12. These bolts 14 pass through adjusting slots 16, so that the space between the members 11 may be regulated if so desired.

The bottom mold has on one, the inner side provided with a series of spaced openings 17, to receive the lower ends of the pickets 8, as shown in Fig. 4 while the outer side member 11 of the bottom mold is preferably made solid and in one piece as shown on the left side of Fig. 6. The other mold or molds are provided with oppositely disposed openings 18 to receive the upper parts of the pickets as also shown in Fig. 4. The openings 17 and 18 are formed by opposed notches in the meeting edges of the members 11^a and 11^b so that after the rails 23 are molded the sides of the mold may be readily moved from the pickets. The edges of the picket receiving openings 17 and 18 are preferably beveled as shown in Fig. 4, for the purpose of decreasing the area of contact of the surface of the mold with that of the inserted pickets, thereby allowing the sections or halves 11^a and 11^b, of a side of the mold to be removed easily. This beveled edge construction of the openings 17 and 18, also has the important function of permitting one of the rail molds to be placed in advance or ahead of the other before the pickets 8, are properly placed in the picket receiving openings 17 and 18, in order to construct a picket fence, in which the pickets 8, are not at right angles to the rails, but any other angle, greater than a right angle, depending upon the distance in which one rail mold is placed in advance of the other. This arrangement permits the picket fence so constructed to be installed and conform to a grade line, in which the pickets and posts are vertical, while the rails connecting the pickets are parallel to the grade.

Each of the molds for the rails is closed at each end by a plate 19, having an outwardly extending boss 20, thereon. In each plate is a socket 21, adapted to receive a pin 22 (see Fig. 7), one end of which projects into the mold, so that when the rails 23, are cast, this inwardly projecting end will be cast in the end of the rail to afford connecting means to the posts as hereinafter described. These rails 23 are preferably reinforced by rods 23^a, which may be placed in the molds for the top and bottom rails while the concrete is placed in said molds.

The posts are molded in a mold very similar to the picket mold, but, of course, having different dimensions. This mold consists, as shown in Fig. 8, of side members 24, and a center member 25, spaced by means of cross members 26, the whole resting on a base or pallet 27 and being held together by bars 28 and bolts 29. Through the members 24 and 25, pass bars 30 which are loose enough to readily slip out of the receiving openings 31. The members 26 may be provided with ornamenting dies 32, if desired, and the tops of the posts may be ornamented as set forth in the description of the picket mold by the use of a block similar to that shown in Fig. 2.

When the post mold, shown in Fig. 8, is ready for use, the concrete is poured into the mold after suitable reinforcing bars have been positioned therein. This produces a post 33 such as is shown in Fig. 9, the bars 30 being knocked out to leave a transverse opening 34 for the reception of the pins 22 embedded or molded in the ends of the upper and lower rails 23, as herein described and shown in Fig. 7. The reinforcing for the post 33, is indicated at 34^a and preferably projects below the lower end

of the post so as to afford connecting means to a base such as is shown at 35, in Fig. 13, or the post to be extended to be planted in the ground as at 36, indicated in Fig. 10.

In constructing a fence the pickets are first molded in the mold shown in Fig. 1. They are then assembled in the rail molds as shown in Fig. 4 and the panel completed by casting the top and bottom rails. The posts, having been molded, are placed in position alternately with the panels, so that the pins 22 in the rails 23, may be inserted in the openings 34, of the posts 33.

Various modifications may be made to accommodate changes in design, angles to conform to different grades in the structure and other like differences without departing from the spirit of my invention, as will be obvious to one skilled in the art. It is not deemed necessary to illustrate all these modifications but it is wished to include all such as come within the scope claimed.

What I claim is:—

1. The process of constructing a concrete picket panel which comprises molding a series of pickets, assembling said pickets in parallel and spaced relation and thereinafter molding concrete rails around the pickets.

2. The process of constructing a concrete picket panel which comprises molding a series of pickets, assembling said pickets in parallel spaced relation and thereinafter molding concrete rails around and at right angles to the pickets.

3. The process of constructing a concrete picket panel which comprises molding reinforced concrete pickets, assembling said reinforced concrete pickets in parallel and spaced relation and thereinafter molding around said pickets spaced rails at right angles to the pickets.

4. The process of constructing a concrete panel which comprises molding a plurality of independent concrete pickets, assembling the pickets in spaced relation and thereinafter molding around said pickets spaced reinforced concrete rails.

5. The process of constructing a concrete fence panel which consists in molding concrete fence pickets, combining the pickets in spaced relation in separated rail molds, and thereinafter molding rails around the pickets in the molds.

6. The process of constructing a concrete fence panel which consists in molding concrete fence pickets, combining the pickets in spaced relation in separated rail molds, and thereinafter molding rails around and at right angles to the pickets in the molds.

7. A mold for integrally combining pickets in spaced relation with concrete fence rails comprising a pallet, a side member, a second side member consisting of upper and lower separable sections having opposed and registering notches arranged to form picket receiving openings.

8. A mold for integrally combining pickets in spaced relation with concrete fence rails comprising a pallet, an adjustable side member, a second side member consisting of upper and lower separable sections having opposed and registering notches arranged to form picket receiving openings.

9. A mold for integrally combining pickets in spaced relation with concrete fence rails comprising a pallet, a side member, a second side member consisting of upper and lower separable sections having opposed and outwardly flaring registering notches arranged to form beveled picket receiving openings.

10. A mold for integrally combining pickets in spaced relation with concrete fence rails comprising a pallet, separated lower side members, an upper side member detachably secured to each of said lower members, each of said upper and lower members having opposed registering notches arranged to form picket receiving openings and means for attaching said members to the pallet.

11. A mold for integrally combining pickets in spaced relation with concrete fence rails comprising a pallet, separated lower side members adjustable to or from each other, an upper side member detachably secured to each of said lower members, each of said upper and lower members having opposed registering notches arranged to form picket receiving openings and means for attaching said members to the pallet.

12. A mold for integrally combining pickets in spaced relation with concrete fence rails comprising a pallet, separated lower side members, an upper side member detachably secured to each of said lower members, each of said upper and lower members having opposed and outwardly flaring registering notches arranged to form beveled picket receiving openings and means for connecting said members to the pallet.

In testimony whereof I affix my signature in presence of two witnesses.

HARRY A. LOSER.

Witnesses:
L. C. WHITCOMB,
CLAUDINE BRICKELL.