Nov. 23, 1954 G. L. BRIDWELL 2,695,159

PRECAST FENCE

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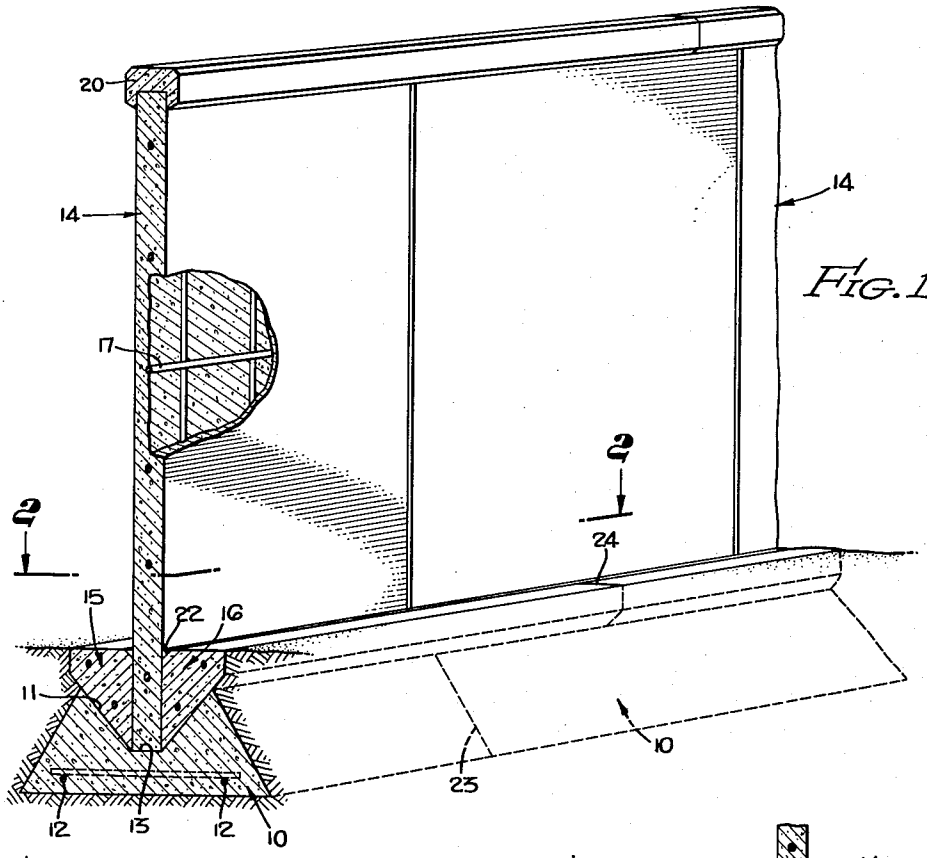

FIG. 1.

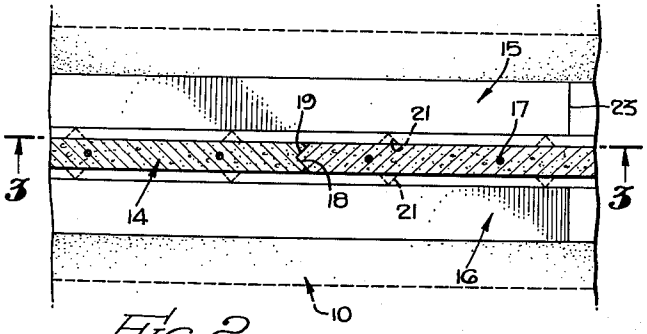

FIG. 2.

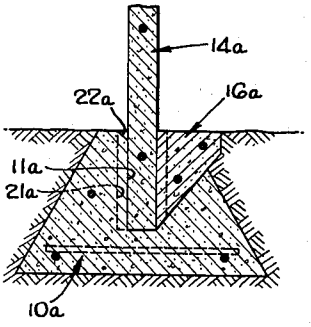

FIG. 4.

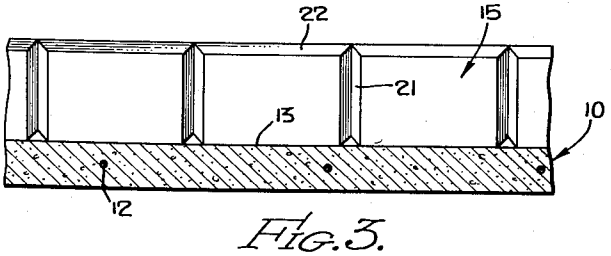

FIG. 3.

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PRECAST FENCE

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9 Claims. (Cl. 256—19)

This invention relates to improvements in fencing.

A primary object of the invention is to provide an improved concrete fence, the parts of which may all be precast or prefabricated to shape and taken to the locality where the fence is to be installed and easily and quickly assembled at such location.

Explanatory of the present invention, it has heretofore been proposed to construct a concrete fence, the panels of which have been precast or prefabricated. However, in such constructions it has been contemplated that the footing which supports the panels should be poured of concrete at the location where the fence was to be erected. When the footing is poured in place a considerable time delay is involved in that the footing must be permitted to set and develop adequate hardness before the panels are erected thereon. The present fence construction, on the other hand, contemplates the use of precast or prefabricated footing members which can be installed at the fence location and which enabled the panels of the fence to be immediately mounted thereon. In this manner, not only is it possible to quickly install the fence, but in addition, the fence may be erected using unskilled labor.

More specifically, an object of the invention is to provide a fence construction consisting of a plurality of precast or prefabricated footing members adapted to be installed in end to end relationship in a trench dug in the ground at the fence location. When these footing members have been installed, the panels may be immediately positioned on the footing members and locked in upright position with relation to the footing members by means of precast or prefabricated wedge members. The wedge members serve to maintain the panels in upright positions, and if desired, these may be cemented to the panel members to produce a truly monolithic structure. The edges of the panels are preferably provided with mutually engageable portions which cooperate to maintain the panels in alignment, and if desired, the tops of the panels may have applied thereto a preformed concrete cap which also assists in maintaining the panels in alignment.

With the foregoing and other objects in view, which will be made manifest in the following detailed description and specifically pointed out in the appended claims, reference is had to the accompanying drawing for an illustrative embodiment of the invention, wherein:

Figure 1 is a partial view in perspective, parts being broken away and shown in vertical section, illustrating one form of fence embodying the present invention;

Fig. 2 is a horizontal section taken substantially upon the line 2—2 upon Fig. 1;

Fig. 3 is a partial view taken substantially upon the line 3—3 upon Fig. 2; and

Fig. 4 is a partial view in vertical section, illustrating an alternative form of construction.

Referring to the accompanying drawing wherein similar reference characters designate similar parts throughout, that form of fence illustrated in Figs. 1 to 3, inclusive, consists of a plurality of footing or base members **10** preformed of concrete which at the time of installation has adequately cured. Each footing or base member **10** is of such a size and length that it is capable of being manually positioned in a trench dug in the soil at the location where the fence is to be installed. Each footing member preferably has upwardly converging outer sides, and in its top it has a longitudinally extending V-shaped groove or recess **11**. The footing or base members may be suitably reenforced such as by reenforcements indicated at **12**.

The bottom of the recess **11** is preferably flat as indicated at **13** so as to receive the bottom edges of preformed concrete panels **14**. The sides of the groove or recess **11** diverge upwardly so as to receive preformed or precast wedge members **15** and **16**. These wedge members have upright or vertical inner faces complementary to the sides of the panels **14** and upwardly and outwardly inclined outer faces substantially complementary to the walls of the recess **11**. After the panels **14** have been positioned on the footing or base members the wedge members **15** and **16** may be merely dropped into the groove **11** on opposite sides of the panels. They will wedge in the groove and maintain the panels **14** in an upright position. The panels may or may not be reenforced, such as by reenforcing **17**. In some instances, the panels are merely in the form of preformed flat, rectangular slabs. In other instances, such slabs may have grooves **18** formed in their side edges to receive tongues **19** formed on the side edges of adjacent panels. The tongues **19** and the grooves **18** form mutually engageable portions tending to keep adjacent panels in alignment. In some instances openings may be cored out of the centers of the panels. A preformed concrete cap **20** may be applied to the top edge of the panels. Such concrete cap if applied encloses the top edges of the panels and tends to keep them in mutual alignment.

After the elements of the fence have been assembled together the trench is refilled with dirt around the base or footing members **10** and preferably the refilling is carried up to the level of the tops of the wedge members **15** and **16**. When the trench is refilled the installation of the fence may be regarded as completed inasmuch as the wedge members **15** and **16** fitting in the groove **11** are ordinarily adequate to maintain the panels in an upright position. However, in order to promote a strong monolithic structure the inner or upright faces of the wedge members are vertically grooved as indicated at **21** and the top corners of these members are beveled as indicated at **22**. These latter bevels cooperate with the faces of the panels to form longitudinally extending grooves. A thin cement grout may be poured into the grooves formed by the bevels **22** and allowed to run down the vertical grooves **21**. Such grout, when it hardens, will bond the wedge members and panels together, thus forming a monolithic structure.

In erecting the fence it is preferable that the joints **23** between adjacent footing members be arranged in staggered relation to the joints **24** between adjacent wedge members. The joints between adjacent panels will usually be, but are not necessarily staggered with relation to the joints **23** and **24**. In this manner, danger of the fence settling and becoming distorted is, to a large extent, overcome.

It will be appreciated by those skilled in the art that unskilled labor may be employed to install the fence. As the footing members, wedge members, panels, and cap are all preformed and cured prior to installation, all that is necessary at the location of installation is to dig a trench of adequate depth to accommodate the footing members and the wedge members. When the trench is refilled due to the dovetailed cross-sectional shape of the footing members, the footing is effectively locked in place in the soil. The footing members can be arranged in end to end relationship in the trench, the panels positioned thereon, and the wedges **15** and **16** dropped in place. These wedges alone are adequate to maintain the panels in upright positions on the footing members so that even when grout is employed in the grooves **21** and **22** it is not necessary to otherwise support the fence while the grout is setting and hardening. The installation of the fence may be easily and quickly accomplished and no time delay is involved in waiting for any portion thereof to set and harden.

In the alternative form of construction shown in Fig. 4, each footing member **10***a* has a groove or recess **11***a* formed therein, one side of which is upright or vertical. The panels **14***a* may have their lower ends positioned directly against this upright side. They will be locked thereagainst when the wedges **16***a* are dropped into the groove **11***a*. In this form of construction, vertical grooves **21***a* may be formed in the upright side of the groove **11***a*

and the top of this side may be beveled as at **22***a* to receive the grout in the same manner as that previously described. The wedge member **16***a* may be identical with the wedge member **16** in all respects.

From the above-described construction it will be appreciated that an improved form of concrete fence has been provided, all parts of which may be preformed and precured prior to the time of installation. The fence may be easily and quickly installed and it is only when a truly monolithic structure is designed that it is necessary to use grout in the grooves.

Various changes may be made in the details of construction without departing from the spirit and scope of the invention as defined by the appended claims.

I claim:

1. A fence comprising a plurality of elongated preformed footing members, said members each having a recess extending lengthwise in the top thereof, the recesses in said members each having at least one outwardly and upwardly slanted side wall, panels having their lower ends in and along the recesses and disposed in edge to edge relation, and elongated preformed wedge members fitting between said slanted walls of the recesses and the panels for holding the panels upright.

2. A fence comprising a plurality of elongated preformed footing members adapted to be arranged in end to end relation, said members each having a recess extending lengthwise in the top thereof, the recesses in said members having at least one outwardly and upwardly slanted side wall, panels having their lower ends in and along the recess and disposed in edge to edge relation, and elongated preformed wedge members fitting between said slanted walls of the recesses and the panels for holding the panels upright, said wedge members being grooved and grout filling the grooves.

3. A fence comprising a plurality of elongated, preformed footing members adapted to be arranged in end to end relation, said members each having a recess extending lengthwise in the top thereof, the recesses in said members having at least one outwardly and upwardly slanted side wall, panels having their lower ends in and along the recesses and disposed in edge to edge relation, and elongated preformed wedge members fitting between said slanted walls of the recesses and the panels for holding the panels upright, said wedge members being grooved and grout filling the grooves bonding the wedge members and panels together.

4. A fence comprising a plurality of elongated, preformed footing members adapted to be arranged in end to end relation, said members each having a recess extending lengthwise in the top thereof, the recesses in said members having at least one outwardly and upwardly slanted side wall, panels having their lower ends in and along the recesses and disposed in edge to edge relation, adjacent panels having mutually engaging portions at their side edges which hold them in alignment, and elongated preformed wedge members fitting between said slanted walls of the recesses and the panels for holding the panels upright.

5. A fence comprising a plurality of elongated, preformed footing members adapted to be arranged in end to end relation, said members each having a recess extending lengthwise in the top thereof, the recesses in said members having at least one outwardly and upwardly slanted side wall, panels having their lower ends in and along the recesses and disposed in edge to edge relation, elongated preformed wedge members fitting between said slanted walls of the recesses and the panels for holding the panels upright, and a cap fitting over the tops of the panels holding adjacent panels in alignment with each other.

6. A fence comprising a plurality of elongated, preformed footing members adapted to be arranged in alignment, said members each having a recess extending from end to end thereof in the top thereof, the recesses in said members having at least one outwardly and upwardly slanted side wall, panels having their lower ends disposed in and along the recesses and in edge to edge relation, and elongated preformed wedge members fitting between said slanted walls of the recesses and the panels for holding the panels upright, the wedge members extending above the top of the footing members.

7. A fence comprising a plurality of elongated preformed footing members adapted to be arranged in end to end relation, said members each having a recess extending lengthwise in the top thereof, the recesses in said members having at least one outwardly and upwardly slanted side wall, panels having their lower ends in and along the recesses and disposed in edge to edge relation, elongated preformed wedge members fitting between said slanted walls of the recesses and the panels for holding the panels upright, the joints between the ends of adjacent wedge members being staggered with relation to the joints between the ends of adjacent footing members.

8. A fence comprising a plurality of elongated preformed footing members adapted to be arranged in end to end relation, said members each having a recess extending lengthwise in the top thereof, the recesses in said members having at least one outwardly and upwardly slanted side wall, panels having their lower ends in and along the recesses and disposed in edge to edge relation, elongated preformed wedge members fitting between said slanted walls of the recesses and the panels for holding the panels upright, the joints between the ends of adjacent wedge members being staggered with relation to the joints between the ends of adjacent footing members, said wedge members being so shaped as to form grooves opposite the sides of the panels and grout filling the grooves and bonding the wedge members and panels together.

9. A fence comprising an elongated preformed footing member, said member having a longitudinally extending recess in the top thereof with at least one outwardly and upwardly slanted side wall, a preformed panel having its bottom positioned in and along the recess, and a preformed wedge member between said slanted side wall and a side of the panel to lock the panel in upright position in the recess.

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