Oct. 7, 1958 G. B. MOORE 2,855,183

FENCE AND GATE CONSTRUCTION

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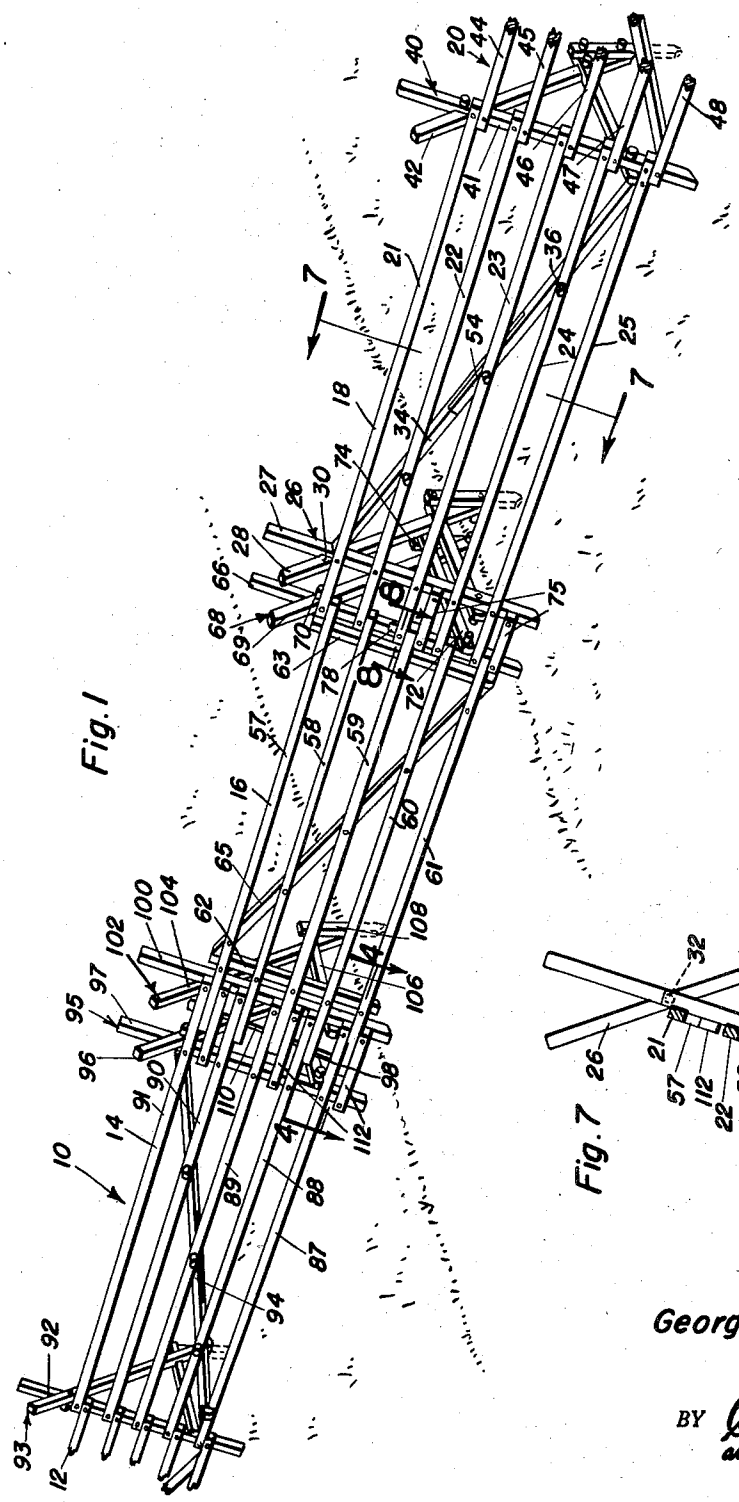


Fig. 1

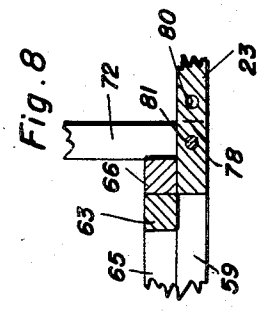


Fig. 8

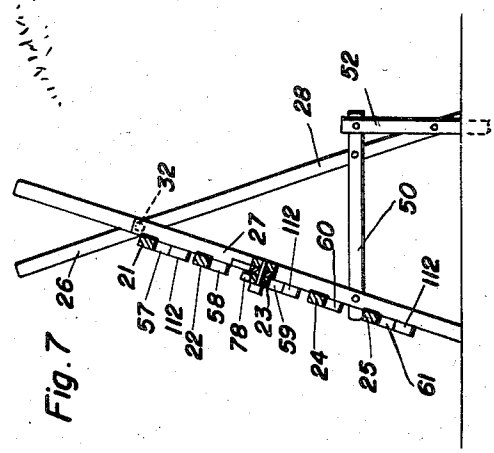


Fig. 7

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Fig. 2

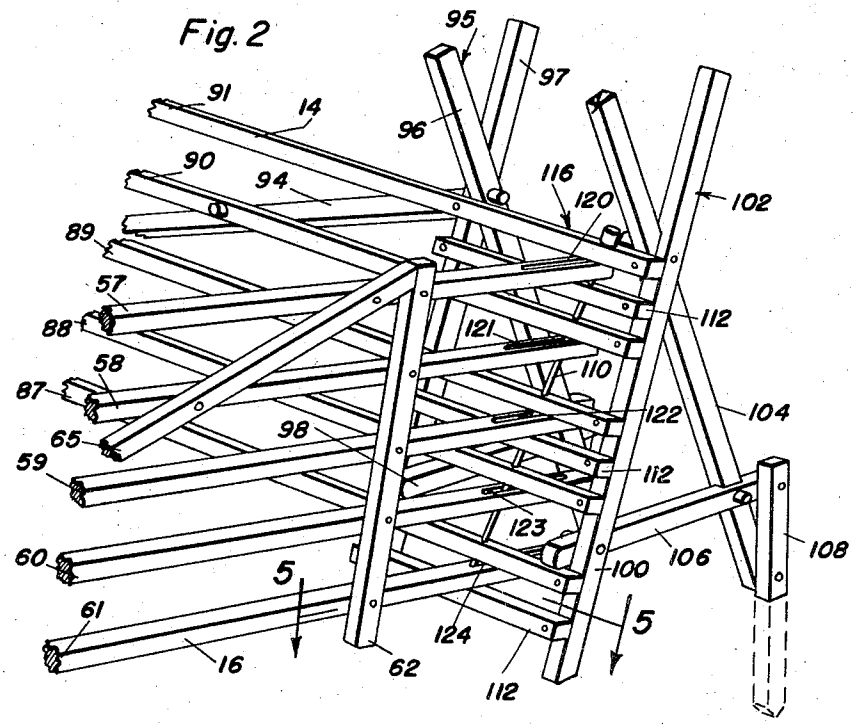


Fig. 4

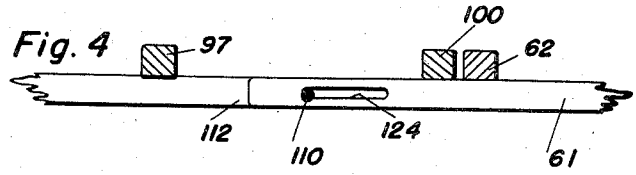


Fig. 5

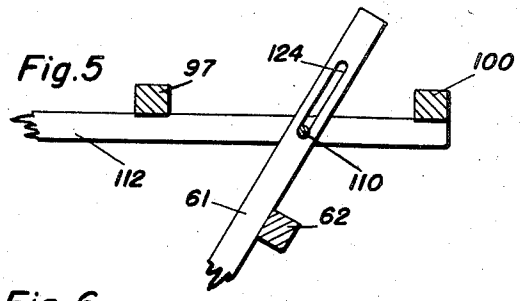
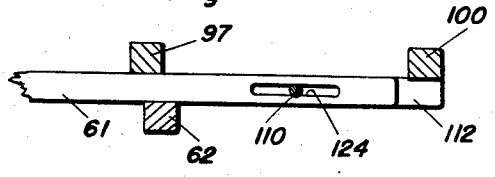


Fig. 6



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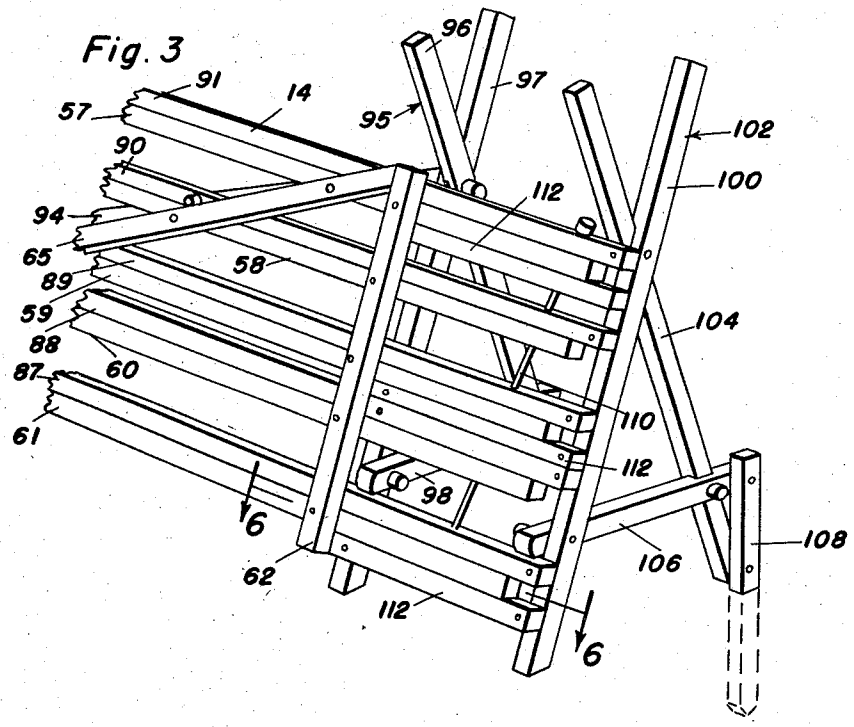
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Fig. 3



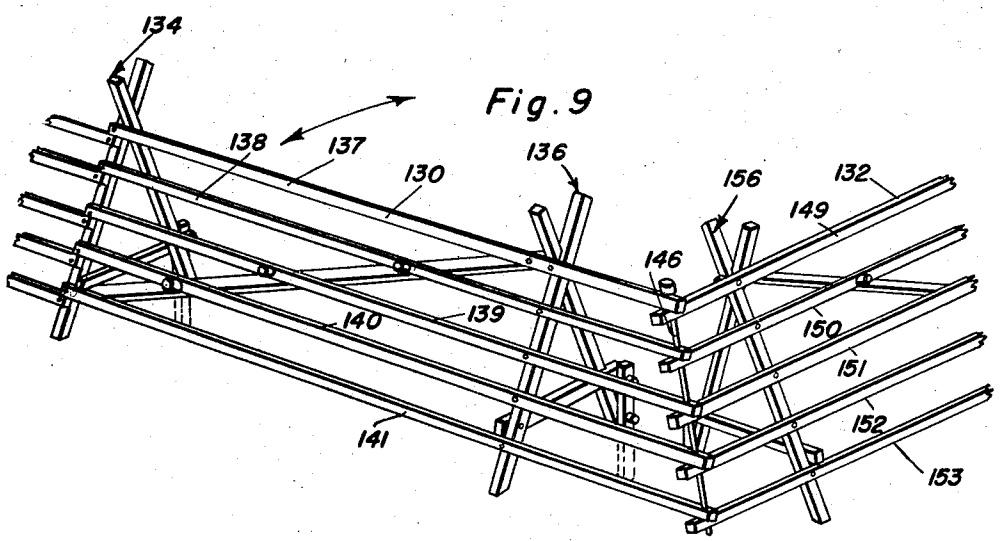


Fig. 9

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FENCE AND GATE CONSTRUCTION

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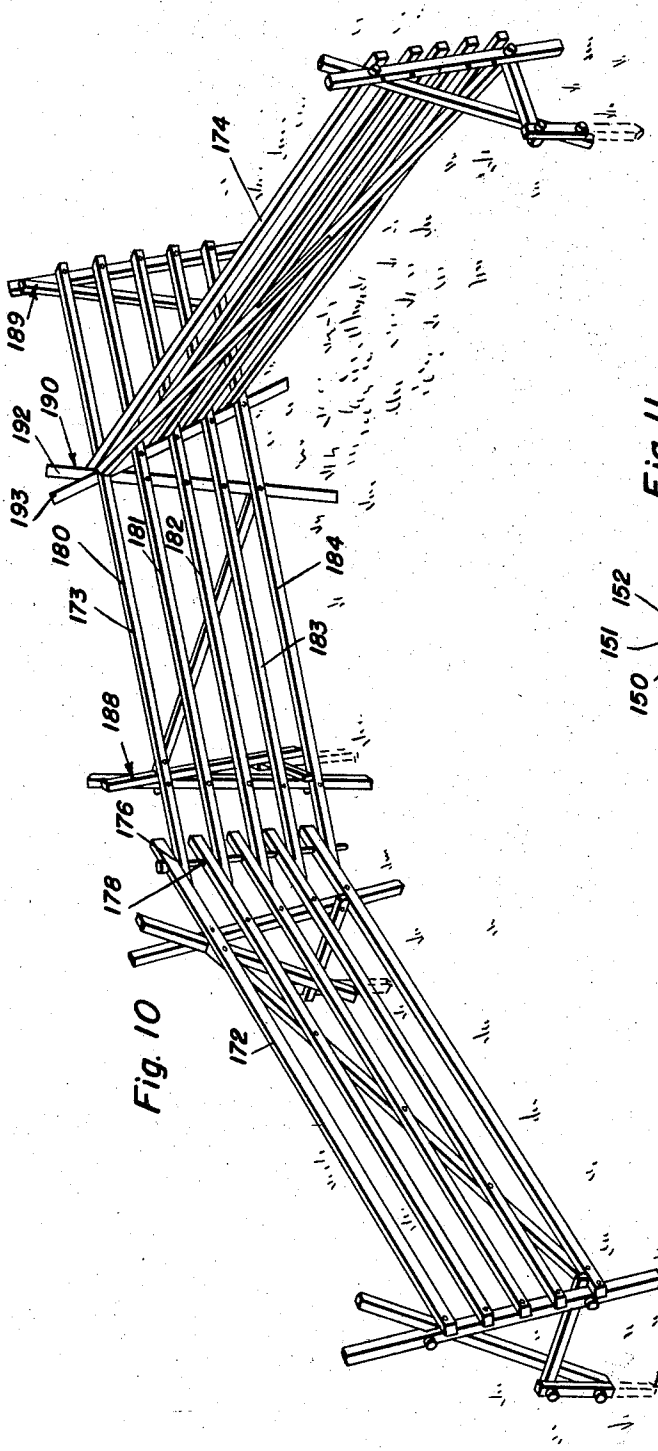


Fig. 10

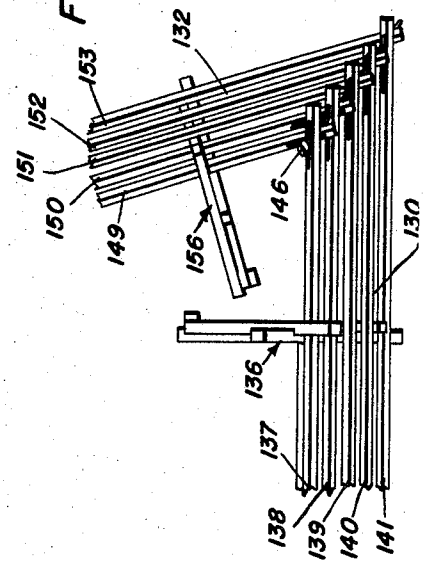


Fig. 11

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2,855,183

FENCE AND GATE CONSTRUCTION

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Application August 24, 1956, Serial No. 605,973

3 Claims. (Cl. 256—26)

This invention relates to a prefabricated fence and more particularly to a prefabricated rail fence made in portable or semi-portable panels adjustable to suit the needs and desires of the fencer.

An object of the present invention is to provide a readily portable fence which is easily installed and is capable of fitting substantially any corner regardless of the irregularities of the terrain and which will be sturdy enough to withstand wind and storms. Ordinarily, a readily portable or semi-portable fence is not particularly substantial. Due to the structural organization in the fencing of the invention, the fence constructed in accordance therewith is very substantial and yet it can be knocked down for storage or removal in a very short time.

A further object of the invention is to provide a fence which is not only portable and substantial but also attractive in its rustic, natural appearance, the entire fence being preferably constructed of wood.

A further object of the invention is to provide a fence which is attractive and yet which is strong, sturdy and practical, the fence being readily portable for easy transportation and after installation, the fence being so constructed that it is capable of being moved from one place to another with a minimum of effort and redirected to assume new angularity, as in fencing different lands or different parts of the land, and the fence being arranged to fit the valleys and swells in the land.

A more specific object of the invention is to provide a fence construction of panels, each panel being made of a number of rails which are supported by frames that have arms which are in a sloped plane, the ends of the rails being apertured in order to accommodate connecting pins that pass through the apertures and the rails of an adjacent panel in order to form a straight run, corner, gentle or steep curve, a gate or an intersection for another length or run of fence.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a perspective view of a part of a fence constructed in accordance with the invention, this part of the fence including a gate which is in the closed position;

Figure 2 is a perspective view showing a fragment of the gate and the panel to which the gate is hingedly connected, the gate being in the partially open position;

Figure 3 is a perspective view of the hinge connection between the gate and adjacent panel, the gate being completely open;

Figure 4 is an enlarged fragmentary sectional view taken on the line 4—4 of Figure 1 and showing the hinge connection between the gate and adjacent panel when the gate is in the fully closed position;

Figure 5 is a fragmentary sectional view taken on a line 5—5 of Figure 2 and showing the same part of the gate and panel adjacent to the gate with the gate in the partially open position;

Figure 6 is a sectional view taken on the line 6—6 of Figure 3 and showing the same part of the gate and panel adjacent to it with the gate in the completely open position;

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

Figure 8 is an enlarged sectional view taken on a line 8—8 of Figure 1 and illustrating a suggested means for holding the gate in the latched condition;

Figure 9 is a fragmentary perspective view of a corner which is constructed in accordance with the invention, this corner being made on flat ground or approximately flat ground and showing that the corner may be made at a 90° angle, or larger or smaller angle;

Figure 10 is a fragmentary perspective view of a fence which is constructed in accordance with the invention, this fence including three panels, two of the panels being joined at an obtuse angle and on a slight hill while a different pair of the three panels is shown joined in order to form an intersection, this also being on a grade; and

Figure 11 is a top view of a corner enclosed at an acute angle by two panels of the fence.

In the accompanying drawings there is a fence constructed in accordance with the invention. This fence is made completely of wood thereby having no metal parts which would weather in a manner different from the weathering of the wood in the fence. Various techniques may be adopted to improve the quality of the fence such as treating the wood to withstand moisture and repel insects, fungus growth, etc. Any type of wood may be used depending on the quality of fence desired, sales appeal and other factors which are not within the scope of this description, but which assume importance insofar as sales and marketability are concerned.

Attention is first invited to Figure 1 where there is a fragmentary part of fence **10** illustrated. A fence is constructed of an indefinite number of panels depending on the size of enclosure which is necessary. In Figure 1 there are five panels **12**, **14**, **16**, **18** and **20**, respectively. Panels **12** and **20** are fragmentarily illustrated while the other panels are shown completely. A typical panel **18** has five parallel rails **21**, **22**, **23**, **24** and **25** supported near one set of ends by means of an A-frame **26** having arms **27** and **28** notched as at **30** and joined by means of a wooden pin **32** near their upper ends. Dowels or other preferably, but not necessarily, non-metallic means are used to join the individual rails to the arm **27** of frame **26**. Diagonal brace **34** is secured by wooden dowels **36** or the like to the five rails and if found necessary or desirable, secured to the frame **26** near its upper end and to a frame **40** near or at the opposite end of the panel **18**. Diagonal brace **34** has an important function. By it and the others like it, on uneven ground, the rails can be made to stay parallel with the ground and the arms **41** made to stand plumb.

Frame **40** is an A-frame including arms **41** and **42**, and it is constructed identically to A-frame **26**. The extremities of the five rails **21**, **22**, **23**, **24** and **25** are mounted on the arm **41** of the frame **40** and are attached thereto by means of dowels or other fasteners. Frame **40** may be considered a part of panel **18** or a part of panel **20** or a part of both inasmuch as the extremities of rails **44**, **45**, **46**, **47** and **48** of panel **20** are also secured thereto, being superimposed with respect to the extremities of the rails **21** through **25**, inclusive. Inasmuch as frames **26**, **40** and all others like it are A-frames, the arms that support the rails of the fence panels are retained in a plane which is sloped with respect to the terrain on which the fence is mounted.

Brace **50** is pinned, doweled or connected by other

fasteners to the A-frame 26, being secured explicitly to the arms 27 and 28 thereof near their lower extremities which are designed to rest on the ground. A stake 52 is driven from a few inches to a few feet into the ground (depending on the permanency of installation which is desired) and is fastened to brace 50 and the frame 26, for example, arm 28 thereof. Stake 52, brace 50 and the arms of frame 26 are separately connected for easy transportation that is, for facility in packaging when transporting. In order to reduce the length of diagonal brace 34 it, too, may be made sectional with a standard form of splice 54 at the junction of the sections thereof. At the places where brace 50 connect to the arms 26 and 28 there may be notches in the arms but preferably in the brace 50, this lending to aid in the rigidity and support of the fence panel 18 and any panels connected thereto.

Panel 16 is of a construction somewhat similar to the described panel 18. However, it functions not only as a panel in the fence but also as a gate inasmuch as it is capable of swinging from a full closed position shown in Figure 1 to an open position. Panel 16 is made of rails 57, 58, 59, 60 and 61 held spaced apart the same distances as rails 21, 22, 23, 24 and 25 inasmuch as they are interfitted between their extremities thereof. The frame 62 for holding the rails 57 through 61 assembled consists of a pair of parallel frame members 62 and 63 that are normal to the rails. They are attached by non-rusting fasteners, preferably wooden dowels, and have the diagonal brace 65 connected to the upper end of one and the lower end of the other of the braces 62 and 63. The diagonal brace 65 is secured to the several rails which make up the panel 16.

One set of ends of the rails 57, 58, 59, 60 and 61 are mounted separably on leg 66 of the A-frame 68. This A-frame is identical in all respects to the A-frames 26 and 40 and includes in addition to arm 66, an arm 69 connected by dowel pin 70 to arm 66. Brace 72 which is identical to brace 50, and stake 74 which is the same as stake 52, are secured to the arms 66 and 69 in order to firmly anchor the frame 68 at the end of panel 18. The extremities of the rails 21 through 25, inclusive, are doweled or otherwise secured to arm 66, and the extremities of arms 57 through 61 are adapted to come to rest on the front surface of the inclined arm 66 directly below the said ends of rails 21 through 25. Crossties 75 are secured to the arms of the frames 26 and 68 so as to hold both of the frames as a unified rigid structure. Locking pin 78 is adapted to fit in aligned holes in a rail of panel 16 and a rail of panel 18 so as to retain the gate in the closed position. An idle rest hole 80 for the dowel pin 78 is located near the latching hole 81 in rail 23 so as to retain the dowel pin 78 when it is not in use as a latching bolt.

Panel 14 is constructed of rails 87, 88, 89, 90 and 91 that are supported at one set of ends on an arm 92 of A-frame 93. This A-frame is similar to frame 40 in both construction and function. Diagonal brace 94 is secured to all of the rails 87 through 91, inclusive, and may be attached to the A-frame 95 which constitutes a part of panel 14. Frame 95 has crossed arms 96 and 97 together with brace 98 and a stake, the brace 98 and stake being identical to the brace and stake 50 and 52, respectively, shown in Figure 7. Rails 87, 88, 89, 90 and 91 are connected by non-rusting fasteners near, but not at the ends thereof to the arm 97. The extremities of these rails are connected by similar fasteners to the arm 100 of A-frame 102, the latter having another arm 104 to which brace 106 is attached, the latter being anchored by means of stake 108 which is adapted to be driven into the ground. The space between frames 102 and 95 is used for accommodating pin 110, the latter functioning as a hinge pin. The two frames 102 and 95 are held spaced apart a uniform distance by means of crossties 112.

The hinge 116 for the panel 16 includes the pin 110 and is seen best in Figures 2–6. The hinge pin 110 is

in the same plane as the rails of the fence inasmuch as it passes through apertures in rails 91, 90, 89, 88 and 87 that are formed between the frames 95 and 102. The ends of rails 57, 58, 59, 60 and 61 have slots 120, 121, 122, 123 and 124 through which the pin 110 passes. By having the pin 110 arranged at an angle with respect to a vertical plane and in the plane of the rails and by having the slots in the rails of panel 16, the gate may be swung in an approximately horizontal plane and when in the full open position rests with its rails nested with the rails of panel 14, the latter forming a rest for panel 16 while it is in the gate open position.

Attention is now invited to Figure 9 which demonstrates a manner of connecting adjacent panels 130 and 132 in order to form an outside corner on approximately flat ground. Panel 130 has frame 134 at one end and frame 136 spaced from the opposite end of each rail 137, 138, 139, 140 and 141. The A-frames are identical to the previously described A-frames, and the extremities of rails 137 through 141 are in vertical echelon with diagonally bored passages therein in order to accommodate pin 146. This pin has a head on it and passes through similar passages in the extremities of rails 149, 150, 151, 152 nad 153 of the panel 132. The extremities of these last mentioned rails are invertical echelon and supported by A-frame 156. It is appreciated from inspection of Figure 9 that the angularity of the corner may be varied by moving either of the panels forming the corner in the direction of the arrow.

In Figure 11 there is the same corner as in Figure 9, including panels 139 and 132, but they are adjusted to form a corner which encloses an included acute angle. The same panels may be adjusted through an angle of 90° and to an obtuse angle. An example of fence panels joined at an obtuse angle is seen in Figure 10.

Panels 172, 173 and 174 are illustrated in Figure 10. Considering first panels 172 and 173, they are connected together by having their rails overlapped as at 176 and by having pin 178 passed through aligned apertures in the overlapped parts of the rails of the two panels. These rails are supported in a manner identical to the description relating to the support of the other rails of the other panels in the fence. Panel 173 has rails 180, 181, 182, 183 and 184 supported by A-frames 188 and 189 located near one set of ends (188) thereof and frame 189 located at the opposite set of ends thereof. But, between the ends of the rails 180 through 184, there is a slightly different frame 190 which includes arms 192 and 193 crossed, these arms being secured by rustless fasteners to the rails 180, 181, 182, 183 and 184. One of these accommodates the extremities of the rails of the fence panel 174, and the last mentioned rails are secured thereto by rustless fasteners. By varying the angularity of the arms of the A-frame 190 compensation for elevation changes in the terrain is obtained. As is apparent from Figure 10, the junction of panels 173 and 174 forms a T or may be used to form an L intersection for the fence.

In constructing a fence in accordance with the invention the panels are preferably already prefabricated, requiring only installation of the A-frames in accordance with the desires of the owner. The frames are set up by merely arranging one arm at proper angularity to the other arm, the other arm already having the rails fastened thereto. At the notched junction of the two arms of the A-frame under consideration the pin is tightened, and the lower horizontal braces applied. The stakes are driven into the ground the desired distance and attached to the brace and the lower part of the frame to which the brace is attached.

The panels are joined by using the long dowel pins described herein, and where irregularities of terrain require, the slotted type rail is adapted for compensating for the inclinations and declinations.

The foregoing is considered as illustrative only of the

principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A prefabricated rail fence which is adjustable during erection to suit terrain slopes and irregularities and to turn to practically any angle, said fence comprising a plurality of panels and means to connect the confronting ends of said panels, at least one panel comprising an A-frame having a first and a second arm, a pivot pin connecting said arms near the upper ends thereof, a plurality of rails secured to said first arm and maintained thereby in a sloping plane, a brace secured to both of said arms, a stake secured to said brace and one of said arms, said connecting means including a titlted hinge pin extending through said rails and disposed in said sloping plane, a panel adjacent to said one panel constituting a gate and having rails which are provided with slots near their ends, said ends of said gate rails being in contact with the rails of said panel, and said tilted hinge pin being passed through said slots in said rails.

2. A gate for a prefabricated rail fence comprising an A-frame having a first and a second arm, a plurality of rails secured to said first arm and maintained thereby in a sloping plane, means securing said A-frame to the ground, a tilted hinge pin extending through an end of said rails and disposed in said sloping plane, a panel consituting a gate and having rails which are provided with slots near their ends, said ends of said gate rails being in contact with said rails, and said tilted hinge pin being passed through slots in said rails.

3. A prefabricated rail fence comprising a plurality of panels and means to connect confronting ends of said panels, at least one panel comprising an A-frame having a first and a second arm, a pivot pin connecting said arms near the upper ends thereof, a plurality of rails secured to said first arm and maintained thereby in a sloping plane, brace means secured to both of said arms, means on said frame for securing said frame into the ground, said connecting means including a tilted hinge pin extending through said rails and disposed in said sloping plane, a panel adjacent to said one panel constituting a gate and having rails which are provided with slots near their ends, said ends of said gate rails being in contact with the rails of said panel, and said tilted hinge pin being passed through said slots in said rails.

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