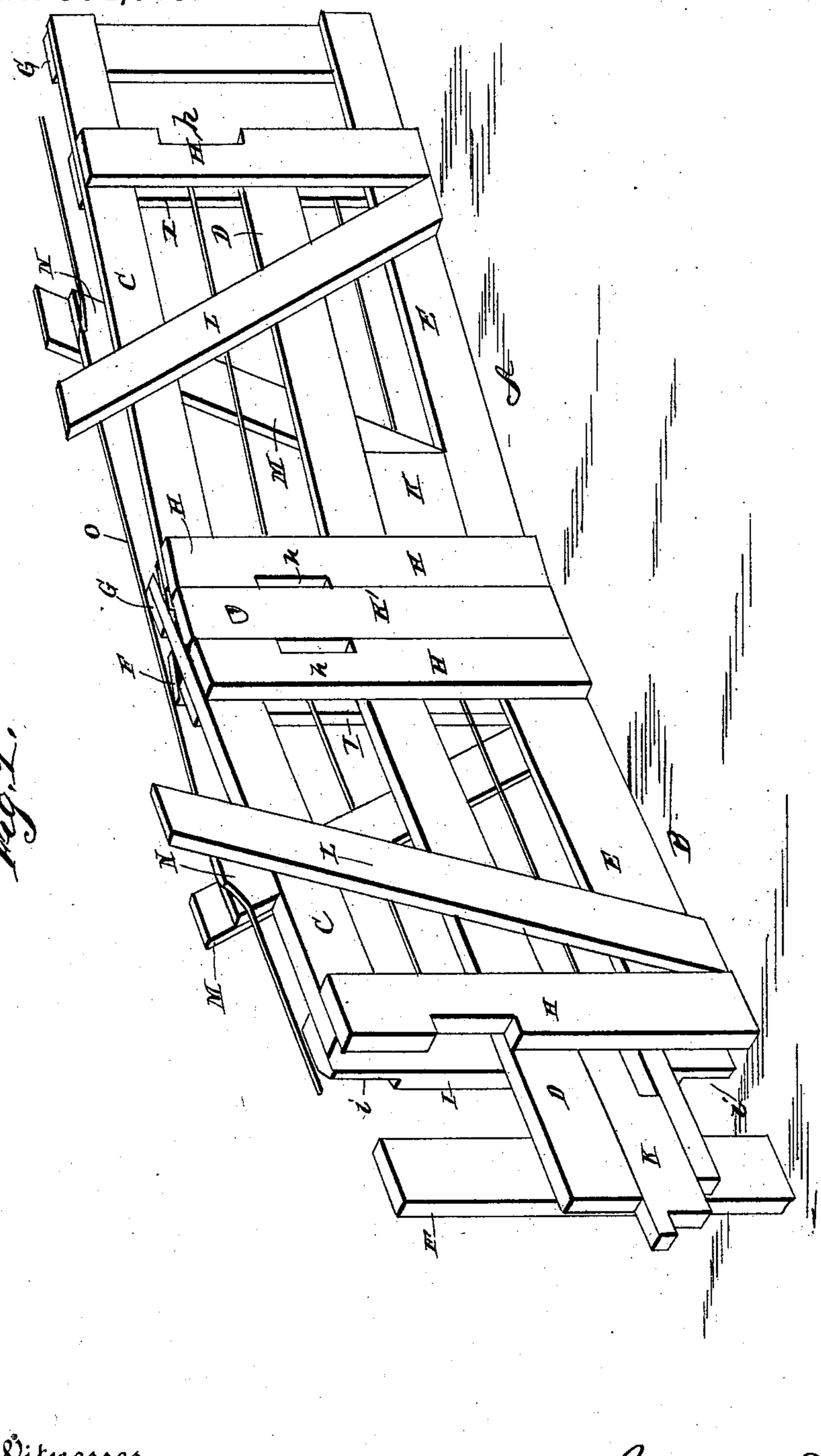
(Model.) 2 Sheets—Sheet 1.

G. S. SPRING.

FENCE.

No. 364,685. Patented June 14, 1887.



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(Model.) 2 Sheets—Sheet 2.

G. S. SPRING.

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Fig. 2.

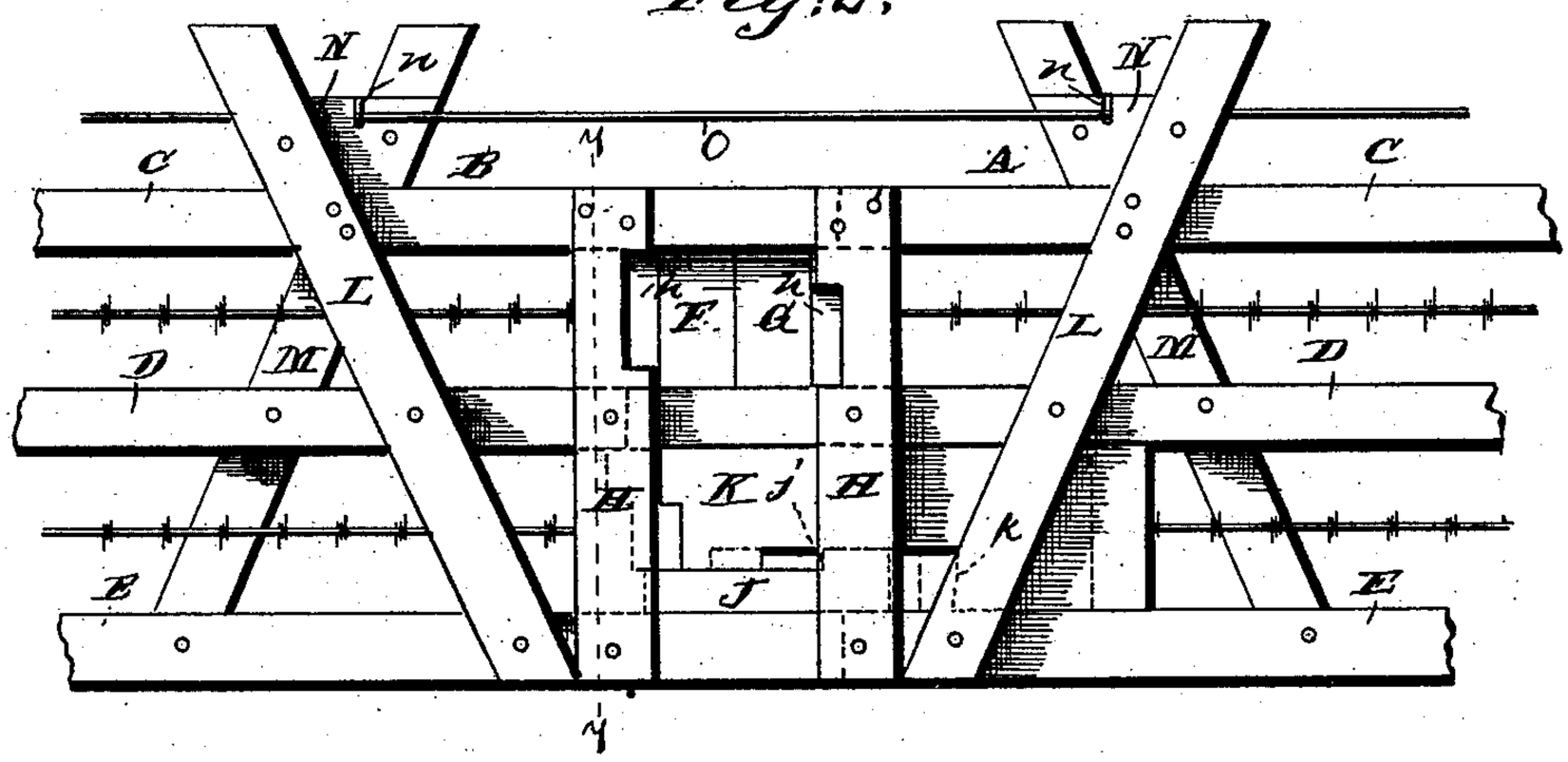


Fig. 3.

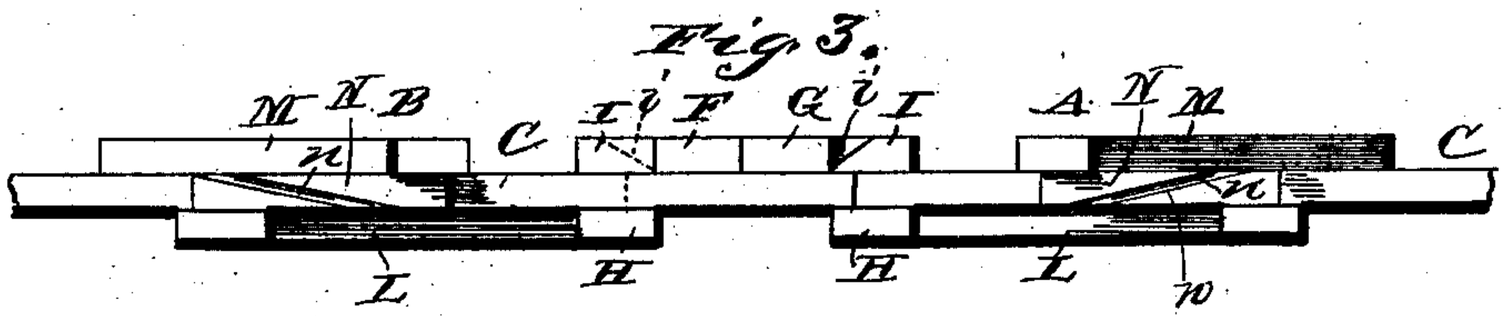


Fig. 4.

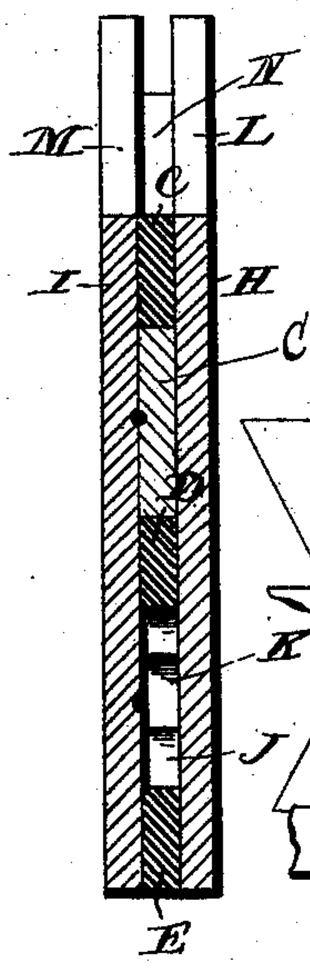


Fig. 5.

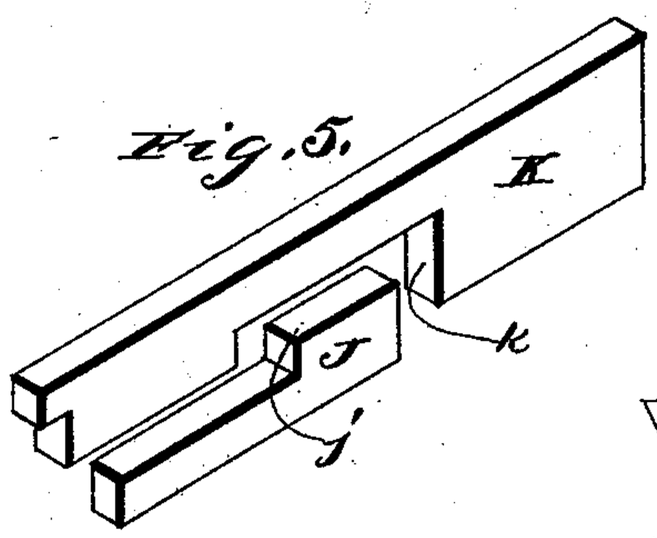
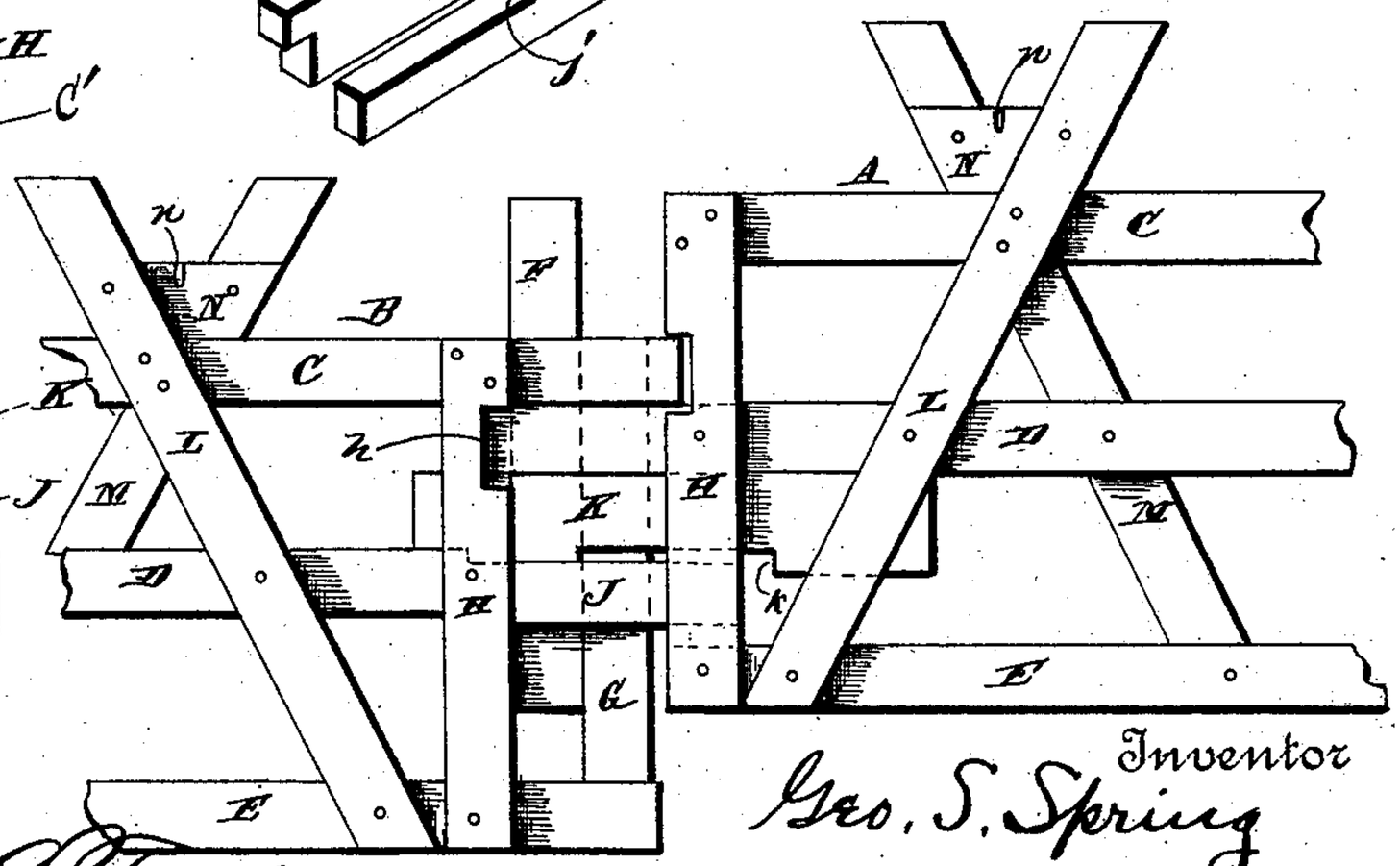


Fig. 6.



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UNITED STATES PATENT OFFICE.

GEORGE SQUIRE SPRING, OF GENEVA, OHIO.

FENCE.

SPECIFICATION forming part of Letters Patent No. 364,685, dated June 14, 1887.

Application filed November 20, 1886. Serial No. 219,501. (Model.)

To all whom it may concern:

Be it known that I, GEORGE SQUIRE SPRING, a citizen of the United States, residing at Geneva, in the county of Ashtabula and State of Ohio, have invented new and useful Improvements in Fences, of which the following is a specification.

My invention relates to improvements in portable fences; and it consists of the peculiar combination, construction, and arrangement of the various parts for service, substantially as hereinafter fully described, and particularly pointed out in the claims.

The primary object of my invention is to provide an improved portable fence of novel construction, the sections of which can be adjusted in line with each other to form a straight fence, or at an angle to form a worm-fence, or an inclosure for corralling cattle, &c.

A further object of my invention is to provide an improved fence of the class named with means for securely locking the sections thereof in their adjusted positions, so that they will be very materially braced and strengthened; and a further object of my invention is to provide a brace or tension rod for the upper ends of the sections, so that they will be further braced and thereby held in their proper positions, so that the necessity for posts which are driven in the ground is avoided.

A further object of my invention is to provide a combined board and barbed-wire fence in which the barbed wire will be shielded from doing injury to stock.

In the accompanying drawings, which illustrate a portable fence embodying my improvements, Figure 1 is a perspective view of my improved fence with the sections adjusted to form a worm fence. Fig. 2 is a side elevation showing the fence adjusted for use as a straight fence. Fig. 3 is a top plan view thereof. Fig. 4 is a vertical transverse sectional view on the line *y y* of Fig. 2. Fig. 5 is a detached detail view of the means for locking the fence-sections together when they have been adjusted in line with each other to form a straight fence. Fig. 6 is an elevation showing the sections of the fence adjusted one above the other to accommodate unevenness in the ground.

Referring to the drawings, in which like letters of reference denote corresponding parts in all the figures, A and B designate two of the meeting sections of a fence embodying my invention. Each section is provided with three or more horizontal rails, C D E, arranged parallel with each other, and to the outer extremities of the rails C E of the section A of the fence is affixed a vertical rail, G, while a rail, F, is similarly affixed to the corresponding end of the rail D of the section B, as clearly shown in Figs. 1 and 6, each fence-section having one of the said rails G at one end, and a rail, F, at its opposite end, the said rails being arranged on the outer side or face of the fence.

Vertical rails H I are arranged on opposite sides of the horizontal rails C D E, and the rails I of each section of the fence are provided with transverse beveled or notched portions *i* in their outer edges, (see Fig. 3,) in which the ends of the horizontal rails of the other fence-section are adapted to fit or take when the said sections are connected together, these notches in the rails of the meeting sections being inclined or beveled in reverse directions.

The vertical rail H of each fence-section is provided with a notch, *h*, in its inner edge and near the upper end thereof, as shown in Fig. 1.

A short stub-rail, J, is arranged between the horizontal rails D E of each section, and this rail is secured or affixed to the rails F I, to brace or strengthen the same, and to provide means for limiting the play of a sliding key. Blocks C′ (see Fig. 4) are inserted between the bars H I and the rails C D, to close the openings between them. This rail extends between the pair of vertical rails H I of the section A, and in its upper edge it has an integral stop or enlargement, *j*, which projects upwardly therefrom, and on the upper side of this short fixed rail is fitted a sliding key, K, which is provided with a notch or recess, *k*, in its lower edge, into which the stop or enlargement *j* on the fixed rail fits, so that the ends of the slot will come in contact with the ends of the stop or enlargement, and thereby limit the play or movement of the key, the recess in the key being of sufficient length to insure the necessary sliding movement thereof. The key K is fitted snugly between the pair of rails H I at the end of the fence-section, where it is located, and

the rails D and J, so that it is prevented from becoming disconnected from the fence-section, while at the same time it is free to have the necessary movement in order to adjust it to lock the meeting ends of the fence-sections together.

K′ designates a vertical locking-key, which is provided with the beveled side edges, *k*′, which are adapted to impinge against the side edges of the vertical rails H when the fence-sections are arranged at an angle to each other to form the worm fence, the key being fitted between the edges of the vertical rails to force the latter apart, and thereby hold the fence-sections in their proper position.

L M designate inclined rails, which are affixed to the horizontal rails of the fence-section, on opposite sides thereof. These rails or bars are inclined in reverse directions, and they cross one another at their upper ends, and between the crossed upper ends of the inclined rails is fitted a supporting-block, N, which is rigidly affixed or secured in place. The upper edge of each of these fixed supporting-blocks is provided with an oblique transverse groove, *n*, and in these grooves is fitted a binding or straining wire, O, which extends along the entire length of the fence and serves to connect and brace the sections of the fence together, the ends of this binding or straining wire being connected to one of the horizontal rails of the end fence-sections, either by bending the wire downwardly and then twisting it around one of the said rails, or by means of another independent wire, which is connected with the end of the binding-wire and the fence section, as will be readily understood.

This being the construction of my improved portable fence, the operation thereof is as follows: When it is desired to form a worm-fence, one of the sections, as B, is fitted or placed vertically on the ground, and the other section, as A, which is to be connected to the vertical section, is turned into an inclined position, so that the upper end of the rail F thereof will pass beneath the extended end of the rail C of the other section. The rail F of the inverted section is passed entirely beneath the said extended end of the rail C, and then the section A is caused to assume a vertical position and dropped on the ground, after which the sections A B are spread or forced apart, so that the extended ends of the upper rails, C E, of the section B will fit in the notches *i* of the section A, and thus lock the sections against vertical displacement, the rail F of the section A bearing against the inner edge of the rail G of section B, while the outer ends of the rail D and the end of the short rail J of the section A bear or fit in corresponding notches in the rail I at the end of the section B. These sections are thus arranged at an angle to each other, and the rails H lie at an angle to each other, so that the wedge-shaped key K′ can be fitted between the opposing faces of the rails H, and thus lock the sections against movement toward one another. The binding-wire O is now fitted in the grooves or notches in the fixed supporting-blocks and the ends thereof confined in place, so as to brace the parts together more securely and firmly, to effectually prevent displacement of the fence-sections relative to one another, and thereby dispense with the use of the fixed posts, which are commonly employed in this class of fences.

To form a straight fence, one of the sections, B, is placed in a vertical position on the ground, and the next section, A, is turned into a horizontal position, so that the upper end of the rail F of said section A may pass between the rails H and G of the first section, B, and the section A is now turned to an upright position, so that the extended end of the rail D of the section A will enter and turn in the notch *h* in the rail H of the section B, while the extended end of the rail C of that section will likewise enter the notch *h* in the rail H of the section A, so that the section A can be very readily turned to an upright position without hinderance from the extended ends of the sections A B. When the section A is turned to a vertical position, the rail F thereof fits between the rails I G at one end of the section B, and the horizontal rails of the meeting sections abut against each other at their ends, as shown, and all the rails C D E of both sections of the fence are arranged in line with each other and in a straight line. The sliding horizontal key K is now forced forward, so that its outer end will pass beneath the horizantal rail D of the section B and between the rails H I of the same, thereby preventing upward movement or displacement of the sections A B, and the binding-wire O is now stretched over the fixed supporting-blocks to more securely connect the fence-sections together.

In hilly or uneven ground it is desirable that one section of the fence shall be capable of elevation above the other section thereof, and thus accommodate the fence to unevenness in the ground. To accommodate the fence to this purpose, one section thereof can be readily elevated until the middle rail of one section strikes against the extended end of the upper rail C of the other section, after which the sliding key K can be moved forward to hold the elevated fence-section in its adjusted position and prevent retrograde movement thereof, as is obvious.

The sections of the fence can be arranged at an acute angle or right angles to one another to form a complete inclosure for corralling animals, as will be very readily understood, and the said sections mutually brace and stregthen one another, to dispense with the use of fixed posts and other means for anchoring the fence to the ground.

Between the horizontal rails of the fence-sections are arranged barbed wires P, which are secured to the vertical rails of the fence-sections. The barbed wire will be protected

from doing injury to the stock by the peculiar arrangement of the parts.

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

1. In a portable fence, the combination of the sections A B, each comprising the horizontal rails C D E, the vertical fixed rails F G, at the outer ends of the said horizontal rails, and the rails H I, arranged on opposite sides of the horizontal rails and in rear of the rails F G, the rails H I of each section being disposed on the same sides of the horizontal rails of the sections, and the rails H, having the notches *h* in their opposing edges to permit the extended ends of the horizontal rails of the sections to fit and turn therein in connecting the fence-sections together, and a sliding key carried by one section and adapted to take beneath one of the horizontal rails of the other section and thereby prevent vertical displacement of the two adjoining fence-sections, substantially as described.

2. In a portable fence, the combination of the sections A B, each having the horizontal rails and the vertical rails F G H I, arranged and constructed substantially as herein described, the short horizontal rail J, affixed to the vertical rail F and between the rails H I of one section, and having the fixed stop, as set forth, and a sliding key carried by one of the sections and provided with a notch or recess in one edge in which the fixed stop of the short rail fits to limit the movement of the sliding key, substantially as described, for the purpose set forth.

3. In a portable fence, the combination of the fence-sections having the horizontal rails C D E, the vertical rails F G, affixed to the outer ends of the said horizontal rails, and the parallel vertical rails H I, affixed to the horizontal rails on opposite sides thereof and in rear of the rails F G, the horizontal rails I of each section having the beveled notches *i* in their opposing edges to receive the extended ends of horizontal rails of the fence-sections, and a vertically-sliding key fitted between the opposing edges of the rails H of the fence-sections, substantially as described, for the purpose set forth.

4. In a portable fence, the combination of the sections, the fixed blocks at the upper sides thereof, and having the grooves, and the binding-wire fitted in the grooves, and connected at its ends with the fence-sections, substantially as described, for the purpose set forth.

5. In a portable fence, the combination of the sections detachably connected together at their contiguous ends in the manner described, the inclined rails having their upper ends extended above the horizontal rails, the grooved supporting-blocks fixed to fence-sections between the upper ends of the inclined rails thereof, and the binding-wire fitted in the grooves of the supporting-blocks and connected with the fence-sections, substantially as described, for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

GEORGE SQUIRE SPRING.

Witnesses:

ARTHUR R. GLEASON,

C. R. TURNER.