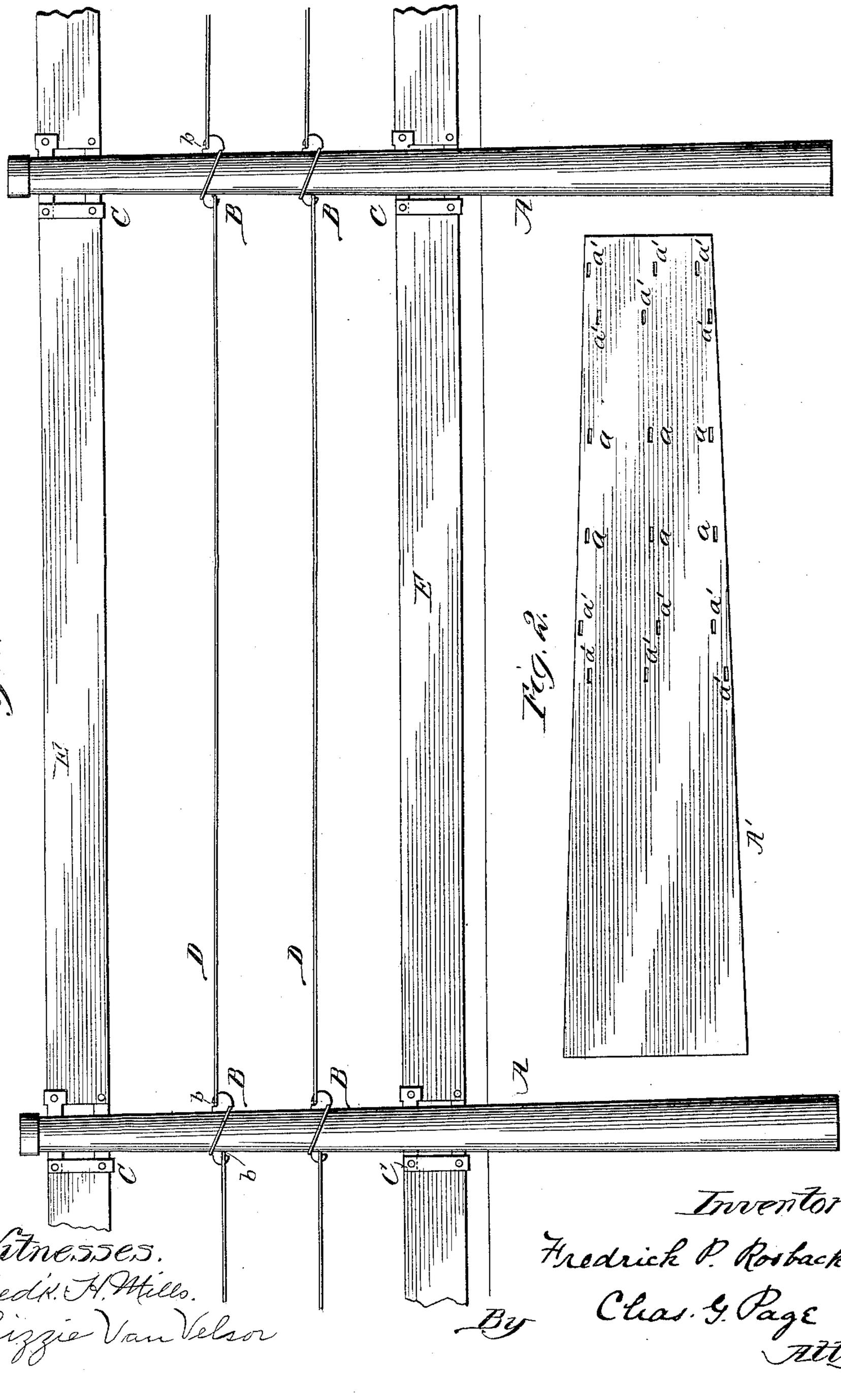
(No Model.) 2 Sheets—Sheet 1.

# F. P. ROSBACK.

## FENCE.

No. 467,836. Patented Jan. 26, 1892.

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(No Model.) 2 Sheets—Sheet 2.

# F. P. ROSBACK.

## FENCE.

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Fig. 3.


Fig. 8.

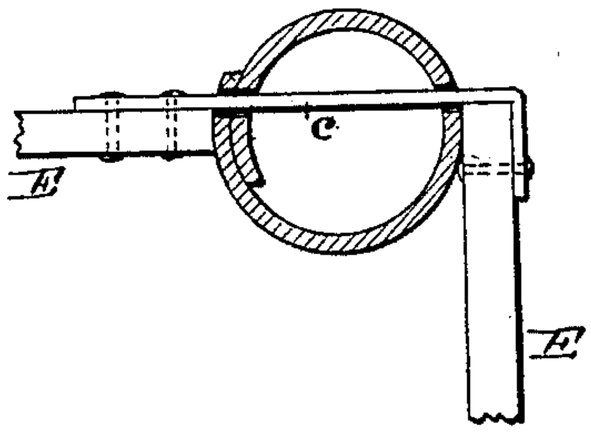



Fig. 4

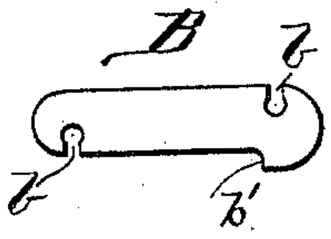



Fig. 6.

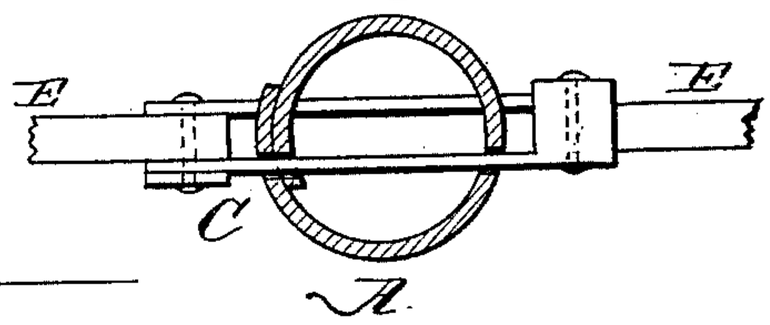



Fig. 5.

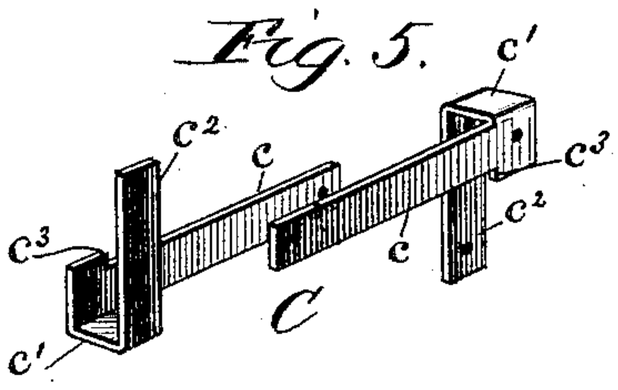



Fig. 7.

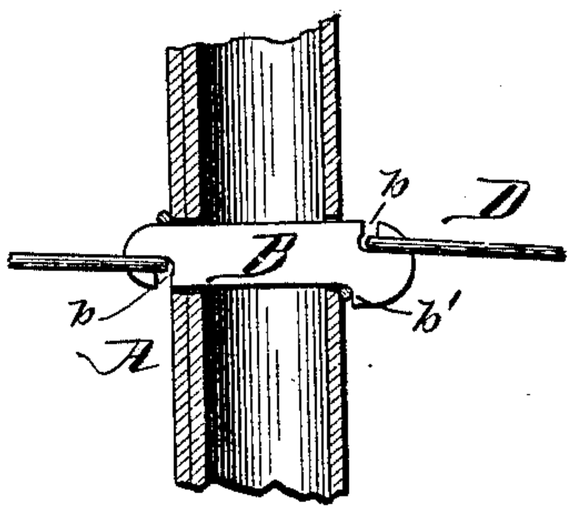
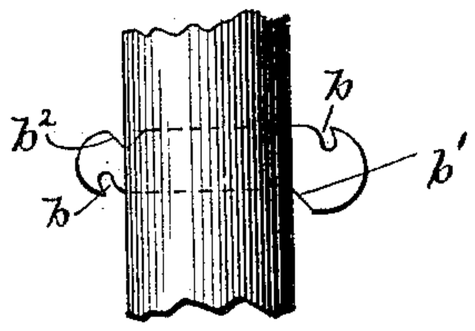



Fig. 9.

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# UNITED STATES PATENT OFFICE.

FREDRICK P. ROSBACK, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO HENRY F. BAND, OF SAN FRANCISCO, CALIFORNIA.

## FENCE.

SPECIFICATION forming part of Letters Patent No. 467,836, dated January 26, 1892.

Application filed July 24, 1891. Serial No. 400,573. (No model.) Patented in England August 4, 1891, No. 13,200.

*To all whom it may concern:*

Be it known that I, FREDRICK P. ROSBACK, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Fences, (for which I have filed an application for a patent in Great Britain dated August 4, 1891, No. 13,200,) of which the following is a specification.

My invention relates to fences involving tubular sheet-metal posts and rails composed of wires or boards or both, as may be desired.

The more prominent objects of my invention are to provide a simple, economical, and durable construction of fence which can be easily and rapidly formed along railroads, farms, and the like; to provide simple and effective devices for holding board and wire rails; to utilize said holding devices as means for securing along the seam a sheet of metal rolled to form a post, and to provide certain novel and improved details, all as hereinafter set forth.

In the accompanying drawings, Figure 1 represents in elevation a portion of a fence embodying my invention. Fig. 2 represents a blank from which the fence-post can be formed. Fig. 3 illustrates one of the posts. Fig. 4 represents one of the wire-holders. Fig. 5 shows in perspective one of the board-holders with its two sections apart. Fig. 6 is a section taken transversely through the post and shows in plan one of the board-holders and the end portions of a couple of board-rails held by the same. Fig. 7 is a longitudinal central section through a portion of the post and illustrates the application of one of the wire-holders and a wire. Fig. 8 shows a section taken transversely through the post and illustrates in plan a board-holding device extended through the post and secured to a couple of board rails at a corner of the fence. Fig. 9 represents in elevation a portion of the post and a wire-holder applied thereto and provided with shoulders in addition to its notches.

The construction of fence illustrated in Fig. 1 involves a series of tubular sheet-metal posts A, provided with wire-holders B and board-holder devices C. The wires D may be single or double and may be barbed, if so desired. The boards E are arranged to provide rails between the same. This arrangement may, however, be varied—as, for example, the fence may for certain purposes comprise any desired number and arrangement of board rails, without the wire rails, or any desired number and arrangement of wire rails without the board rails, or any desired number and arrangement of board rails and wire rails. I prefer, however, to construct the fence with both wire and board rails, for the reason that, while the use of wires involves economy and various other known advantages, the provision of one or more board rails permits the fence to be readily seen by cattle, and hence practically checks them from running into the fence and injuring both fence and themselves.

The wire-holders B are formed by plates or bars which have their ends adapted to receive and hold the wires. These wire-holders may be said to form keys, which are thrust through slots in the post and made of such length that when thrust through the post to a proper extent their ends shall extend from opposite sides of the post, so as to receive and hold the wires.

Each wire-holder B is provided with a couple of wire-receiving notches *b*, one at each end of the holder, it being observed that the length of the wire-holder and the distance between its notches are so proportioned relatively to the diameter of the post that when the holder is in position for receiving the wire its notches will be comparatively close to the post in place of being set out at some distance from the same, as in United States Letters Patent No. 66,321, to Gore, July 2, 1867, wherein the eyes or loops formed at the ends of wires which extend through the post are set out at a considerable distance from the same. The fence-wires engage in the notches of their respectively-allotted holders and are so carried about the holders and the posts as to securely tie the holders to the posts without either knotting the wires or using supplemental tie-wires. The mode of thus applying the fence or line wires is illustrated in Figs. 1 and 7, wherein it is seen that each wire is made to take a half-turn about one end portion of its allotted holder at one side of the fence-post and engage in the notch *b* at said end of the holder and then carried

round the fence-post to the opposite side thereof and there made to take a half-turn about the other projecting end portion of the holder and engage in its allotted notch. By such arrangement a wire of any length can be readily applied, and when so applied will securely tie the holder to the post. The post, therefore, can be provided with oppositely-arranged slots, and the wire-holder in a completed condition can be simply thrust through the slots, and then, without bending or applying any sort of fastening devices to the holder—such as rivets or extra wires—it can be securely fastened in place by the wire rail, which as it is unrolled from a coil or reel can be easily bent so as to take the hereinbefore-described half-turns or half-hitches about the projecting ends of the holders.

As a further advantage and matter of improvement involved in the foregoing the wire-holders and rail-wires serves as means for fastening a rolled sheet-metal post along the seam, and thereby enable me to dispense with rivets for such a purpose and to provide an exceedingly simple form of wire-holder, which, in conjunction with the rail-wire, serves to fasten the post. While, therefore, the wire-holders B can be applied to a tubular sheet-metal post fastened, if desired, in any suitable way along the seam, I prefer to provide a post formed by rolling a sheet-metal blank—such, for example, as the blank A′ in Fig. 2—into tubular form, with its longitudinal edge portions arranged to overlap one another, as herein illustrated. The slots *a* for the wire-holders B can be so formed through the blank that when the latter is rolled into tubular form the slots along its longitudinal edge portions will register, as in Fig. 7, wherein a couple of registering slots formed through the overlapping edge portions of the tubular sheet are diametrically opposite a slot previously formed along the longitudinal middle of the blank, as in Fig. 2.

Referring to Figs. 1 and 7, it will be seen that the rail-wire engages in notches *b* of its holder at points adjacent to the post and that the two notches of the holder are respectively at opposite sides of the same, in which way the wire passes from one to the other end of the holder in a direction diagonally to the length of the post; also, that the portions of the wire which are carried over and under the unnotched sides of the holder abut and bind against the post, so that by exerting a proper tension upon the wire in carrying it from one side to the other side of the post it will in effect provide a pair of connected shoulders or abutments respectively held against opposite sides of the post and serving, therefore, to secure the same along the seam, it being observed that the portion of the post below the ground-line need not be secured along the seam for purposes set forth in my application, Serial No. 378,114, for Letters Patent of the United States.

As a matter of further improvement, I provide each wire-holder B with a shoulder *b′*, which serves to so widen the holder adjacent to one end thereof that it cannot be thrust one way entirely through the slots in the post. A portion of the rail-wire lies between the said shoulder *b′* and the post, as in Figs. 1 and 2, in which way additional security and stability are afforded and a still more reliable connection between the wire and its holder provided. I may also notch the holder, so as to provide it with another shoulder $b^2$, so that a portion of the rail-wire can lie between said shoulder and the post, and as a matter of further improvement I arrange the shoulders oblique to the post, as in Fig. 9, so that different sizes of wire rails comprising one or more strands may wedge between the post and the said oblique shoulders.

The board-holders C each comprise a couple of sections *c*, which are respectively thrust through slots in the post from opposite sides of the latter. Each of said sections comprises an oblong plate or bar, which when thrust through the post will project from opposite sides of the same, so that the ends of the rail-boards E can be secured to its said ends. The ends of the boards are held between and secured to the end portions of said sections by rivets, bolts, screws, or the like, and as a means for providing stronger and more durable connections between the boards and their respectively-allotted holders I provide each section with a laterally-arranged end extension, which is bent so as to provide it with a horizontally-arranged portion *c′*, which fits against one of the longitudinal edges of the boards, and a vertically-arranged portion $c^2$, which lies alongside of the board and which is secured to an adjacent end of the other section of the holder. The portions *c′* and $c^2$ of these holders for the boards afford, therefore, enlarged bearing and securing surfaces and permit the use of a suitable number of bolts or the like. Said arrangement also adds to the strength and durability of the fence. The slots *a′* for these board-holding devices can be formed through the blank and arranged substantially as in Fig. 2, so that when the blank is rolled into tubular form some of the slots will be through the overlapping portions of the rolled blank or sheet, as in Fig. 6. As a matter of course the ends of the boards could be set close up to the post, and thereby provide shoulders or abutments rigidly connected together and arranged at opposite sides of the post, and in such way the holders would be secured in place and the post also secured along its seam. Again, the end portions *c′* of the holders could be utilized as shoulders for the purpose last mentioned. I prefer, however, to provide each section *c* of the holder with a shoulder $c^3$, arranged adjacent to its end, so that when the section is thrust through the post to a proper extent its said shoulder shall abut against the post. When, therefore, the two sections are applied with their respective

shoulders abutting against opposite sides of the post, respectively, and said sections are tied together by fastening-bolts or the like, the board-holders will be held against end movement independently of the post and the overlapping edges of the post will be securely held together.

Where a corner is to be made in the fence, the sections *c* can be formed and applied as in Fig. 8, it being obvious that a duplicate of the section therein shown and applied to one side of each board can be applied to the opposite side of the board.

What I claim as my invention is—

1. The combination, with a tubular sheet-metal post, of a wire-holder forming a key, which is arranged to extend through slots in the post and project from opposite sides of the same, and a line or rail wire arranged to take half-turns both about the projecting ends of the holder and about the post, substantially as set forth.

2. The combination of a tubular rolled sheet-metal post having the edges of the blank from which it is formed arranged to overlap one another along the seam and provided with oppositely-arranged openings, which at one side of the post are formed through its said overlapping portions, a wire-holder forming a key, which is arranged to extend through said slots and project from opposite sides of the post, and a rail-wire arranged to engage the ends of said holder and pass about the post, so as to tie the holder in place and also secure together the said overlapping edge portions of the post, substantially as set forth.

3. The combination of a tubular sheet-metal post having the longitudinal edges of the blank from which it is formed arranged to overlap along the seam, a wire-holder B, consisting of a plate or bar notched at its ends and inserted through slots *a* in the post, and a rail-wire D, engaging in the notches of said holder and arranged to take half-turns both about the holder and about the post, substantially as described.

4. The combination, with a tubular sheet-metal post, of a holder B, extended through the post and provided with a shoulder *b'*, and a rail-wire arranged to take half-turns about said holder and pass between its shoulder and the post, substantially as set forth.

5. The combination, with a tubular sheet-metal post, of a holder B, extended through the post and provided with shoulders *b'* and $b^2$, and a rail-wire applied and arranged to pass between said shoulders and the post, substantially as set forth.

6. The combination, with a tubular sheet-metal post, of a board-holding device extended through slots in the post and projecting from opposite sides of the same, and a couple of board rails secured to the projecting ends of said holder, substantially as set forth.

7. The combination, with a tubular sheet-metal post having the longitudinal edges of the blank from which it is formed arranged to overlap one another, board-holding devices extended through slots in the post, board rails secured to said holders, and shoulders formed as herein set forth and arranged to hold the post along the seam.

8. The combination, with a tubular sheet-metal post, of a board-rail holder comprising two sections *c*, provided with shoulders and arranged to extend through the post, so that their allotted shoulders shall abut against the post respectively at opposite sides of the same, and board rails secured to said holders, substantially as set forth.

9. The combination, with a tubular sheet-metal post, of a sectional board-holder C, comprising the bar *c*, extended through the post and having lateral extension *c'*, and board rails held by said holders, substantially as set forth.

10. The combination, with a tubular sheet-metal post, of a sectional board-rail holder C, comprising the bars *c*, having lateral extensions *c'* and $c^2$, and board rails held by said holders, substantially as described.

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