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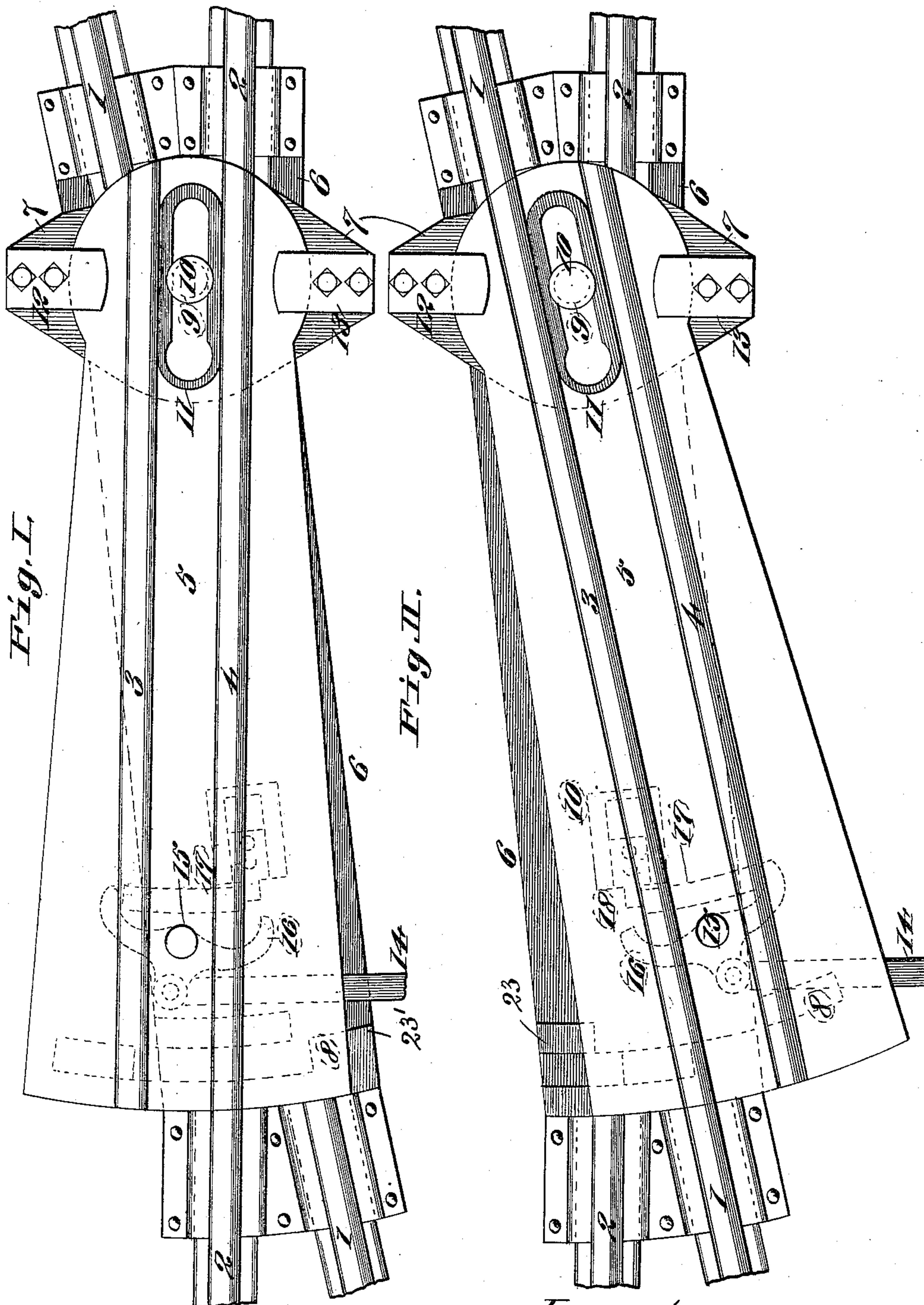
Patented July 12, 1898.

S. J. AUSTIN.  
RAILROAD OBLIQUE CROSSING,

(Application filed Apr. 17, 1897.)

(No Model.)

3 Sheets—Sheet 1.



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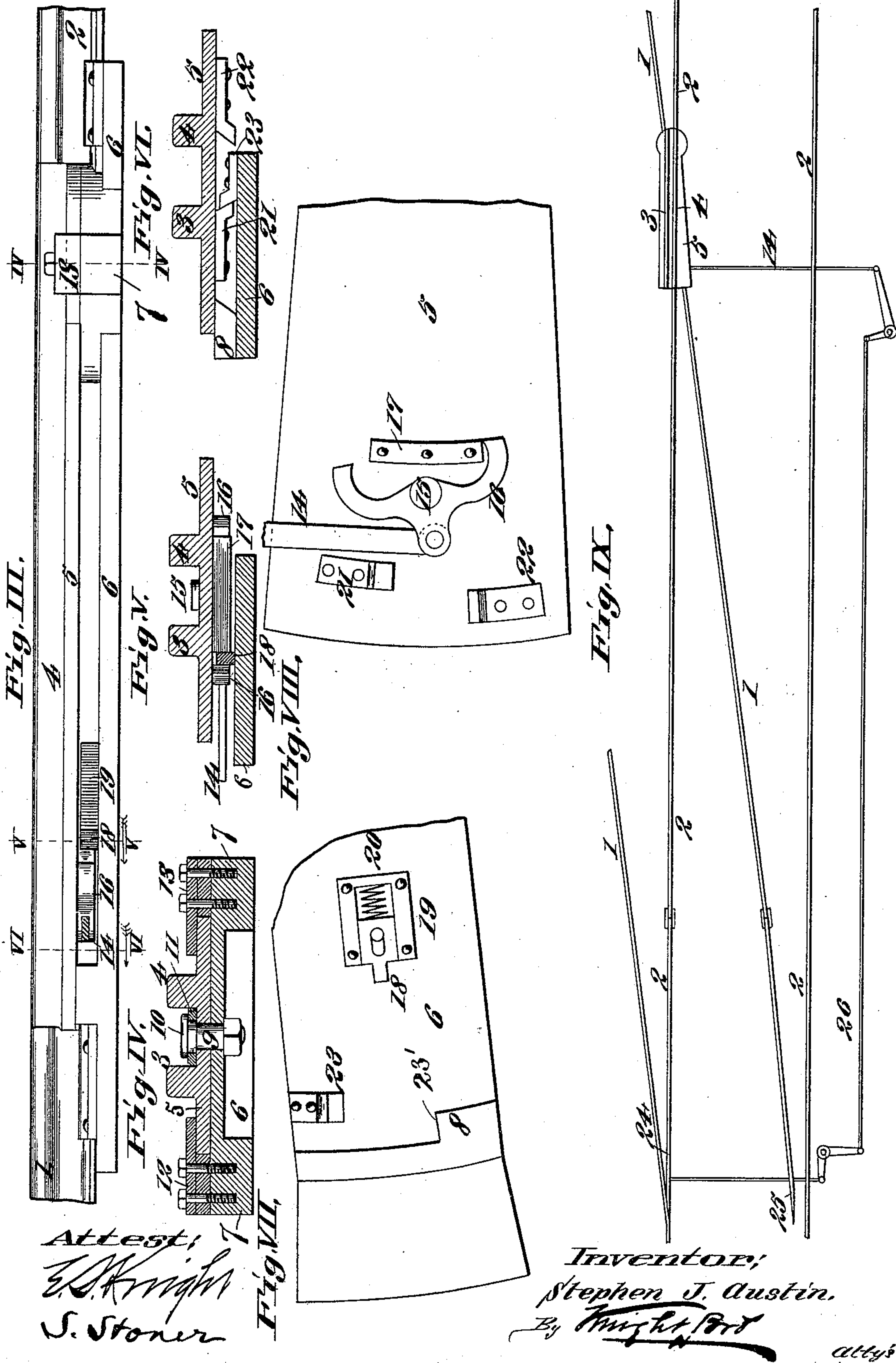
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Fig. X.

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# UNITED STATES PATENT OFFICE.

STEPHEN J. AUSTIN, OF TERRE HAUTE, INDIANA.

## RAILROAD OBLIQUE CROSSING.

SPECIFICATION forming part of Letters Patent No. 607,324, dated July 12, 1898.

Application filed April 17, 1897. Serial No. 632,636. (No model.)

*To all whom it may concern:*

Be it known that I, STEPHEN J. AUSTIN, a citizen of the United States, residing at the city of Terre Haute, Vigo county, in the State of Indiana, have invented a new and useful Improvement in Railroad Oblique Crossings, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

The object of my invention is to provide a double-rail railroad oblique crossing of simple and strong construction adapted to be easily manipulated and to prevent the rails from the main track from creeping onto the movable sections of rails.

Referring to the drawings forming a part of this specification, Figure I illustrates a top view of the movable portion of the rails with sections of the stationary rails in position to allow a train to pass over one pair of the said rails. Fig. II is a similar view to that shown in Fig. I, excepting that the movable sections are turned to allow a train to pass over the other pair of rails. Fig. III is a side elevation of that portion shown in Fig. I. Fig. IV is a cross-section taken along the line IV IV of Fig. III. Fig. V is a cross-section taken along the line V V of Fig. III. Fig. VI is a cross-section taken along the line VI VI of Fig. III. Fig. VII is a detail top view of a portion of the plate on which the movable sections rest, showing the spring which acts as a locking device. Fig. VIII is a detail bottom view of the plate on which the rail-sections are secured, showing the unlocking-jaw and upper stops. Fig. IX is a top plan view showing both the crossing and switch. Fig. X is a view similar to that shown in Fig. I, except that the rail-sections are bolted to the movable plate, whereas in Fig. I they are integral therewith; and Fig. XI is a view of the ground-plate on which the movable plate is adapted to rest, showing the spring locking device shown in Fig. VII.

1 1 are portions of a pair of fixed rails. 2 2 are portions of another pair of fixed rails crossing the first pair of rails 1 1 obliquely. 3 is a rail-section adapted to be placed coincident with the fixed rails 1, and 4 is another rail-section adapted to be placed coincident with the fixed rails 2.

5 is a movable plate to which the rail-sections

3 and 4 may be made integral, as shown in Figs. I and II, or they may be bolted thereto, as shown in Fig. X.

6 is a ground-piece to which the ends of the fixed rails 1 and 2 are bolted, and a block 7 and a guide 8 are cast solid to the same to prevent said fixed rails from creeping to the movable parts. The block 7 is provided with a pin 9, cast into it, which is adapted to engage a hole in the plate 5 and serve as a pivot therefor, said pin being provided with a circular groove near the head 10, into which a key 11 is adapted to pass for the purpose of holding the plate 5 in position.

12 and 13 are lugs secured to the ground-piece 7, which are removably attached thereto and which extend over the plate 5 and serve to hold the same in place.

14 is a lever-arm which may be operated by any proper source of power and which is pivoted to an unlocking-jaw 16 and which in its turn is pivoted to the plate 5 at 15.

17 is a lug secured to the under part of plate 5.

18 is a locking-tooth riding in a frame 19, secured to bed-plate 6, which locking-tooth is held extended by a spring 20. The lug 17 is so placed on the bottom of the plate 5 that the locking-tooth 18 will engage either end thereof, according to the position in which the plate 5 is placed in relation to the rails 1 and 2. The unlocking-jaw 16 is so placed that when swung in either direction it will strike the locking-tooth 18 and force it back against the spring 20, thus unlocking and freeing it from engagement with the lug 17 and permitting the plate 5 to be swung on its pivot 9.

21 and 22 are stops fastened to the bottom of the plate 5 for the purpose of holding the rails in their proper position, which is accomplished by the said stops engaging with the stops 23 and 23', secured to the bed-plate 6.

24 and 25 represent a switch which is of any ordinary construction and which is operated by a lever 26, which in its turn is operated by the same source of power that controls the lever-arm 14.

The device is operated as follows: By applying the power to the lever 14, supposing that the rails are in position shown in Figs. I, IX, and X, this power first forces the lever-arm 14 toward the bottom of the said figures,



which in its turn throws the inner end of the unlocking-jaw 16 against the locking-tooth 18, which locking-tooth has served to hold the device in place to withstand the vibration of any passing train. This movement of the unlocking-jaw 16 forces the locking-tooth 18 back against the spring 20, which frees the said unlocking-jaw from the lug 17, and the force on the lever-arm 14 being further exercised the plate 5, secured to the said unlocking-jaw at 15, is turned on its pivot 9 away from the rails 2 2, with which heretofore the rail 4 has been coincident, so as to bring the rail 3 coincident with the rail 1 1. When the said plate has been turned this distance, the locking part 21 has come against the locking part 23 and further motion is stopped. The locking-tooth 18 then springs over the opposite end of the lug 17, and the device is now locked in place, but in a position to allow a train to pass over the continuous rails 1 1 and 3.

If for any purpose it is necessary to remove the plate 5 for repairs or otherwise, the key 11 is slipped away from the grooved head of the pivot 9, a special enlargement at one end thereof forming such release, and the removable lugs 12 and 13 are unbolted, which permits the plate 5 to be removed.

The advantage possessed by having double rail-sections rests in the fact that the wear is equal on fixed and movable portions alike. If one movable section were used, double wear and an uneven crossing would result. Moreover, the sections being carried on a plate of considerable width protects the turn-table mechanism beneath from snow or mud.

The lug 8 and block 7 are cast solid with bed-plate 6 to prevent the rails of the main track from creeping onto the movable rail-sections and plate 5. This creeping is occasioned were the parts not integral by reason of the expansion and contraction caused by heat and cold.

The rail-sections are arranged parallel with each other on the pivoted plate, and the pivot of the plate is located between the rail-sections near one end of the plate, so as to maintain the proper relation between the main rails and the parallel rail-sections as the switch is moved. It will therefore be seen that the ends of the rail-sections move laterally into and out of line with the adjacent main rails, the said ends being cut in the line of movement.

I claim as my invention—

1. A railroad oblique crossing, comprising a bed-plate with two separately-traveled main rails at each end, an elongated pivoted plate located between the ends of the main rails, and parallel rail-sections carried by the plate; the pivot of said plate being located near one end thereof, with its center between said rail-sections and forward of the ends of the adjacent main rails, whereby the ends of the rail-sections move laterally into and out of line therewith, substantially as described.

2. A railroad oblique crossing, comprising a pivoted plate located between the ends of two separately-traveled main rails, and parallel rail-sections carried by the plate; the pivot of said plate being located within one end thereof between said rail-sections, whereby in closing the crossing the ends of said rail-sections move laterally inward from the main rails at the pivot end and outward from the adjacent main rails at the free end, substantially as described.

3. A railroad oblique crossing, comprising a bed-plate, an elongated plate pivoted to the bed-plate, and rail-sections carried by the pivoted plate, the pivot of said plate being located near one end thereof with its center between two rail-sections and forward of the ends of the adjacent main rails whereby the ends of the rail-sections are displaced laterally, and said ends being cut in the line of movement, substantially as described.

4. A railroad oblique crossing, comprising a bed-plate, with two separately-traveled main rails at each end, an elongated plate pivoted to the bed-plate near one end thereof and parallel rail-sections carried by the pivoted plate; said pivoted plate forming a continuous bearing for said rail-sections, and said pivot being located between said rail-sections, within the end of the plate at a point to cause the pivoted ends of said plate to move laterally into and out of position, substantially as described.

5. In combination with two separately-traveled main rails having a gap between them, an interposed pair of rail-sections in said gap located to receive the wheel-flanges on their outer pivoted sides, near one end whereby their free end moves laterally inward, out of line and outward into position with the main rails, whereby said rail-sections are held in closed position by passage of the wheels, substantially as set forth.

6. The combination of the bed-plate having main rails at each end, and a movable plate bearing rail-sections, and pivotal connection between said bed and movable plate consisting of a pivot-pin with grooved head, and a slotted locking-key adapted to engage the head of the pin, substantially as described.

7. A bed-plate having two separately-traveled main rails at each end, a movable plate between the ends of the said main rails and pivotal connection between said bed and movable plates, one pair of main rails being cut on the line in which the end of the movable plate moves, substantially as described.

8. The combination of a bed-plate having stops 23', 23, and two separate main rails at each end and a movable plate pivoted to the bed-plate and having stops 21, 22, cooperating with the stops on the bed-plate; and two rail-sections, substantially as described.

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Witnesses:

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