

(No Model.)

2 Sheets—Sheet 1.

S. J. AUSTIN.
RAILROAD CROSSING.

No. 533,774.

Patented Feb. 5, 1895.

Fig. I.

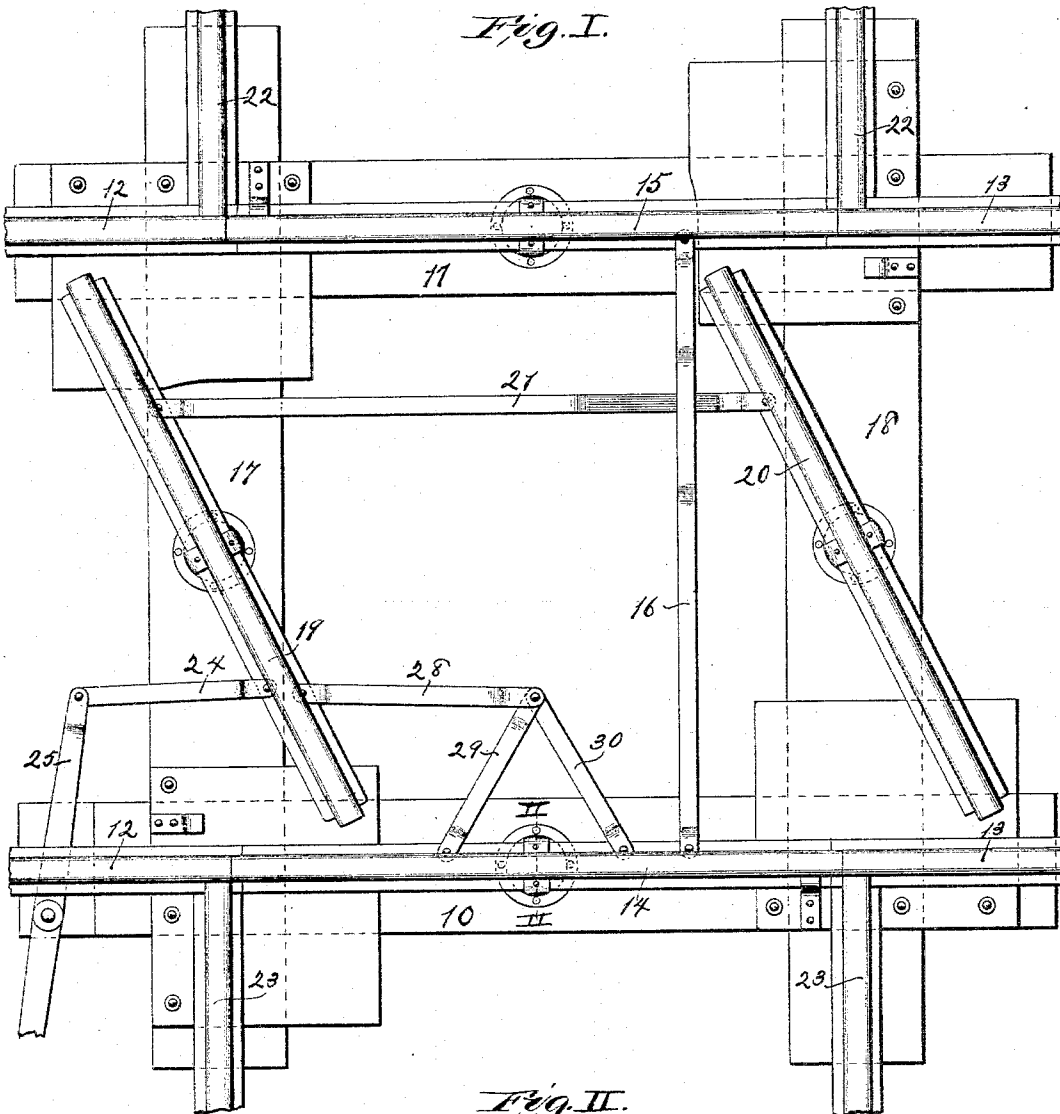
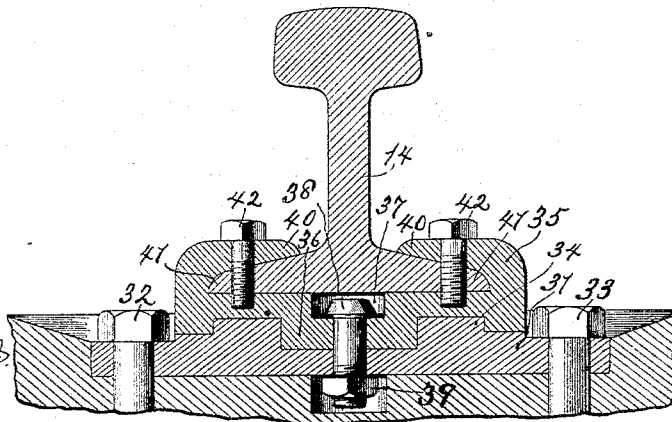


Fig. II.



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Fig. III.

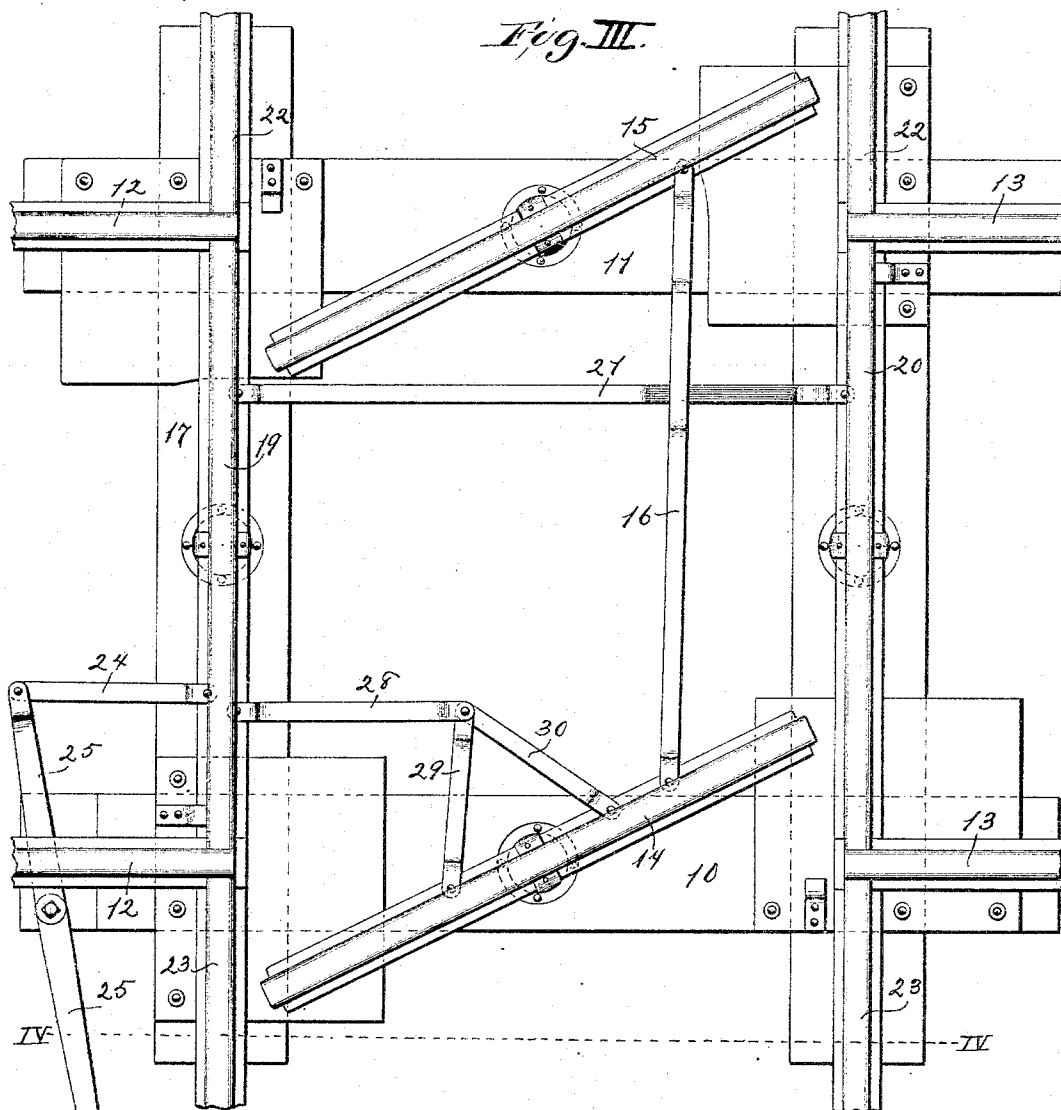


Fig. IV.

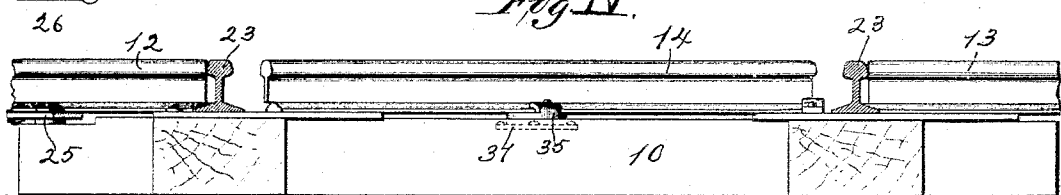
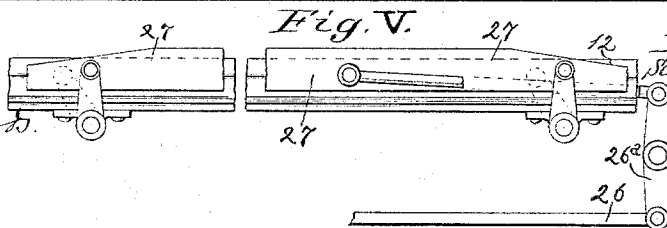


Fig. V.



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UNITED STATES PATENT OFFICE.

STEPHEN J. AUSTIN, OF TERRE HAUTE, INDIANA.

RAILROAD-CROSSING.

SPECIFICATION forming part of Letters Patent No. 533,774, dated February 5, 1895.

Application filed March 10, 1894. Serial No. 503,109. (No model.)

To all whom it may concern:

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

The object of this invention is to provide an improved crossing for railway tracks, the lines of which tracks are approximately at right angles to each other, which crossing shall permit of the passage of a train on either line, on a continuous track, the remaining line track being broken during such passage of the train on the first track.

This invention consists in the construction, arrangement, and combination of parts, hereinafter set forth, pointed out in my claims, and illustrated by the accompanying drawings, in which—

Figure I is a plan view, showing the parts in position to permit the passage of cars in a given line, in either direction. Fig. II is an enlarged, transverse sectional elevation on the line II—II, of Fig. I. Fig. III is a plan view, showing the parts in position to permit the passage of cars in a direction transversely of that shown in Fig. I. Fig. IV is a transverse, sectional elevation on the line IV—IV of Fig. III. Fig. V is a side elevation of means for mechanically actuating the operating parts.

In the construction of the crossing, as shown, the numerals 10, 11, designate sleepers, and 12, 13, the end portions of rigid track rails which are separated a distance equal to the gage of the track which traverses the same. Fitted between each pair of rails 12, 13, in alignment therewith and forming a portion of the track thereof, and two rail sections 14, 15, which said sections are pivotally connected at their centers to the sleepers 10, 11, as will hereinafter be made plain. The flanges of the rail sections 14, 15, are connected by means of a rod 16, the ends of which rod are pivotally connected to said flanges at points approximately midway between the pivots of the rail sections and the adjacent ends of the rails 12, 13.

Sleepers 17, 18, are positioned at right angles to and between the sleepers 10, 11, which

said sleepers 17, 18, form supports for rail sections 19, 20, respectively, which said rail sections are pivotally mounted at their centers, (as hereinafter explained,) on said sleepers and are of a length corresponding to the gage of the track previously described. The flanges of the rail sections 19, 20, are connected by means of a rod 21, the ends of which rod are pivotally connected to said flanges at points approximately midway between the pivots of the rail sections and the adjacent ends of rigid rails, 22, 23 which are in alignment, at times, with said sections, and when in such alignment form the transverse track.

In Fig. I the track first described herein is shown continuous, in condition and position for the passage of cars, and, therefore, the rail sections 19, 20, form oblique angles thereto; but in Fig. III the positions are reversed, the rails 22, 23, and rail sections 19, 20 conjunctively forming the continuous track, the rail sections 14, 15, being at oblique angles thereto.

The rods 16, 20, cross each other, and are respectively arched upward and downward, to avoid interference, one with the other.

Pivotally connected to one flange of the rail section 19, at a point approximately midway between the pivot of said rail section and the adjacent end of the rail 23, is a rod 24, the opposite end of which rod is pivotally fixed to one end of a lever 25, fulcrumed on the end portion of the sleeper 10 outside of the rail 23, the opposite end of which lever 25 is secured to one end of a rod 26, (Figs. III and V). The rod 26 is connected with a lever 26^a fulcrumed on a suitable support and connected with a hinged tread plate 27, (Fig. V,) located at the side of the rail 12 at a distance from the crossing.

The tread plate 27 is normally in position slightly inclined toward the crossing, and is adapted to be depressed by the tread of the car wheels approaching the crossing, as shown by dotted lines, by this means acting through the lever 26^a and the rod 28 to oscillate the lever 25, reciprocating the rod 24 and turning the rail sections 19, 20, into alignment with the rigid rails 22, 23.

A rod 28 is pivoted at one end to the flange of the rail section 19, opposite to the rod 24,

the opposite end of said rod 28 being pivotally secured to the convergent ends of two rods 29, 30, which said rods 29, 30, are fixed, respectively, to the rail section 14, at equal distances from the pivot and on opposite sides thereof.

It will be observed that the rods 29, 30, conjunctively form a lever, which, when the rail section 19 is rotated, is acted upon by the rod 28 and rotate the rail section 14. In this manner the four rail sections are conjunctively operated, the rail sections 14, 15, being always parallel, and the rail sections 19, 20, being also always parallel and at oblique angles to the sections 14, 15.

It is obvious that either of the rails 22, 23, should be provided with a tread plate 27 and mechanism connecting the same with the rail sections, in order that said sections may be operated by the car wheels on the transverse track, but I have not deemed it necessary to illustrate the same.

It is apparent that the lever 25 may be attached to a switch stand, adapted for either mechanical or manual operation, as desired, and that other devices may be employed to rotate the rail sections; but such devices or any different arrangement thereof cannot alter my invention and would be simply alternative forms of the devices herein described.

The pivotal connection between the rail sections and their sleepers are identical in form and constructed as follows: Referring to Fig. II, it will be observed that a base plate 31 is fixed to the sleeper 10 by bolts 32, 33, which base plate is provided with an annular ring 34, in its upper face, and a central circular depression within said ring. A cap plate 35 is located above the base plate 31, and is provided with a lower face having an annular depression, and a central circular hub 36 mating with the upper face of the base plate 31. A depression or seat 37 is formed in the center of the upper face of the cap plate 35, and central aligning apertures are formed in the two plates, a bolt or pivotal pin 38 being seated in said depression and passed through said apertures, which bolt is

provided with a nut 39 and connects said two plates loosely. The base plate 31 is at all times stationary, the cap plate 35 being revolvable relative thereto. A chair is formed on the upper portion of the cap plate 35, in which the rail section is seated, flanges 40, 40, overlapping the flanges 41, 41, of the rail section, and lag screws 42, 42, seated in said flanges and in the cap plate rigidly connect the same, thus insuring the rail sections against longitudinal movement.

I claim as my invention—

1. In a railway crossing a given track, a track traversing the first said track, pivoted rail sections in each of said tracks, one set of said sections being normally in alignment with its track, the remaining set of sections being out of alignment with its track, and lever mechanism whereby said sections are conjunctively operated to align either of said sections at will.

2. A railway crossing comprising sleepers, rail sections independently revolvably mounted at their centers on said sleepers and connected one with the other, transverse sleepers, transverse rail sections independently revolvably mounted on said transverse sleepers and connected with each other, an operating lever fulcrumed adjacent to one of said transverse rail sections and connected therewith, and connections between one of said transverse sections and one of the first said sections, whereby in the operation of said lever all of said sections are conjunctively operated.

3. In a railway crossing, a rail pivot comprising a base plate having an annular ring, and a central depression, a cap plate having an annular depression receiving the ring, a circular hub fitting the central depression of the base plate, a central seat and a chair, and a pivot bolt whereby the base plate and cap plate are connected together; substantially as set forth.

STEPHEN J. AUSTIN.

In presence of—

A. M. EBERSOLE,
C. G. EDWARDS.