

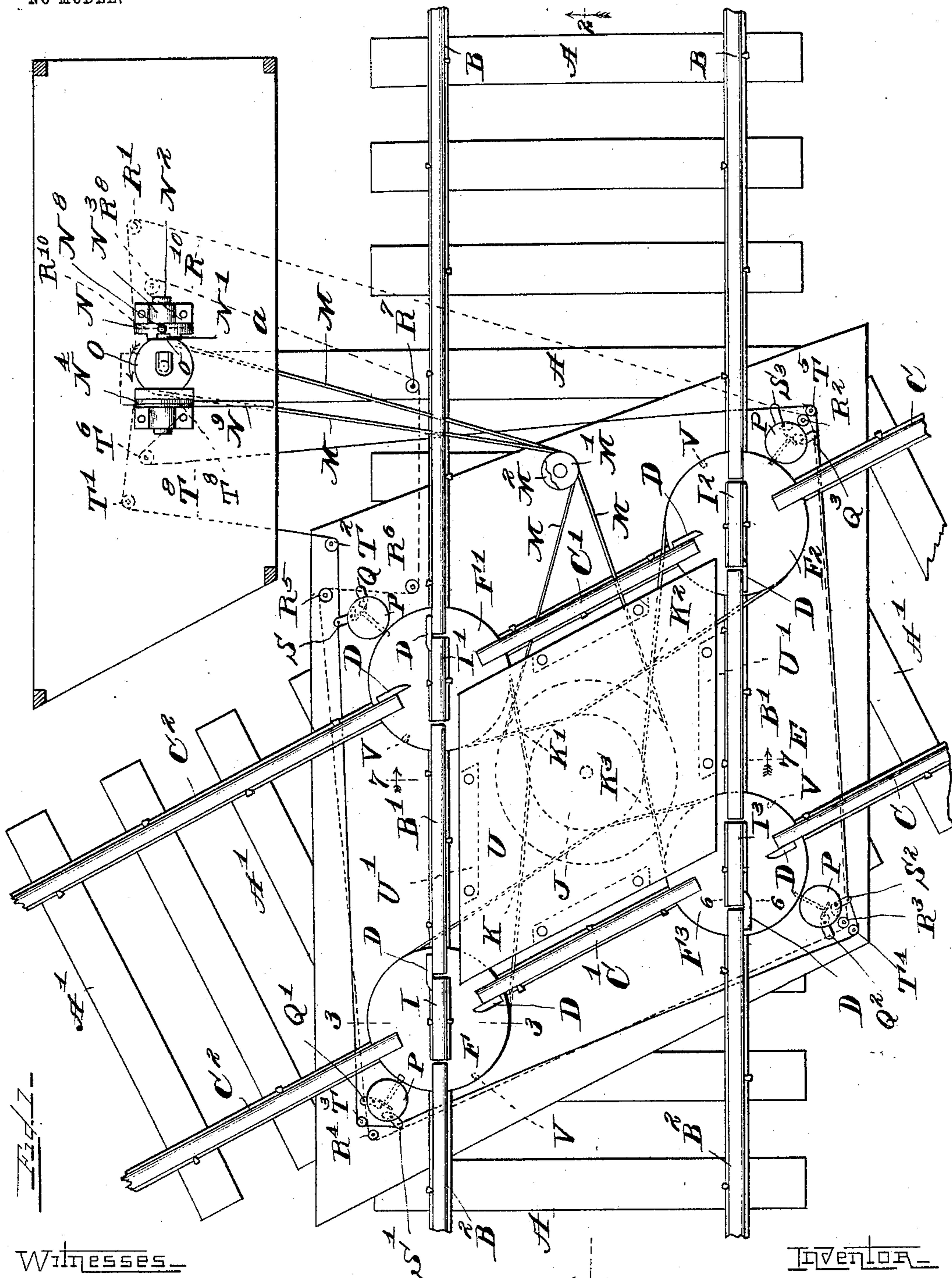
No. 775,551.

PATENTED NOV. 22, 1904.

W. J. BAZAREK.  
RAILWAY CROSSING.  
APPLICATION FILED SEPT. 6, 1904.

NO MODEL.

4 SHEETS—SHEET 1.



WITNESSES—

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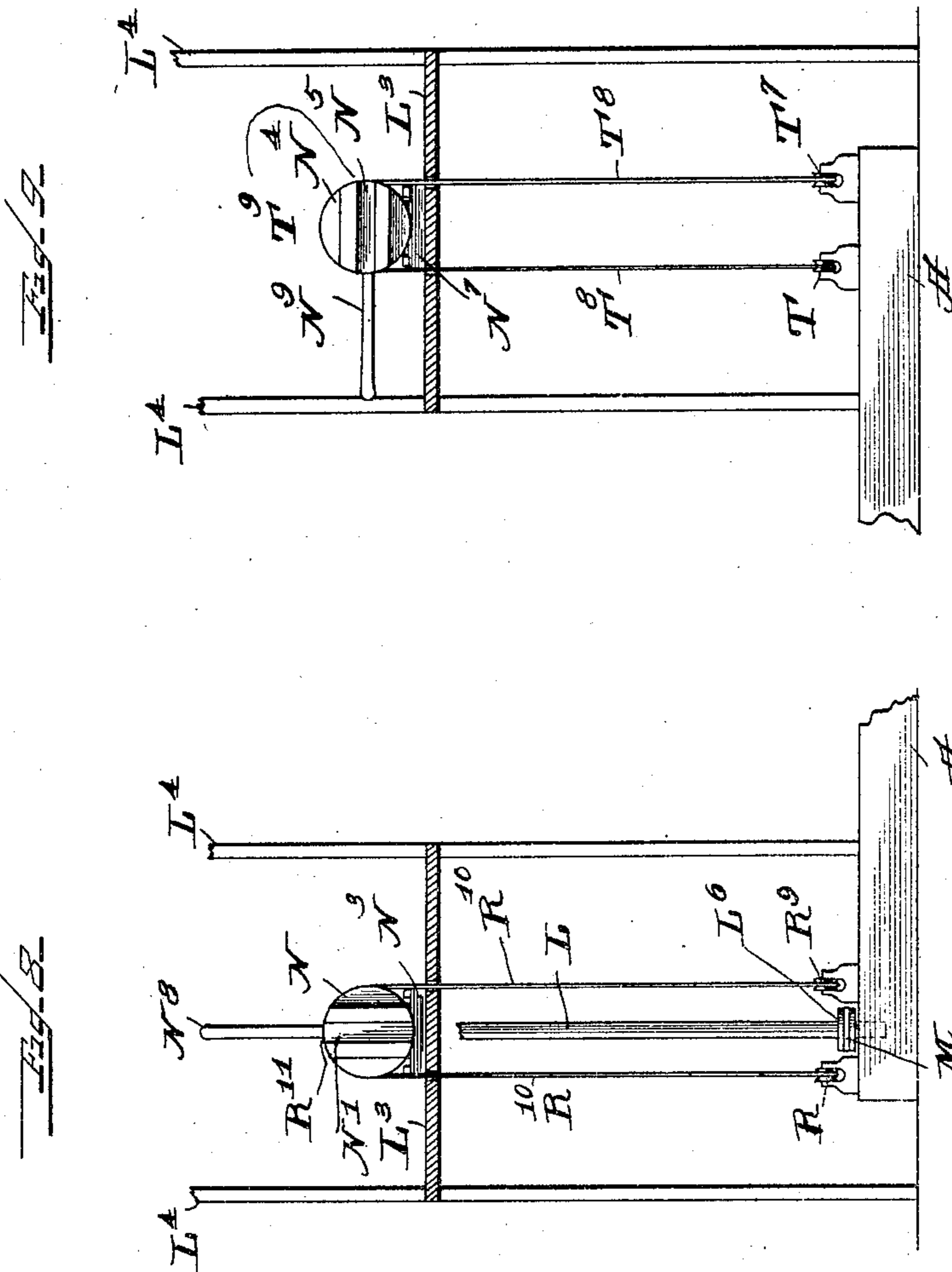
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Witnesses\_\_\_\_\_

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# UNITED STATES PATENT OFFICE.

WALDO J. BAZAREK, OF BEAVERDAM, WISCONSIN.

## RAILWAY-CROSSING.

SPECIFICATION forming part of Letters Patent No. 775,551, dated November 22, 1904.

Application filed September 6, 1904. Serial No. 223,553. (No model.)

*To all whom it may concern:*

Be it known that I, WALDO J. BAZAREK, a citizen of the United States of America, residing at Beaverdam, in the county of Dodge and State of Wisconsin, have invented certain new and useful Improvements in Railway-Crossings, of which the following is a specification.

My invention relates to a railway-crossing consisting of rail-sections so mounted on turntable bearings as to be capable of being turned into alinement with the parallel rails of intersecting tracks and form therewith continuous crossings and to means for operating the same; and it consists of certain new and useful features of construction and combinations of parts especially devised to that end, all as hereinafter fully described, and specifically pointed out in the claims.

Referring to the accompanying drawings, which form a part of this specification, Figure 1 is a plan view of a railway-crossing provided with my improvements. Fig. 1<sup>a</sup> is a like view of parts of the same in enlarged detail. Fig. 2 is a section at the dotted line 2 in Fig. 1 of parts there shown. Fig. 3 is a section at the dotted line 3 in Fig. 1 of parts there shown. Fig. 4 is a section at the dotted line 4 in Fig. 3 of one of the four rail-section turn-tables of the crossing with its locking mechanism. Fig. 5 is a section at the dotted line 5 in Fig. 4 of the locking mechanism of one of the rail-section turn-tables of the crossing. Fig. 6 is a section at the dotted line 6 in Fig. 1 of parts there shown. Fig. 7 is a section at the dotted line 7 in Fig. 1 of parts there shown. Fig. 8 is a section at the dotted line 8 in Fig. 1 of parts there shown. Fig. 9 is a section also at the line 8 in Fig. 1 looking in a direction opposite to that indicated by arrows in the last-mentioned figure.

Like letters of reference indicate corresponding parts throughout the several views.

A A' are the ties of two intersecting railways.

B B' B<sup>2</sup> are two lines of parallel rails constituting a track and are so arranged as to leave gaps between the adjacent ends thereof and are secured to the ties A in the usual manner.

C C' C<sup>2</sup> are two lines of parallel rails con-

stituting an intersecting track and are so arranged as to leave gaps between the adjacent ends thereof of substantially the same length as the gaps between the adjacent ends of the rails B B' B<sup>2</sup> and are secured to the ties A' in the usual manner.

D, Figs. 1 and 6, represent stops having their operative portions beveled to a blunt edge D' for a purpose to be explained hereinafter and rigidly secured to the rails of the intersecting tracks.

E is a metallic plate supported by the ties A A' and supporting the rails B' C' and the adjacent ends of the rails B B<sup>2</sup> and C C<sup>2</sup> of the tracks at their intersection.

E' represents preferably circular bearings secured to the upper face of the plate E.

F F' F<sup>2</sup> F<sup>3</sup> are four circular turn-tables peripherally sprocketed, Fig. 4, and having radial locking-sockets F<sup>4</sup>, Fig. 5, sunk into the peripheries thereof.

G, Fig. 3, represents four reinforces secured to the under face of the plate E by means of cap-screws G'.

H represents cylindrical bearings provided with circular heads H', one whereof is inserted through a central opening H<sup>2</sup> in each of the turn-tables and tapped at its lower end into the plate E and reinforce G at a point substantially midway between the adjacent ends of the rails of the intersecting tracks. Each of the turn-tables has a circular countersink H<sup>3</sup> in the apex thereof to admit the circular head H' of one of the bearings H.

I I' I<sup>2</sup> I<sup>3</sup>, Fig. 1, are rail-sections, one of each whereof is rigidly secured to the central portion of the upper face of one of the turn-tables F F' F<sup>2</sup> F<sup>3</sup> and is also of suitable length to be switched between the adjacent and corresponding ends of the rails of the intersecting railways and form therewith continuous tracks.

J, Figs. 2 and 7, is a two-stepped pulley having a sprocketed groove J' in the periphery of its outer step and four sprocketed grooves J<sup>2</sup> J<sup>3</sup> J<sup>4</sup> J<sup>5</sup> in the periphery of its inner step and mounted, by means of a central opening J<sup>6</sup> therein, on a vertical cylindrical bearing J<sup>7</sup>, provided with a circular head J<sup>8</sup>, included in a corresponding countersink J<sup>a</sup>

in such pulley J, tapped at its lower end into the plate E and reinforce J<sup>9</sup>, the latter being secured to the under face of such plate E by means of cap-screws J<sup>10</sup>.

5 K, Fig. 1, is a crossed chain belt connecting the turn-table F with the pulley J through the peripheral groove J<sup>2</sup> therein.

K' is a crossed chain belt connecting the turn-table F' with the pulley J through the peripheral groove J<sup>3</sup> therein.

10 K<sup>2</sup> is a crossed chain belt connecting the turn-table F<sup>2</sup> with the pulley J through the peripheral groove J<sup>4</sup> therein.

K<sup>3</sup> is a crossed chain belt connecting the turn-table F<sup>3</sup> with the pulley J through the peripheral groove J<sup>5</sup> therein.

L, Fig. 2, is a rock-shaft vertically mounted in bearings L' L<sup>2</sup> in one of the ties A and in the floor L<sup>3</sup> of the broken tower L<sup>4</sup>.

20 L<sup>5</sup> is a pivoted lever for rocking the shaft L.

L<sup>6</sup>, Figs. 2 and 8, is a sprocket-wheel fast to the rock-shaft L.

M is a chain belt passing over the guide-pulleys M' M<sup>2</sup> and connecting the sprocket-wheel L<sup>6</sup> with the pulley J through the peripheral groove J' therein.

25 N, Figs. 1 and 2, is a rocking disk having a rectilinear groove N' in the inner face thereof and mounted, by means of the stub-axle N<sup>2</sup>, in the bearing N<sup>3</sup>.

N<sup>4</sup> is a rocking disk (the counterpart of the rocking disk N) having a rectilinear groove N<sup>5</sup> in the inner face thereof and mounted, by means of the stub-axle N<sup>6</sup>, in the bearing N<sup>7</sup>.

35 N<sup>8</sup> N<sup>9</sup> are levers for rocking the disks N N<sup>4</sup>, respectively, and are rigidly connected therewith.

O is a disk for locking the rock-shaft L and has its periphery sectioned away to form thereon a contacting plane O' to engage the inner faces of the rocking disks N N<sup>4</sup> and therethrough lock such rock-shaft L.

40 P, Figs. 4 and 5, represents bolt-casings secured to the plate E and having bolt-bearings P' therein.

P<sup>2</sup> represents bolts provided with heads P<sup>3</sup> to limit their inward travel and serving as a stop for springs, to be described hereinafter, and slidably mounted in the bearings P' in the casings P.

P<sup>4</sup> represents spiral springs encircling the bolts P<sup>2</sup> and included between the outer walls of the casings P and the head P<sup>3</sup> of the bolts P<sup>2</sup> and normally holding such bolts out of engagement with the locking-sockets F<sup>4</sup> in the turn-tables F F' F<sup>2</sup> F<sup>3</sup>.

Q Q' Q<sup>2</sup> Q<sup>3</sup> are levers pivotally mounted between their ends on the bearings Q<sup>4</sup> Q<sup>5</sup> Q<sup>6</sup> Q<sup>7</sup>.

60 R to R<sup>9</sup>, inclusive, are a series of mounted pulleys.

R<sup>10</sup> is a wire cable contacting the peripheries of the pulleys R to R<sup>9</sup>, inclusive, and made fast to the periphery of the rocking disk N at R<sup>11</sup>.

65 All of the levers Q Q' Q<sup>2</sup> Q<sup>3</sup> are pivotally connected by their outer ends to the cable R<sup>10</sup>.

S S' S<sup>2</sup> S<sup>3</sup> are levers pivotally mounted between their ends on the bearings S<sup>4</sup> S<sup>5</sup> S<sup>6</sup> S<sup>7</sup>.

T to T<sup>7</sup>, inclusive, are a series of mounted pulleys.

70 T<sup>8</sup> is a wire cable contacting the peripheries of the pulleys T to T<sup>7</sup>, inclusive, and made fast to the periphery of the rocking disk N<sup>4</sup> at T<sup>9</sup>.

All of the levers S S' S<sup>2</sup> S<sup>3</sup> are pivotally connected by their outer ends to the cable T<sup>8</sup>.

75 U is a metallic plate supported by the rail-sections U' and serving as a housing for the parts below it. Each of the edges of such plate U also serves as a guard-rail.

80 Figs. 1 and 2 show the rail-sections I I' I<sup>2</sup> I<sup>3</sup> switched and held into longitudinal alinement with the rails B B' B<sup>2</sup> by the rock-shaft L, which is locked by the rocking disk N and disk O. Whenever it is desirable to render the rails C C' C<sup>2</sup> available as a track, swing the free end of the lever N<sup>8</sup> toward  $\alpha$  in Fig. 1 until such lever is in a horizontal position.

85 The consequent rocking movement of the disk N acting through the cable R<sup>10</sup> will be to withdraw the free ends of the levers Q Q' Q<sup>2</sup> Q<sup>3</sup> from engagement with the locking-bolts P<sup>2</sup>, thereby leaving their springs P<sup>4</sup> free to slide them out of engagement with the locking-sockets F<sup>4</sup> in the turn-tables F F' F<sup>2</sup> F<sup>3</sup>. The rock-shaft L, with its sprocket-wheel L<sup>6</sup>, may then be turned in the direction indicated 95 by the curved arrow in Fig. 1, the sprocket-wheel L<sup>6</sup> acting through the cable M, pulley J, and cables K K' K<sup>2</sup> K<sup>3</sup> to rotate the turn-tables F F' F<sup>2</sup> F<sup>3</sup> and therethrough switch the track-sections I I' I<sup>2</sup> I<sup>3</sup> into longitudinal alinement with the rails C C' C<sup>2</sup>. While the rock-shaft L was turning, as described above, the periphery of the disk O thereon entered into and traveled in the grooves N' N<sup>5</sup> in the inner faces of the rocking disks N N<sup>4</sup> until the 105 contacting planes O' on the periphery thereof were opposite to and parallel with the inner face of such disk N<sup>4</sup>. The lever N<sup>9</sup> of the rocking disk N<sup>4</sup> may now be swung to a vertical position, thereby rocking such disk N<sup>4</sup> 110 and acting through the cable T<sup>8</sup> and levers S S' S<sup>2</sup> S<sup>3</sup> to force the locking-bolts P<sup>2</sup> into the sockets V, counterparts of the sockets F<sup>4</sup>, Fig. 1, in the turn-tables F F' F<sup>2</sup> F<sup>3</sup> and therethrough lock such turn-tables. 115

The function of the edges D', Fig. 6, of the stops D is to prevent the inclusion of matter between the same and the rail-sections I I' I<sup>2</sup> I<sup>3</sup>.

What I claim as new, and desire to secure by Letters Patent, is— 120

1. In a railway-crossing, in combination, the ties of two intersecting railways, two lines of parallel rails, constituting a track, arranged to leave gaps between the adjacent ends thereof, and secured to one row of ties, two additional lines of parallel rails, constituting an intersecting track, arranged to leave gaps between the adjacent ends thereof, and secured to the intersecting row of ties, four 125 turn-tables F F' F<sup>2</sup> F<sup>3</sup>, mounted at points sub- 130

stantially midway between and below the adjacent ends of the rails, and four rail-sections  $I I' I^2 I^3$ , one of each whereof is rigidly secured to the central portion of the upper face of one of the turn-tables and is of suitable length to be switched between the adjacent and corresponding ends of the rails of the intersecting railways and form therewith continuous tracks, substantially as described.

2. In a railway-crossing, in combination, the ties of two intersecting railways, two lines of parallel rails, constituting a track, arranged to leave gaps between the adjacent ends thereof, and secured to one row of ties, two additional lines of parallel rails, constituting an intersecting track, arranged to leave gaps between the adjacent ends thereof, and secured to the intersecting row of ties, four turn-tables  $F F' F^2 F^3$ , having sprocketed grooves therein and mounted at points midway between and below the adjacent ends of

the rails, four rail-sections  $I I' I^2 I^3$ , one of each whereof is rigidly secured to the central portion of the upper face of one of the turn-tables and of sufficient length to be switched between the adjacent and corresponding ends of the rails of the intersecting railways and form therewith continuous tracks, a pulley J, having five sprocketed grooves in the periphery thereof, cross chain belts  $K K' K^2 K^3$  connecting the turn-tables  $F F' F^2 F^3$  with the pulley J, and a chain belt M passed over the pulley J and means for actuating such chain belt J, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WALDO J. BAZAREK.

Witnesses:

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