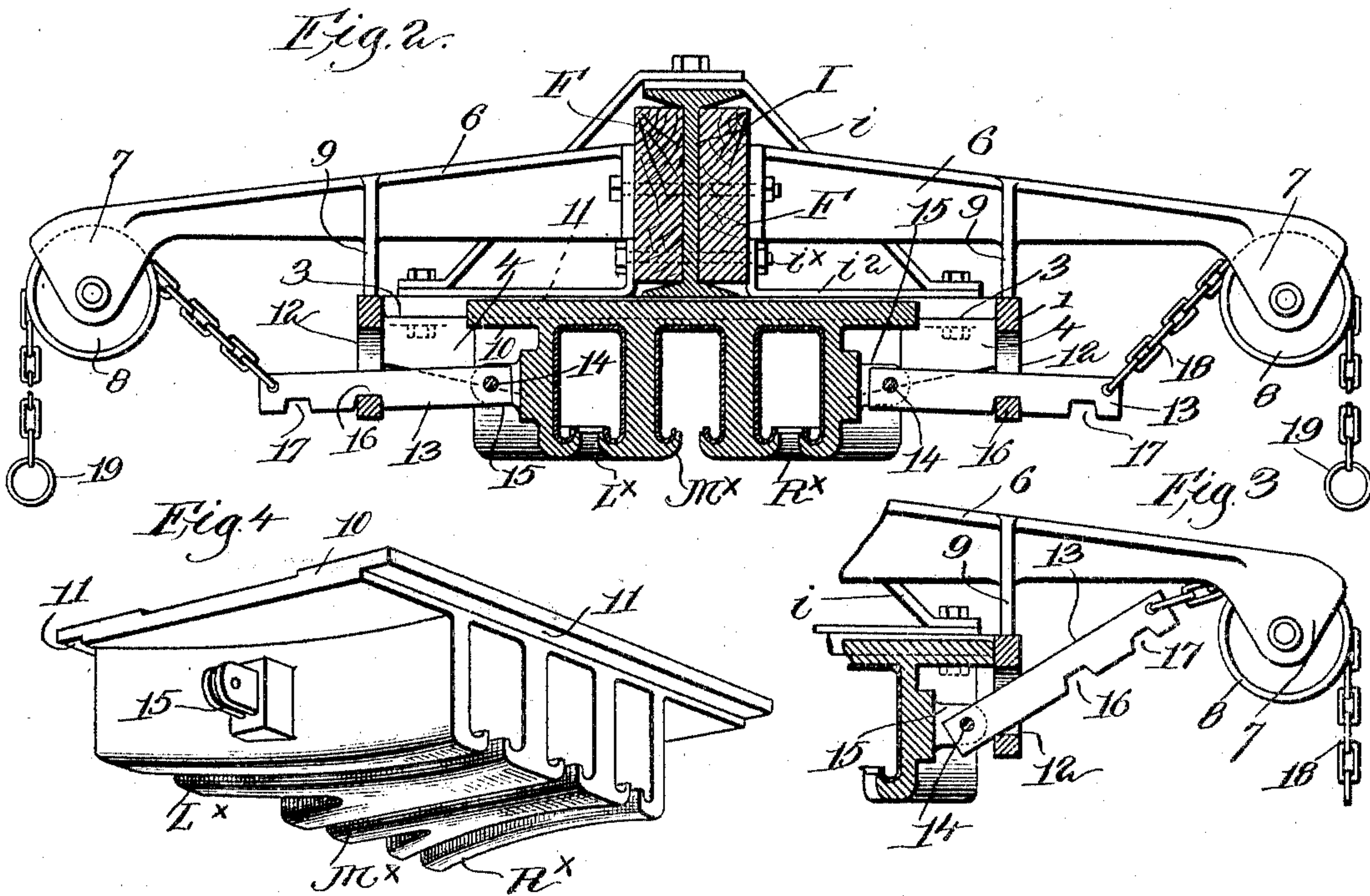
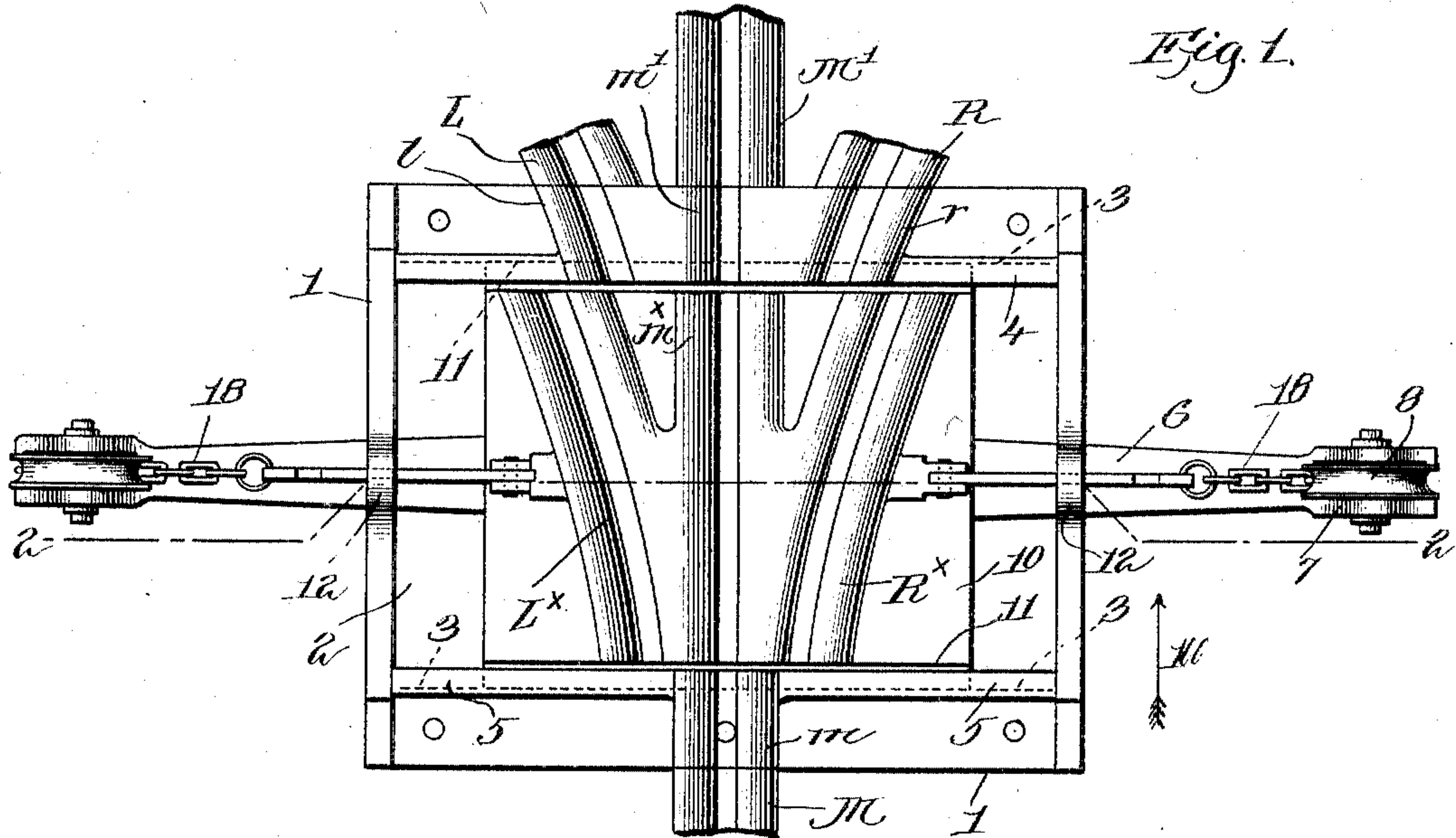


No. 784,037.

PATENTED MAR. 7, 1905.

R. N. CUNDALL.
SWITCH FOR OVERHEAD TROLLEY TRACKS.

APPLICATION FILED JAN. 4, 1905.



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SWITCH FOR OVERHEAD TROLLEY-TRACKS.

SPECIFICATION forming part of Letters Patent No. 784,037, dated March 7, 1905.

Application filed January 4, 1905. Serial No. 239,581.

To all whom it may concern:

Be it known that I, ROBERT N. CUNDALL, a citizen of the United States, and a resident of Hopedale, county of Worcester, State of Massachusetts, have invented an Improvement in Switches for Overhead Trolley-Tracks, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

My invention relates to switches for overhead-track trolley-lines such as are used in foundries, machine-shops, &c.; and it has for its object the production of a strong and durable switch device whereby the trolley or hanger can be quickly switched from a main to a branch track, or vice versa.

I have provided a movable member or switch-plate which is mounted in a transversely-slidable manner between fixed sections of main and branch tracks and provided with depending track-sections to complete the gap between the ends of one or the other of the fixed tracks, novel means being employed to lock the switch-plate in position and to shift its position when unlocked.

The various novel features of my invention will be fully described in the subjoined specification and particularly pointed out in the following claims.

Figure 1 is an under side view of a switch device embodying one form of my invention, illustrating a three-way switch—that is, for a main track and two branches. Fig. 2 is a transverse section thereof on the line 2 2, Fig. 1, looking in the direction of arrow 100, the switch-plate being shown locked in mid-position. Fig. 3 is a similar view of the right-hand portion of Fig. 2, showing the relative position of the parts when the switch-plate is shifted to the right; and Fig. 4 is a perspective view of the switch-plate detached.

Referring to Fig. 1, the separated ends M and M' of overhead fixed tubular track-sections are shown with the ends of right and left branches R and L, the switch device being interposed between the separated ends of the fixed track-sections and being herein illus-

trated as a three-way switch. A strong support for the switch member is shown as a heavy casting 1, having a rectangular opening 2 and transverse guides 3 3 at its opposite ends, the casting having a depending track portion *m*, preferably cast thereon, to register with the main track-section M and at its other end similar depending portions *m'*, *l*, and *r* to register with the adjacent fixed sections M', L, and R, respectively. The guides 3 3 are located at the tops of depending flanges 4 and 5, (see Fig. 1,) which extend inward from the side edges of the casting 1 to the parts *l*, *r*, and *m*, respectively, serving to stiffen and strengthen the support.

Referring to Fig. 2, the support 1 is secured to an overhead girder I and steadied by straps or brackets *i i'*, the latter being held in place on the girder by bolts, as *i''*, passed through it and through timber filling-pieces F. The latter have rigidly secured thereto lateral arms 6, which project over the support 1 and a considerable distance beyond the sides thereof and have at their ends depending housings 7, in which are rotatably mounted sheaves 8, for a purpose to be described. The arms 6 have legs 9, which rest upon the top of the support 1 at the sides of the opening 2.

By the construction described the support for the switch-plate is securely and rigidly sustained in position in the gap between the adjacent fixed track-sections.

The switch-plate is shown separately in Fig. 4 and is made as a casting comprising a preferably rectangular plate 10, having its opposite ends shaped to present transverse lips or flanges 11, which are slidably mounted upon the guides 3 of the support. (See Fig. 1.) Track-sections M^x, L^x, and R^x depend from the bottom of the plate 10, the through-section M^x bridging the space between the separated ends of the fixed main track-sections, and, as shown in Fig. 1, the section M^x is in position between the parts *m* and *m'* of the support 1. The latter is provided at each side with a depending loop-like keeper 12, through each of which keepers is loosely extended a latch 13, pivotally connected at 14 with ears

15 on the switch-plate casting, each latch having locking-notches 16 and 17 in its lower edge to cooperate with the bottom of the adjacent keeper 12. A chain 18 or other flexible member is passed over each of the sheaves 8 and attached to the free end of the nearer latch 13, the depending end of the chain having a ring 19, by which the operator may grasp it. In Figs. 1 and 2 the switch-plate is in mid-position, the latches dropping by their weight into locking position, so that their notches 16 cooperate with the keepers 12. When so locked, it will be impossible for the switch-plate to move accidentally out of mid-position. To shift the switch-plate, the operator grasps the two rings 19 and by a downward pull swings the two latches upward, thereby disengaging their notches 16 from the keepers and unlocking the switch-plate. Now by pulling on one chain 18 and letting off the other the switch-plate will be shifted to the right or left until one of its side edges engages the side of the opening 2 in the support 1, such side acting as a limiting-stop. Thereupon both chains are released, and while one latch will be held upraised by the keeper, as shown in Fig. 3, the opposite latch will drop and its outer notch 17 will engage its keeper, locking the switch-plate in shifted position. If the tracks M and L are to be connected, the switch-plate will be drawn to the right, Figs. 1 and 2, the left-hand latch 13 then locking the plate by the cooperation of its keeper with the outer notch 17. To connect tracks M and R, Fig. 1, the switch-plate will be shifted to the left, and then the right-hand latch will perform the locking.

From the foregoing description it will be seen that the latches are effective to not only lock the switch-plate from movement, but that the manually-controlled shifting means act through the latches to move the switch-plate from one to another position.

The switch device is very strong, capable of use in plants where heavy loads are carried on the trolley-track, and it cannot be jarred out of position, for one or both latches must be positively lifted to unlock the switch-plate. If the latter is locked in position for a branch line, the operator need not grasp the flexible member connected with the inoperative latch if the switch is to be set for the main line. With a three-way switch, however, such as herein illustrated, both of the actuating members 18 must be manipulated if the switch is to be thrown from the main line to a branch or from one branch to the other, as will be manifest.

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

1. In a switch device for overhead trolleys, a fixedly-mounted support having transverse guides, and adapted to be interposed between fixed main and branch track-sections, com-

bined with a switch-plate slidably mounted on the guides and having depending track-sections to bridge the gaps in the fixed track-sections, and manually-controlled means to shift the switch-plate and positively lock it in position when shifted.

2. In a switch device for overhead trolleys, a fixedly-mounted, open support having transverse guides and a depending keeper at each side, combined with a switch-plate slidably mounted on the guides and having depending track-sections, latches operatively connected with the switch-plate and adapted to cooperate with the keepers, to lock the plate in position, and manually-controlled means to release the latches and through the same shift the switch-plate.

3. In a switch device for overhead trolleys, a fixedly-mounted, open support having transverse guides and a depending keeper at each side, combined with a switch-plate slidably mounted on the guides and having depending track-sections, pivoted latches operatively connected with said plate and having notches to cooperate with the keepers and lock the switch-plate in position, and manually-controlled means to rock the latches from engagement with the keepers and thereafter shift the switch-plate by or through the latches.

4. In a switch device for overhead trolleys, a fixedly-mounted, open support having transverse guides and a depending loop-like keeper at each side, combined with a switch-plate slidably mounted on the guides and having depending track-sections, notched latches pivotally connected with the switch-plate and extended through the keepers, to cooperate therewith and lock the switch-plate in position, and manually-controlled means to disengage the latches and through the same shift the switch-plate.

5. The combination, in a switch device for overhead trolleys, of a fixedly-mounted support having a rectangular opening and transverse guides at its ends, depending, open keepers at the sides of the support, a rectangular switch-plate provided with depending track-sections and having a transverse flange at each end, a slide upon the guides, the sides of the opening of the support serving as stops for the switch-plate, notched latches operatively connected with the latter and extended through the keepers, and manually-controlled means connected with the latches to disengage them from the keepers and shift the switch-plate, release of said means permitting a keeper to automatically reengage its keeper and lock the switch-plate.

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

ROBERT N. CUNDALL.

Witnesses:

GEORGE OTIS DRAPER,
ERNEST W. WOOD.

It is hereby certified that in Letters Patent No. 784,037, granted March 7, 1905, upon the application of Robert H. Cundall, of Hopedale, Massachusetts, for an improvement in "Switches for Overhead Trolley-Tracks," an error appears in the printed specification requiring correction, as follows: In line 114, page 2, the letter "a" before the word "slide" should read *to*; and that said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 21st day of March, A. D., 1905.

[SEAL.]

F. I. ALLEN,
Commissioner of Patents.