H. SAWYER.

SWITCH CONSTRUCTION FOR OVERHEAD TROLLEY TRACKS.

APPLICATION FILED FEB. 27, 1911.

1,000,124. Patented Aug. 8, 1911.

Fig. 1.

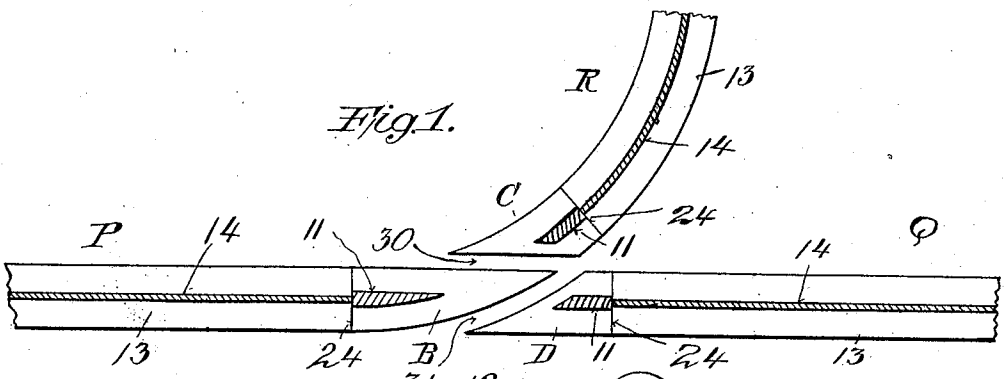


Fig. 2.

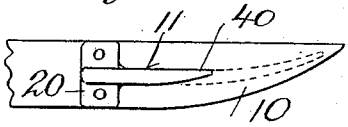


Fig. 3.

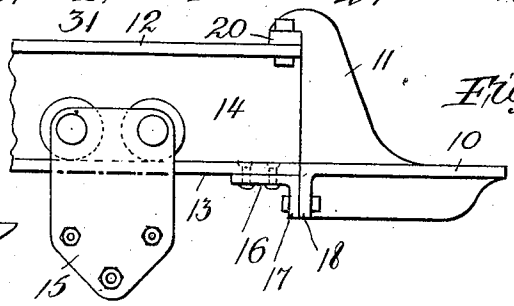


Fig. 4.

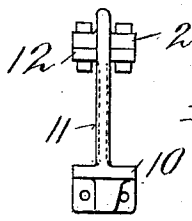


Fig. 5.

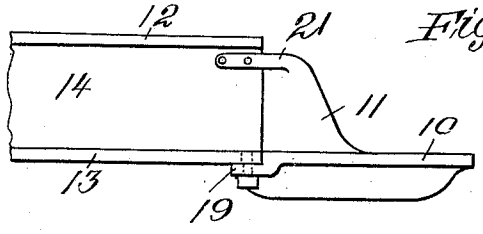


Fig. 6.

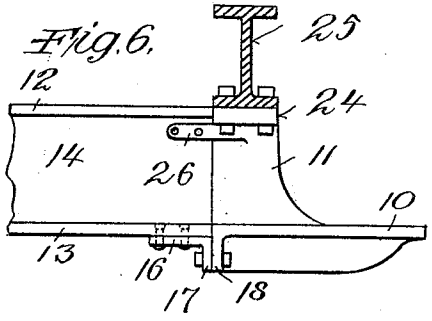
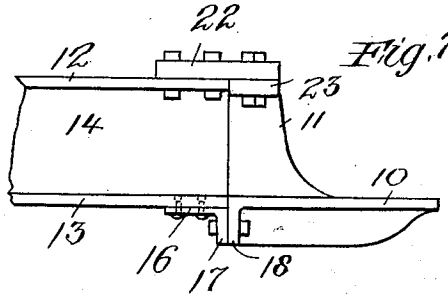


Fig. 7.



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UNITED STATES PATENT OFFICE.

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SWITCH CONSTRUCTION FOR OVERHEAD-TROLLEY TRACKS.

1,000,124. Specification of Letters Patent. Patented Aug. 8, 1911.

Application filed February 27, 1911. Serial No. 611,123.

To all whom it may concern:

Be it known that I, HARRY SAWYER, a citizen of the United States, residing at Muskegon, county of Muskegon, State of Michigan, have made a certain new and useful Invention in Switch Construction for Overhead-Trolley Tracks, of which the following is a specification.

This invention relates to switch constructions for use in connection with overhead trolley tracks.

The object of the invention is to provide a simple, strong and durable switch device for use in connection with overhead trolley tracks to permit the passage of a trolley from one line of overhead track to another without the necessity of employing movable switch members or tongues.

A further object is to provide a switch device of the class and character referred to wherein the switch member or tongue is rigidly held and supported in permanent relation to the tracks, and efficiently supported and braced, and can be easily and readily applied against the end of the track beam in connection with which it is employed.

Other objects of the invention will appear more fully hereinafter.

The invention consists substantially in the construction, combination, location and relative arrangement of parts, all as will be more fully hereinafter set forth, as shown in the accompanying drawing, and finally pointed out in the appended claims.

In the drawing,—Figure 1 is a top plan view of an overhead trolley main and branch track beam system showing the application of a switch device embodying my invention at the junction thereof, the vertical webs of the track beams being in horizontal section. Fig. 2 is a top plan view of the end of a track beam section showing the application thereto of a switch tongue embodying my invention. Figs. 3 and 4 are respectively, side and front end views of the same. Figs. 5, 6 and 7, are side elevations showing various modifications embodying the principles of my invention.

In carrying out my invention I provide the proximate end of each track section at the junction or intersection of main and branch lines of track, with a switch tongue device which is constructed to form a flush continuation of the track surface thereof, and which is rigidly secured against the end of and to the track beam section, the tongue of one track beam end being sufficiently spaced apart from that of an adjacent track beam end to afford a passage therebetween to accommodate the side frame of a trolley carrier passing along the tracks from one section to the other.

As shown in the drawings, and in the various embodiments thereof, the switch tongue comprises a casting having a horizontal portion 10, and a central vertical portion 11. The horizontal portion 10, on opposite sides of the vertical portion 11, has its upper surface lying flush with and forming, in effect, a continuation of the track surface of the beam to the end of which the tongue casting is applied.

As shown in the drawing, I employ a trolley track beam in the form of an I-beam having the usual upper flange 12, the lower flange 13, and the connecting web portion 14, but my invention as defined in the claims, is not to be limited or restricted to this specific form of track beam. In the form of track beam shown the trolley or carrier wheels 15, see Fig. 3, operate along the upper surfaces of the track beam flanges 13, on opposite sides of the web 14 of the beam, in a well understood manner.

The vertical portion 11, of the tongue is provided with a flat bearing surface at its rear edge which fits against the front vertical end of the track beam section, as clearly shown. This vertical portion 11, of the tongue, as above stated, is central with reference to the horizontal portion 10, and should conform approximately in thickness to that of the body or web portion 14 of the track beam, to form, in effect, a short continuation thereof, as clearly shown, so as not to offer any obstruction to the travel of the trolley therepast, and at its extreme outer edge, if desired, may be turned or curved slightly in the direction of the line of travel of the trolley while passing from one to another line of tracks, as clearly shown at 40, Fig. 2.

The tongue may be rigidly secured to the track beam end in many different ways, at the upper as well as at the lower edges of the track beam. In the form shown in Figs. 3, 6 and 7, an angle plate 16, is bolted or otherwise secured against the under side of the track beam adjacent its end, and against the vertical flange 17, thereof, bears a cooperating vertical flange 18 on the tongue casting, the flanges 17, 18, being bolted or otherwise secured together. In the form

shown in Fig. 5 the tongue casting is provided with an off-set rearwardly projecting flange 19 which fits against and is bolted or otherwise secured to the under side of the track beam at the end thereof. The upper end of the vertical portion 11, of the tongue casting is shown in Figs. 2, 3 and 4, as provided with an overhanging flange 20, adapted to rest upon, and to be bolted or otherwise secured to the upper side of the track beam, or the upper flange 12, thereof. In Fig. 5, I have shown the upper part of the vertical portion 11, of the tongue casting, provided with strap arms 21, to embrace the upper part of the body, or web 14, of the track beam, and adapted to be bolted or otherwise secured thereto. In Fig. 7, I have shown a bracket or plate 22 applied and securely bolted or otherwise secured to the upper side or flange 12 of the beam and having its end overhanging the end of the beam, the upper end of the tongue casting part 11, being provided with a flange 23 which is bolted or otherwise secured to said overhanging end. In Fig. 6, I have shown the tongue casting vertical part 11, provided with a flange 24, which is bolted or otherwise secured to an auxiliary supporting beam 25, and also a strap arm 26, which is bolted or otherwise secured to the body, or web 14, of the track beam. It is obvious that various other modes of attaching and securing the tongue casting to and against the end of the track beam section will readily occur to persons skilled in the art and still fall within the spirit and scope of my invention as defined in the claims.

The operation of the switch device will be readily understood by reference to Fig. 1. Each proximate end of the track beam sections at a junction or intersection of track lines as P, Q, R, is equipped with a switch tongue member B, C, D, which is rigidly secured against the end surface thereof, the tongues B and C being separated by the space 30 for the passage therethrough of one of the side frame pieces 27 of the trolley, when the trolley is to pass from one or the other of the track lines P, or Q, to the other. Similarly the tongue members B, D, are separated by the space 31, for the passage of the other side frame piece 27 of the trolley when the trolley is to pass from one of the track lines P, or R, to the other.

It will be understood that the trolley will be properly guided into the required direction to transfer from one line of track to another over the switch, but the means for accomplishing this result forms no part of my present invention.

Having now set forth the object and nature of my invention, and various forms of construction embodying the principles thereof, I desire it to be understood that my invention is not to be limited or restricted to the exact and specific structures shown and described as operative embodiments thereof as many modifications, variations and changes in the details thereof might readily occur to persons skilled in the art and still fall within the spirit and scope of my invention as defined in the claims. But

What I claim as new and useful, and of my own invention, and desire to secure by Letters Patent is,—

1. In a switch device, the combination with a track beam, having a web and a track flange, of a switch tongue casting having a vertical and a horizontal portion, and means for rigidly securing the vertical portion against the end surface of the beam web, the horizontal portion of the tongue casting forming a continuation of the track flange of the beam.

2. In a switch device, the combination with a track beam having a vertical web and track flanges on opposite sides thereof, of a switch tongue casting having a horizontal portion and a central vertical portion, said vertical portion corresponding approximately in thickness to that of the beam web, and means for rigidly securing the vertical portion of the tongue casting against and in line with the end of the vertical beam web, the horizontal portion of the tongue casting forming a continuation of the track flanges of the beam.

3. In a switch device, the combination with a track beam, of a switch tongue casting having a vertical and a horizontal portion, the vertical portion arranged to be applied against the end of the track beam and having a securing flange, means for rigidly securing said flange to the upper part of the beam, and means for rigidly securing the beam and casting together at their lower parts, the horizontal portion of the casting forming a continuation of the track surface of the beam.

4. In a switch device, the combination with a track beam, of a switch tongue casting having a vertical and a horizontal portion, the vertical portion adapted to be applied against the end of the track beam, and provided with a flange at its upper and lower ends, an angle plate secured to the underside of the beam and rigidly connected to the flange at the lower end of the vertical portion of the tongue casting, and means for rigidly connecting the flange at the upper end of the vertical portion of the tongue casting to the upper part of the track beam, the horizontal portion of the tongue casting forming a continuation of the track surface of the beam.

5. In a switch device, the combination with a track beam having a track surface, of a switch tongue having a vertical and an integral horizontal portion and adapted to be applied to the end of the track beam,

means for rigidly attaching the switch tongue to the upper and also to the lower part of the track beam, the horizontal portion of the switch tongue forming a continuation of the track surface of the beam.

In testimony whereof I have hereunto set my hand in the presence of the subscribing witnesses, on this 31st day of January A. D. 1911.

HARRY SAWYER.

Witnesses:
T. C. AKIN,
F. E. MCKEE.