

(No Model.)

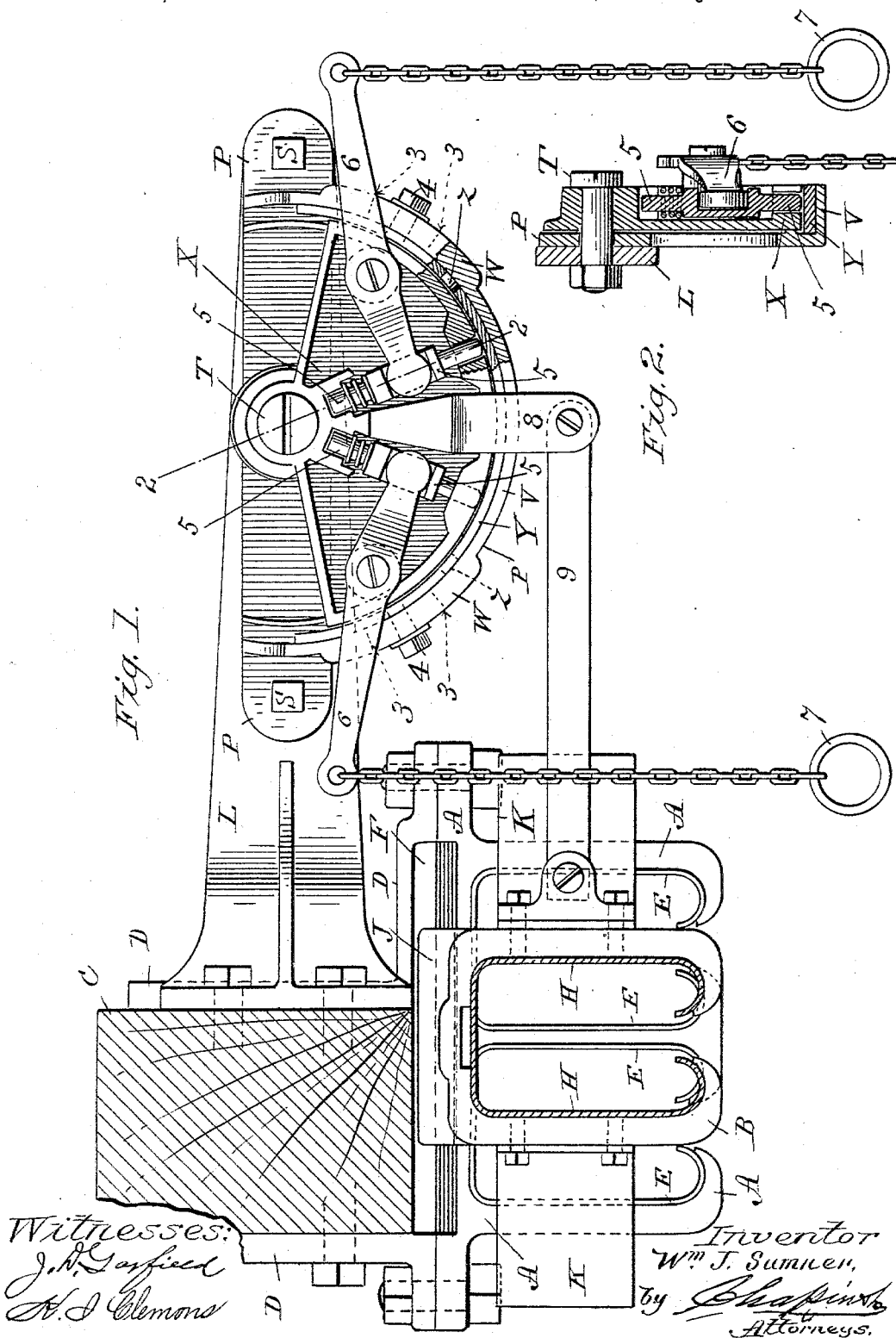
2 Sheets—Sheet 1.

W. J. SUMNER.

SWITCH AND BRACKET FOR TROLLEY TRACKS.

No. 564,950.

Patented July 28, 1896.



(No Model.)

2 Sheets—Sheet 2.

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Fig. 3.

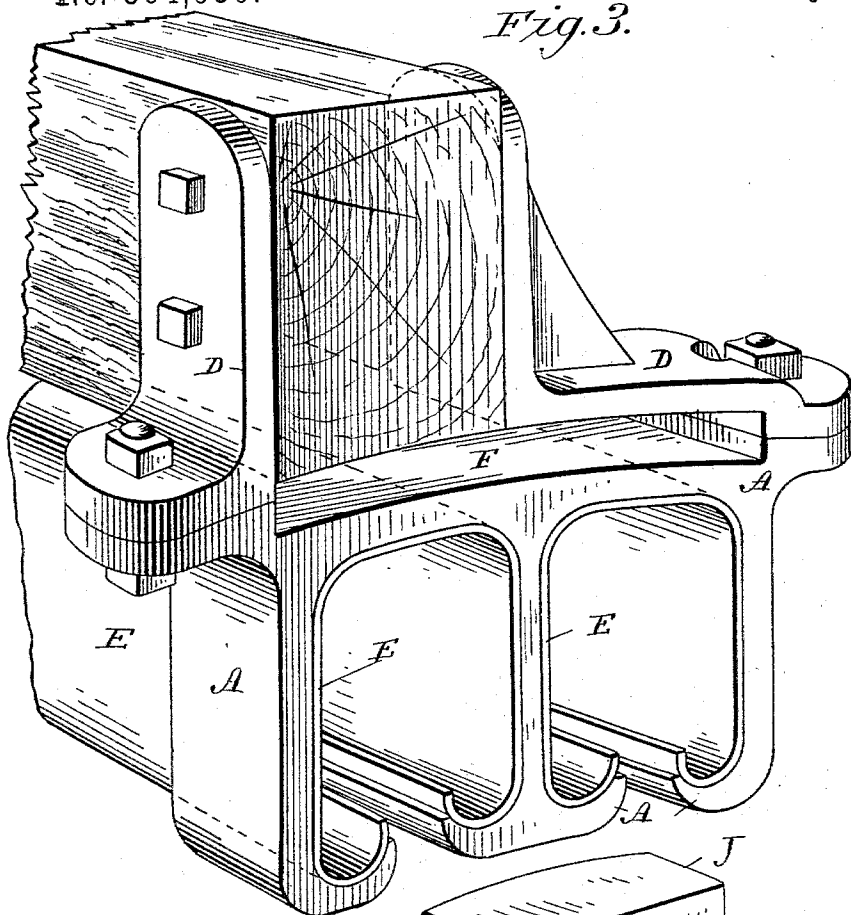
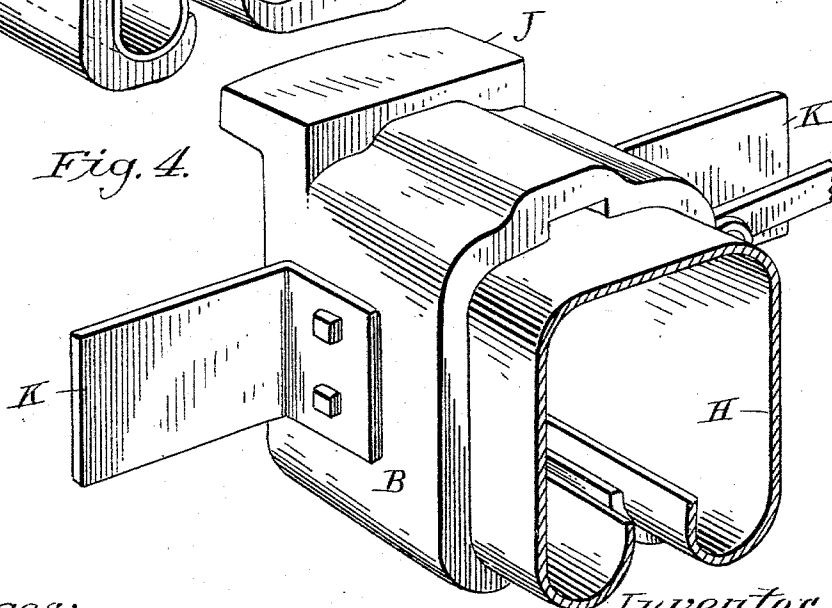


Fig. 4.



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UNITED STATES PATENT OFFICE.

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SWITCH AND BRACKET FOR TROLLEY-TRACKS.

SPECIFICATION forming part of Letters Patent No. 564,950, dated July 28, 1896.

Application filed April 1, 1896. Serial No. 585,837. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. SUMNER, a citizen of the United States of America, residing at Holyoke, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Switches and Brackets for Trolley-Tracks, of which the following is a specification.

This invention relates to switches and brackets for operating overhead trolley-tracks, the object being to provide an improved construction of switches and brackets for said purpose, and more particularly switches of that class which are adapted to be operated in connection with movable brackets in which the movable end of a trolley-track is sustained; and the invention consists in the peculiar construction and arrangement of said switches and brackets, all as herein-after fully described, and more particularly pointed out in the claims.

In the drawings forming part of this specification, Figure 1 is a front elevation of trolley-track-supporting brackets and a switch for operating the same embodying my invention, one of said brackets and switch being shown secured to a timber. Fig. 2 is a section on line 2 2, Fig. 1. Fig. 3 is a perspective view of the twin bracket and its supporting devices, showing the same secured to a piece of timber. Fig. 4 is a perspective view of the movable bracket.

The several brackets herein referred to are each shown in connection with an end of a trolley-track supported therein.

In the drawings, A and B indicate, respectively, a twin and a movable bracket for supporting the ends of trolley-tracks.

C indicates a timber, and D D elbow connections bolted to the opposite sides of said timber, and having said twin bracket A bolted thereto, whereby said bracket is held in proper suspended position for sustaining the ends of two trolley-tracks EE. Between the said elbow connections D D and the upper part of said twin bracket a slot-like opening F is formed for the reception of an arm on the said movable bracket, hereinafter described. Said movable bracket B (see Fig. 4) is of proper form to receive any suitable trolley-track and sustain one end thereof,

and, as shown in said last-named figure, the end of a trolley-track H is shown in connection therewith, the said end of a track being the end of a section of trolley-track which it becomes desirable to swing opposite the end of either one of the trolley-tracks E, which are shown to be sustained by the said twin bracket A, whereby a trolley-hanger running on said track H may be guided onto either of said tracks E; or a trolley-hanger running on and approaching the end of the track H, supported by the bracket B, may be received on the track H, supported on the latter. The operative position of said bracket B, against the end of the bracket A, is clearly shown in Fig. 1, the arm J of said bracket B entering said slot F in the upper part of the bracket A.

The end of the trolley-track H fits closely in the bracket B and holds the latter and the said arm J in proper position against the end of said bracket A. Said bracket B is provided on its opposite sides with the wings K K, which serve alternately to block the open ends of the tracks EE of bracket A, according to the position which bracket B may occupy opposite one or the other of said tracks supported by said bracket A. For instance, should bracket B hold the end of track H before the end of the track E at the right in Fig. 3, the wing K on the left side of bracket B would stand rigidly before the open end of track E at the left in Fig. 3, and vice versa. A horizontal bracket L is bolted to the side of said timber C, as shown in Fig. 1, on which bracket are supported the below-named trolley-track switching devices. Said switch devices consist of a case P of segmental form, secured to said bracket L by bolts S and by a center bolt T. The said case P has a horizontally-extending border V. On said border V are two bosses W W, made thicker than the intermediate portion of said border, and through each of said bosses and the border are provided two elongated bolt-holes, as indicated between the dotted lines 3 3, Fig. 1. Within said case P is pivoted by said bolt T a stop-bolt and lever-carrier X. The said lever-carrier X is of segmental form on its border, as shown. The said border of the carrier X is separated from the inner side of said border

V of the case P, and a flat segmental bolt-hole shoe Y is fitted between the said border of the bolt and lever-carrier X and the border V of said case P. The said bolt-hole shoe Y is adjustably secured against the inner face of said border V of the case P by bolts 4 4, which pass through the said elongated openings in the said border V, and are screw-connected to the said segmental shoe Y, and thereby said shoe is adjustable between said carrier X and the border V of case P to different radial positions for the below-described purpose.

Two stop-bolt holes Z Z are shown in shoe Y, Fig. 1, one of which holes is there shown in full lines and one in dotted lines. The said holes Z Z are adapted each to receive the end of one of two stop-bolts 5 5, which are supported in suitable bearings on said carrier X, whereby they have each an endwise movement into and out of one of said bolt-holes Z. A spring around the upper end of each of said bolts 5 drives the same into one of said holes Z when brought thereover, and a lever 6 for each of said bolts, pivoted on said carrier X, and having one end engaging with said bolts, as shown, is provided for each of the latter, whereby by grasping the ring 7, connected to each of said levers by a chain, as shown, one of said bolts 5 is drawn out of engagement with one of said bolt-holes Z, and at the same time the carrier X is swung upon its pivot T, as below described. An arm 8, fixed on said carrier, is connected to said bracket B by a connecting-rod 9.

The operation of the above-described devices whereby said bracket B and the end of the trolley-track H connected therewith are moved so that said last-named track is brought into line with either one of the said tracks E E, held by bracket A, and there locked in said position, whereby the swinging movement of said bolt and lever-carrier X has its said movements adjusted for the purpose of correcting any erroneous movements thereof, whereby the said fixed and movable ends of the trolley-tracks would not be brought into proper juxtaposition, is as follows: The position of bracket B (shown in Fig. 1) is that which is intermediate of the end of the bracket A, and consequently neither of the bolts 5 on said carrier X is in engagement with one of the holes Z in said bolt-hole shoe Y. To determine the position of said shoe and its bolt-holes relative to the said bolts 5, the track H of bracket B is moved directly opposite one of the tracks E of bracket A and such movement of bracket B swings the carrier X and brings its bolts 5 to a certain position. For instance, if said bracket B be moved as aforesaid and to the right in Fig. 1, the bolt 5 at the right of lever 8 in that figure should drop into the hole Z, (there shown in full lines,) provided said bolt-receiving hole be in proper position to receive the end of said bolt. If, however, such be not

the case, the said shoe-holding bolts 4 4 are slightly unscrewed and the shoe Y, in which said holes are, is moved in one direction or the other under the end of said bolt until the end of the latter shall drop into said hole, whereupon the said bolts 4 are screwed up, locking said shoe Y in said last-named properly-adjusted position. When it becomes desirable to move or switch said bracket B to the left from its said position at the right of bracket A, the lever 6, at the right in Fig. 1, and said carrier X are operated by pulling down on the ring 7, connected therewith, and said pulling-down action swings lever 6 on its pivot, thereby lifting the bolt 5, connected therewith, out of said stop-hole Z in the shoe Y, and then swings the carrier X on its pivot T, thereby, through lever 8 and connecting-rod 9, causing said bracket B to be moved to the left, and when the end of the track carried by said last-named bracket shall arrive opposite the end of the left-hand track held by bracket A the end of bolt 5 at the left of arm 8 on said carrier will drop into its stop-hole Z in said shoe, and thus lock the bracket B in said position.

From the above description of the construction and operation of said devices it will be clearly understood that the extent of the swinging movements of said carrier X, by means of said levers 6 and their chain connections, are gaged and determined by the said adjustable shoe Y, having stop-holes therein, one for each of said bolts. When one of said bolts is in engagement with one of said stop-holes Z, the end of the other bolt rides on the face of said shoes. Thus by lifting one bolt out of engagement with said shoe, and at the same time swinging said carrier, the second bolt is caused to drop into its said stop-hole on arriving thereover.

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

1. Overhead trolley-track supporting and switching devices comprising a fixed twin track-holding bracket, a movable single track-holding bracket supported to move opposite the face of said twin bracket, combined with devices for imparting said movements to said single bracket, and for varying the degree of said movements thereof, and for locking the same in operative positions, relative to said twin bracket, substantially as set forth.

2. Trolley-track switching devices consisting of a pivoted segmental bolt and lever-carrier, a case on which said carrier is pivoted having a segmentally-extending border opposite the border of said carrier, combined with a bolt-hole shoe interposed between said two borders having holes therein for receiving the ends of said bolts, means for securing said shoe whereby the same is made endwise adjustable, and whereby the degree of the swinging movement of said carrier is adjusted and determined, and a movable track-hold-

ing bracket, and connections between said carrier and said bracket, substantially as set forth.

3. In combination, the switch-case P, having the segmental border V, the bolt and lever-carrier X, the bolt-hole shoe Y, adjustably secured between the borders of said case and carrier, the bolts 5, 5, connected to said carrier for endwise movements toward and from said shoe, and springs for moving the same thereagainst and into engagement with holes therein, the levers 6, 6, pivoted on said case

and engaging with said bolts for lifting them, devices connected with each of said levers, whereby the latter and said bolts are operated, and said carrier is swung on its pivot, and connections for uniting said carrier with a trolley-track bracket, substantially as set forth. 15

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