No. 815,150. PATENTED MAR. 13, 1906.

H. ELLIOT, JR. & W. H. ELLIOT.

ADJUSTABLE SWITCH ROD.

APPLICATION FILED DEC. 23, 1905.

Fig. I.

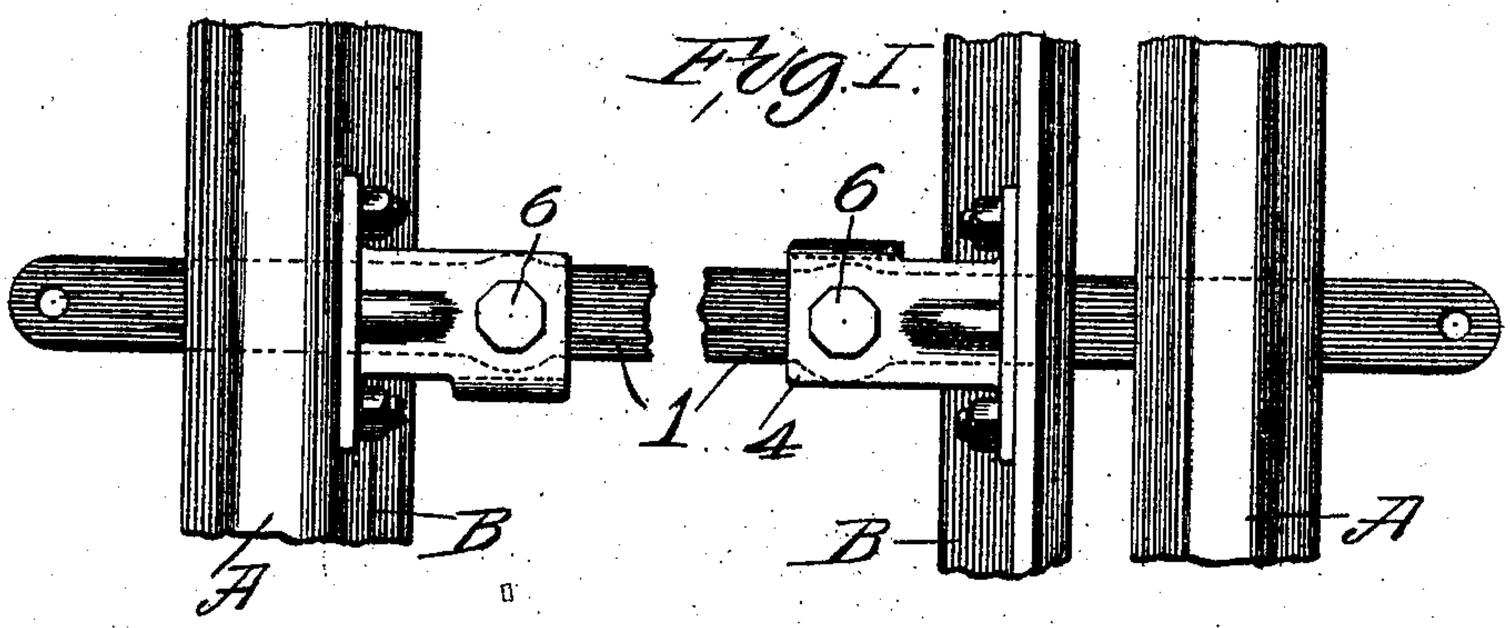


Fig. II.

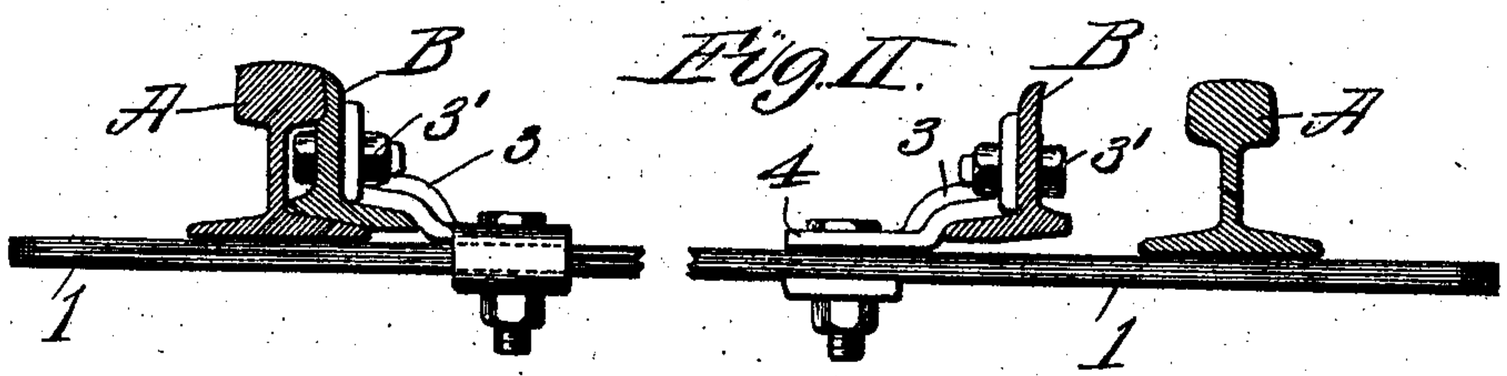


Fig. III.

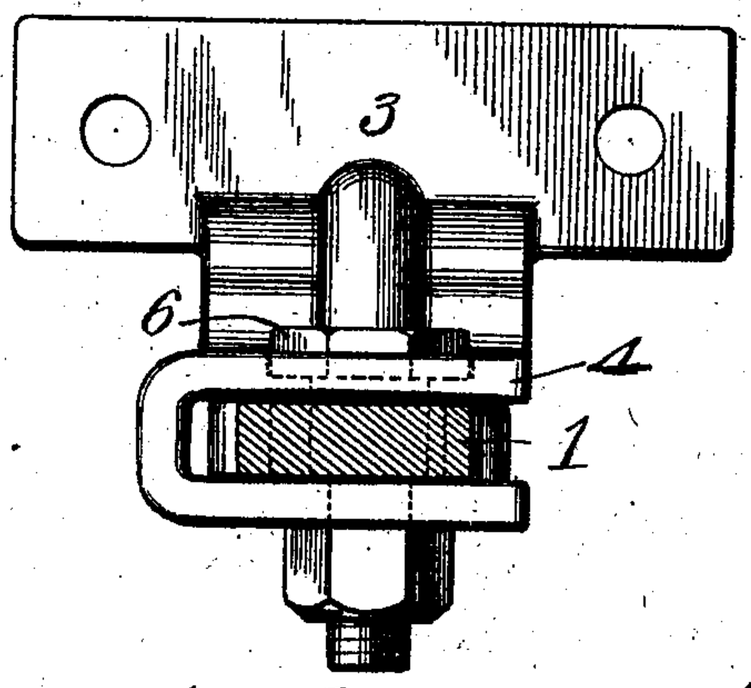


Fig. IV.

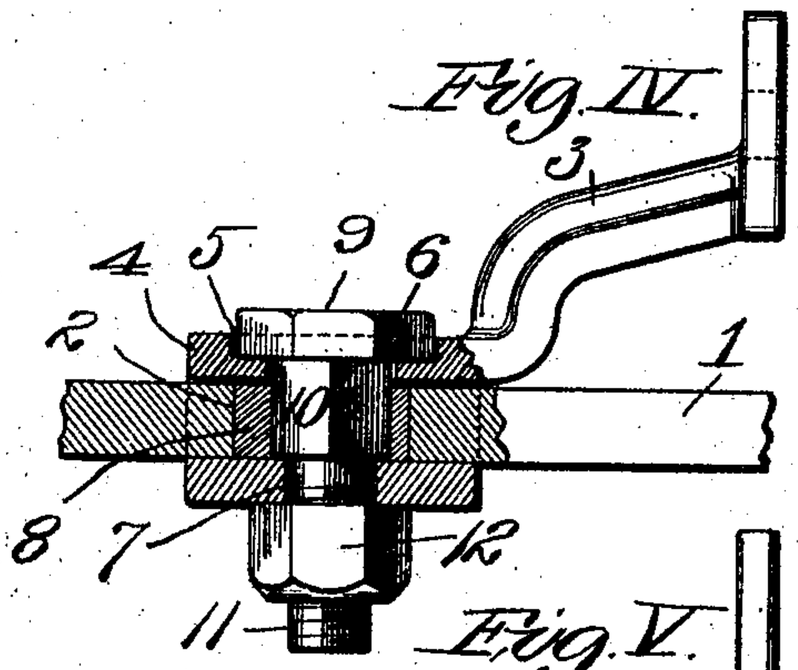


Fig. V.

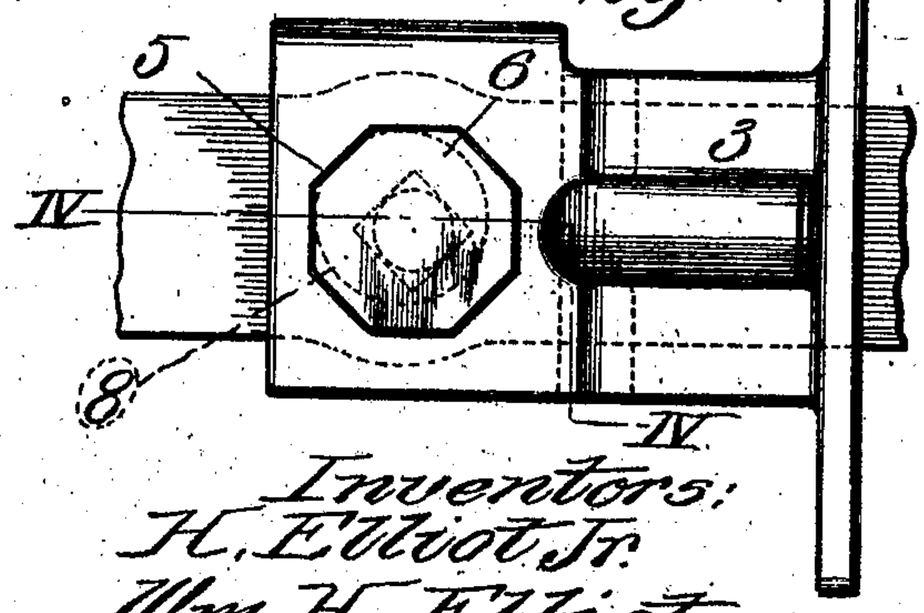
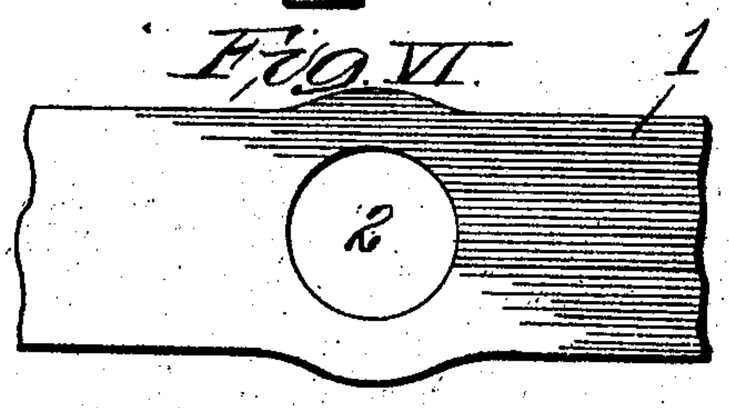


Fig. VI.



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UNITED STATES PATENT OFFICE.

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ADJUSTABLE SWITCH-ROD.

No. 815,150. Specification of Letters Patent. Patented March 13, 1906.

Application filed December 23, 1905. Serial No. 293,150.

To all whom it may concern:

Be it known that we, HENRY ELLIOT, Jr., and WILLIAM H. ELLIOT, citizens of the United States, residing in the city of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Adjustable Switch-Rods, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

Our invention relates to that description of switch-rods in which an eccentric is used for the purpose of drawing the switch-points connected by the rod toward each other or spacing them farther apart, so that they may be brought at all times firmly to the track-rails.

Figure I is a top or plan view of our adjustable switch-rod. Fig. II is a cross-section taken through a pair of switch-points with our switch-rod connecting them and through adjacent track-rails. Fig. III is an enlarged end elevation of one of the brackets in which the switch-rod is held, said switch-rod being shown in cross-section. Fig. IV is in part a longitudinal section taken on line IV IV, Fig. V, through a fragment of the switch-rod and through a portion of the bracket in which it is held and in part a side elevation of the bracket and a portion of the switch-rod. Fig. V is a top or plan view of one of the brackets and a portion of the switch-rod therein. Fig. VI is a fragmentary top view of the switch-rod.

A designates the track-rails of a railway-track, and B the switch-points, which are adapted to be moved to and from said track-rails.

1 designates a switch-rod that operates, as usual, beneath the track-rails. This switch-rod is provided with circular holes 2.

3 designates brackets that are secured to the switch-points B by any suitable means, such as bolts 3′. Each of these brackets is provided with a U-shaped extension 4, in which the switch-rod 1 is adapted to fit, the said U-shaped extension consisting of an upper arm and a lower arm spaced apart sufficiently to permit of the switch-rod entering readily between them. In the upper arm of the extension is a socket 5 of non-circular form, as seen most clearly in Fig. V. The upper arm is also provided with a bolt-hole 6, that is located centrally with respect to the non-circular socket 5. The lower arm of the extension contains a circular bolt-hole 7.

8 designates eccentric disks that are seated in the circular openings 2 in the switch-rod, these disks being designated "eccentrics," due to their being provided with bolt-holes that are offset from their centers. These bolt-holes in the eccentric disks are of non-circular form, as illustrated in dotted lines, Fig. V. The extension-arms of the brackets and the eccentric disks are adapted to receive bolts that consist of non-circular heads 9, which correspond in contour to the sockets 5 in the upper bracket-extension arms, non-circular shanks 10, that correspond in contour to the non-circular bolt-holes in the eccentric disks, and round threaded shanks 11 that pass through the bolt-holes 7 in the lower bracket-extension arms and receive nuts 12. When the switch-rod is to be adjusted to carry the switch-points A, to which said rod is connected by the brackets 3, the nuts 12 are loosened on the threaded shanks of the bolts passing through the brackets and switch-rod. The bolts are thereby freed sufficiently to permit of the heads 9 being lifted from the non-circular sockets 5 in the upper arms of the brackets. The bolts are then rotated in either direction, and as their non-circular shanks 10 remain in the non-circular bolt-holes in the eccentrics 8 said eccentrics are rotated in the holes in the switch-rods, with a result of shifting the brackets 3 inwardly or outwardly, according to the direction of rotation of said eccentrics, and the switch-points are drawn closer together or spread more widely apart, according to requirements.

It will be seen that the threaded portion of the bolts being circular, such portions will turn readily in the circular bolt-holes of the lower arms of the bracket extensions in securing the desired adjustment.

While we have shown and described our adjustment means in connection with both of the brackets united to the switch-points and we prefer to so utilize the parts, as a greater degree of adjustment may be obtained, we do not limit ourselves to the use of the adjustment means in connection with both of

the switch-point-carried brackets, as our improvement may be applied and used in connection with only one of the brackets.

We claim as our invention—

1. A switch-rod mechanism comprising a switch-bar having a circular or round hole therein, a disk fitting in said hole, a bracket secured to one of the switch-rails and provided with a U-shaped extension that embraces said switch-bar, and a bolt passing through said bracket extension and through said disk; the hole in said disk through which the bolt passes being eccentrically located and the head of said bolt being non-circular and fitting, when in normal position, in a non-circular socket in the extension of said bracket, substantially as set forth.

2. A switch-rod mechanism comprising a switch-bar having a circular or round hole therein, a disk fitting in said hole and having an eccentric non-circular hole, a bracket secured to one of the switch-rails and provided with an extension that bears against said switch-bar, and a bolt passing through said bracket extension and through said disk; said bolt having a non-circular portion fitting in the non-circular hole in said disk and the head of said bolt being non-circular and fitting, when in normal position, in a non-circular socket in the extension of said bracket, substantially as set forth.

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WILLIAM H. ELLIOT.

In presence of—
E. S. KNIGHT,
BLANCHE HOGAN.