

(No Model.)

A. A. STROM.
SWITCH RAIL ADJUSTING ATTACHMENT.

No. 487,458.

Patented Dec. 6, 1892.

Fig. 1.

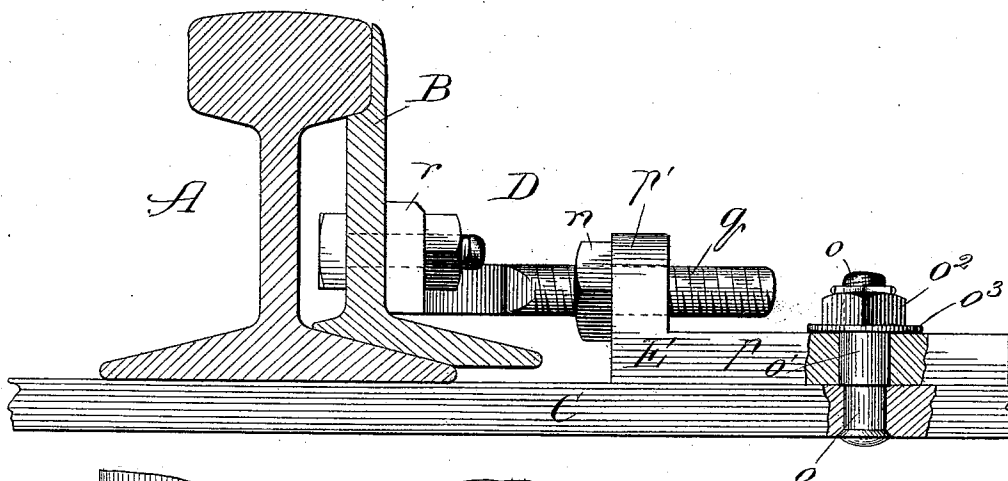
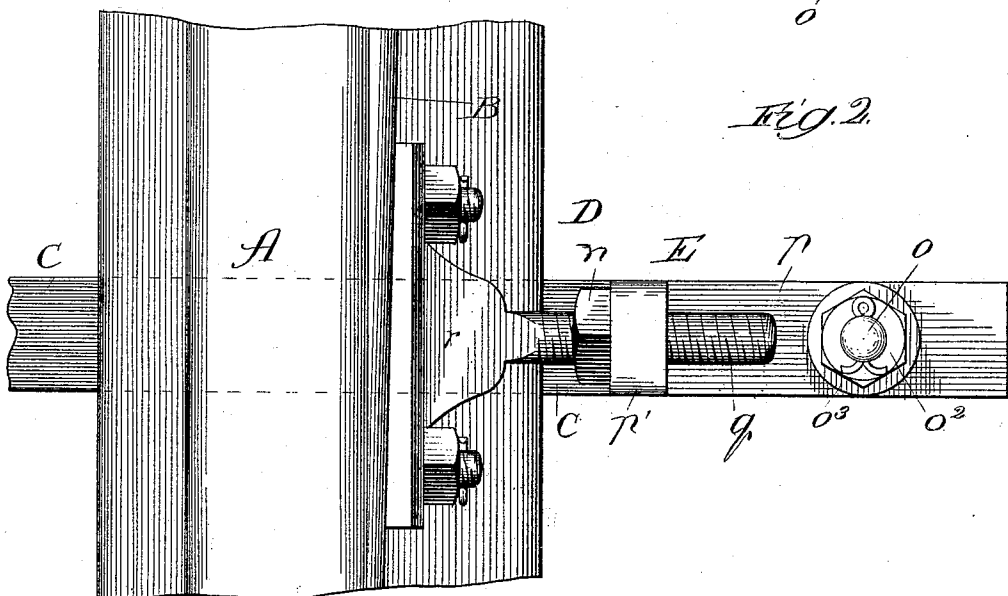


Fig. 2.



Witnesses:
Edw. J. Gayles
Clifford W. White

Inventor:
Axel A. Strom
By *Dyckman & Dyckman*
Attorneys

UNITED STATES PATENT OFFICE.

AXEL A. STROM, OF AUSTIN, ASSIGNOR TO THE STROM MANUFACTURING COMPANY, OF CHICAGO, ILLINOIS.

SWITCH-RAIL-ADJUSTING ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 487,458, dated December 6, 1892.

Application filed August 13, 1892. Serial No. 443,051. (No model.)

To all whom it may concern:

Be it known that I, AXEL A. STROM, a citizen of the United States, residing at Austin, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Switch-Rail-Adjusting Attachments, of which the following is a specification.

My invention relates to an improvement in the class of devices employed in connecting a switch-rail with a tie-bar to afford means for adjusting the switch-rail with relation to its main rail, thereby to insure the complete throw of the switch-rail.

My object is to provide a simple construction of such attachment which shall as an incidental advantage tend to prevent tipping of the switch-rail under the strain to which it is subjected in use.

In the accompanying drawings, Figure 1 is a view in sectional elevation, partly broken, showing a main rail and its adjacent switch-rail provided with my improved adjusting attachment connecting the switch-rail with a tie-bar; and Fig. 2 shows the same in plan.

A is the main rail; B, the switch-rail, and C a tie-bar; and D is my improved adjusting attachment comprising the following-described details: A clip *r* is fastened, as by the bolts and nuts illustrated, in proper position to the web of the switch-rail, and it has a screw-stem extension *q*.

E is a swivel-block, preferably shaped as a "knee" and formed with a metal bar *p*, terminating at one end in a bearing *p'*, extending at a right angle from it and provided with a perforation which may be threaded, the bar *p* being fastened to the tie-bar by means holding it down firmly thereon, but permitting it to swing readily in a horizontal plane, the means shown for the purpose being a pivot-bolt *o*, passed through and riveted under the tie-bar and having an enlargement *o'*, fitting an opening through the bar *p*, but which may extend slightly beyond the top thereof, and a nut *o''*, screwed on the bolt against the bar *p* and shoulder afforded by the end of the enlargement *o'*, a washer *o'''* being shown interposed. The screw-stem *q* engages the knee at the bearing *p'*, which may be tightened against any threads there may

be on the stem by a nut *n*, screwed against the face of the bearing.

The throw of the switch-rail which is necessarily in the arc of a circle while the movement of the tie-bar is in a straight line requires that the knee be swiveled, as described, and by the construction, as will be seen, the knee readily turns on its pivot-post *o* to maintain the proper degree of alignment of the stem *q* and opening in the bearing *p'*.

To adjust the switch-rail against its main rail, and thus insure the complete throw of the switch, as in providing against lost motion in the switch mechanism or impairment of any part tending to shorten the throw of the switch-rail, it is only necessary on, say, loosening the knee-fastening to the tie-bar and the nut *n* to turn the knee in the proper direction to force the switch-rail against the main rail by thus increasing the distance between the switch-rail and coinciding openings in the tie-bar C and knee-bar *p*, in which the pivot-post *o* is applied.

The construction thus described is peculiarly simple and durable, and, as will be seen, the comparatively-large area of surface bearing of the knee-bar *p* on the tie-bar C and the absolute rigidity in a vertical direction of the attachment D firmly holds the switch-rail against tipping under the strain of a train passing over the switch.

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

1. In a switch-rail-adjusting attachment, the combination of a clip to be fastened to the switch-rail and provided with a screw-stem extension and a swivel-support on the tie-bar, having a bearing for the said stem, substantially as described.

2. In a switch-rail-adjusting attachment, the combination of a clip to be fastened to the switch-rail and provided with a screw-stem extension, a swivel-support on the tie-bar, having a bearing into which the said stem is screwed, and a nut on the stem for tightening the bearing against the stem-thread, substantially as described.

3. In combination with a switch-rail and a tie-bar, a switch-rail-adjusting attachment formed with a clip fastened to the switch-

5 rail and having a screw-stem extension q , a knee E, comprising a bar p , and a bearing p' , engaging the stem q , and a pivot-post swiveling the knee at its said bar to the tie-bar, substantially as described.

10 4. In combination with a switch-rail and a tie-bar, a switch-rail-adjusting attachment formed with a clip fastened to the switch-rail and having a screw-stem extension q , a knee E, comprising a bar p and a bearing p' , engaging the stem q , a pivot-bolt o , having an enlargement o' and passing through the tie-bar and bar p , and a nut o^2 on the said bolt, substantially as described.

15 5. In combination with a switch-rail and

a tie-bar, a switch-rail-adjusting attachment comprising a clip fastened to the switch-rail and having a screw-stem extension q , carrying a nut n , a knee E, comprising a bar p , and a bearing p' , engaging the stem q , a pivot-bolt o , passed through the tie-bar and bar p , being riveted to the tie-bar and having an enlargement in the bar p , and a nut o^2 on the said bolt, the whole being constructed and arranged to operate substantially as described. 25

AXEL A. STROM.

In presence of—

J. W. DYRENFORTH,

W. H. DYRENFORTH.