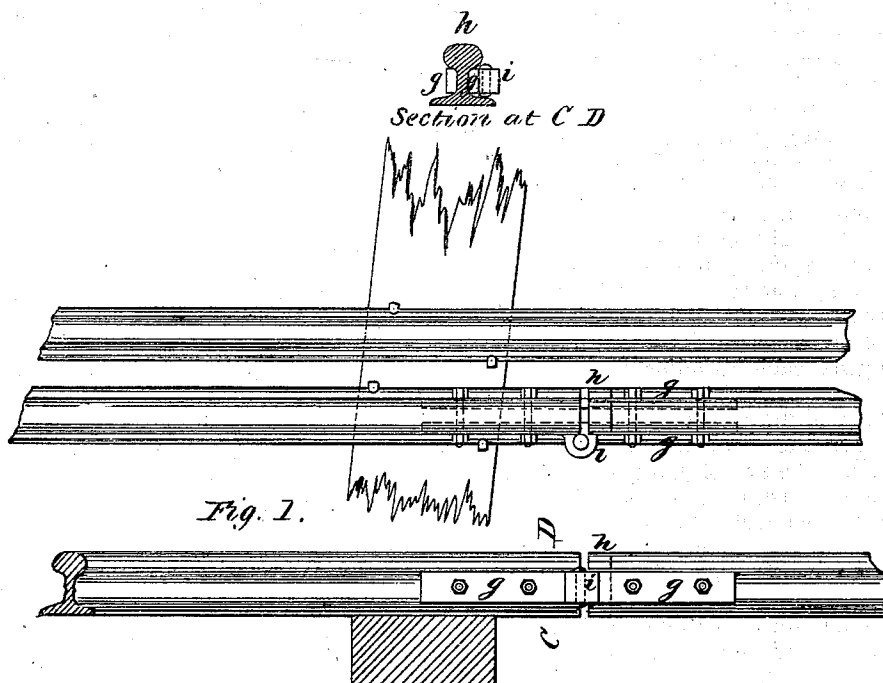


JOHN R. SULLIVAN.

Improvement in Adjustable Rail Joints.

No. 120,547.

Patented Oct. 31, 1871.



Witnesses.

E. W. M. Smith.
Hyram Harris.

Inventor.

John R. Sullivan.

UNITED STATES PATENT OFFICE.

JOHN R. SULLIVAN, OF WOODLAND, CALIFORNIA.

IMPROVEMENT IN ADJUSTABLE RAIL-JOINTS.

Specification forming part of Letters Patent No. 120,547, dated October 31, 1871.

To all whom it may concern:

Be it known that I, JOHN R. SULLIVAN, of Woodland, in the county of Yolo and State of California, have invented an Improved Adjustable Rail-Joint for Railways; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawing and to the letters of reference marked thereon.

My invention relates to an adjustable rail-joint which is employed at the switch or other suitable point, and serves to compensate for any lengthening or shortening of the rails by expansion or contraction; and it consists of a strong strap of iron fitted to each side of the rail and secured by bolts passing through slots in the rail and secured by nuts. The strap upon one side has a strong knuckle-joint, and by loosening the nuts upon one side of this joint it is possible to turn the strap back, thus exposing the joint. Two or three pieces or blocks are constructed of different lengths, each forming a short section of a rail, and one or more of these sections may be inserted or withdrawn, as the case may be, to compensate for the contraction or expansion which will affect the switch joint from some distance in either direction from it. The jointed strap is then turned back into its place and again secured by its nuts when the track will be complete, and the necessity of cutting or replacing rails will be avoided.

In the drawing forming a part of this specification is shown a side elevation and plan view of my improved joint.

To enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe fully my improved device with the appliances for carrying it into effect.

In order to compensate for the lengthening and shortening of the rails by expansion and contraction I employ an adjustable rail-joint. This is placed at the switch-joint, as the evil effects are generally shown here, and the switch-rail has often to be cut off or a new one put in, as the case may be. This part of my device consists in attaching a stout strap of iron, *g*, to either side of the rail so as to extend across the opening between the rails, and the two are secured to each other by strong bolts which pass through slots in the rails. These slots allow the rails to expand and contract. One of the straps or plates *g* is hinged or has a stout knuckle-joint, *i*, just opposite the end of the rail; and by removing the nuts at one side of the joint the strap can be turned back, thus exposing the spaces between the rails. A number of short blocks, *h*, are formed of different lengths, and have the same cross-section as that of the rail. Any one or more of these blocks, which will fit the space between the ends of the contiguous rails, may be introduced to fill the space caused by contraction; or one may be removed if the space is diminished by expansion. The strap *g* is then turned back to its place and again bolted, when the rail will be firm and complete.

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

The slotted strap *g*, having the knuckle-joint *i*, in combination with the main rail and the removable splice-pieces *h*, as described.

In witness whereof I have hereunto set my hand and seal.

JOHN R. SULLIVAN. [L. S.]

Witnesses:

C. W. M. SMITH,
HYRAM HARRIS.

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