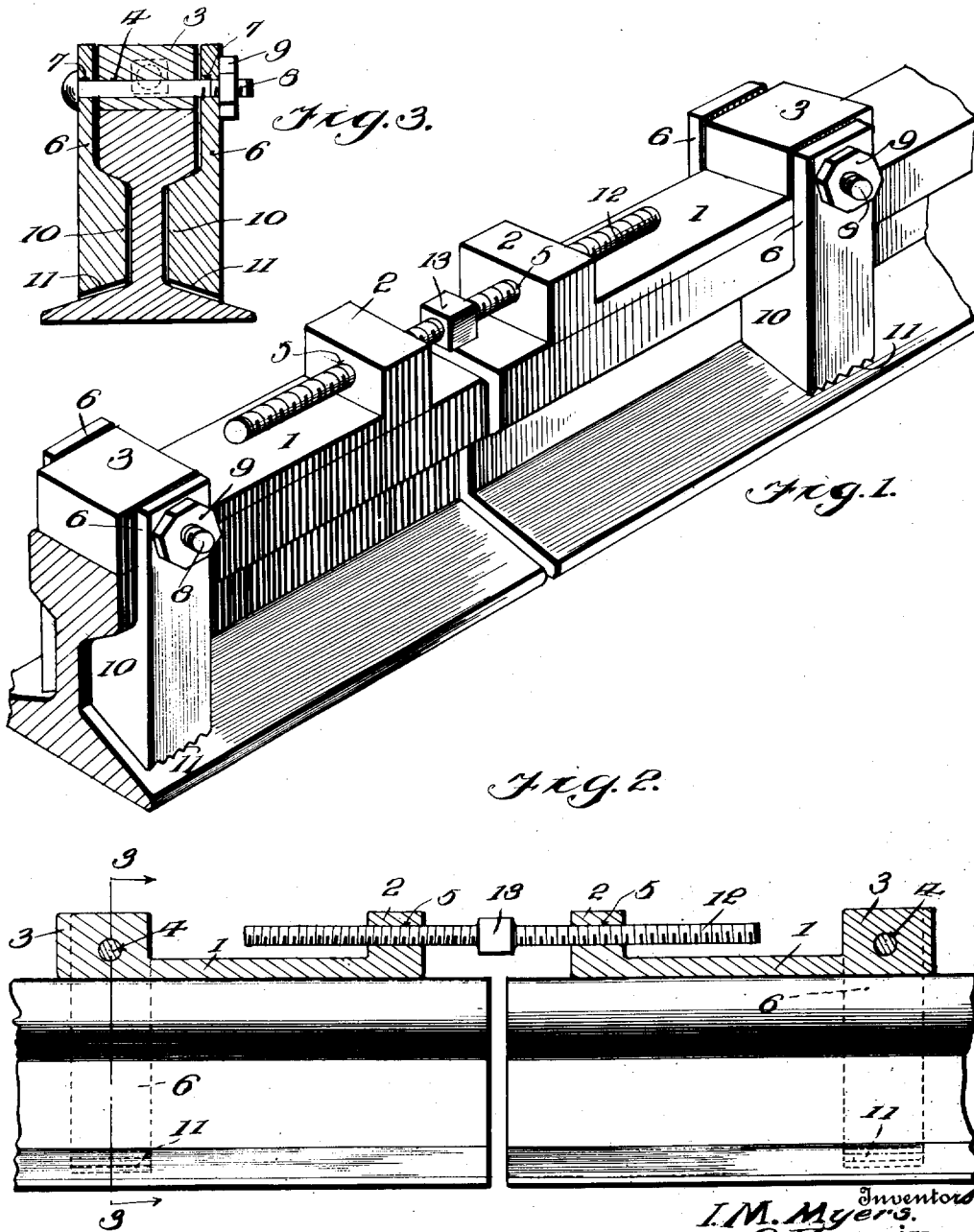


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1,018,436.



Witnesses

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ISAAC M. MYERS AND OTTO ERWIN, OF ELLINGTON, MISSOURI.

RAIL-JOINT REGULATOR.

1,018,436.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, ISAAC M. MYERS and OTTO ERWIN, citizens of the United States, residing at Ellington, in the county of Reynolds and State of Missouri, have invented certain new and useful Improvements in Rail-Joint Regulators, of which the following is a specification.

It is well known that gaps are frequently formed at the joints between the meeting ends of companion rail sections, on account of construction of the rails in cold weather, or from various other causes, and that these gaps, if not closed or substantially closed, break the continuity of the tread surface of the rail and thus cause the wheels of the rolling stock to have a very disagreeable and injurious pounding action as they pass over the joints. In order to close such a gap at a joint, it has been customary to employ a gang of ten or fifteen men to loosen the bolts in the joints for about a quarter or half a mile on each side of the defective joint, and to pound the heads of the loosened rail sections so as to take up space therebetween to provide sufficient space between the meeting ends of the defective joint to enable an additional rail section to be inserted in the track. This operation ordinarily consumes a half a day or more, and is not only objectionable for that reason, but also on account of the fact that the steel is considerably damaged from the battering of the rail heads.

The object of the present invention is to obviate the objections above noted and to enable the defective joints to be more cheaply and expeditiously remedied, and to this end, the invention consists in an improved joint regulator which may be readily applied to the meeting ends of a pair of companion rail sections and which may be operated after the slot spikes in the angle bars have been loosened, to draw the rail sections together with a positive force to close the gap therebetween.

Another object of the invention is to provide a device of this character which may be readily carried from place to place as required for use, which is thoroughly reliable and efficient in operation, and which is simple, durable and strong in construction and is not liable to get out of order.

With these and other objects in view, as will more fully appear as the description proceeds, the invention consists of certain constructions, combinations and arrange-

ments of the parts that we shall hereinafter fully describe and claim.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawing in which:

Figure 1 is a sectional perspective view illustrating the application of the invention; Fig. 2 is a longitudinal section thereof, the rail sections being shown in side elevation; and, Fig. 3 is a transverse section on the line 3—3 of Fig. 1.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Our improved joint regulator includes a connecting-bar which is normally disposed in a substantially horizontal position and which is constructed in a pair of separate sections 1 that are arranged in longitudinal alinement. Each section is formed at its ends with upstanding heads which extend transversely entirely thereacross with their side faces flush with the side edges of the section. For the sake of perspicuity the heads at the adjacent ends of the sections are designated 2, while those at the remote ends of the sections are designated 3. All of the heads have square corners and rectangular faces and are substantially similar except that the heads 3 are of somewhat greater length than the heads 2. Each head 3 is formed with a transverse opening 4 extending entirely therethrough in close proximity to the plane of the upper face of the section 1. The heads 2 have registering longitudinal openings 5 extending there-through midway between their side faces and at a predetermined distance above the plane of the upper faces of the sections of the connecting bar, said openings being preferably threaded, as shown.

Rail-engaging clamps are mounted at the remote ends of the sections 1, and as these clamps are substantial duplicates, only one of the same will be specifically described. The clamp comprises a pair of co-acting members 6 the upper ends of which are arranged on opposite sides of the head 3 and are formed with openings 7 registering with the transverse opening 4. A bolt 8 is passed through the openings and has a nut 9 working on its extremity, the nut being designed to be tightened to draw the clamping members together. The clamping members de-

pend substantially vertically below the bar section and have their inner faces flat except at said depending lower ends, where the members are thickened to form inwardly projecting jaws 10. The upper and lower edges of the jaws are inwardly beveled so that the jaws are wedge-shape in cross section, for a purpose to be hereinafter disclosed. The upper edge of each jaw is spaced apart from the lower face of the connecting-bar section, while the lower edge of the jaw is flush with the lower extremity of the clamping member and is formed with transverse serrations 11.

The adjacent ends of the sections 1 are adjustably coupled together by a turn-screw 12 having oppositely threaded end portions which work in the longitudinal openings 5 in the respective heads 2. Midway between its ends the turn-screw has an integral collar 13 that is angular in cross section and is designed to be engaged by a wrench or similar tool to enable the screw to be turned in one direction or the other as occasion requires.

In practice, the connecting-bar is disposed longitudinally upon the tread surface of the rail so as to span the joint between the meeting ends of companion rail sections. The clamps are then applied to the respective rail sections with the co-acting members 6 of each clamp depending on opposite sides of the rail, it being noted that the jaws 10 fit under the head of the rail with their beveled edges engaging, respectively, the under surface of the head and the upper surface of the base flange. By tightening the nuts 9 the clamping members are drawn together so as to force the jaws against the sides of the rail sections and thus cause the jaws to firmly grip the rail sections with a wedging action. By having the bolts 8 in the lower portion of the heads 3 and comparatively close to the tread surface of the rail the clamping members may be, of course, drawn against the rail with considerable force. After the clamps have been secured to the rail sections, a wrench or the like is applied to the collar 13 and the screw turned in the requisite direction to draw the clamps together and thus exert longitudinal tension on the rail sections to close the gap at the joint. Inasmuch as the turn-screw engages the heads 2 at points above the plane of the

bolts 8, the tension exerted by the screw tends to hold the adjacent ends of the connecting-bar sections 1 down against the tread of the rail so that a straight pull on the rail sections is secured and any tendency of the rail sections to rise at the joint is obviated. The operation of the device may be conveniently effected by a single workman, and it is only necessary to employ a second workman to pull the slot spikes in the angle bars to enable the rails to be shifted under tension. The track may therefore be repaired at a considerably smaller cost than with a method requiring the services of a gang of ten or more workmen. Furthermore, the desired result is attained without the necessity of pounding the rails or otherwise injuring the steel. After the gap at one joint has been closed the spikes are driven home to retain the rail sections in place, whereupon the regulating device is detached and applied to the next adjacent joint, the operation being repeated until sufficient space has been taken up to permit the insertion of an extra length of rail.

Attention is directed to the fact that the serrations 11 engage the upper faces of the base flanges, for the purpose of affording the jaws a firmer grip on the rail sections and to insure against the liability of the jaws slipping longitudinally under tension.

What we claim is:

A rail joint closure, comprising a connecting member constructed in separate longitudinally alined sections formed at their ends with heads, a longitudinal actuating screw extending between and working through the heads at the adjacent ends of the sections, transverse clamping bolts passing through the heads at the remote ends of the sections, and clamping members mounted on the bolts and depending therefrom, said clamping members being formed at their lower ends with enlargements of a size to engage the underside of the head, the side of the web and the base flange of a standard rail.

In testimony whereof, we affix our signatures in presence of two witnesses.

ISAAC M. MYERS. [L. S.]
OTTO ERWIN. [L. S.]

Witnesses:

C. L. MASSIE,
A. L. GEORGE.