J. J. THELEN.

RAIL JOINT.

APPLICATION FILED JAN. 14, 1911.

1,005,670. **Patented Oct. 10, 1911.**

Fig. 1.

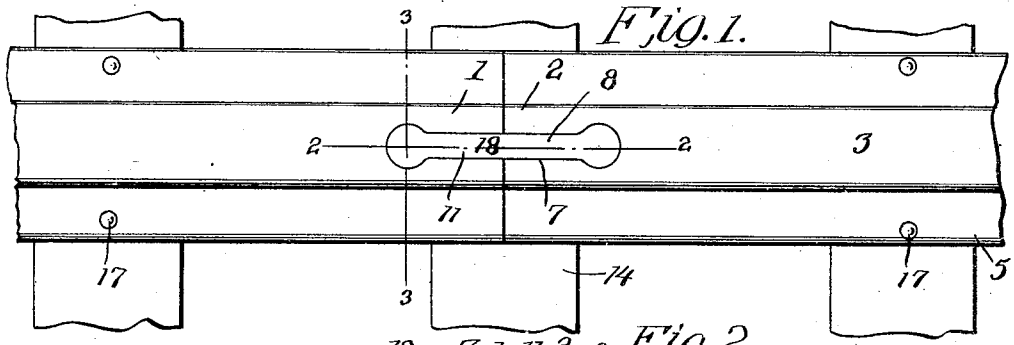


Fig. 2.

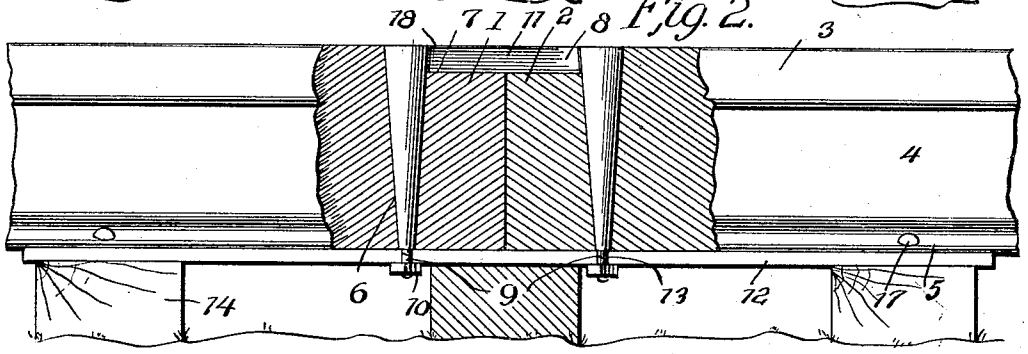


Fig. 3.

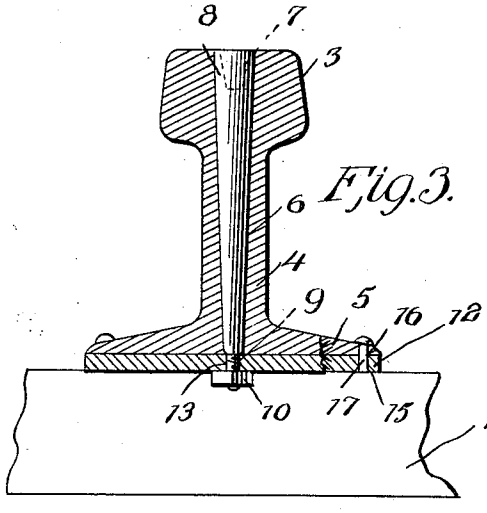
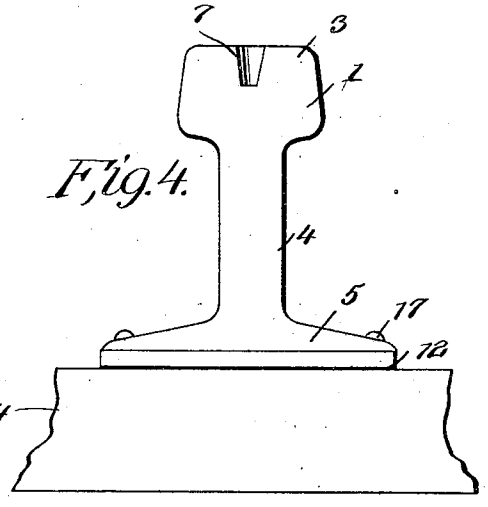


Fig. 4.



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UNITED STATES PATENT OFFICE.

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RAIL-JOINT.

1,005,670. Specification of Letters Patent. Patented Oct. 10, 1911.

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To all whom it may concern:

Be it known that I, JACOB J. THELEN, a citizen of the United States, residing at Schenectady, in the county of Schenectady and State of New York, have invented new and useful Improvements in Rail-Joints, of which the following is a specification.

This invention relates to rail joints and the object of the invention is to provide a secure and durable joint for the ends of rails which may be readily and conveniently operated to connect the parts.

Further objects of the invention will appear as the following specific description is read in connection with the accompanying drawing, which forms a part of this application, and in which:—

Figure 1 is a top plan view. Fig. 2 is a longitudinal section taken on the line 2—2 of Fig. 1. Fig. 3 is a transverse section taken on the line 3—3 of Fig. 1. Fig. 4 is a detail end view of one of the rails.

Referring more particularly to the drawing, 1 and 2 represent the rail ends to be connected, both of which are provided with the customary treads 3, webs 4 and bases 5. In this instance the webs of the rails are somewhat thickened so as to permit the forming of tapered sockets or apertures 6 which communicate at their large ends in the tread with longitudinal recesses 7. The side walls of these recesses are inclined outwardly to correspond with the general inclination of the walls of the apertures 6.

The sockets or apertures 6 are formed in each rail and are adapted to receive the tapered locking pins 8 which are threaded upon their lower or smaller ends, as at 9, to receive the clamping nuts 10 and have their upper or larger ends connected together by a bar 11 which is wedge shaped in cross section to fit the recesses 7, these pins 8 passing through the rails vertically and through a supporting plate 12 which is apertured at 13 to receive the same and extends across a plurality of ties 14 as shown. Suitable registering apertures 15 and 16 are formed in the plate and rail ends to receive the bolts 17 whereby these parts may be connected together irrespective of the connection by means of the pins and nuts 8 and 10.

The bar 11, it will be noticed, lies flush with the top of the tread 3 and being bridged across the joint between the rail ends 1 and 2 forms an auxiliary tread 18 upon which the car wheels are adapted to run. It will thus be seen that the wheel in passing from one rail to another will not be subject to the jump and consequent jar as where the rails are connected together with the ordinary fish plates. The plate 12 is of the same width as the base and has a thickness of approximately three-quarters of an inch. In extending across a plurality of ties the weight of the car in passing over the joint is distributed over a large area and the strain on the bar 11 thereby minimized.

Having thus described the invention, what I claim as new is:—

The combination with rail ends to be connected, each of said rail ends having a vertical tapered aperture and wedge shaped recesses extending longitudinally of the rail in the treads and communicating with said apertures, tapered pins passing through and fitting said recesses, a bar connecting the larger ends of said pins and fitting in said recesses, a supporting plate bridged across the joint between the rail ends and connected to said rail ends, said plate having apertures to permit the passage of said pins, and means to secure the pins in the apertures and the bar in the recesses.

In testimony whereof I affix my signature in presence of two witnesses.

JACOB J. THELEN.

Witnesses:
EDWARD S. VOSS,
J. LESLIE SCHOOLCRAFT.