

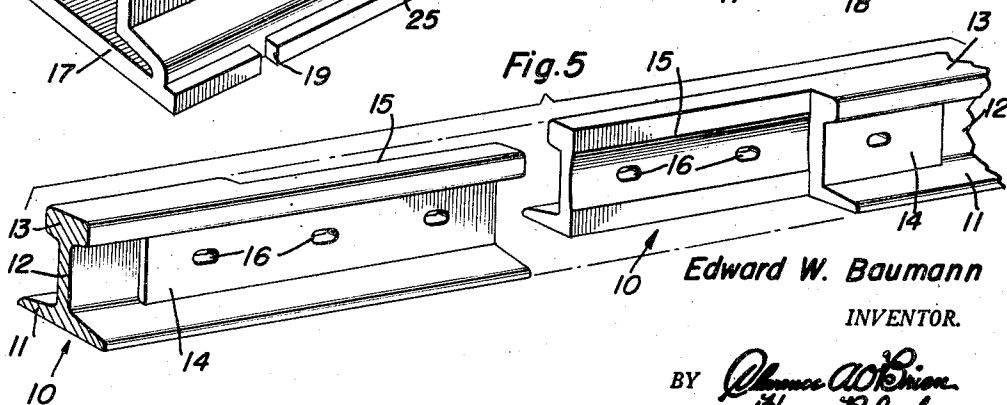
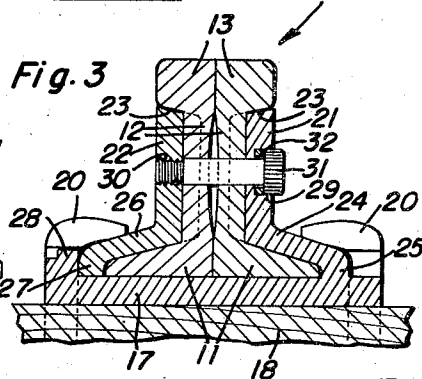
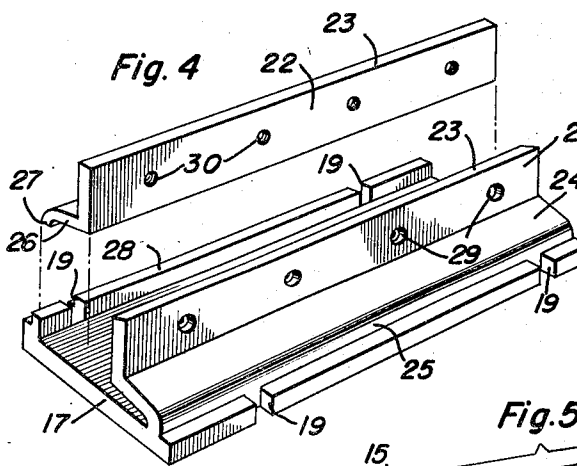
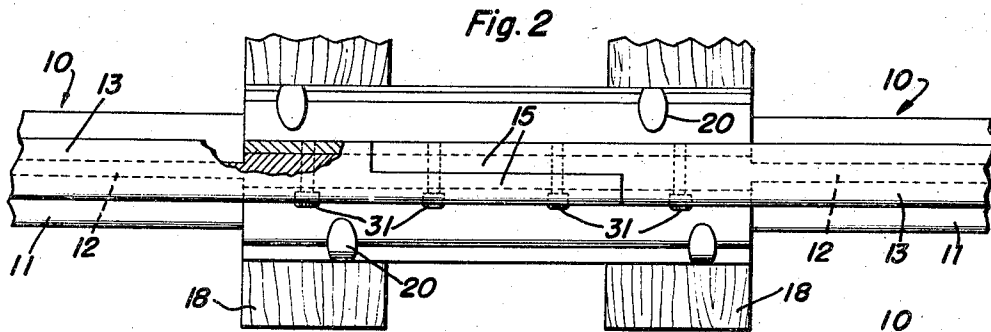
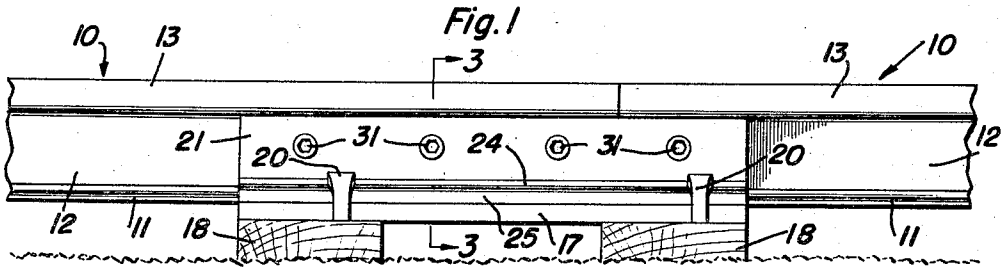
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E. W. BAUMANN

2,710,147

RAIL JOINT

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2,710,147

RAIL JOINT

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1 Claim. (Cl. 238—232)

The present invention relates to new and useful improvements in rail joints of the scarf-type and has for its primary object to provide, in a manner as hereinafter set forth, a joint of this character comprising a novel construction and arrangement whereby pounding of the wheels of the rolling stock passing thereover and noise will be substantially eliminated.

Another very important object of the invention is to provide a rail joint of the aforementioned character wherein projecting nuts, bolts, etc., are substantially eliminated thus materially promoting safety and economy.

Other objects of the invention are to provide a rail joint of the character set forth which will be comparatively simple in construction, strong, durable, compact and which may be manufactured and installed at low cost.

All of the foregoing and still further objects and advantages of the invention will become apparent from a study of the following specification, taken in connection with the accompanying drawing wherein like characters of reference designate corresponding parts throughout the several views, and wherein:

Figure 1 is a view in side elevation of a rail joint constructed in accordance with the present invention;

Figure 2 is a top plan view thereof, a portion being broken away in section;

Figure 3 is a view in transverse section, taken substantially on the line 3—3 of Figure 1;

Figure 4 is a group perspective of the clamping units; and

Figure 5 is a group perspective of the end portions of the two rails.

Referring now to the drawing in detail, it will be seen that reference numeral 10 designates generally the end portions of a pair of rails. Each rail 10 includes a base 11, a web 12 and a ball 13. On their outer sides, the end portions of the rails 10 are thickened for additional strength, as at 14. Also, the end portions of the rails 10 are scarfed and fitted together, as at 15. The rails 10 are further provided with longitudinally elongated bolt holes 16.

Mounted beneath the end portions of the rails 14 is a metallic base 17 of sufficient length to bridge at least two of the crossies 18 and rest thereon. The longitudinal sides of the base 17 are notched or recessed, at 19, to accommodate spikes 20 which are driven into the ties 18.

The scarfed end portions of the rails 10 are clamped between fish plates 21 and 22, the upper edges of which are inclined or beveled, as at 23, to conform to the rail balls 13 which rest thereon. The fish plate 21 is integral with the base 17, said plate comprising an outwardly and downwardly inclined flange 24 which seats on the adjacent base portions 11 of the rails 10 and which includes a downturned outer portion 25 which merges

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with said base 17. The fish plate 22 is substantially similar in construction but is separate from the base 17, said fish plate 22 comprising an outwardly and downwardly inclined flange 26 terminating in a downturned portion 27 which rests on said base 17. The portion 27 of the flange 26 abuts an upstanding flange 28 on one of the marginal side portions of the base 17. The flange 28 is also notched or recessed to accommodate the respective spikes 20.

The fish plates 21 and 22 have formed therein, respectively, aligned counterbored and threaded openings 29 and 30 which are in registry with the rail openings 16. The aligned openings 29, 16 and 30 receive Phillips head screws or bolts 31 which are threaded into said openings 30. The counter-bores of the openings 29 accommodate the heads of the bolts 31. Lock washers 32 are provided in the openings 29 for the bolts 31. As shown to advantage in Figure 3 of the drawing, the opposed inner face portions of the rail webs 12 are slightly concaved.

It will thus be seen that a continuous rail joint has been provided wherein pounding and noise will be substantially eliminated. The counter-sunk bolts 31, being nutless and substantially flush with the outer faces of the fish plates 21 and 22, will not be sheared off by broken wheels, brake hangers, etc., thereby promoting safety.

It is believed that the many advantages of a rail joint constructed in accordance with the present invention will be readily understood and although a preferred embodiment of the device is as illustrated and described, it is to be understood that changes in the details of construction may be resorted to which will fall within the scope of the invention as claimed.

Having described the invention, what is claimed as new is:

A rail joint comprising; a pair of rails including scarfed end portions having registering longitudinal slots therein, an elongated base mounted longitudinally beneath the rails and comprising an upstanding flange on one of its longitudinal marginal portions, a removable fish plate engaged with one side of the rails and having therein threaded openings in registry with the slots, said removable fish plate including a depending flange resting on the base between the rails and the first-named flange in side-abutting engagement with the latter, an integral fish plate rising from the other longitudinal marginal portion of the base and engaged with the adjacent sides of the rails, the second-named fish plate having therein spaced counterbored smooth openings in registry with the slots, the counterbores of the smooth openings being of uniform diameter throughout the length thereof, bolts inserted through the smooth openings and the slots and threaded into the first-named opening for securing the rails and the fish plates together, said bolts including cylindrical heads engaged in the counterbores, and lock washers in the counterbores beneath the heads of the bolts for securing said bolts against loosening.

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