

E. F. ODELL & G. A. HUMASON.
RAIL JOINT.

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949,744.

Patented Feb. 15, 1910.

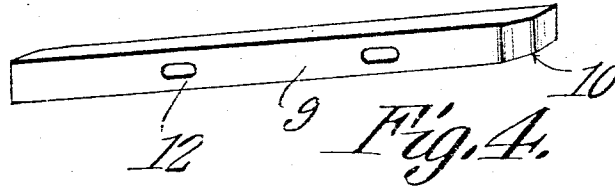
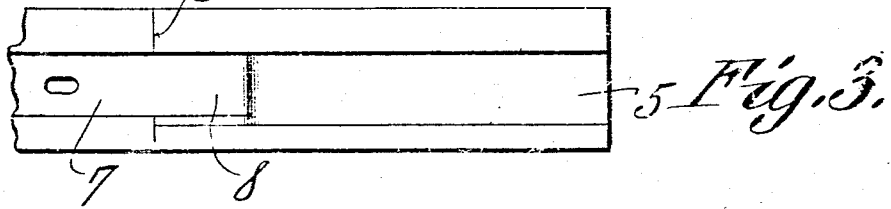
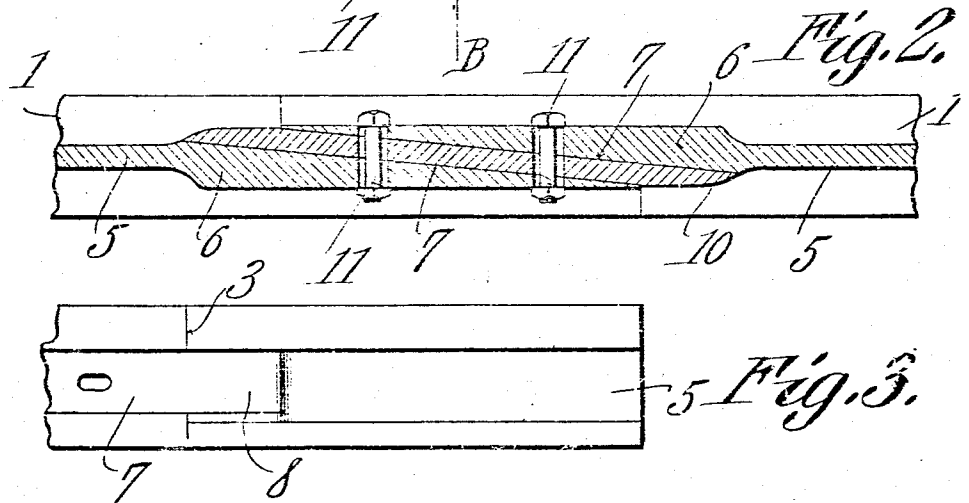
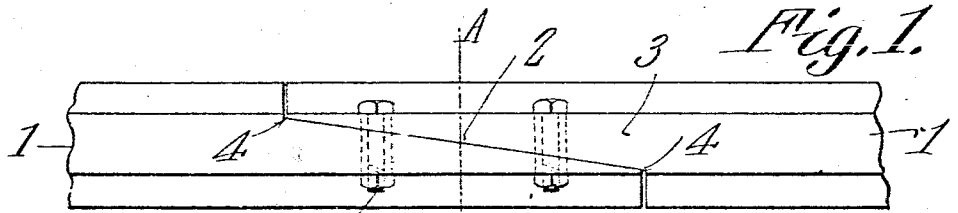


Fig. 5.

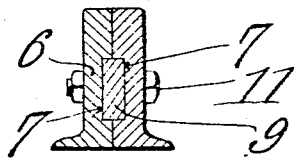
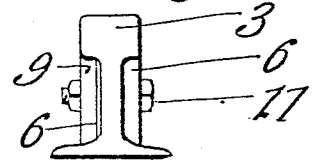


Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

EDWARD FRANKLIN ODELL AND GRANVILLE ALISON HUMASON, OF SHREVEPORT, LOUISIANA; SAID HUMASON ASSIGNOR OF ONE-HALF OF HIS RIGHT TO EDWARD H. R. FLOOD.

RAIL-JOINT.

949,744.

Specification of Letters Patent.

Patented Feb. 15, 1910.

Application filed October 13, 1909. Serial No. 522,444.

To all whom it may concern:

Be it known that we, EDWARD FRANKLIN ODELL and GRANVILLE ALISON HUMASON, citizens of the United States, residing at Shreveport, in the parish of Caddo, State of Louisiana, have invented a new and useful Rail-Joint, of which the following is a specification.

It is the object of this invention to provide an overlapped rail joint, the component parts of which are secured together by a removable key of novel construction, the key being so constructed that it is accessible, beyond the ends of the rail sections, for removal; other and further objects being made manifest hereinafter as the description of the invention progresses.

The drawings show but one form of the invention and it is to be understood that changes falling within the scope of what is claimed may be made without departing from the spirit of the invention.

Other numerals of reference are employed to denote corresponding parts throughout the several figures of the drawings, wherein:

Figure 1 is a top plan; Fig. 2 is a horizontal section through the web of the rail; Fig. 3 is a fragmental side elevation of one rail section; Fig. 4 is a perspective of the key; Fig. 5 is a vertical transverse section on the line A-B of Fig. 1; and Fig. 6 is an end elevation.

The invention includes a pair of rail sections, which are denoted generally by the numeral 1. The ends of these rail sections 1 are adapted to overlap and are provided with beveled, contacting faces 2. These beveled faces 2, when the rail sections are viewed in top plan, do not cut the lateral edges of the ball 3 of the rail, but terminate between the edges of the ball 3, thereby forming in each rail section, a shoulder 4, against which the end of the other section is adapted to abut. The webs 5 of the rail sections 1 are thickened as denoted by the numeral 6, adjacent the beveled faces 2, and for a short distance beyond the same, the beveled faces 2 being provided with cooperating grooves 7, prolonged beyond the shoulders 4 to extend into the webs 5 of the rails in their thickened portions 6, as denoted by the numeral 8. A key 9 is provided adapted to be removably inserted in the grooves 7 and to fit closely therein, the key being prolonged beyond the shoulders

4, to extend into the portions 8 of the grooves 7. The prolongations of the key 9 are beveled as denoted by the numeral 10, so that the extremities of the key 9 are flush with the faces of the portions 6 of the webs of the rails. The rail sections are provided with openings extending transversely through the sections and through the grooves 7 therein, these openings being adapted to receive bolts 11 or the like, the bolts passing through the openings 12 in the key 9. By fashioning the key 9 separate from the rail sections, instead of integral with one of them, should the key become broken or injured, the same may readily be replaced, without the necessity of the insertion of an entirely new rail section. By causing the key 9 to extend terminally beyond the rail sections, it is obvious that a more secure bond is obtained than would be possible otherwise. Moreover, should the rail sections and the key 9 be rusted or otherwise secured, so that the parts adhere, even after the bolts 11 are removed, the protruding ends of the key 9 may be struck a smart blow, which will serve to loosen the key and to separate the rail sections.

The key 9 may readily be slid into the grooves 7 after the sections are alined, or the key may be mounted in place in one of the sections before the beveled faces 2 are brought into contact and by beveling the ends of the key 9, as denoted by the numeral 10, the key is housed entirely beneath the ball of the rail and not likely to be engaged by the flanges of passing wheels.

By referring to Fig. 4 of the drawings, it will be seen that the openings 12 in the member 9 are elongated, longitudinally of the member 10 and it will be seen upon an examination of Fig. 2, that the openings in the overlapped ends of the rail section, are similarly elongated. By this construction, the expansion and contraction of the rails may be provided for.

It will be seen that when the construction heretofore described is employed, a continuous rail joint will be effected. The rails may therefore be employed as an electric conductor for signaling purposes, doing away with the necessity of bonding the rails, and the construction obviously be applicable to electrically operative car lines, as well as to steam roads.

The construction of the joint is such that

- a continuous rail is effected, eliminating the battering of the ends of the rails doing away with the unpleasant click caused by the wheel passing from one rail end to the other, and preventing what in railway maintenance are denominated "low joints." The device will therefore render possible a higher rate of speed in train operation and materially lessen the cost of track maintenance and repairs.
- 10 Having thus described our invention, what we claim is:—
1. A device of the class described comprising overlapped rails having beveled contacting faces, there being cooperating grooves in said faces; and a key removably inserted in the grooves and prolonged beyond the rail ends.
 2. A device of the class described comprising overlapped rails having beveled contacting faces, there being cooperating grooves in said faces, extended beyond said faces into the webs of the rails; and a removable key to fill the grooves.
 3. A device of the class described comprising overlapped rails having beveled contacting faces, there being cooperating grooves in said faces extended beyond said faces into the webs of the rails; a key removably

inserted in the grooves and prolonged beyond the rail ends to fill the extensions of the grooves, the extremities of the key being beveled to present faces flush with the webs of the rails.

4. A device of the class described comprising overlapped rails having beveled contacting faces, there being cooperating grooves in said faces; a key removably inserted in the grooves; the key and the overlapped portions of the rail being provided with elongated openings; and a retaining element arranged to reciprocate in said openings, longitudinally of the key and of the rail.

In testimony that we claim the foregoing as our own, we have hereto affixed our signatures in the presence of two witnesses.

EDWARD FRANKLIN ODELL.
 GRANVILLE ALISON HUMASON.

Witnesses to signature of Edward F. Odell:

G. A. PFAEFFLE,
 A. R. HOLMES.

Witnesses to signature of Granville A. Humason:

EDWARD A. GEORGE,
 D. V. FRAZIER.