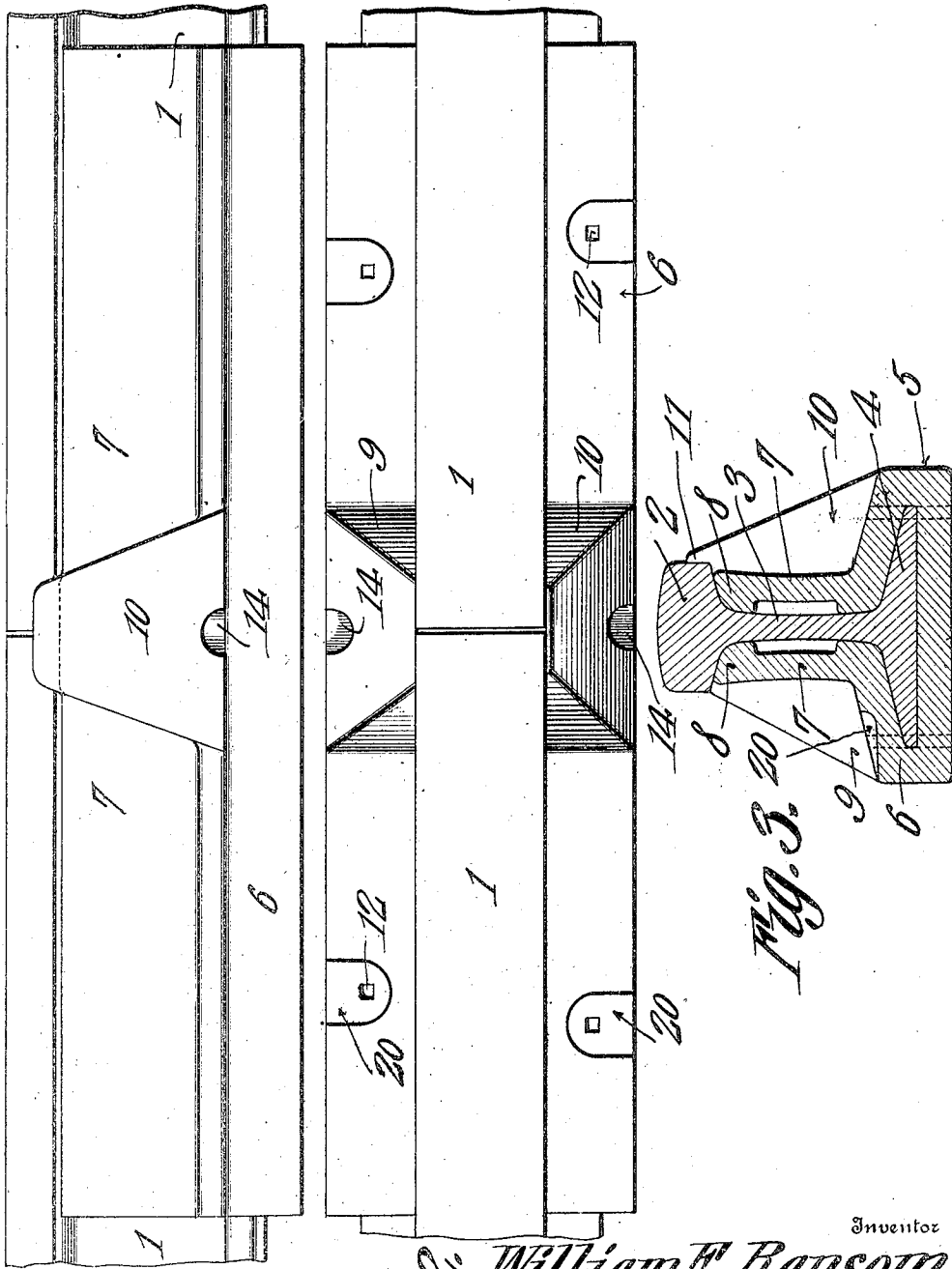


942,411.

Patented Dec. 7, 1909.



Witnesses
M. B. Lawton
Fig. 1.

Fig. 2. *William E. Ransom.*
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Attorneys.

Inventor

UNITED STATES PATENT OFFICE.

WILLIAM E. RANSOM, OF NORTH YAKIMA, WASHINGTON.

RAIL-JOINT.

942,411.

Specification of Letters Patent.

Patented Dec. 7, 1909.

Application filed June 21, 1909. Serial No. 503,509.

To all whom it may concern:

Be it known that I, WILLIAM E. RANSOM, a citizen of the United States, residing at North Yakima, in the county of Yakima and State of Washington, have invented a new and useful Rail-Joint, of which the following is a specification.

The objects of the invention, are, generally, the provision in a merchantable form of a device of the class above mentioned which shall be inexpensive to manufacture, facile in operation, and devoid of complicated parts; specifically, the provision of a casing adapted to receive telescopically, the ends of a pair of rail sections, the said casing being provided with oppositely disposed buttresses of novel and improved construction adapted to reinforce the casing and to make more secure and rigid the union between the ends of the rail sections; other and further objects being made manifest hereinafter as the description of the invention progresses.

The invention consists in the novel construction and arrangement of parts hereinafter described, delineated in the accompanying drawings, and particularly pointed out in that portion of this instrument wherein patentable novelty is claimed for certain distinctive and peculiar features of the device, it being understood, that, within the scope of what hereinafter is thus claimed, divers changes in the form, proportions, size, and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

Similar numerals of reference are employed to denote corresponding parts throughout the several figures of the drawings.

In the accompanying drawings, Figure 1 shows my invention in side elevation; Fig. 2 is a top plan thereof; and Fig. 3 is a vertical transverse section.

In the accompanying drawings, I have shown the adjacent ends of a pair of rail sections 1 united by the device of my invention. The invention is adapted to be used with rails of any weight and of standard construction, but, in order to make the description of the invention plain, and to render the claims definite and certain, I will state that the rail shown in the accompanying drawings comprises a ball 2, a web 3, and a flange 4.

The invention includes a casing denoted generally in Fig. 3 by the numeral 5. This casing 5 is adapted to receive telescopically, and to inclose, the adjacent ends of a pair of rail sections. The casing 5 comprises a hollow base 6 which is adapted to inclose closely the flange 4 of the rail, it being understood that sufficient space is left between the flange 4 of the rail and the inner walls of the base 6, so that the rail may move readily, longitudinally, within the casing.

The web 3 of the rail is inclosed upon either side by ribs 7, the said ribs 7 being provided at their upper extremities, with heads 8 adapted to fit snugly against the lower face of the ball 2 of the rail. The ribs 7 take the form of flat plates substantially coextensive in length with the base 6.

Intermediate its ends, the casing 5 is provided with oppositely disposed buttresses 9 and 10. These buttresses are fashioned integral with the base 6 and the ribs 7, and extend slightly above the upper faces of the heads 8, into supporting contact with the lower face of the ball 2 of the rail. One of these buttresses, denoted by the numeral 10, is provided at its upper extremity, with an upstanding lug 11 which, as clearly shown in Fig. 3, engages laterally the ball 2 of the rail. As shown most clearly in Fig. 2 the buttresses 9 and 10 are pyramidal in form. Upon their upper faces at their outer edges, the buttresses are provided with seats 14 adapted to receive the outstanding portion of the head of a spike.

The base 6, upon either side of the buttresses 9 and 10, is provided with spike holes 12, disposed out of alignment with each other, transversely of the tie, in order that the spikes which are inserted into them may not engage a common grain in the tie, causing the same to split. If desired, the spike holes 12 may be surrounded by seats 20, whereby the body of the device will not interfere with the head of a sledge-hammer when the spikes which are inserted in the apertures 12 are being driven to place.

The device may be mounted in a variety of ways. When it is desired to employ the same to form a suspended joint, so-called, spikes may be driven into the apertures 12 which are disposed on either side of the buttresses 9 and 10. In such case, the central portion of the device, defined by the buttresses, remains unsupported. When this construction is carried out, it is obvious that the but-

tresses serve to strengthen greatly the device at its point of greatest strain, namely, the point midway between the supports. The upper extremities of the buttresses are in contact with the ball 2 of the rail, and serve to receive fairly, and to aid in distributing, the weight of the passing trains, the pyramidal form of the buttresses giving them great strength, and adapting them peculiarly to fulfil this function. The lug 11 which up-stands from one of the buttresses, serves to reinforce and to steady the rail upon the outside of the track. This is of peculiar importance upon curves, the inertia of the moving train tending, upon a curve, to throw it out-ward.

If desired, a joint tie may be introduced directly beneath the buttresses 9 and 10, and in such case, a spike may be driven upon either side of the device, the head of this spike extending inward and registering with the seats 14.

In applying the device the casing 5 is slid upon one of the rail sections until the end of the said section protrudes from the device. The other rail section is then brought into alinement with the first rail section, and the casing slid to inclose the second rail section until the adjacent ends of the two sections are disposed between the buttresses 9 and 10, as shown in Fig. 2. The device may then be attached to the ties in the usual manner. The buttresses 9 and 10, being disposed preferably upon either side of the ends of the rail sections, serve to reinforce the union between said sections, and to reduce to a minimum, the possibility of the lateral separation of the extremities of the rail sections, due to a fracture of the device in which they are inclosed.

My invention serves not only to strengthen the union between the two rail-ends, but at the same time, to do away with "low-joints," thus maintaining the grade of the tracks. The rails are closely inclosed laterally by the device and adequate reinforcement against fracture due to lateral stress is pro-

vided in the buttresses 9 and 10. The device, therefore, will obviously tend to maintain the track in alinement, as well as at grade.

My invention, although simple in construction results in a rail joint well adapted to withstand the wear and tear incident to a heavy freight, or high speed passenger traffic.

Having thus described my invention what I claim as new and desire to protect by Letters Patent is:—

1. A device of the class described comprising a casing arranged to receive telescopically, and to inclose, the web and flange of a rail, the said casing being provided, intermediate its ends, with oppositely disposed, sloping buttresses, extending to the edges of the casing and provided upon their upper faces, at their outer edges, with inwardly extending depressions constituting seats located within the contour of the buttresses and arranged to receive the outstanding portion of a spike head, the casing being intact beneath the depressions.

2. A device of the class described comprising a casing arranged to receive telescopically, and to inclose, the web and flange of a rail; the said casing being provided intermediate its ends, with oppositely disposed pyramidal buttresses, each having its apex extended superiorly and laterally beyond the casing to engage the ball of a rail, the buttresses extending to the edges of the casing and being provided upon their faces at their outer edges, with inwardly extending depressions located within the contour of the buttresses and arranged to receive the outstanding portion of a spike head, the casing being intact beneath the depressions.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

WILLIAM E. RANSOM.

Witnesses:

J. A. LOUDON,
A. B. CLINE.