

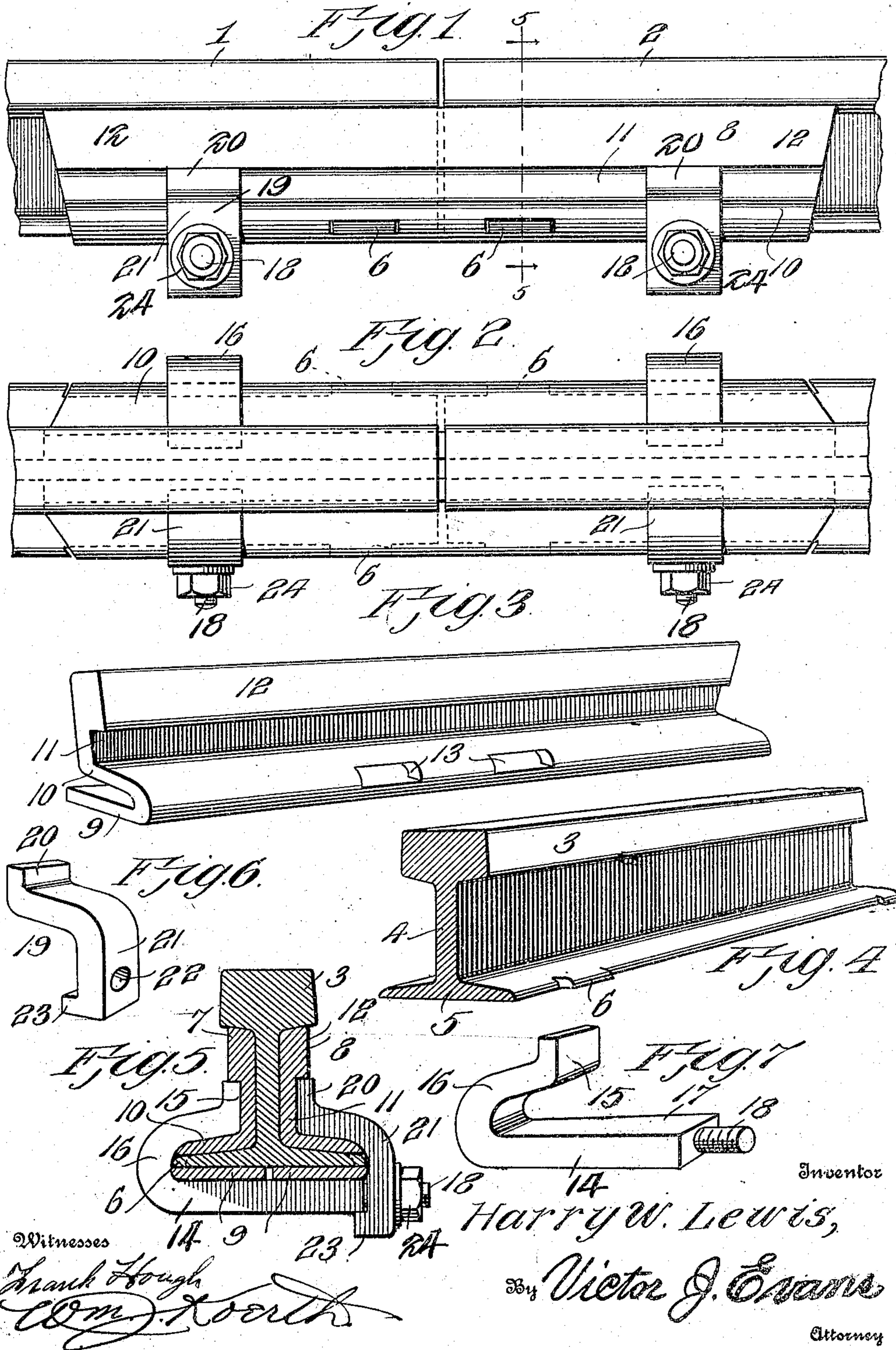
H. W. LEWIS.

RAIL JOINT.

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930,870.

Patented Aug. 10, 1909.



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UNITED STATES PATENT OFFICE.

HARRY W. LEWIS, OF TYRONE, PENNSYLVANIA.

RAIL-JOINT.

No. 930,870.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HARRY W. LEWIS, a citizen of the United States, residing at Tyrone, in the county of Blair and State of Pennsylvania, have invented new and useful Improvements in Rail-Joints, of which the following is a specification.

This invention relates to rail joints for railway rails, and one of the objects of the invention is to provide a joint having structural features which will overcome the defects of ordinary joints as to noise and jar incident to car wheels moving thereover and loosening the parts of the joint itself, thereby obviating damages to the rails and injury to the rolling stock, as well as inconvenience and jar to the traveling public.

Another object of the invention is to embody in a railroad joint a construction which will so unite the rails as to make them practically continuous and to prevent depressions of the joints occurring between the ties by the application to the under part of the contiguous ends of the rails of bracing means adapted to be easily disposed between the ties and readily accessible in the operations of applying the parts to the united ends as well as in the disassociation of the rails.

A still further object of the invention is to provide a rail splice which is so constructed as to entirely obviate the necessity of providing the usual bolt openings in the ends of the rails and which in itself employs no bolt openings which may tend to weaken the rails and the device, the members comprising the brace being rigidly secured to the ends of the rails through the medium of projecting ears extending from the base flanges of the rails and providing suitable openings in the splice members for the reception of said ears.

With the above, and other objects in view, which will be more apparent as the description progresses, the invention resides in the novel construction and combination of parts hereinafter fully set forth and claimed.

In the drawing, Figure 1 is a side elevation of a rail joint embodying the features of the invention and shown applied to the contiguous ends of a pair of rails. Fig. 2 is a top plan view of the same. Fig. 3 is a perspective of one of the splice members. Fig. 4 is a perspective view of one of the rail ends. Fig. 5 is a sectional view upon the line 5-5 of Fig. 1. Fig. 6 is a perspective view of one of the securing members. Fig.

7 is a similar view of the coacting securing member.

The numerals 1 and 2 designate the contiguous meeting ends of a pair of railway rails. These rails 1 and 2 are constructed in the ordinary manner being provided with a head 3, web 4 and a base flange 5. In the present construction the base flanges 5 of each of the rails 1 and 2 are provided with outstanding tongues 6. These tongues 6 have their outer edges in a parallel line with the outer edges of the flanges of the rails proper and are for a purpose hereinafter to be set forth.

The numerals 7 and 8 designate the splice members of the joint. Both of these members 7 and 8 are precisely similar in construction and numerals of reference referring to parts of one of the members may be considered equally applicable to the opposite member. Each of these members 7 or 8 is provided with a base flange 9 which is horizontally straight, and above the same is an inclined covering flange 10 integrally rising from the outer edge of the flange 9, the space between the flanges 9 and 10 being of such dimensions as to practically embrace one half of the base flanges 5 of the rail sections 1 and 2. Rising from the inner terminal of the flange 10 is a fish plate 11 which is provided with an enlarged head 12, adapted to lie directly beneath the under face of the heads 3 of the rails, thus providing a reduced portion or channel between the head and the flange 10. The outer face of the inclined edge of the clamping members 8 and 9, directly above the horizontally straight wall provided by the base flange 9 is provided with a pair of spaced openings 13. These openings 13 are of a length slightly greater than that of the tongue 6 of the flange 5 of the rail ends so as to allow for the contraction and expansion of the rails when the tongue is positioned within the pockets or openings 13.

The numeral 14 designates one member of the securing device. This member 14 is provided with a head or offset portion 15 adapted to be positioned within the channel formed between the head 12 and the overlying flange 10 of the splice members. The member 14 is also provided with an angularly arranged extending portion 16 which is adapted to engage the angular face of the splice member, and is from thence continued so as to provide the extension 17 which is

adapted to underlie the base flange 9 of the said splice member. The extremity of this extension 17 is provided with a threaded extension 18 the purpose of which will presently be set forth.

The numeral 19 designates the opposite member of the securing device. This member 19 is also provided with a suitable head 20 adapted to be positioned between the head 12 and the overlying flange 10 of the splice member opposite to that engaged by the member 14. The member 19 is also provided with an inclined extension of a length equal to the width of the overlying flange 10 with which it is adapted to engage and the member is also provided with a substantially vertical depending portion 21 provided with a suitable opening 22 and a substantially right angular inturned offset 23. The vertical portion 21 of this member 19 has its inner wall of a length equaling the distance between the overlying flange 10 and the lower edge of the extension 17 provided by the member 14, so that the threaded element 18 of the said member 14 may engage with the opening 22 and the extension 23 will underlie the extremity of the extension 17. The threaded extension 18 is adapted to extend a suitable distance beyond the outer face of the member 19 and to receive a suitable female threaded element such as a nut 24.

From the above description taken in connection with the accompanying drawing it will be noted that I have provided an extremely simple and effective joint for the contiguous ends of a pair of rails, one which entirely dispenses with the usual form of nuts and bolts, thus obviating the necessity of providing the webs of the rails as well as the splice members with the usual bolt holes which tend to weaken the same, one which may be easily and quickly applied to the rails and which may be readily disconnected therefrom if desired, and one in which the ordinary form of rails may be employed by

simply providing the base flanges of the rails with projecting tongues.

Having thus fully described the invention what is claimed as new is:

1. In a rail joint, the combination of rail sections having their base flanges provided with extending tongues, of joint members applied against the opposite sides of the said contiguous rail members, said joint members each comprising a base plate adapted to underlie the base flanges of the rails and an integrally formed overlying plate adapted to engage the upper faces of the flanges of the rails and having a vertically extending fish plate provided with an enlarged head adapted to be positioned beneath the under-faces of the heads of the rails, said joint members being provided with spaced openings adapted for the reception of the tongues of the rails, and securing elements engaging the sides of the joint sections and being provided with underlying portions positioned beneath the base flanges of the said joint sections, substantially as described.

2. The combination with the contiguous meeting ends of a pair of rails having their base flanges provided with extending tongues, of joint sections provided with openings adapted to engage the tongues, said joint sections being provided with vertically arranged fish plates having enlarged heads and being provided with underlying flanges, securing members for the joint members, each of said securing members being provided with heads adapted to engage between the enlarged heads and the body of the joint members, and means for connecting the said securing members.

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

HARRY W. LEWIS.

Witnesses:

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