L. LARSON.

RAIL JOINT.

APPLICATION FILED MAR. 8, 1909.

937,003.

Patented Oct. 12, 1909.

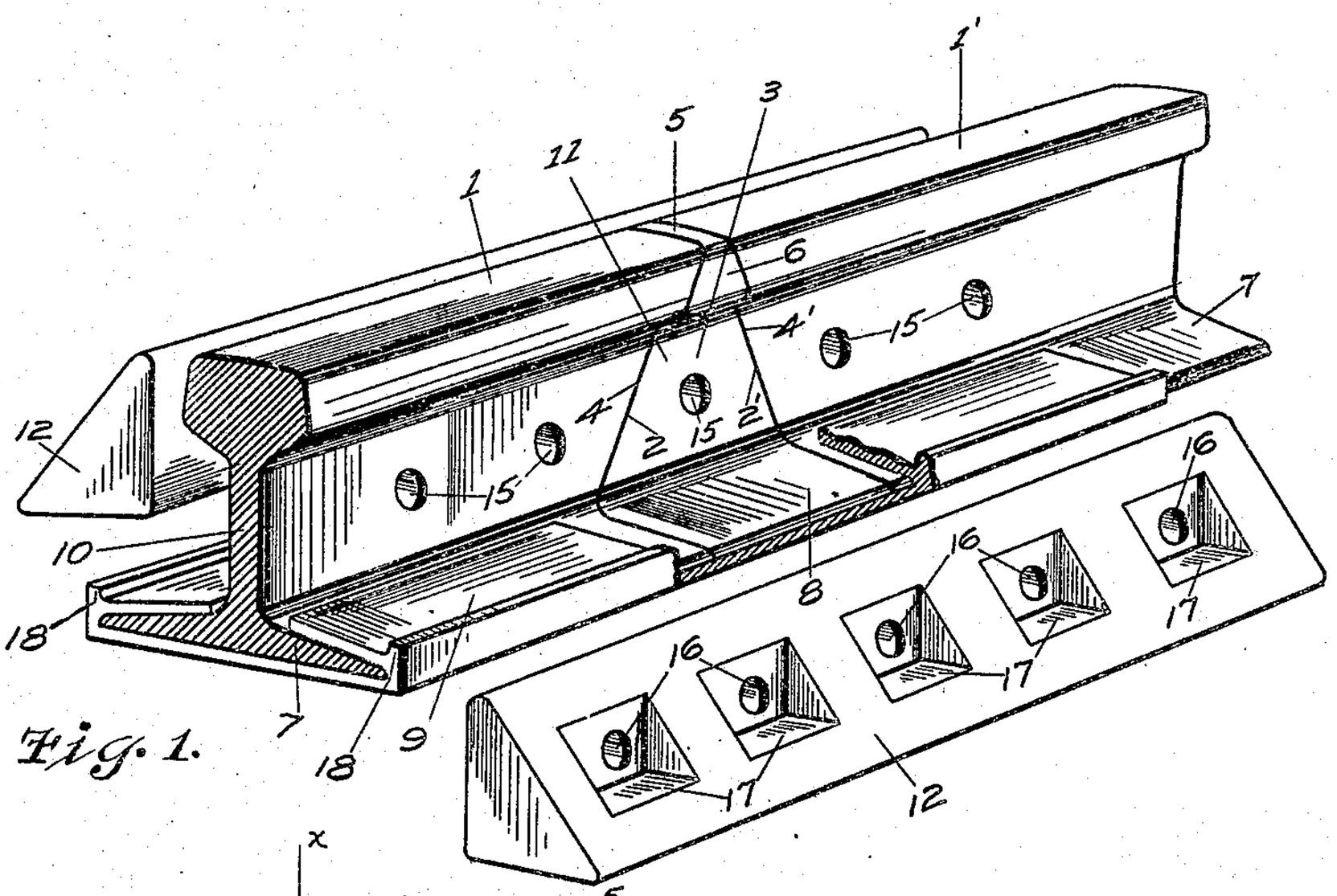

Fig. 1.

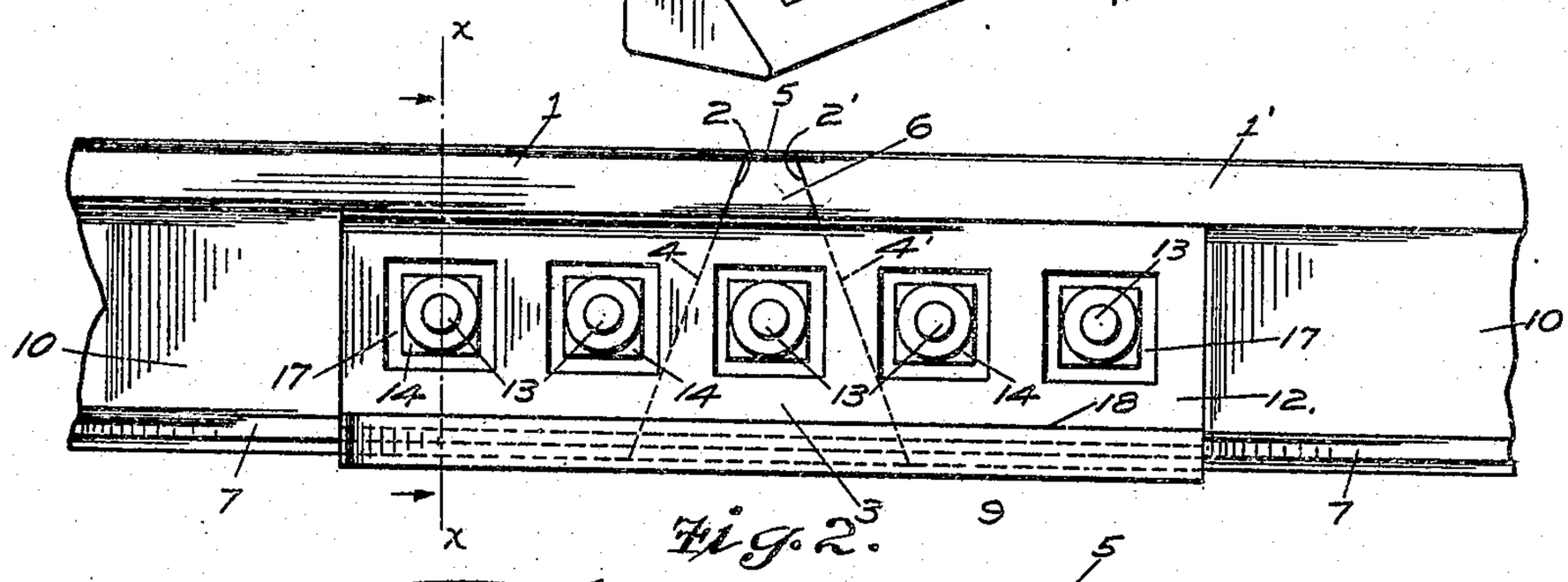

Fig. 2.

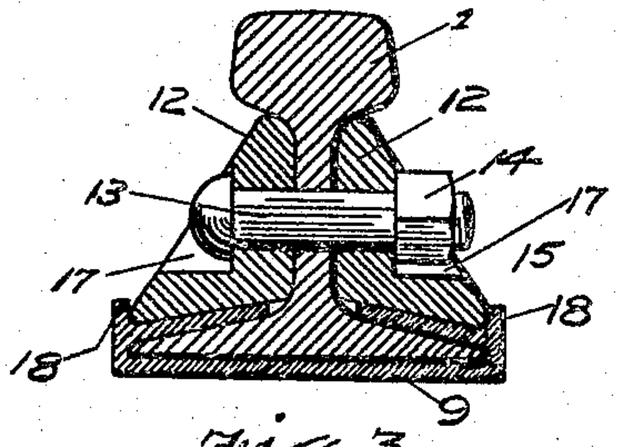

Fig. 3.

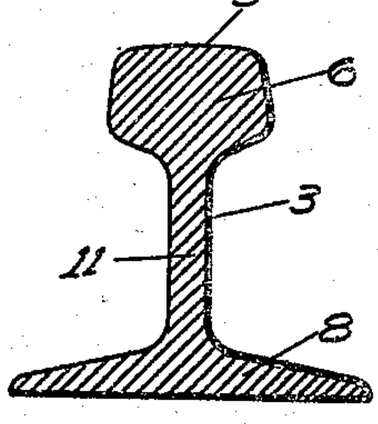

Fig. 4.

Witnesses:

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UNITED STATES PATENT OFFICE.

LARS LARSON, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-FOURTH TO ENOCH PETERSON, OF CHICAGO, ILLINOIS.

RAIL-JOINT.

937,003. Specification of Letters Patent. Patented Oct. 12, 1909.

Application filed March 8, 1909. Serial No. 482,109.

To all whom it may concern:

Be it known that I, LARS LARSON, a citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification.

My invention relates to railway rails, and more specifically to means for joining contiguous extremities of such rails.

The object of my invention is to provide a rail joint of the character mentioned adapted to reinforce the contiguous extremities of adjacent rails of a railway track in such a manner as to prevent depression thereof such as is caused at the present time in rails jointed in the ordinary manner; such depression resulting in the well known bumping or jarring of the cars or other rolling stock passing thereover, it being my object to eliminate such bumping and jarring of the latter by providing the rails with a joint of improved construction.

A further object is to provide a rail joint of the nature stated which will be of great efficiency in effecting the purpose above stated, and which will be comparatively simple of construction, hence of low cost to manufacture.

Other objects will appear hereinafter.

With these objects in view my invention consists in a rail joint characterized as above mentioned and in certain details of construction and arrangement of parts all as will be hereinafter fully described and particularly pointed out in the claims.

My invention will be more readily understood by reference to the accompanying drawing forming a part of this specification, and in which,

Figure 1 is a perspective view of a rail joint in which is embodied the preferred form of my invention, the fish plates employed therein being shown laterally separated therefrom and a portion of the shoe thereof being broken away so as to better illustrate its construction, Fig. 2 is a side elevation thereof showing parts in assembled position, Fig. 3 is a vertical transverse section taken on the line *x x* of Fig. 2, and Fig. 4 is a similar section of the interposed rail section embodied in my invention.

Referring now to the drawings 1—1′ indicate the contiguous end portions of adjacent rails of a railway track. The extremities 2—2′ respectively of said rails 1—1′ are obliquely disposed in such a manner as to diverge downwardly from the upper edges thereof.

Interposed between the rail extremities 2—2′ is a rail section 3 of a cross sectional shape identical with that of the rails 1—1′, the extremities 4—4′ thereof being disposed at such angles as to be adapted to engage said obliquely disposed extremities 2—2′ of said rail end portions 1—1′, as clearly shown in Fig. 1. The tread 5 of the ball 6 of the rail section 3 is comparatively short in length, such length being preferably one inch or one and one quarter inches. Snugly embracing the flanged base portions 7 of the rail end portions 1—1′ and the flanged base 8 of the member 3 is a detachable shoe 9. Arranged upon either side of the web 10 of the rails 1—1′ and the web 11 of the member 3, are fish plates 12 preferably triangular in cross section, the same being secured thereto by means of bolts 13 and nuts 14 threaded upon said bolts, the latter extending through alining perforations 15 and 16 provided in said plates and in the webs 10 and 11 respectively, the outer surfaces of the members 3 being slotted as at 17 to receive the heads of said bolts and said nuts. Said plates 12 are of such a vertical width as to rest upon the upper surface of the shoe 9, the upper edges thereof being adapted to engage the under surface of the ball of the rails 1—1′ and that of the rail section 3, such construction resulting in an obvious advantage. The bases of said plates 9 are of such a width that the outer edges thereof rest in abutment with the upwardly and longitudinally extending flanges 18 provided at either of the outer edges of the shoe 9, said flanges acting as a bracing means for said fish plates.

By the provision in a railway track of joints of a construction as described, the contiguous extremities of the rails thereof will be reinforced to such an extent and in such a manner as to prevent the depression thereof, thereby eliminating the jarring, as before stated, to which a car is ordinarily subjected in passing over a track.

While I have shown what I deem to be the preferable form of my joint, I do not wish to be limited thereto, as there might be various changes made in the details of construction and arrangement of parts without

departing from the spirit of my invention comprehended within the appended claims.

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

1. The combination of two alining rails provided with downwardly diverging contiguous extremities, a rail section interposed between said rail extremities, the extremities of said rail section being disposed in contact with said rail extremities, a shoe adapted to embrace the bases of the adjacent end portions of said rails and said rail section, and fish plates arranged upon the webs of said rails and said rail section, substantially as described.

2. The combination of two alining rails provided with downwardly diverging contiguous extremities, a rail section interposed between said rail extremities, the extremities of said rail section being disposed in contact with said diverging rail extremities, a shoe embracing the bases of the adjacent end portion of said rails and said rail section and fish plates arranged upon the webs of said rails and said rail section, the bases of said fish plates resting upon the upper surface of said shoe, the upper edges of said plates resting in abutment with the under surfaces of the balls of said rails in said rail section, substantially as described.

3. The combination of two alining rails provided with downwardly diverging contiguous extremities, a rail section interposed between said rail extremities, the extremities of said rail section being disposed in contact with said diverging rail extremities, a shoe adapted to embrace the flanged bases of the adjacent end portions of said rail and said rail section, upwardly extending flanges provided at either of the outer edges of said shoe, and fish plates arranged upon the webs of said rails and said rail section, the bases of said plates resting upon the upper surface of said shoe, the upper edge of said plate resting in abutment with the under surfaces of the balls of said rails and said rail section, the outward edges of said plates resting in engagement with the flanges of said shoe, substantially as described.

4. The combination of two alining rails provided with downwardly diverging contiguous extremities, a rail section interposed between said rail extremities, the extremities of said rail section being disposed in contact with said diverging rail extremities, a shoe adapted to embrace the flanged bases of the adjacent end portion of said rails and said rail section, upwardly extending flanges formed at either of the outward edges of said shoe, and fish plates triangular in cross section bolted to the webs of said rails and said rail section, said plates being recessed to receive the heads of the securing bolts of said plates and the nuts threaded upon said bolts, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LARS LARSON.

Witnesses:
JOSHUA R. H. POTTS,
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