J. M. LOFFLAND.

RAIL JOINT SUPPORT.

APPLICATION FILED MAR. 18, 1911.

995,360. Patented June 13, 1911.

Fig. 1.

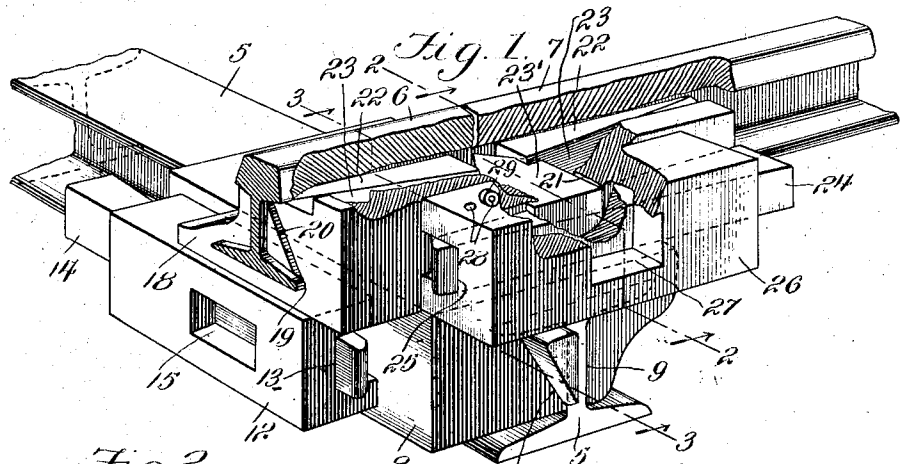


Fig. 2.

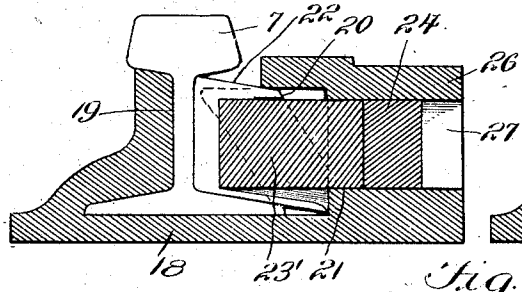


Fig. 3.

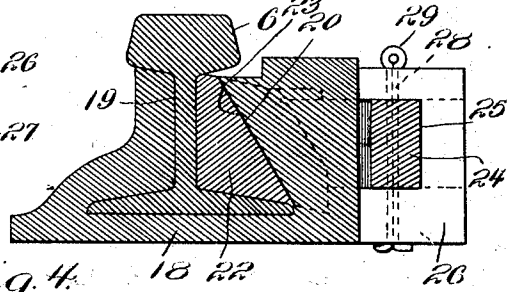
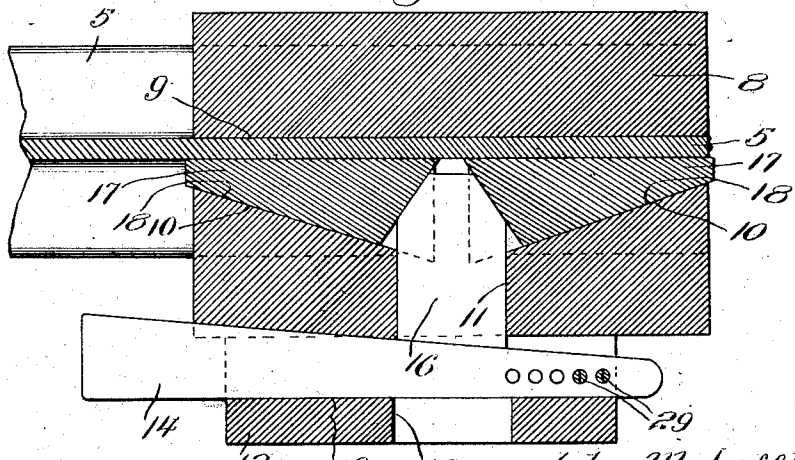


Fig. 4.



Witnesses

J. L. Wright.

L. O. Sanders.

Inventor

John M. Loffland.

By Victor J. Evans.

Attorney

UNITED STATES PATENT OFFICE.

JOHN M. LOFFLAND, OF WOODSFIELD, OHIO.

RAIL-JOINT SUPPORT.

995,360. Specification of Letters Patent. Patented June 13, 1911.

Application filed March 18, 1911. Serial No. 615,329.

To all whom it may concern:

Be it known that I, JOHN M. LOFFLAND, a citizen of the United States, residing at Woodsfield, in the county of Monroe and State of Ohio, have invented new and useful Improvements in Rail-Joint Supports, of which the following is a specification.

The invention relates to rail joint supports, and more particularly to the class of rail chairs.

The primary object of the invention is the provision of a support in which the meeting ends of rails may be securely fastened, so as to prevent the lowering of the joint, and at the same time obviating the loosening of the rails or the lateral displacement of the same.

Another object of the invention is for the purpose of fastening the steel tie when such is desired to be used in the place of wood ties, securely to the rail without the use of bolts, spikes, or other like fasteners, the same can be placed at any distances along the rail, the same as wood ties are now spaced; thus enabling the use of steel ties in the place of wood.

A further object of the invention is the provision of a support of this character in which the meeting ends of rails may be securely held together and the cross tie clamped, so as to prevent displacement of the rail ends or said cross tie, thus enabling car wheels to freely pass over the rail joint, without possibility of the pounding of said wheels.

With these and other objects in view, the invention consists in the construction, combination and arrangement of parts, as will be hereinafter more fully described, illustrated in the accompanying drawings, and pointed out in the claims hereunto appended.

In the drawings: Figure 1 is a perspective view of the invention, showing the rail joint and cross tie mounted therein. Fig. 2 is a sectional view on the line 2—2 of Fig. 1. Fig. 3 is a sectional view on the line 3—3 of Fig. 1. Fig. 4 is a horizontal sectional view through the clamp bearing for the tie.

Similar reference characters indicate corresponding parts throughout the several views of the drawings.

Referring to the drawings by numerals, 5 designates a steel I-beam designed for use as a cross tie, and 6 and 7 the meeting ends of a pair of railway rails, the latter being of the ordinary well-known construction, that is to say, each including a base flange, a web, and a tread or ball, and these rails are superposed above the tie at angles thereto, the said rails being detachably held within a chair, as will be hereinafter more fully described.

Adjustably supported upon the I-beam 5, forming the tie, is a clamp bearing comprising a block 8, the same being longitudinally channeled to provide a bearing seat 9 for the I-beam when positioned therein. One side wall of the bearing seat 9 is cut away to form laterally converging downwardly inclined friction surfaces 10, the same extending from opposite ends of the block 8 inwardly and intersect a horizontal opening 11 medially of the length of the block and extending through one side thereof.

Integral with or otherwise mounted on one side of the block 8 is an enlargement 12, the latter being provided with a tapering key-way 13, in which is adapted to be driven a wedge-shaped key 14, the enlargement 12 being provided with an opening 15 correspondingly shaped to and registering with the opening 11, and through these openings is introduced into the block 8 a wedging member 16 which coöperates with and is disposed between displaceable wedges 17, each being provided with an outer inclined bearing face 18 adapted to frictionally engage with the bearing surfaces 10 when both of the wedges 17 are displaced in opposite directions with respect to each other, by means of the wedging member 16, the latter being acted upon by the key 14 when driven into the key-way 13 in the enlargement 12 at one side of the clamp bearing. These displaceable wedges 17 serve to lock the clamp bearing upon the tie, so as to prevent the displacement of the chair supported thereby, as will be hereinafter more fully described.

The chair comprises a block 18, the same being longitudinally channeled to provide a bearing seat 19 for the rails 6 and 7 passed within the block. One side wall of the channel 19 is cut away to form laterally converging downwardly inclined friction surfaces 20, the same extending from opposite ends of the block 18 inwardly and intersecting a medial correspondingly shaped opening 21 extending through the outside face of the said block 18.

Removably fitted within the block 18 between the heads and base flanges of the rail ends 6 and 7, at one side thereof, are displaceable wedges 22, the same being pro-

vided with inclined outer bearing surfaces 23 adapted to engage with the friction surfaces 20 when driven in opposite directions with respect to each other after being inserted in the block. These displaceable wedges serve to lock the rail ends within the chair and prevent separation thereof. The wedges 22 are separated from each other by the inward movement of a wedging member 23′, the latter being inserted in the horizontally disposed opening 21 and is acted upon by a wedge-shaped key 24, working within a tapering key-way 25 formed in an enlargement 26 integral with or mounted upon the outside face of the chair, the said enlargement 26 being provided with a medial opening 27 correspondingly shaped with the opening 21, and through which is adapted to be introduced the wedging member 23′ prior to the insertion of the key 24 in the key-way in said enlargement.

Provided in the enlargements 12 and 26 on the clamp bearing and the chair, respectively, are suitable cotter pin receiving holes 28 adapted to receive a cotter pin 29, the same being also engageable in suitable holes formed in the keys 14 and 24, so that the latter will be securely locked in the key-ways in the enlargements and against accidental release.

The chair is superimposed upon the clamp bearing and may be made integral therewith or may be suitably fastened thereto, so that the rails will extend at right angles with respect to the I-beam forming the cross tie.

What is claimed is:

1. A device of the class described, comprising a pair of blocks united together and each having a rail seat therein, one wall of each rail seat being provided with laterally converging surfaces, displaceable wedges cooperative with said surfaces for securing rail ends in one of the blocks and also securing a cross tie in the other block, enlargements formed on said blocks and having key ways, means interposed between the displaceable wedges for separating the same, and means engaged in the key ways for acting upon the last-named means.

2. A device of the class described, comprising a block having a rail seat therein, one wall of the said rail seat being provided with laterally converging outwardly inclined friction surfaces, displaceable wedges coöperative with said surfaces, for securing the rail end on the block, means interposed between said wedges for separating the same, and means acting on said last named means for operating the same.

3. A device of the class described, comprising a block having a rail seat therein, one wall of the said rail seat being provided with laterally converging outwardly inclined friction surfaces, displaceable wedges coöperative with said surfaces for securing the rail end on the block, means interposed between said wedges for separating the same, means acting on said last named means for operating the same, and means for locking the said last-named means against displacement.

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

JOHN M. LOFFLAND.

Witnesses:
R. C. KOONTZ,
T. A. JEFFERS.