O. V. BERKLEY.

RAILROAD RAIL JOINT.

APPLICATION FILED APR. 21, 1908.

919,681. Patented Apr. 27, 1909.

Fig. 1.

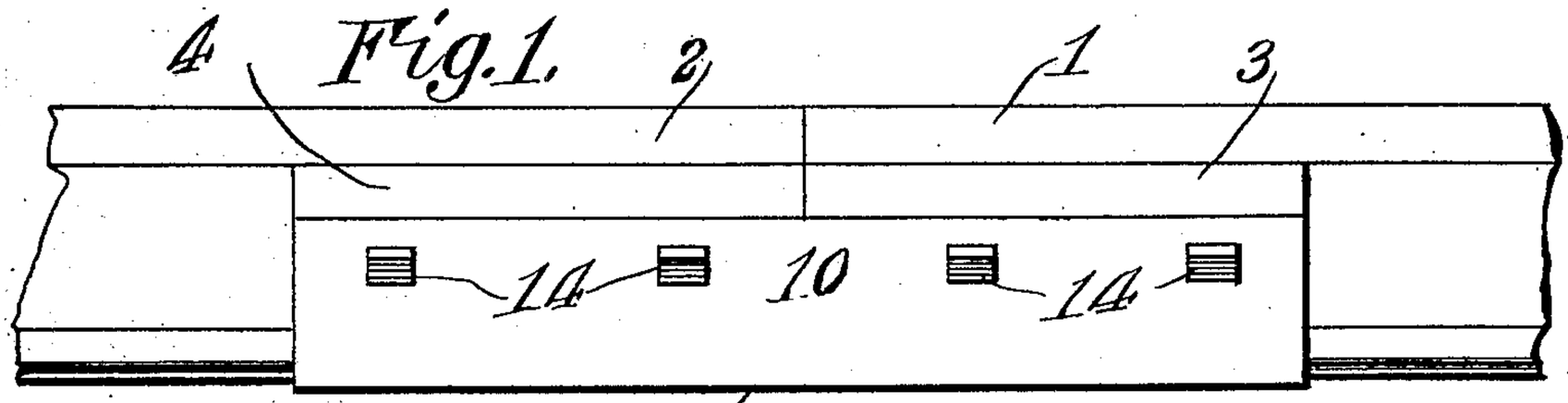


Fig. 2.

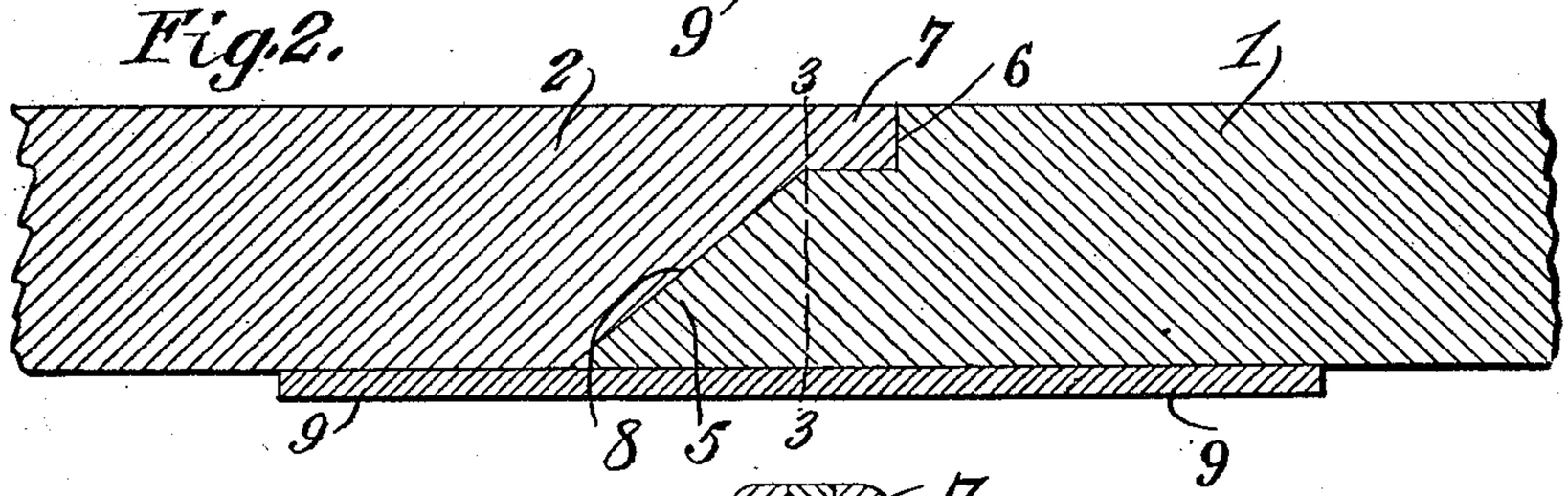


Fig. 3.

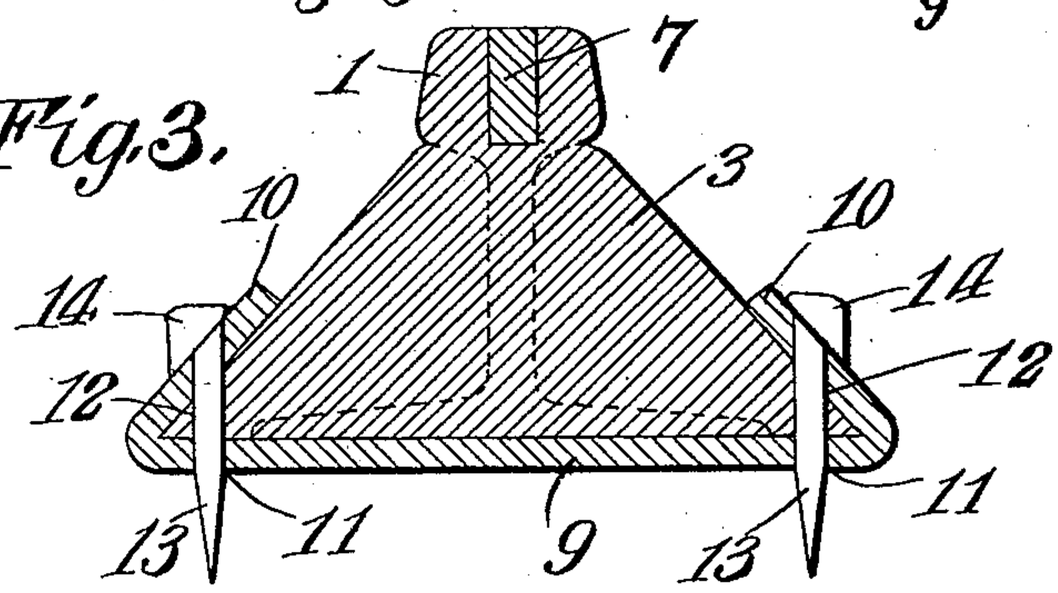


Fig. 5.

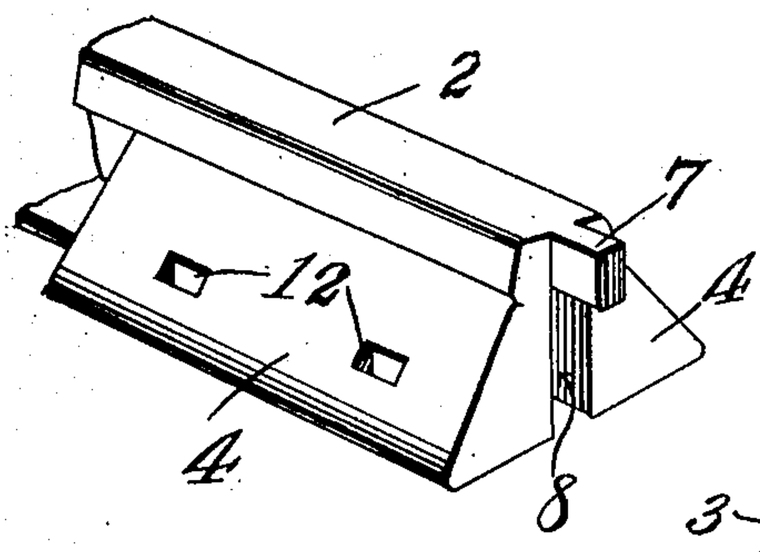
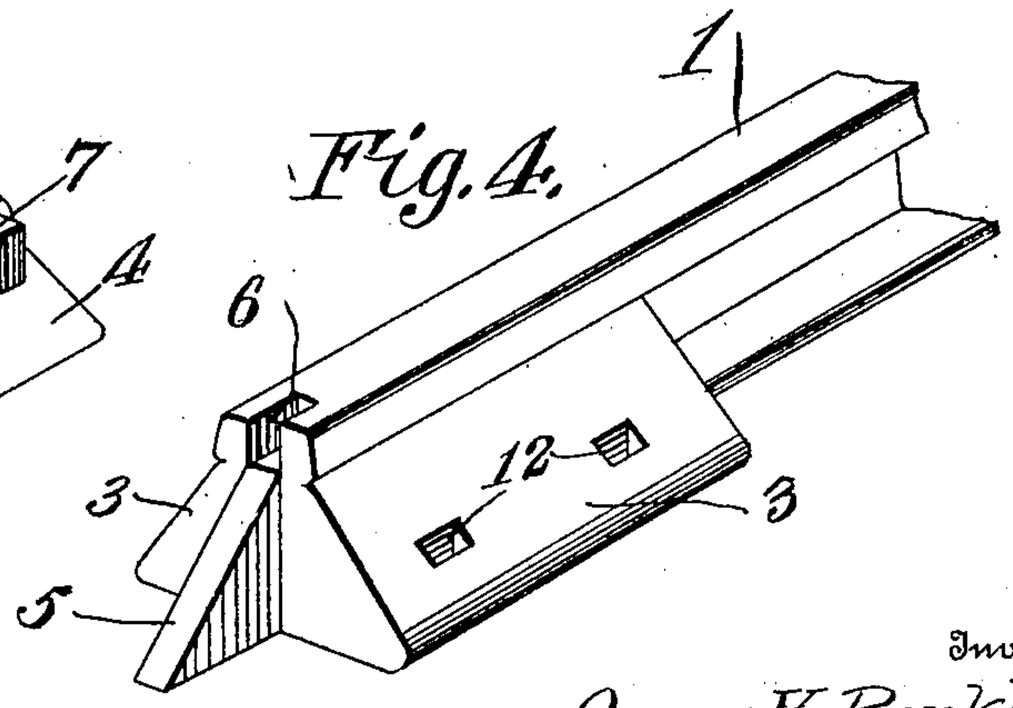


Fig. 4.



Witnesses

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RAILROAD-RAIL JOINT.

No. 919,681. Specification of Letters Patent. Patented April 27, 1909.

Application filed April 21, 1908. Serial No. 428,330.

To all whom it may concern:

Be it known that I, OSCAR V. BERKLEY, a citizen of the United States, residing at Flat Lick, in the county of Knox and State of Kentucky, have invented new and useful Improvements in Railroad-Rail Joints, of which the following is a specification.

This invention relates to joints for railroad rails; and it has for its object to provide a rail joint which shall be simple in construction and thoroughly efficient in operation; which shall be free from the bolts and fish plates ordinarily employed in the formation of a rail joint; which shall enable the rails to be quickly heeled together and assembled or disconnected as may be required, and which shall possess superior advantages in point of simplicity, durability and general efficiency.

With these and other ends in view which will appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawing has been illustrated a simple and preferred form of the invention; it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the invention may be resorted to when desired.

In the drawing:—Figure 1 is a side elevation showing the abutting ends of two rails connected by the improved joint. Fig. 2 is a longitudinal vertical section of the same. Fig. 3 is a transverse sectional view taken on the plane indicated by the line 3—3 in Fig. 2. Fig. 4 is a perspective detail view of one of the rail ends. Fig. 5 is a perspective detail view of the opposite or abutting rail end.

Corresponding parts in the several figures are denoted by like characters of reference.

The abutting rail ends 1 and 2 are provided with enlargements 3 and 4 which are of approximately triangular shape and which extend laterally beyond the foot flanges of the rails so as to form broad and extended supports for the rail ends. These enlargements are preferably integral with the rail, in order that the greatest possible strength and ability to resist strain and wear may be secured.

The rail end 1 is provided with an outward extending triangular fin or flange 5 which is of a width approximately equal to the thickness of the vertical web of the rail, although the dimensions may be varied at will. Adjacent to the upper end of said fin or flange there is formed, in the head of the rail, a rectangular recess or socket 6 adapted for the reception of a correspondingly shaped projection 7 which extends outwardly from the head of the abutting rail end 2. The latter is also provided with an approximately triangular recess 8 for the accommodation of the fin or flange 5 projecting from the abutting rail end 1.

A chair 9 is provided, the same consisting of a plate of metal provided along its side edges with inturned flanges 10—10 adapted to engage the enlargements 3 and 4 upon the abutting rail ends; these enlargements may be readily slid into position in the chair, and the chair and the rail flanges or enlargements are provided with registering apertures 11 and 12 for the reception of spikes 13 having downturned or inclined heads 14 specially constructed to fit the inclined sides of the chair; the chair and the rail ends are assembled by simply driving the spikes into the cross tie which is placed underneath in the usual manner, and said spikes will be amply sufficient to secure the rails against accidental displacement.

From the foregoing description taken in connection with the drawings hereto annexed, it will be seen that the rail ends are assembled and connected without the use of bolts and nuts and without the use of fish plates such as are ordinarily employed in the formation of rail joints; this not only brings about a reduction of expense, but it is obvious that the loosening of the rail joint due to loss and displacement of the nuts from the bolts becomes out of the question. The abutting rail ends, by the herein described improvement, will be locked together in such a manner that accidental displacement will be practically impossible; the rail ends being interlocked in such a manner as to prevent displacement vertically as well as laterally. Apart from the danger of dislocation of the rails, the improved rail joint will be found extremely advantageous for the reason that the rails are thereby retained in perfect and absolute alinement, thus providing a perfectly smooth and level surface or track for the rolling stock and obviating the excessive wear which is due to even slight imperfections in

the proper alinement of the rails and maintenance of the track. A track constructed with the improved rails may also be maintained in perfect condition with greater ease and at much less expense than tracks composed of rails connected in the customary manner by means of bolts and fish plates.

Having thus described the invention, what is claimed as new, is:—

1. A rail joint comprising abutting rail ends having laterally extending triangular enlargements, said enlargements extending beyond the base flanges of said rail ends, one of the rail ends being provided with an outwardly extending triangular flange and with a rectangular recess adjacent to the upper edge of said flange and the opposite or abutting rail end being provided with a triangular recess for the accommodation of the flange and with a rectangular lug projecting from the head thereof and adapted to engage the recess in the abutting rail end.

2. A rail joint comprising abutting rail ends having laterally extending triangular enlargements and interengaging projections and recesses, said enlargements extending laterally beyond the base flanges of said rail ends, in combination with a chair consisting of a plate provided along its side edges with inturned flanges, said chair and the enlargements upon the rail ends being provided with registering apertures for the passage of securing members, such as spikes.

3. In a device of the class described, the combination with a rail end having triangular enlargements extending laterally therefrom and beyond the base flange of said rail end, said rail end having a triangular recess formed therein, a projection carried by the end and disposed above the recess, of a second rail end having triangular enlargements to aline with the enlargements of the first named rail end, said last named rail end having a recess formed in its tread flange for receiving the projection, a triangular fin for engagement in the recess of the first named end, and a chair for said rail ends, said chair having portions at the sides thereof bent to engage the sides of the triangular enlargements.

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

OSCAR V. BERKLEY.

Witnesses:
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