

No. 812,059.

PATENTED FEB. 6, 1906.

U. G. MARCUCCI.

RAIL JOINT.

APPLICATION FILED JAN. 28, 1905.

Fig. 1.

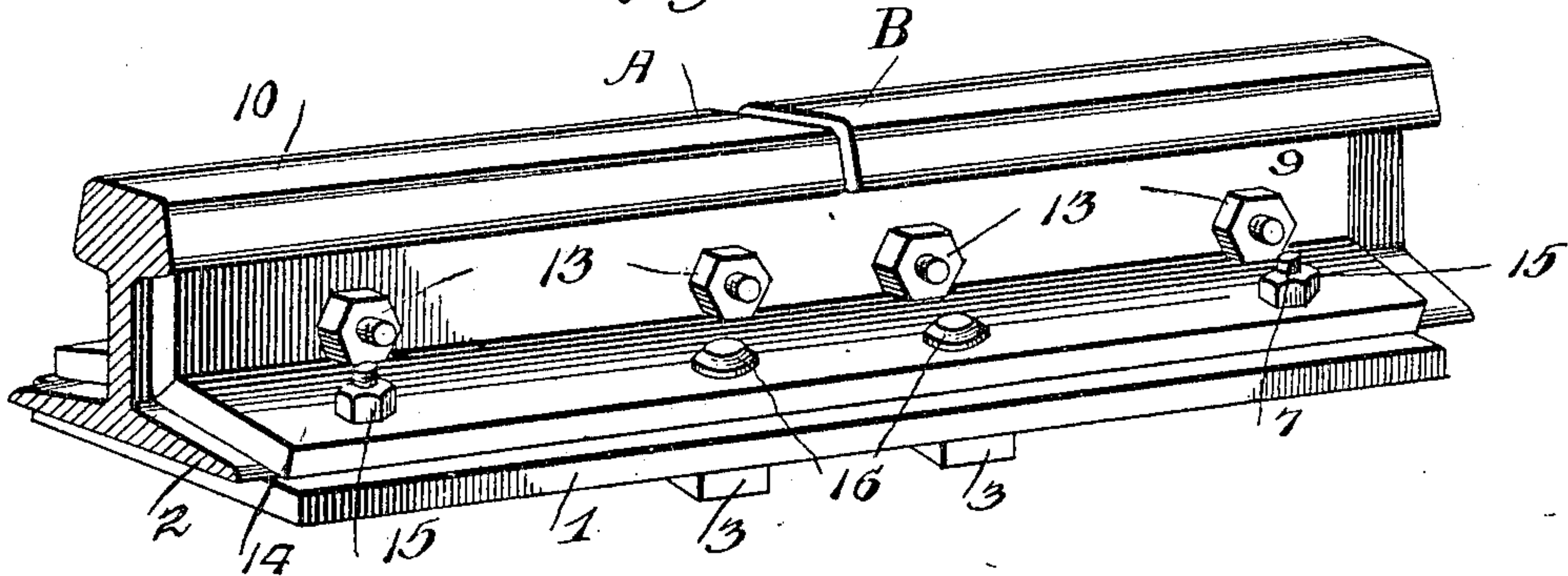


Fig. 2.

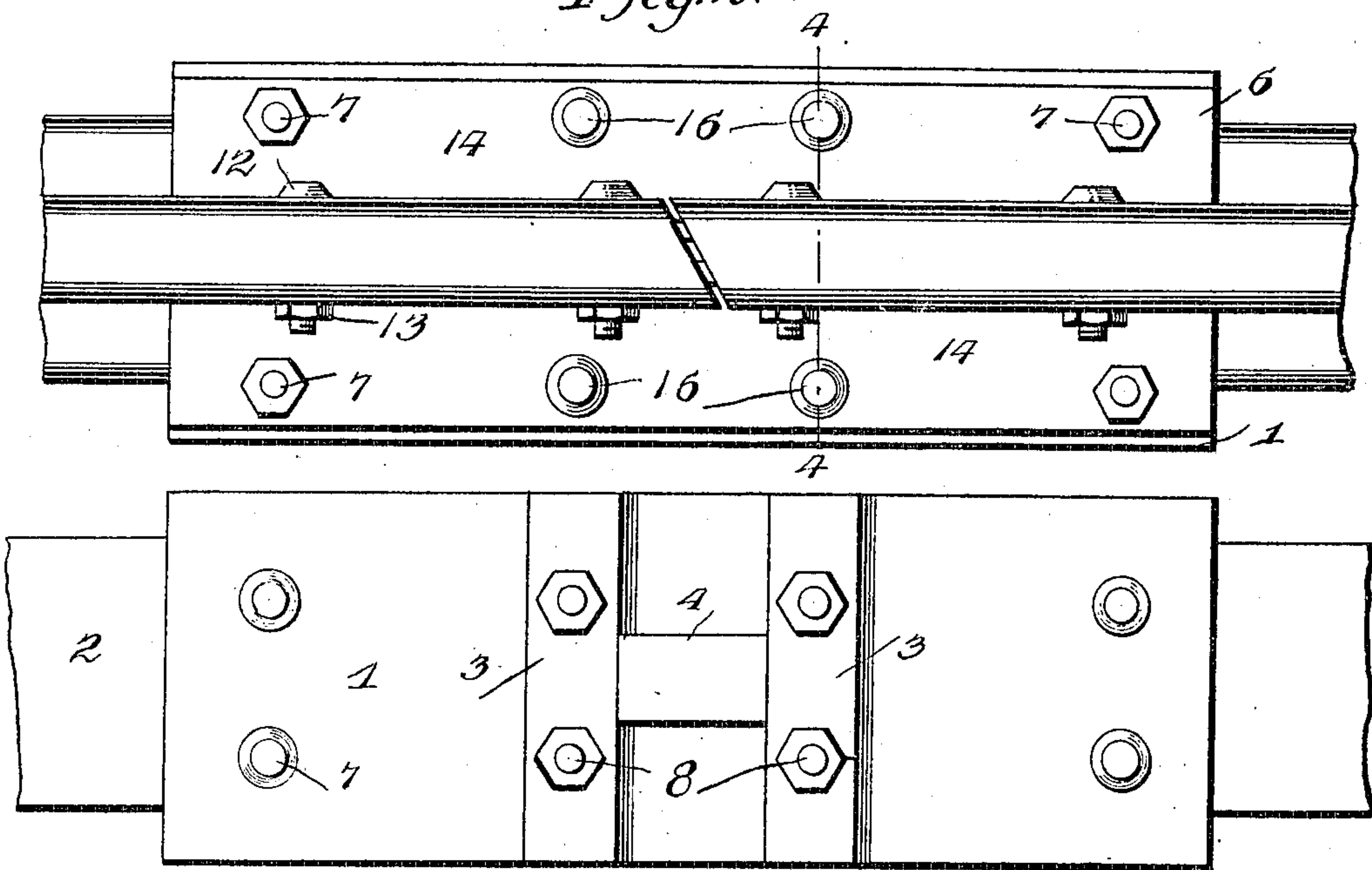


Fig. 3.

Fig. 4.

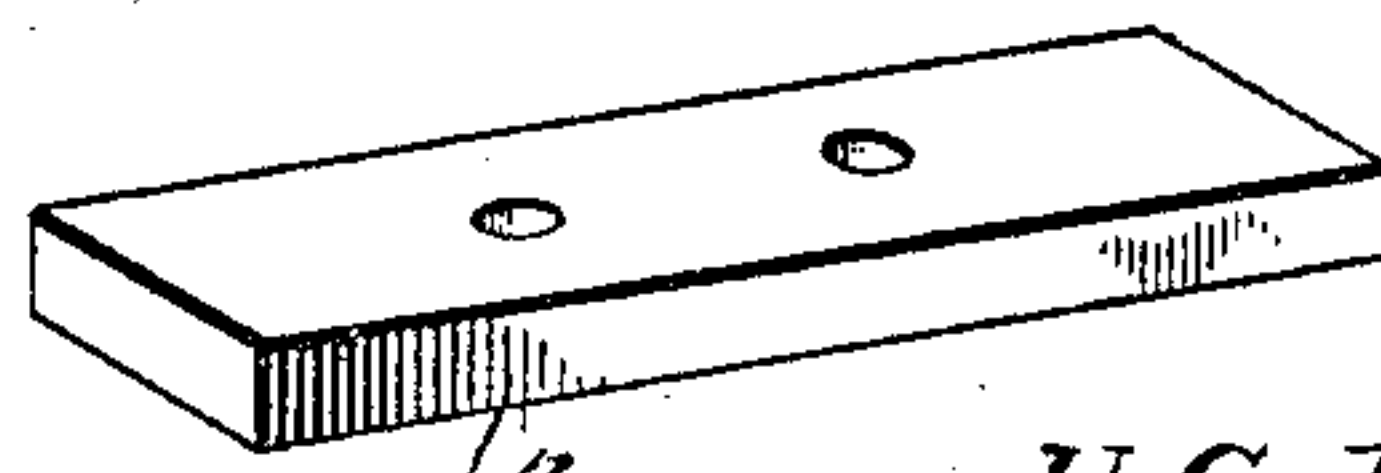
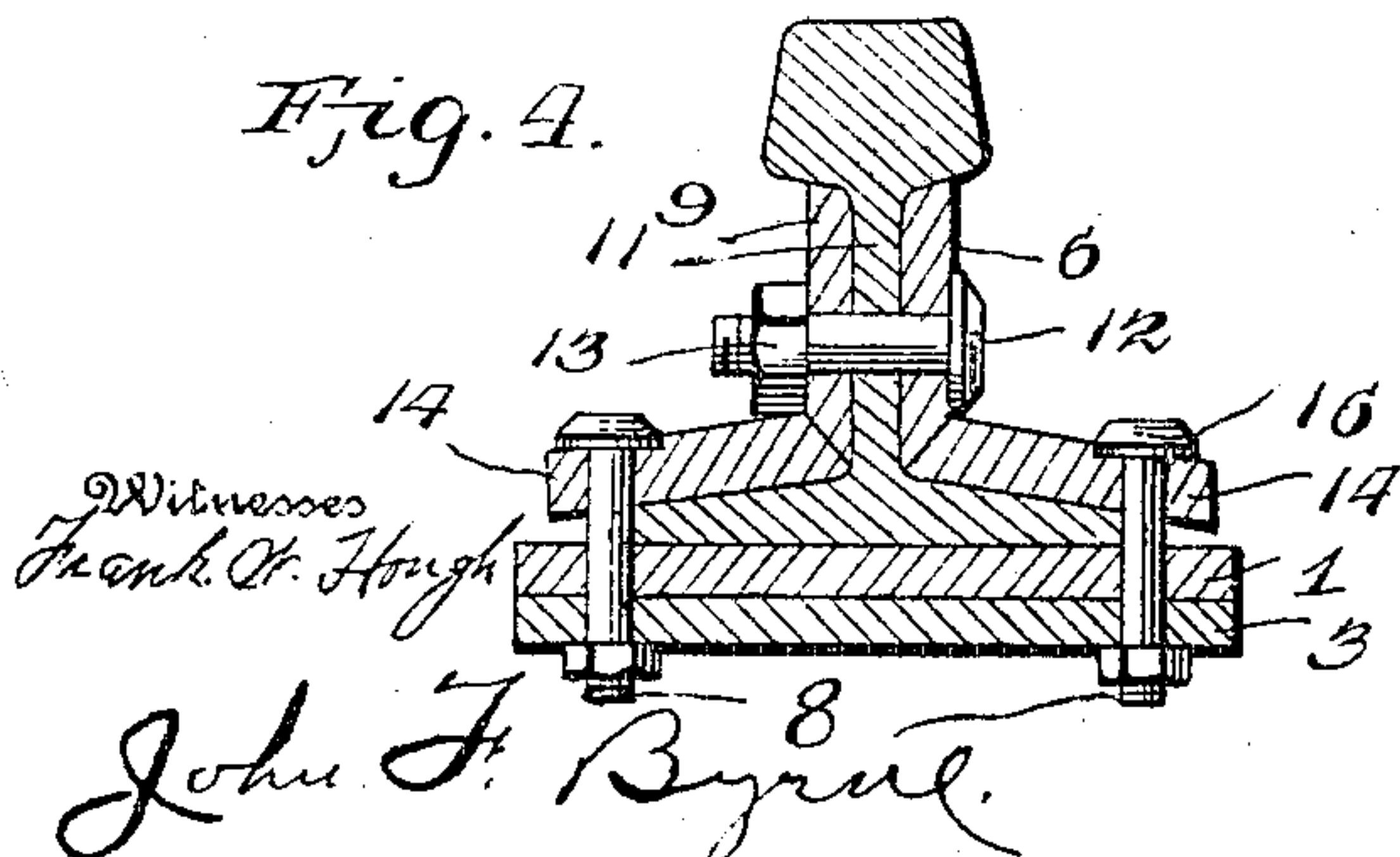


Fig. 5.

Inventor
U. G. Marcucci.

By

Victor J. Evans
Attorney

Witnesses
Frank C. Hough

John F. Byrne

UNITED STATES PATENT OFFICE.

UMBERTO GIOVANNI MARCUCCI, OF EAST OAKLAND, CALIFORNIA.

RAIL-JOINT.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, UMBERTO GIOVANNI MARCUCCI, a citizen of Italy, residing at East Oakland, in the county of Alameda and State of California, have invented new and useful Improvements in Rail-Joints, of which the following is a specification.

My invention relates to rail-joints; and its primary object is to provide a novel and highly efficient device of this character which will prevent the accidental separation of the rails and their sagging at their points of union and which may be easily and quickly applied and removed.

A further object of the invention is to provide a rail-joint having combined therewith a nut-lock of novel construction, the same being practically a part of the rail-joint and adapted to lock the nuts upon the bolts securing the fish-plates in applied position against accidental removal.

The invention consists in the construction, combination, and arrangement of parts more fully hereinafter described, claimed, and illustrated in the accompanying drawings, which disclose the preferred form of my invention, and in which—

Figure 1 is a perspective view of a combined rail-joint and nut-lock constructed in accordance with my invention, the same being shown in applied position. Fig. 2 is a top plan view thereof. Fig. 3 is a bottom plan view thereof. Fig. 4 is a sectional view on the line 4 4, Fig. 2. Fig. 5 is a detail perspective view of one of the strengthening-ribs.

Referring to the drawings by reference characters, A and B indicate the meeting ends of two adjacent railroad-rails, the same being adapted to be united by means of my improved rail-joint and nut-lock.

1 designates the base-chair of a length sufficient to span the space between two adjacent ties and of a width greater than that of the bases 2 of the rails. This base-chair 1 is provided on its under side with two transversely-arranged strengthening-ribs 3, said ribs being spaced apart and arranged on either side of the transverse center of said base-chair. Located between the ribs 3 is a short rib 4, the same being arranged centrally and longitudinally of said base-chair. The ribs 3 and 4 go to reinforce the base-chair at the point where the meeting ends of two adjacent railroad-rails bear thereon, and by means of the strength and rigidity thus afforded to said base-chair all liability of the sagging of the

railroad-rails at their points of union is obviated.

6 designates an angular fish-plate, having bolts 7 passing through the base-chair 1 and the horizontal member of the fish-plate, said bolts being arranged at points adjacent the ends of said chair and horizontal portion. Arranged intermediate of the bolts 7 are bolts 8, the latter passing through the strengthening-ribs 3, base-chair 1, and horizontal portion of said fish-plate 6, whereby to partially secure the ribs 3 in applied position and to add further means for securing the base-plate 6 to the base-chair 1. 9 designates a fish-plate interposed between the bases 2 and treads 10 of the rails in parallel relation with the webs 11 of said rails. Bolts 12 pass through the vertical portion of the fish-plate 6, the webs 11, and fish-plate 9 and have secured to their projected threaded ends nuts 13, which when in applied position firmly secure the fish-plates in applied position, and in turn firmly unite the adjacent ends of the rails.

The nut-lock feature of this invention consists of a plate 14, which when in applied position forms the horizontal member of the fish-plate 9, which is adapted to be secured in applied position beneath the nuts 13 to prevent said nuts from becoming accidentally removed from the bolts 12, thereby obviating all liability of the fish-plates of the rail-joint from becoming accidentally loosened in their applied position. The lower end of the fish-plate 9 is inclined downwardly and inwardly, as fully disclosed in Figs. 1 and 4 of the drawings, and the inner edge of the nut-lock 14 is provided with a similarly-inclined edge to engage the said inclined edge of the fish-plate 9. Bolts 15 and 16 serve to secure the nut-lock 14 and strengthening-ribs 3 in applied position, as is apparent.

The application of the nut-lock may be described in the following manner: After the nuts 13 have been applied to the bolts 12 the inclined edge of the nut-lock 14 is positioned, so as to engage the inclined edge of the fish-plate 9, thus bringing the upper face of the nut-lock 14 into engagement with the nuts 13 and forming a practical continuation of the fish-plate 9. After the nut-lock has been thus applied it is secured in its applied position by means of the bolts 15 and 16.

From the foregoing description, taken in connection with the accompanying drawings, the construction and mode of operation of

the invention will be understood without a further extended description.

Changes in the form, proportions, and minor details of construction may be made within the scope of the invention without departing from the spirit or sacrificing any of the advantages thereof.

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

10 1. In a rail-joint, the combination of two adjacent rails, an angular fish-plate comprising separable vertical and horizontal members, and nuts and bolts for securing the fish-plate in applied position, the horizontal member of said fish-plate engaging said nuts to lock them in applied position.

20 2. In a rail-joint, the combination of two adjacent rails, an angular fish-plate comprising separable vertical and horizontal members, the meeting edges of said members being beveled in reverse directions, and nuts and

bolts adapted to secure the fish-plate in applied position, the horizontal member of said fish-plate engaging the nuts to lock them in applied position.

3. In a rail-joint, the combination of two adjacent rails, a base-chair provided on its under side with transversely and longitudinally strengthening ribs, fish-plates, one of said fish-plates comprising separable vertical and horizontal members, and nuts and bolts for securing the fish-plates in applied position, the separable horizontal member of said fish-plate engaging said nuts to lock them in applied position.

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

UMBERTO GIOVANNI MARCUCCI.

Witnesses:

W. F. KROLL,
A. KOENIG.