

F. W. POOL.
FISH PLATE CHAIR FOR RAILWAY RAILS.
APPLICATION FILED NOV. 11, 1909.

967,666.

Patented Aug. 16, 1910.

2 SHEETS—SHEET 1.

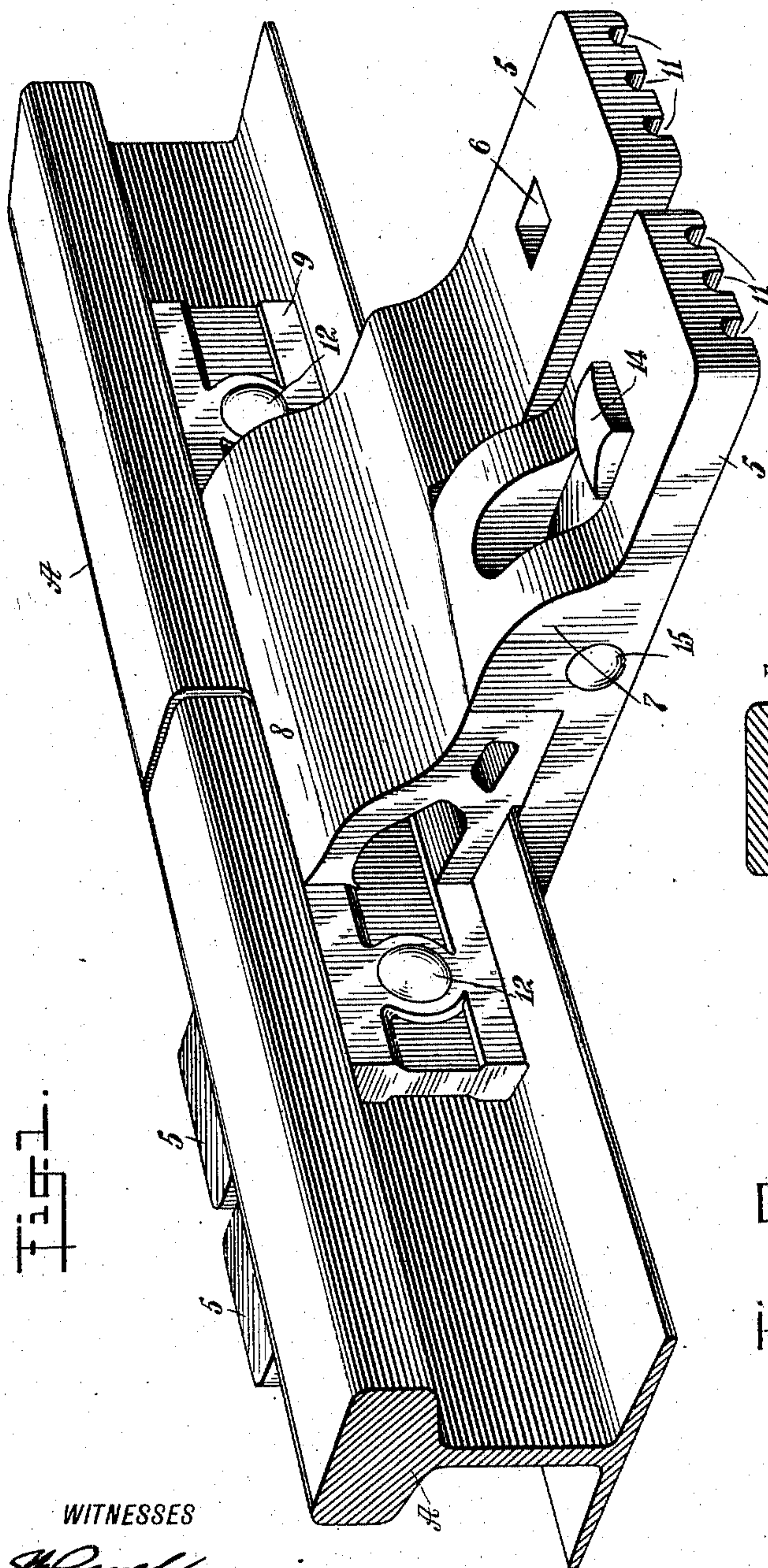


Fig. 1.

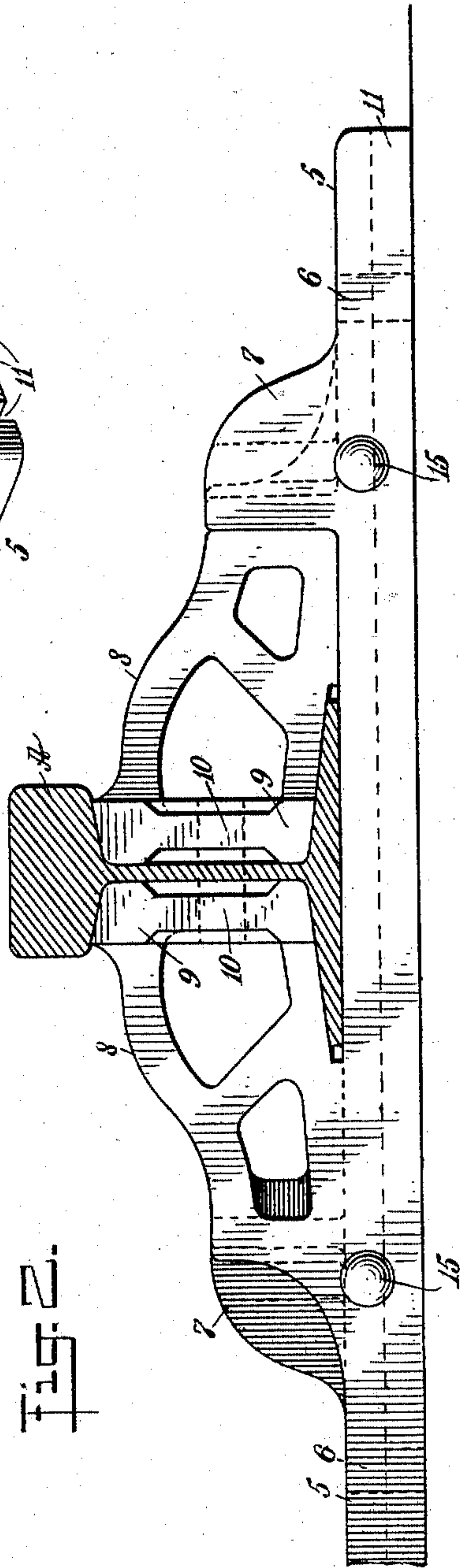


Fig. 2.

WITNESSES

E. J. Murphy
E. J. Murphy

INVENTOR

Francis W. Pool

BY

Mumford Co.

ATTORNEYS

F. W. POOL.
FISH PLATE CHAIR FOR RAILWAY RAILS.
APPLICATION FILED NOV. 11, 1909.

967,666.

Patented Aug. 16, 1910.

2 SHEETS—SHEET 2.

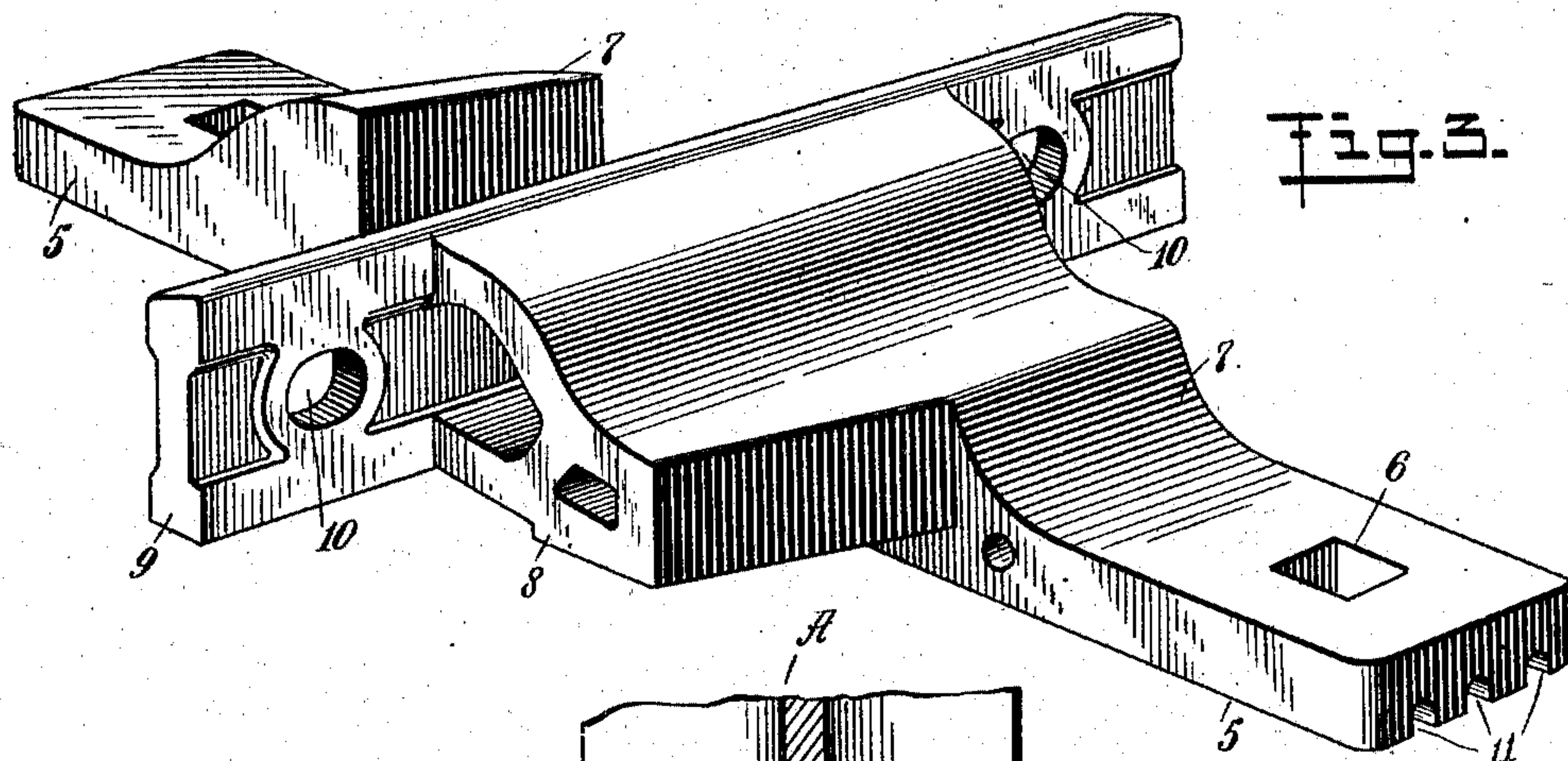


Fig. 3.

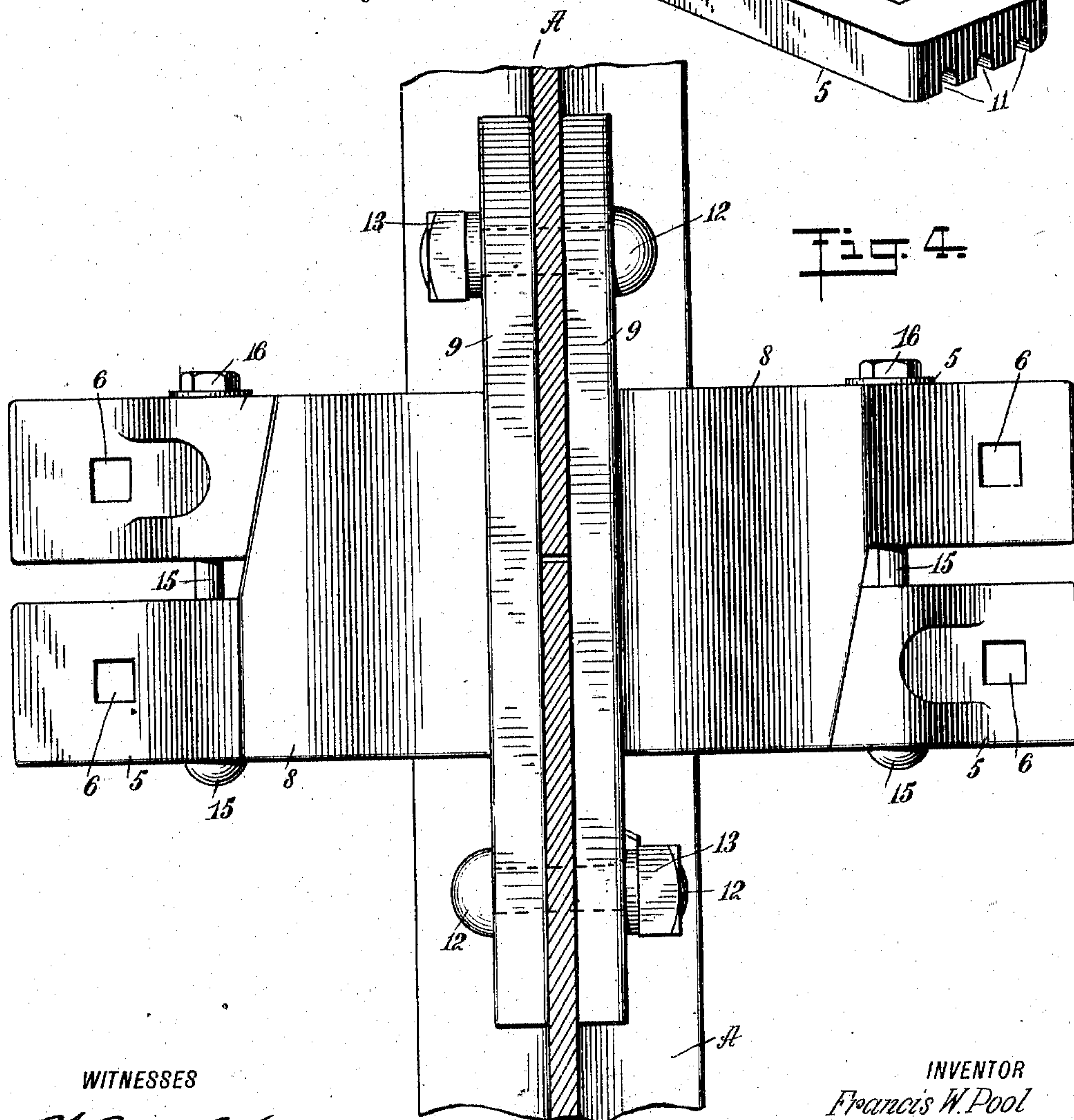


Fig. 4.

WITNESSES

Wm. J. Higgins
E. J. Masack

INVENTOR
Francis W. Pool
BY *Munroe*
ATTORNEYS

UNITED STATES PATENT OFFICE.

FRANCIS WRIGHT POOL, OF HAVRE, MONTANA.

FISH-PLATE CHAIR FOR RAILWAY-RAILS.

967,666.

Specification of Letters Patent.

Patented Aug. 16, 1910.

Application filed November 11, 1909. Serial No. 527,419.

To all whom it may concern:

Be it known that I, FRANCIS W. POOL, a subject of the King of Great Britain, and a resident of Havre, in the county of Chouteau and State of Montana, have invented a new and Improved Fish-Plate Chair for Railway-Rails, of which the following is a full, clear, and exact description.

Among the principal objects which the present invention has in view are: to provide a joint for railway rails embodying fish-plates and chairs for uniting and supporting the ends of the said rails; to provide a structure of the character above mentioned having means exclusive of the fish-plate bolts upholding the fish-plates in rigid relation to the railway rails; and to provide a construction for a device of the character specified which results in a maximum economy in weight and structural strength.

One embodiment of the present invention is disclosed in the structure illustrated in the accompanying drawings, in which like characters of reference denote corresponding parts in all the views, and in which

Figure 1 is a perspective view of two fragmentary ends of railway rails joined and supported by fish-plate chairs constructed in conformity with the present invention; Fig. 2 is a cross section of a rail showing in side elevation the joined fish-plate chairs in operative position; Fig. 3 is a perspective view of one of the said fish-plate chairs separated; and Fig. 4 is a plan view of the fish-plate chairs showing the railway rails, the tread of the same being removed.

In a former patent granted to me the 19th day of April, 1904, No. 758,018, for improvements in railway chairs, was set forth and claimed a structure similar in many respects to the present invention. The similarity broadly consists in the employment of two base plate members 5, 5, in the ends of which are formed perforations 6, 6 suitable for the passage of fastening bolts. Carried upon each of the members is a vertical projection 7, 7, the face of which is removed from and inclined toward the railway rail to receive the inclined surface of a head or bracket extension 8, 8. In the present instance the heads 8, 8 in each of the members are provided with a fish plate 9, 9. The fish-plates 9, 9 are extended at suitable distances to either side of the heads 8, 8, and are provided with one or more bolt

holes 10, 10 to aline with bolt holes provided in the end sections of the rails A, A. The faces of the fish-plates 9, 9 are shaped to the size of the web of the rails A, A, conforming to the junction curves or inclines of the web with the flange and tread of the said rail, as is usual with fish-plates of the present known construction.

The bodies of the heads 8, 8 and the projections 7, 7 are formed in hollow construction, the castings, if castings be used, being properly cored to produce the lightest practicable structural weight with the maximum structural strength. With the same idea in view, that is, to reduce the weight of the structure, I have provided the bed plates thereof with a series of parallel grooves 11, 11, the vertical walls whereof are underneath and have full capacity for carrying the weight received upon the chair.

With a structure thus formed the operation of assembling the same in operative position is as follows: The separate members are passed under the rails A, A to be joined, the fish-plates 9, 9 being separated sufficiently to permit the rails to slide readily between the same. The rails A, A having been set in desired position, the fish-plate chairs are then drawn together, the inclined faces of the heads 8, 8 and the projections 7, 7 abutting, and each sliding upon the other. The result of the sliding action is to wedge each of the heads 8, and the fish-plates 9 carried thereby, against the butted ends of the rails A, A. In this position the projections provided in the rails to receive bolts 12, 12 will aline with the bolt holes 10, 10 formed in the fish-plates 9, 9. In this position the bolts 12, 12 are extended through the perforations, and nuts 13, 13 are thereon fastened and set up. The chairs are usually assembled to ride on the same tie. This having been provided, the usual spikes 14 are driven into the ties through the perforations 6, 6 provided in the chairs for that purpose. With the driving of the spikes 14 the operation of assembling and fastening in position the various parts connected with the railway joint when formed by using the present invented fish-plate chair, is completed.

The two fish-plate chair members are often provided by me with the bolts 15, 15, which pass through the castings in such manner as to be drawn together by setting up the screw nuts 16, 16.

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

1. A fish-plate chair for railway rails comprising a plurality of base plates each adapted to extend under and at both sides of the joined rails; a plurality of fish-plates having a vertical face shaped to the channel formed by the web, tread and flange of the joined rail, said fish-plates being laterally extended from said base plates to reinforce the joined rails; supporting heads for said fish-plates integrally formed therewith and with the said base plates, having inclined wedging surfaces at the rearward extension thereof, and having a separated upper and lower wall extension in the lines of thrust of said rails; a plurality of inclined surfaces having vertical planes formed in the rear of each of said fish-plates; a plurality of vertical projections formed on the said base plates and having inclined vertical planes adapted to engage the said inclined surfaces in the rear of said fish-plates; bolt holes formed in said fish-plates to aline with bolt holes in the joined rails; fastening bolts extended through said fish-plates and said rails; and fastening devices for retaining the said members of the fish-plate chair in fixed relation with the railway structure.

2. A fish-plate chair for railway rails comprising a plurality of fish-plates shaped to conform to the channel of the railway rails

and having bolt holes for securement to said rails; a plurality of base plates each connected with one of said fish-plates disposed at the side of the median line of said fish-plates and extended under the said rail in position to support the same; supporting heads for said fish-plates integrally formed with said fish-plates and said base plates, said supporting heads extended laterally from said base plates to rest on both sides of said median line of the said fish-plates to form a support for said fish-plates on opposite sides of the rail meeting, the rear of said supporting heads having an angular extension from said base plates; projections formed integrally on each of said base plates and extended upward therefrom having an angular surface adapted to engage the angular surface of the supporting heads of the adjacent fish-plate to force the said fish-plates against the said rail by the wedging action of the angular surfaces of said heads and said projections; and means for securing said projections in engaged relation with said heads.

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

FRANCIS WRIGHT POOL.

Witnesses:

ED. M. ALLEN,
GEO. T. WARLAND.