

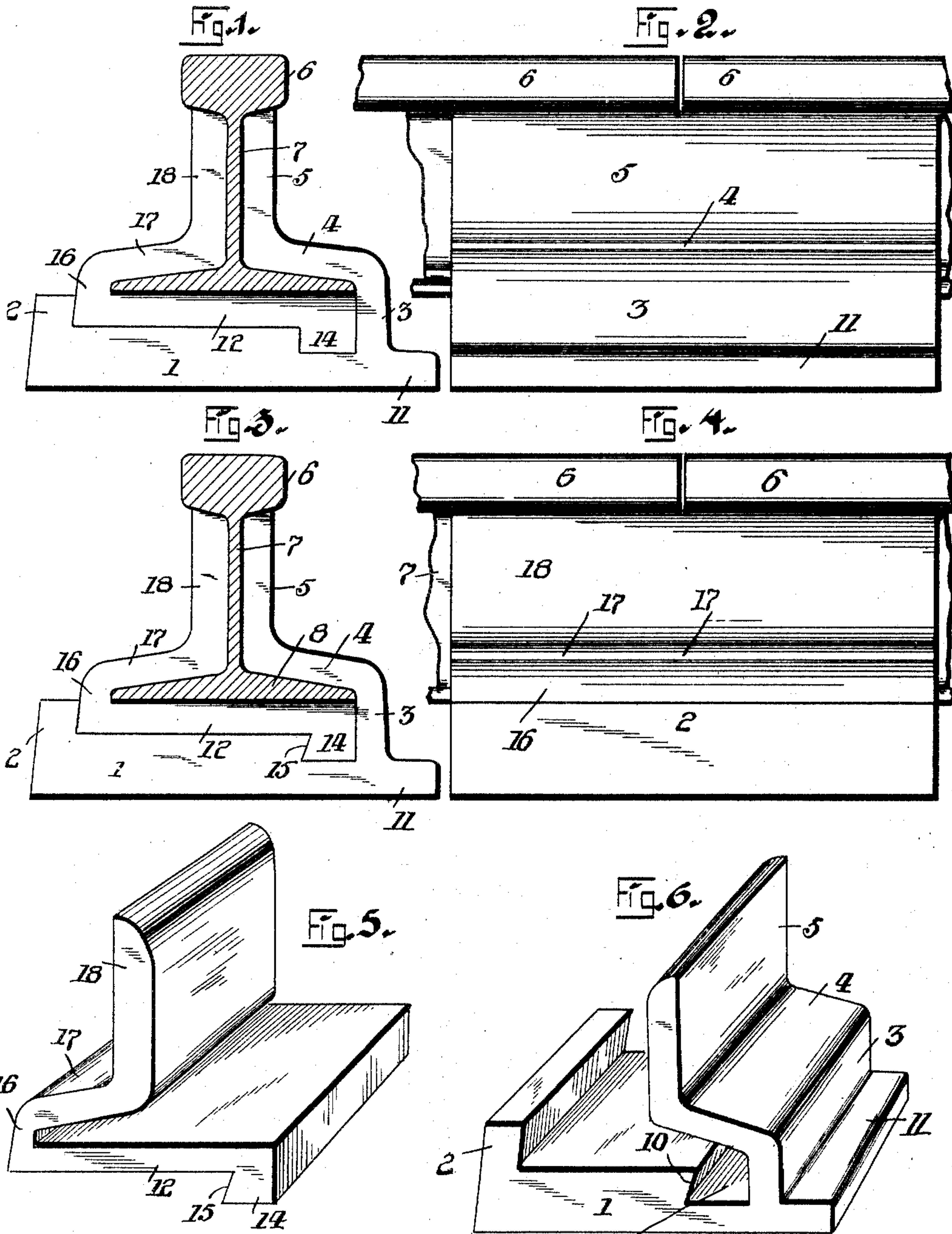
No. 777,494.

PATENTED DEC. 13, 1904.

R. CAHA.  
RAIL JOINT.

APPLICATION FILED AUG. 12, 1904.

NO MODEL.



Witnesses.  
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## UNITED STATES PATENT OFFICE.

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## RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 777,494, dated December 13, 1904.

Application filed August 12, 1904. Serial No. 220,499. (No model.)

*To all whom it may concern:*

Be it known that I, RUDOLF CAHA, a subject of the Emperor of Austria-Hungary, residing at McKeesport, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention has relation to certain new and useful improvements in rail-joints, and has for its object the provision of novel means whereby the ends of two sections of rails may be secured together without the use of nuts  
15 and bolts.

Another object of my invention is to provide novel means for supporting the ends of two rail-sections upon the ties forming part of a road-bed, and in conjunction with  
20 my improved rail-joint I construct means for supporting two rail-sections adjacent to each other, means being provided to permit the expansion and contraction of the rails and at the same time preventing any lateral move-  
25 ment of the sections of rails which would cause the rolling-stock traveling over the same to become displaced.

Briefly described, my improved rail-joint comprises a chair the one side of which carries  
30 an integral fish-plate, and upon said chair is adapted to be secured an auxiliary chair in which the ends of the rail-sections are placed, this auxiliary chair also having an integral fish-plate upon its one side and provided with  
35 means upon its base to engage in the chair of the rail-joint.

All of the above construction will be hereinafter more fully described and claimed, and in the accompanying drawings, forming a part  
40 of this application, like numerals of reference will be used to indicate like parts throughout the several views, in which—

Figure 1 is an end view of my improved rail-joint, showing a section of a rail mounted  
45 therein. Fig. 2 is a side elevation of my improved rail-joint, showing two sections of rails placed therein. Fig. 3 is an end view of a modified form of construction of my improved rail-joint. Fig. 4 is a side elevation  
50 of the same. Fig. 5 is a detail perspective

view of the auxiliary chair. Fig. 6 is a perspective view of the chair which is adapted to support the auxiliary chair and rail-section.

Referring to the drawings accompanying this application, the reference-numeral 1 in-  
55 dicates the base of a chair, which is clearly illustrated in Fig. 6 of the drawings. The one edge of this base is provided with an upwardly-turned flange 2, and adjacent to the other edge of said base is formed an integral  
60 fish-plate, which extends upwardly for a short distance, as indicated at 3, inwardly, as indicated at 4, and upwardly, as indicated at 5, the inward and upward portions of the fish-plate being adapted to engage the head 6, the  
65 web 7, and the base 8 of the rail-sections which are to be supported within said chair.

The reference-numeral 9 indicates a slot which is cut in the base 1 adjacent to the inner side of the upwardly-extending portion 3  
70 of the fish-plate, this slot being beveled upon its one side, as indicated at 10, and a flange 11 is formed between the outer side of the upwardly-extending portion 3 of the fish-plate and the edge of the base 1, whereby the chair  
75 may be secured upon the ties of the road-bed.

The auxiliary chair, as shown in Fig. 5 of the drawings, consists of a base portion 12, which upon its one edge is provided with a depending flange 14, the one side of which is  
80 beveled, as indicated at 15, to an angle corresponding in degree to the beveled side 10 of the slot 9, and upon the opposite side of the base 12 is formed an integral fish-plate, this fish-plate extending upwardly, as indicated at  
85 16, for a short distance, and then inwardly, as indicated at 17, and then upwardly, as indicated at 18, the fish-plate being adapted to engage the top of the base 8, the web 7, and the under face of the head of the rail-section when  
90 the rail is resting upon the top of the base 12. When it is desired to place two rail-sections in my improved rail-joint, the chair 12 is placed upon the one side of the two rail-sections, each rail-section resting upon the base  
95 12 being engaged by the fish-plate of the auxiliary chair. The auxiliary chair carrying the rail-sections is then placed in the chair 1, the flange 14 of the auxiliary chair engaging in the slot 9, and the fish-plate carried by the  
100



chair will engage and support the other side of the rail from that supported by the fish-plate of the chair 12.

5 In Figs. 1 and 2 of the drawings I have shown the depending flange 14 and the slot 9 of the base 1 as having their sides formed vertically, the beveled side of the flange 14 being dispensed with.

10 From the above construction it will be seen that it will be impossible for the rail-sections to become disjoined or any lateral movement of the same permitted, and it will also be observed that when the chair has been secured upon the rails and ties of the road-bed or upon 15 the ballast thereof the rail-sections which are supported within the auxiliary chair may be easily and quickly secured therein.

20 It will be noted that various slight changes may be made in the details of construction without departing from the general spirit of my invention.

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

25 In a rail-joint, a main chair comprising a

base provided on its upper face along one edge with a flange and having a longitudinal groove adjacent the opposite edge, one of the side walls of said groove being vertical and the other side wall being at an angle to the ver- 30 tical, a fish-plate integral with said base and projecting upwardly and lying over the groove, and said base having a flange projecting beyond the fish-plate, combined with an auxiliary chair comprising a base, having a 35 depending flange along one edge, the side walls of said flange formed to correspond to and fit with the side walls of the groove, the opposite edge of the base engaging the inner wall of the upwardly-extending flange of the 40 base-plate of the main chair, and a fish-plate formed integral with the base-plate of the auxiliary chair, substantially as described.

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

RUDOLF CAHA.

Witnesses:

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