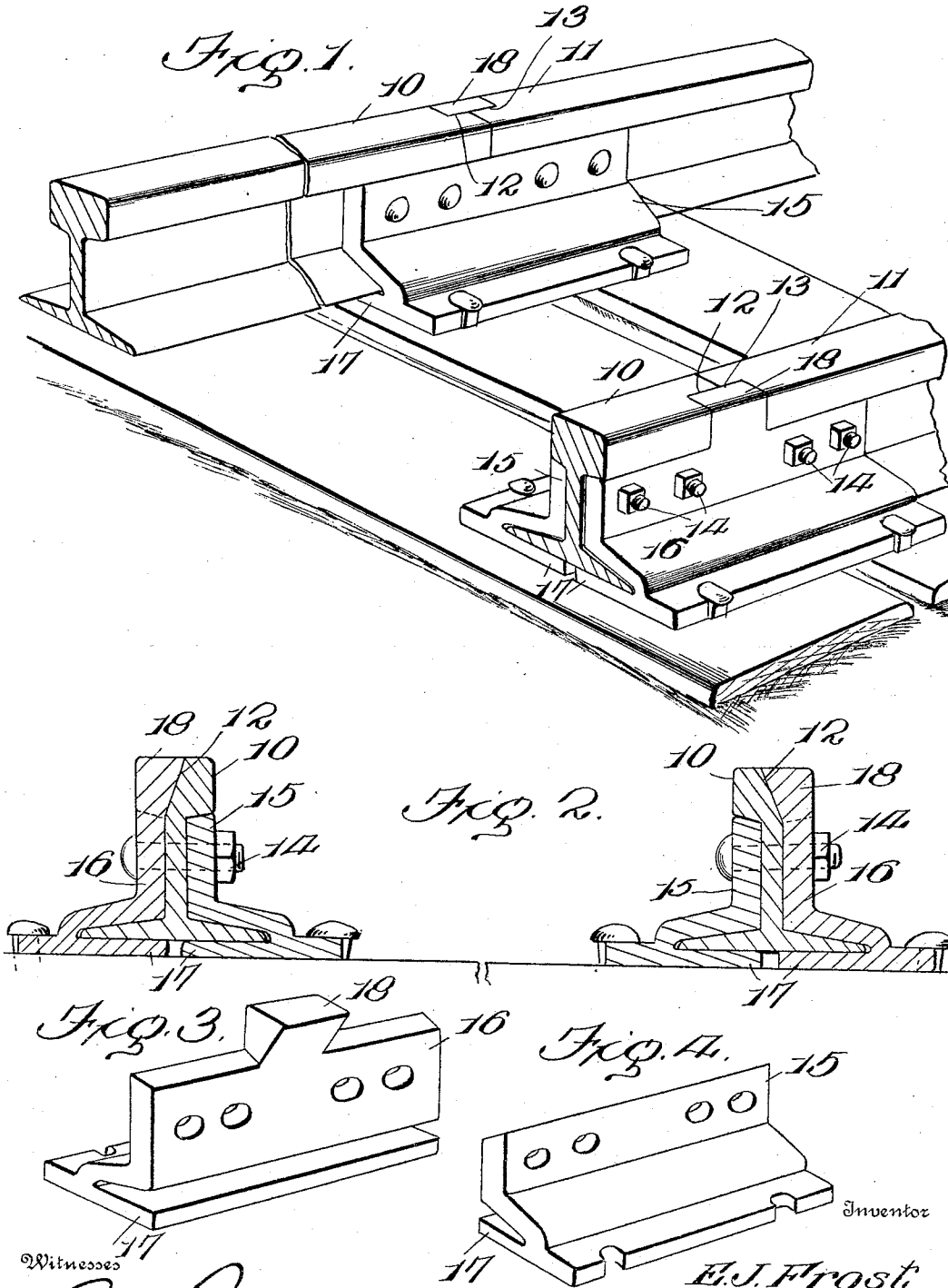


E. J. FROST.
RAIL JOINT.

APPLICATION FILED MAR. 8, 1909.

939,240.

Patented Nov. 9, 1909.



Witnesses

W. H. Woodson

By

E. J. Frost
W. H. Woodson, Attorneys

UNITED STATES PATENT OFFICE.

EDWARD J. FROST, OF NOTTINGHAM, OHIO, ASSIGNOR OF ONE-HALF TO WILLIAM JOITE, OF CLEVELAND, OHIO.

RAIL-JOINT.

939,240.

Specification of Letters Patent.

Patented Nov. 9, 1909.

Application filed March 8, 1909. Serial No. 481,889.

To all whom it may concern:

Be it known that I, EDWARD J. FROST, citizen of the United States, residing at Nottingham, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification.

This invention relates to railways and has particular reference to a rail joint and chair which is employed in connection with the same.

An object of this invention is to provide an improved joint whereby the formation of the rail ends are of simple construction enabling the same to be rolled with the formation of the rail and thus forming a joint which is solid and at the same time one which may be produced economically and with little labor.

The invention further aims the provision of a joint which renders the tread of the rail practically continuous thereby eliminating the jarring of the rails and coaches which pass over the rails upon the striking of the wheels on the joint. The feature thereby avoids the rocking of the rails and prevents the sliding of the rail ends past each other as the weight is disposed upon the same.

It is well-known that rail joints of this character have been invented, but the purpose of this invention is to provide a rail joint which combines all of the features of this character of joint but which can be economically and readily produced owing to the simplicity and structure thereof and in the application of the same, for the rails are positioned the same as the rails now commonly employed which are secured simply by means of laterally positioned fish plates and which are not dependent upon the interlocking engagement of any portions of the rails which necessitate the lateral registration or of the raising of the ends during the setting of the same.

For a full understanding of the invention reference is to be had to the following description and accompanying drawings, in which:—

Figure 1 is a perspective fragmentary view of a track having the improved rail joints and chairs applied to the rails of the same. Fig. 2 is a transverse section of the same, and Figs. 3 and 4 are detailed perspective views of the improved fish plates

and attachments thereto which are used in connection with the joint.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Referring to the drawings the numerals 10 and 11 designate the adjoining rails of a track which are provided with diagonal or beveled faces 12 and 13 which are adapted to register upon the positioning of the ends of the rails 10 and 11 together and which are formed at the extremities and at one side of the tread of the rails. The rails 10 and 11 are provided in the usual manner with slightly elongated apertures formed through the webs of the same for the reception of clamping bolts 14 which engage through fish plates 15 and 16 which are disposed against the sides of the rails 10 and 11 and which are extended across the adjoining ends of the same. The fish plates 15 and 16 are each provided with bases 17 which are extended beneath the bases of the rails 10 and 11 and serve to support the same to prevent the sagging of either of the ends of the rails 10 and 11 upon the passage of a weighted object thereover. The fish plate 16 is disposed upon the outer side of the rails 10 and 11 and is provided with an upwardly extended and inwardly enlarged flange 18 which is provided with an inwardly beveled face to engage against the beveled faces 12 and 13 formed upon the ends of the rails 10 and 11 and which is flushed with the upper or tread surface of the same to form a substantially continuous tread portion to the rails 10 and 11. The beveled flange 18 in conjunction with the beveled faces 12 and 13 serve as a means for preventing the rising of either of the ends of the rails 10 and 11 past one another during the riding of the coaches over the same. The fish plates 15 and 16 are provided with slightly elongated apertures to register with the apertures formed through the rail ends and through which the clamping bolts are positioned. The adjoining edges of the fish plates 15 and 16 with the bases 17 are notched at intervals along the edges thereof to admit of the engagement of spikes or the like for the purpose of securing the rails 10 and 11 to the ties or the like which support the track.

In forming the track employing rail joints of this nature it is only necessary to position

the ends of the rails together in the ordinary manner when the fish plates 15 and 16 are engaged against the sides of the same and clamped through the medium of the bolts 5 14. The flange 18 is of such formation that it admits of lateral adjustment against the rails 10 and 11 thereby providing a locking member which is positioned simultaneously with the clamping of the fish plate 16 against 10 the sides of the rails. It is seen from this construction that the only change in the formation of the rails from those in common use is that the same are provided at their opposite extremities with the beveled faces 12 15 and 13 which do not interfere with nor are they injured by the rolling process through which they are passed in the formation of the rails. This is believed to be a distinct advantage in the art, as rail joints of this 20 character heretofore constructed necessitate the special formation of the extremities of the rails after the same have been formed thereby forming joints which are expensive to manufacture and which require additional 25 labor in the making of the same.

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

1. In a rail joint the combination with adjacent rail ends having beveled faces on the 30 outer sides thereof in the treads of the same,

the beveled faces extending inwardly from the end of the rails a distance approximately equal to the width of the abutting ends of the treads of the rails, of fish-plates clamped against the sides of said rails, a flange up- 35 wardly extended intermediately of the upper edge of the outer of said fish-plates, a beveled face formed on said flange for bearing against the beveled faces on the treads of said rails, said flange on said fish-plate serving as a tread, and bases inwardly extended 40 from the lower ends of said fish plates for engagement beneath the bases of said rails.

2. In a rail joint the combination with two rails having their tread portions cut- 45 away in registered relation at the outer sides thereof, of fish-plates engaged against the opposite sides of said rail, a member projected upwardly from the outer of said fish-plates to bear in the cut-away portion, the 50 member being of a length approximately twice the width of the abutting ends of the rails and bases carried by said fish-plates to engage beneath the rails.

In testimony whereof I affix my signature 55 in presence of two witnesses.

EDWARD J. FROST. [L. s.]

Witnesses:

ENEL H. SWEENEY,
J. M. RAUCH.