J. W. DAVIES.

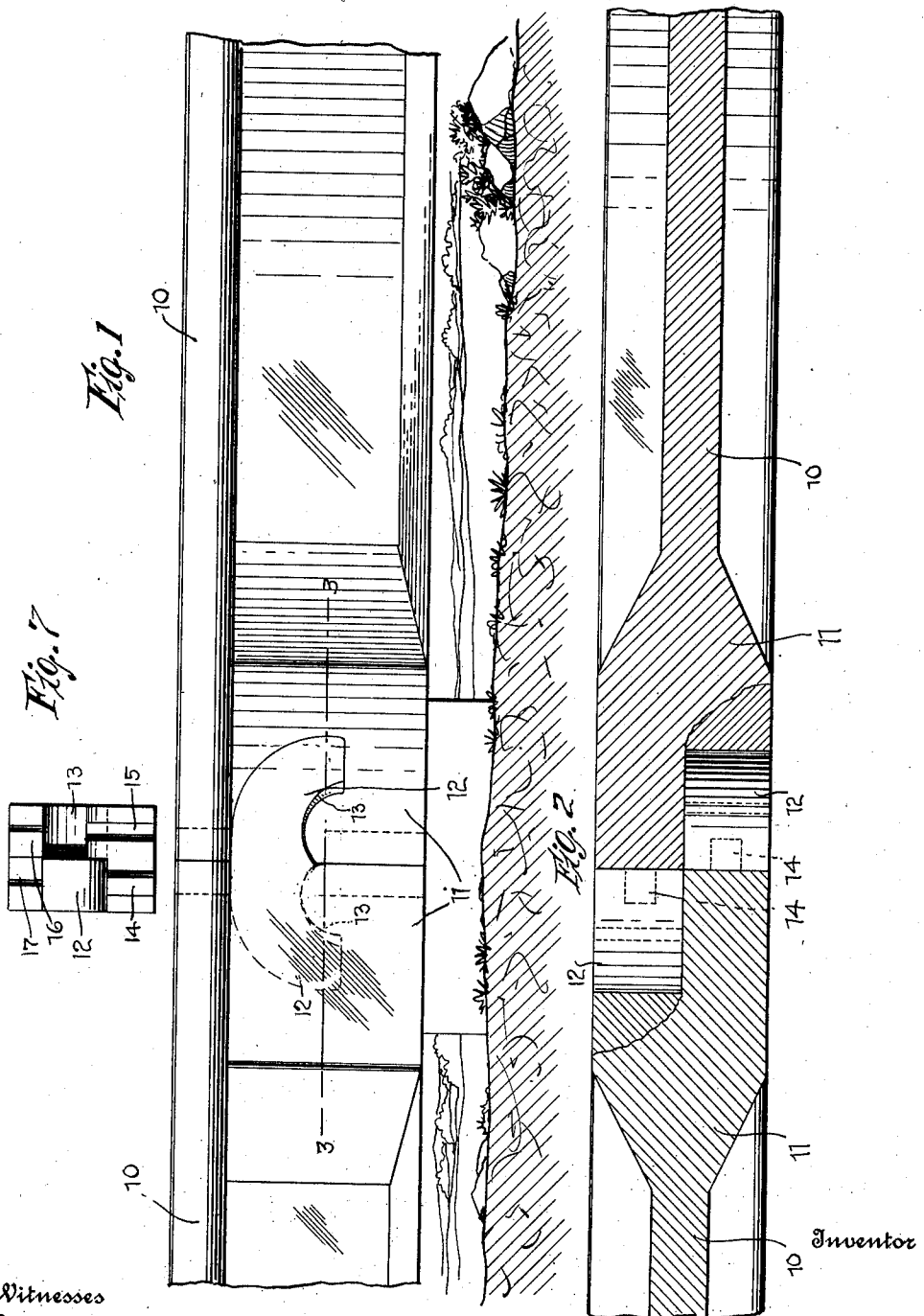
RAIL JOINT.

APPLICATION FILED JUNE 29, 1912.

1,044,357.

Patented Nov. 12, 1912.

3 SHEETS—SHEET 1.



Witnesses

Robert M. Sutphen

Ross J. Woodward

Inventor

JOHN W. DAVIES

By E. C. Crooman,

His Attorney

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

J. W. DAVIES.

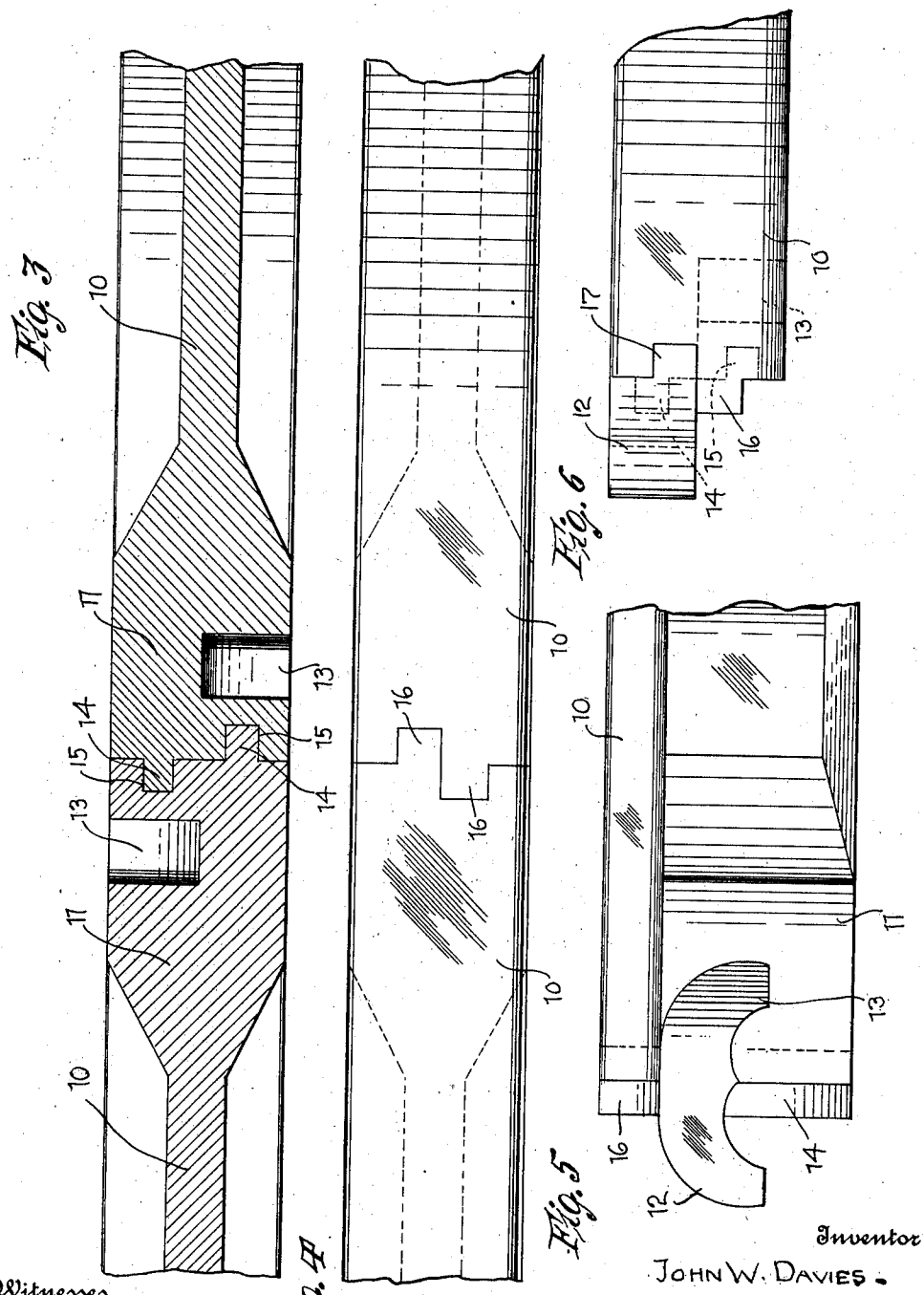
RAIL JOINT.

APPLICATION FILED JUNE 29, 1912.

1,044,357.

Patented Nov. 12, 1912.

3 SHEETS—SHEET 2.



Witnesses

Robert M. Sutphen

Ross J. Woodward

Inventor

JOHN W. DAVIES.

By C. C. Crooman,

his Attorney

J. W. DAVIES.

RAIL JOINT.

APPLICATION FILED JUNE 29, 1912.

1,044,357.

Patented Nov. 12, 1912.

3 SHEETS—SHEET 3.

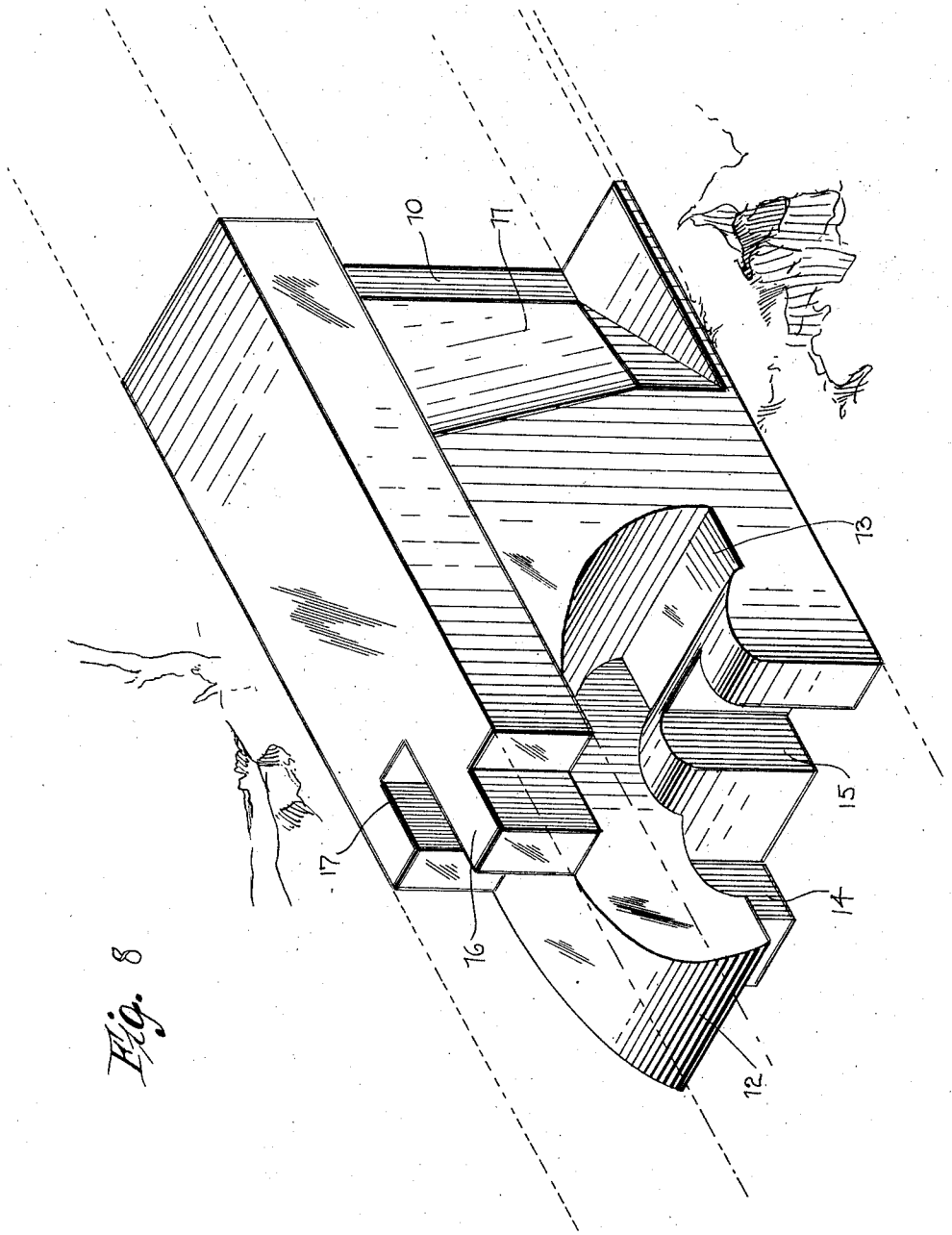


Fig. 8

WITNESSES

Robert M. Sutphen

Ross J. Woodward

INVENTOR

JOHN W. DAVIES

By E. E. Wrenman his Attorney

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN WILLIAM DAVIES, OF BARNESBORO, PENNSYLVANIA.

RAIL-JOINT.

1,044,357. Specification of Letters Patent. Patented Nov. 12, 1912.

Application filed June 29, 1912. Serial No. 706,729.

To all whom it may concern:

Be it known that I, JOHN WILLIAM DAVIES, citizen of the United States, residing at Barnesboro, in the county of Cambria 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 drawing.

This invention relates to railroad rails, and the principal object of the invention is to so construct the end portions of the rail that they will be connected together without it being necessary to pass any bolts or other securing means through the rail.

Another object of the invention is to so construct the end portions of the rail that they will be interchangeable thus doing away with the necessity of having the rails placed with certain ends meeting.

Another object of the invention is to so construct the ends of the rails that the portions of the rails which are connected together will be as strong as the remaining portions of the rail.

Another object of the invention is to so construct the rails together that all longitudinal and transverse movement of the rails will be prevented after the rails have been connected together.

This invention is illustrated in the accompanying drawings, wherein:—

Figure 1 is a side elevation of the rail. Fig. 2 is a longitudinal sectional view through the rail. Fig. 3 is a longitudinal sectional view through the rail along the line 3—3 in Fig. 1, with the curved claws removed from the pockets. Fig. 4 is a top plan view of the rail. Fig. 5 is a side elevation of the end portion of one of the rails. Fig. 6 is a top plan view of the end view of one of the rails. Fig. 7 is an end elevation of one of the rails. Fig. 8 is a perspective view of one end of a rail formed in accordance with this invention.

Referring to the accompanying drawings, it will be seen that this invention comprises the rails 10, each of which is provided at each end with a plurality of tongues and sockets, the tongues at the end of one rail fitting into the sockets at the end of the adjoining rail thus preventing longitudinal and transverse movement of the rails after the rails have been connected together. The web portion at each end of the rail is thickened as shown at 11, so that a solid block is formed at each end of the rail, which is of the same width as the base and tread of the rail. This forms a solid piece of metal at the end of each rail so that when the two rails are connected together, the end portions of the rail will be as strong and as solid as the central portion of the rail.

A curved tongue 12 extends from the end of the rail to one side of the center and is adapted to fit into a curved pocket 13 formed in the end of an adjoining rail. It is, of course, obvious that the end of the adjoining rail will be also provided with a curved tongue 12 which would fit into the curved pocket 13 of the first rail, the pocket 13 being formed upon the opposite side of the rail center from the tongue 12. A vertically extending lip 14 is positioned beneath the tongue 12 and a groove 15 is formed beneath the pocket 13. The lip 14 fits into the groove 15 of the adjoining rail, and the groove 15 receives the lip of the adjoining rail. A tongue 16 which is straight throughout its length, extends from the rail above the pocket 13 and a pocket 17 is formed above the tongue 12 to receive the tongue 16 of an adjoining rail.

It should be noted that the rails have to be tilted a certain amount in order to place the tongues 12 into the pockets 13, and that when the rail ends have been lowered upon the tie, the tongues 12 will fit tightly in the pockets 13 thereby forming hooks to prevent longitudinal movement of the rails. The lips 14 fit into the grooves 15, and the tongues 16 fit into the pockets 17 so that transverse movement of the rails is prevented. It should also be noted that these tongues 16 prevent noise when the cars are passing over the joints since the edges of the rails do not meet in a straight line the full width of the tread, but the wheel first rides upon the tongue 16 of one rail and then rides over the side portions of the rail. After the rails are connected together, spikes are driven in the ties with their heads engaging the rails and the rails will then be held securely in place.

It will, therefore, be seen that there has been provided a rail joint which will securely hold the two rails together and prevent independent transverse movement of the rails, and it will also be seen that there has been provided a rail joint which will cause the portions of the rails which are connected together to be as strong, if not

stronger, than the remaining portions of the rails without it being necessary to provide fish plates in order to strengthen the end portions of the rails. It will also be seen that when it is desired to remove the rail it is a very simple matter since it is only necessary to withdraw the spikes and the rails can then be lifted up and disconnected. This construction also eliminates the necessity of bolts for holding the rails together and, therefore, it is not necessary to be continually tightening the bolts in order to keep the rail ends tightly held together.

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

1. A rail provided in one end with a curved pocket and with a groove beneath said pocket and a smaller pocket above and to one side of said curved pocket, a curved tongue extending from said rail to one side of said curved pocket and beneath said last mentioned pocket, a tongue extending from said rail above said curved pocket, and a lip extending from said rail beneath said curved tongue, the tongues and lip being adapted to fit into the pockets of an adjoining rail end.

2. A rail having each end portion thickened whereby the web will be of the same width as the tread and the base of the rail, each end of said rail being provided with an angular pocket extending inwardly, and with a smaller pocket extending inwardly above and to one side of said angular pocket and being also provided with a groove extending inwardly beneath said angular pocket, a tongue extending from each end of said rail above the angular pocket and having one side flushed with the inner side of the smaller pocket and adapted to fit into the smaller pocket of an adjoining rail, an angular tongue extending from each end of said rail and adapted to fit into the angular pocket of an adjoining rail, and a lip extending from said rail beneath said angular tongue and extending to the bottom of the rail and adapted to fit into the groove of an adjoining rail, the lip and upper tongue preventing independent transverse movement of the rails, and the angular tongue forming a hook to prevent longitudinal movement of the rail.

3. A rail having each end provided with a plurality of pockets, one of said pockets being curved inwardly, and a plurality of tongues extending from the end of said rail and fitting into the pockets of an adjoining rail to prevent independent movement of the rails, one of said tongues being curved and fitting into a curved pocket of the adjoining rail to prevent longitudinal movement of the rails.

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

JOHN WILLIAM DAVIES.

Witnesses:

THOMAS RUSSELL DAWSON,

ELLIS DAVIES.