(No Model.)

J. E. SARVIS.

RAIL JOINT.

No. 486,605. Patented Nov. 22, 1892.

Fig. 1.

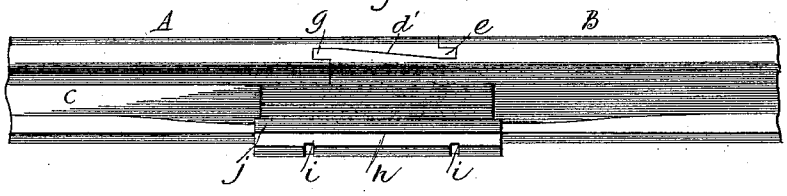


Fig. 2.

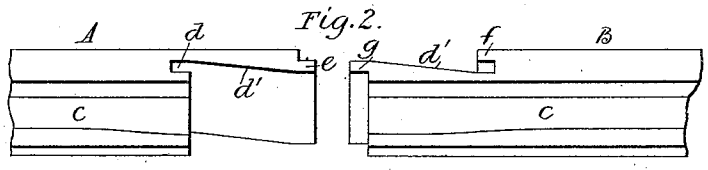
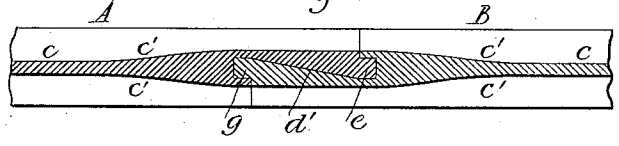


Fig. 3.

Fig. 4.



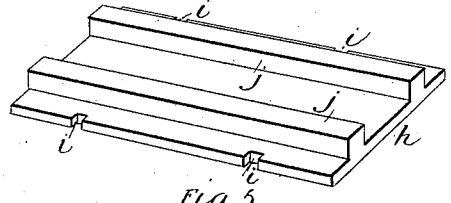
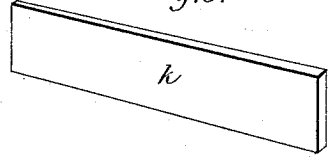


Fig. 5.



Witnesses
Will. A. Norton
Geo. H. C. Brownyr.

Inventor
John E. Sarvis
by Dudley & Co
his Attorneys

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN ELY SARVIS, OF NEWBURG, NEW YORK.

RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 486,605, dated November 22, 1892.

Application filed July 22, 1892. Serial No. 440,916. (No model.)

To all whom it may concern:

Be it known that I, JOHN ELY SARVIS, a citizen of the United States, residing at Newburg, in the county of Orange and State of New York, have invented certain new and useful Improvements in Rail-Joints; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention has reference to improvements in lap-rail joints in which the ends of the rails are united without the use of bolts and fish-plates; and it consists generally in forming the ends of the rails with projections and corresponding recesses which interengage to lock the rails together, and in a chair and wedge-pieces which operate to strengthen the joint and prevent lateral play.

My invention also consists in the special construction, arrangement, and operation of the several parts which constitute my improved rail-joint, all of which will hereinafter be fully and clearly described and specifically claimed.

Reference being had to the accompanying drawings, which form a part of this specification, Figure 1 shows the ends of two rails having my improvements thereon and in a locked condition; Fig. 2, a similar view, the rails separated; Fig. 3, a side elevation; Fig. 4, a horizontal longitudinal section, and Fig. 5 a detail in perspective of the chair and one of the wedge-pieces employed.

Like letters of reference denote like parts in the several figures of the drawings.

The letters A B denote the rails, which are of ordinary construction, except at the ends thereof, and which are spiked to the cross-ties in the well-known manner. The rails are provided at each end with my improved construction of lap-joint, and a description of one of said ends will suffice for the remainder. The web *c* of the rails is thickened at the ends from the point *c'* to form walls for a vertical recess *d*, which is rectangular in shape and extends entirely through the rail. A diagonal cut is made from the wall *d'* of the recess to the end of the rail, the center of said cut being in a line coincident with the central line of the rail. At the end of the rail opposite to this cut-away portion is formed a vertical projection *e*, also rectangular in shape and conforming to a similar recess *f* in the end of the adjacent rail, which is constructed in a manner similar to that just described, but with the parts in a reversed position. In making a joint one of the rails—say, for instance, A—is spiked to the ties and the rail B is placed in position relative thereto, the projections *e g* entering the recesses *f d* and preventing lateral play, and the diagonal walls engaging to prevent longitudinal play.

h is a chair which is secured to the tie, recesses *i* being formed for the spikes. *j* are flanges which embrace the part of the rail and which extend far enough upward to permit of wedge-pieces *k* being interposed between the inner wall of the flanges and the webs in order to secure a more rigid connection.

By reason of the construction of my rail-joint the use of bolts and their accessories is dispensed with, the wedge-pieces serving as fish-plates. The wheels of the cars as they are drawn over rails having my improved joint engage a continuous tread, inasmuch as the tread of the advance rail is engaged before the wheel leaves the tread of the rail occupied.

The joint is simple in construction and may be easily and quickly made.

I claim—

In a rail-joint of the class described, the combination, with the rail A, having the vertical recess, the vertical wall arranged diagonally to the length of the rail, and the vertical projection, of the rail B, having the recess, vertical wall, and projection, the chair having the flanges, as described, and the wedge-pieces, as and for the purpose set forth.

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

JOHN ELY SARVIS.

Witnesses:

JAMES H. GORTON,

JONAS G. HASBROUCK.