

No. 771,692.

PATENTED OCT. 4, 1904.

A. AMBERT.
MEANS FOR CONNECTING RAILS.
APPLICATION FILED JUNE 23, 1904.

NO MODEL.

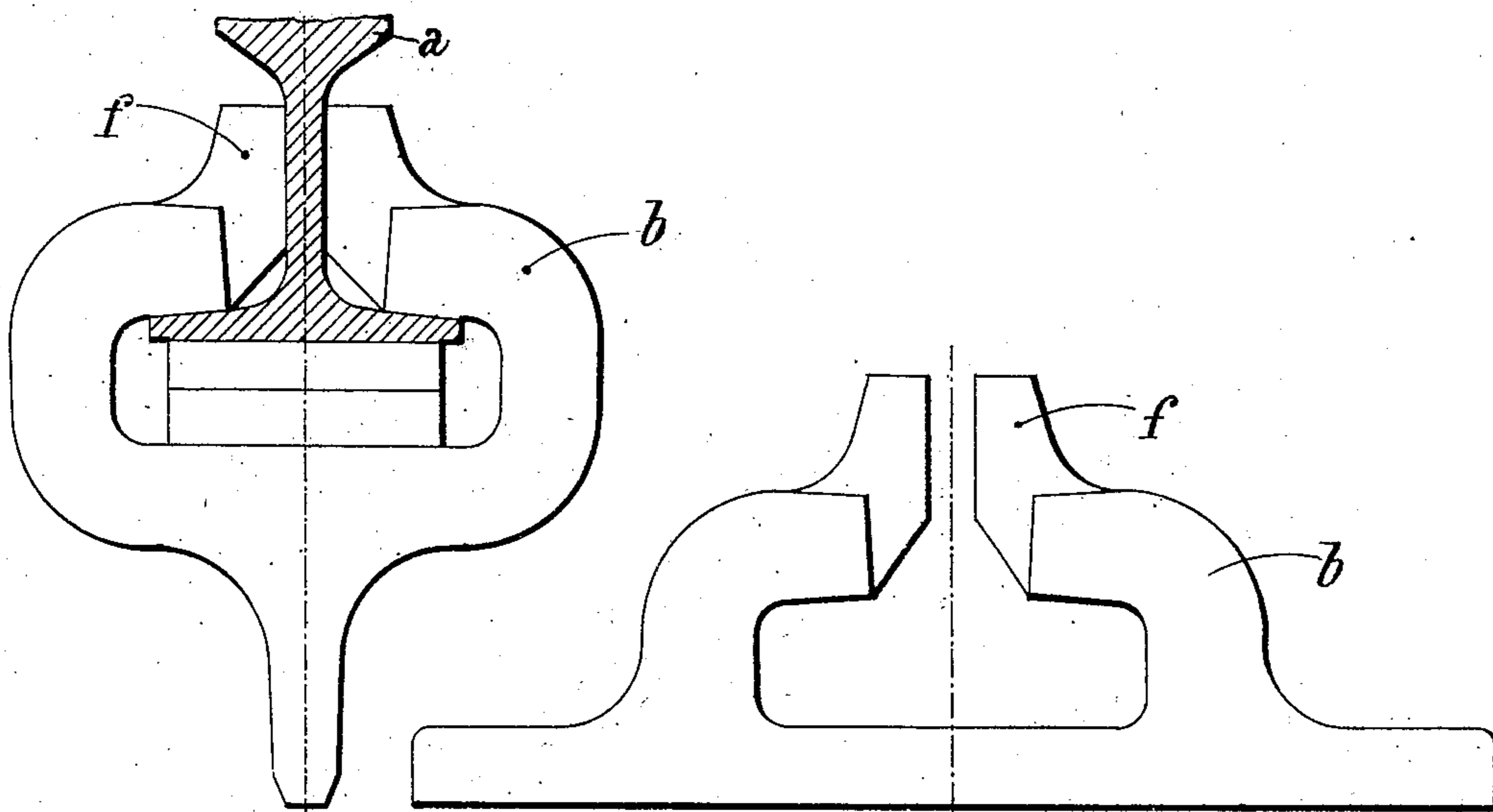


Fig. 1.

Fig. 3.

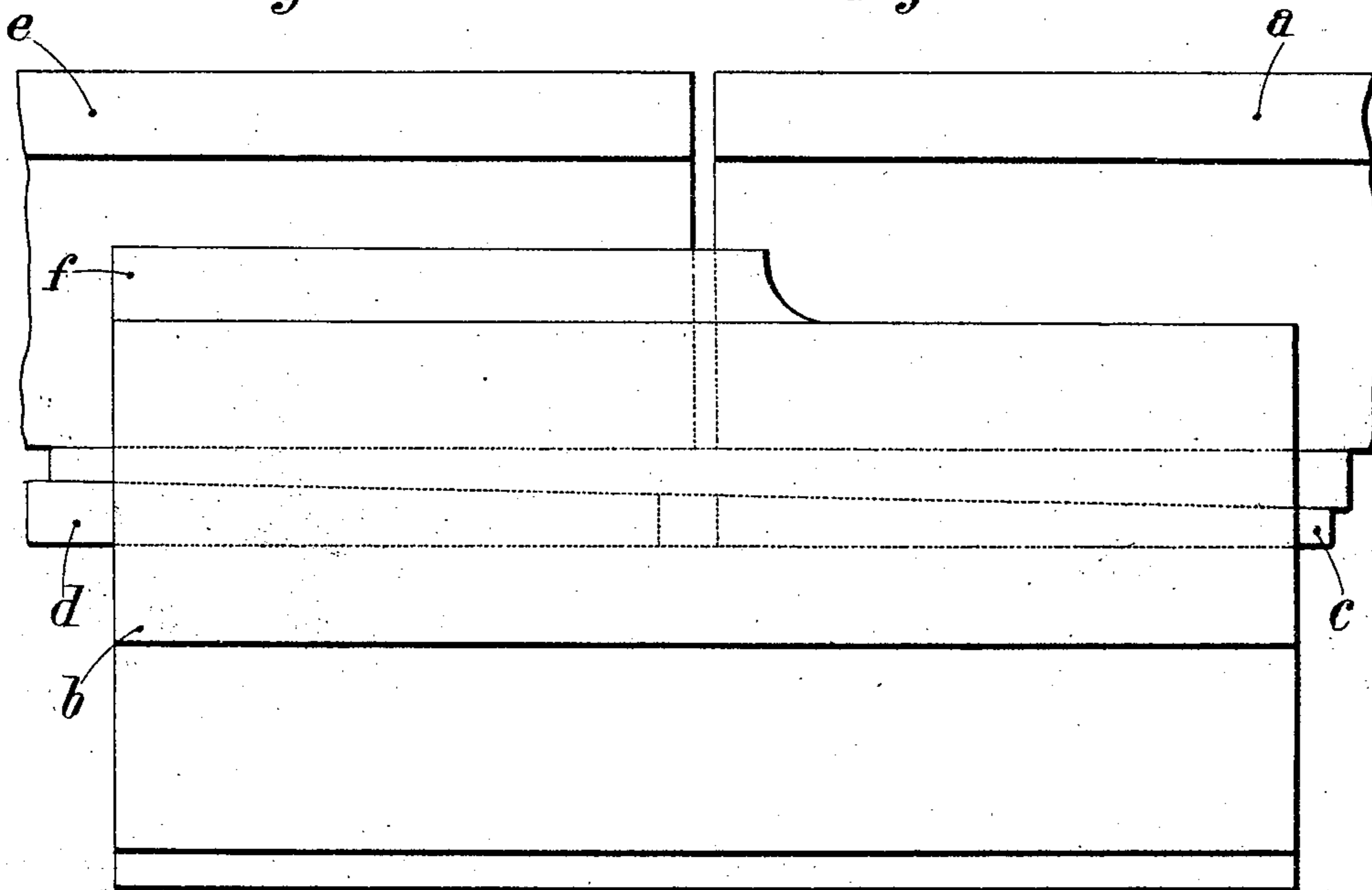


Fig. 2.

Witnesses:

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Att'y

UNITED STATES PATENT OFFICE.

ALEXANDRE AMBERT, OF LYONS, FRANCE.

MEANS FOR CONNECTING RAILS.

SPECIFICATION forming part of Letters Patent No. 771,692, dated October 4, 1904.

Application filed June 23, 1904. Serial No. 213,869. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDRE AMBERT, engineer, a citizen of the French Republic, residing at Lyons, Rhône, France, have invented certain new and useful Improvements in Means for Connecting Rails, of which the following is a specification.

This invention relates to rail-joints of the character described in the specification of Letters Patent No. 728,652, of May 19, 1903, granted to me; and it has for its object to provide means whereby allowance for longitudinal movement of each length of rail is made, as hereinafter described.

When the system of supports and wedges described in the aforesaid specification is applied to rails laid on a special road, as on ordinary railroads or to tramway-rails projecting above the surface of the road, it is necessary to provide fish-joints at intervals—say at every third or fourth rail-joint—to allow the intervening lengths of rails to expand and contract longitudinally, it being necessary that the distance between the ends of the rails thus connected by the fish-joints be equal to the usual clearance-space at each joint multiplied by the number of the intervening rigid supports plus one. My present invention overcomes this objection, allowing as it does for expansion and contraction at all the joints between the lengths of rails, whether the said joints be suspended joints or be supported from beneath, the necessity for the use of fish-joints at intervals as aforesaid being obviated.

In the accompanying drawings, Figure 1 is a transverse section of a support for suspended rail-joint according to my invention. Fig. 2 is a side view. Fig. 3 is a support for a supported rail-joint.

According to this invention the end *a* of one of the rails (say the right-hand rail) is held fast in the support *b* by driving between the said support and the upper key described in the aforesaid specification a short lower key *c*, which is the equivalent of the thinner end of the lower key described in the said specification. When this short key is in position, another key *d*, being an ordinary key of which

the point has been cut off about a quarter of the length of the key, is driven under the end of the left-hand rail *e*, the wedging of this left-hand rail effected by this last-named key being less powerful than is the wedging action of the first-named key on the end of the right-hand rail *a*. The lesser wedging action as determined by trials with various patterns of rails insures sufficient stability of the left-hand rail while allowing it freely to expand and contract longitudinally under variations of temperature.

The support *b* is provided at its upper part with jaws *f*, which are turned inwardly toward each other and support and guide the web of the expanding left-hand rail end *e*. These jaws when the support is made of cast metal may extend over only a little more than one-half of the length of the support if it be desired to economize metal, Fig. 2; but the said jaws will extend along the whole length of the support if it be made of rolled metal. The said jaws insure that the end of the longitudinally-movable rail end *e* is always exactly opposite to and in line with the fixed rail end *a*, so that the contiguous rail-heads are not injured by the flanges of the wheels of the vehicles which run on the rails.

Having thus described and ascertained the nature of my invention and in what manner the same may be produced, I declare that what I claim is—

A rail-joint having a support, in which the end of one of the rails is rigidly held by keys, the end of the other rail being capable of expanding, and wedged by an ordinary key, of which the point has been cut off about a quarter of the length of the key, the support having jaws turned inwardly toward each other and guiding the end of the expanding rail, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ALEXANDRE AMBERT.

Witnesses:

FELIX ROUBILLE,
MARTIN VACHON.