

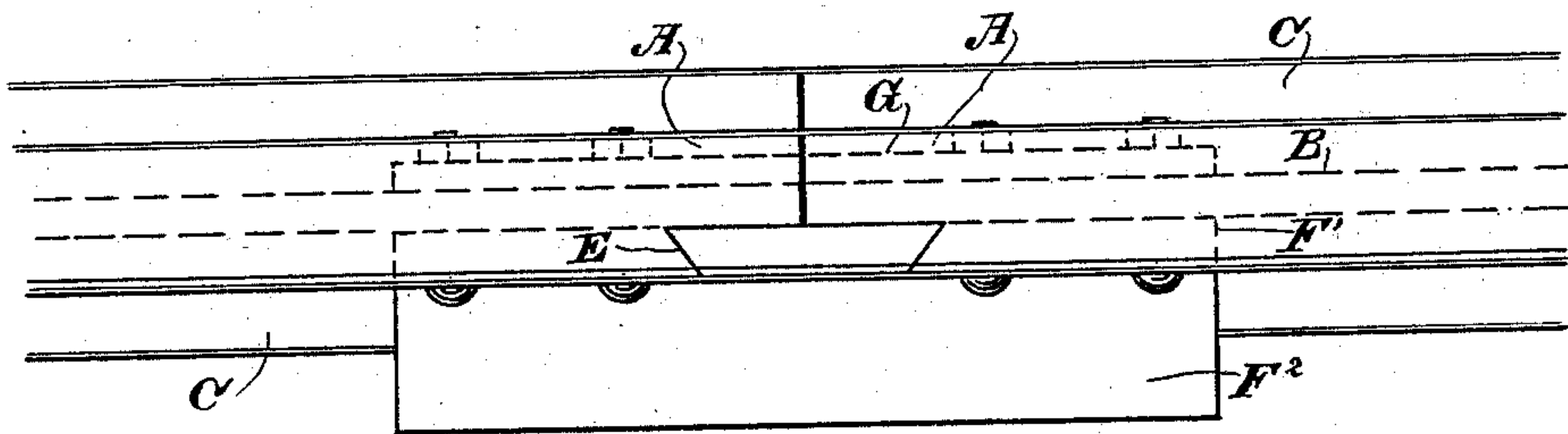
(No Model.)

L. W. KENNEDY.  
RAILWAY RAIL JOINT.

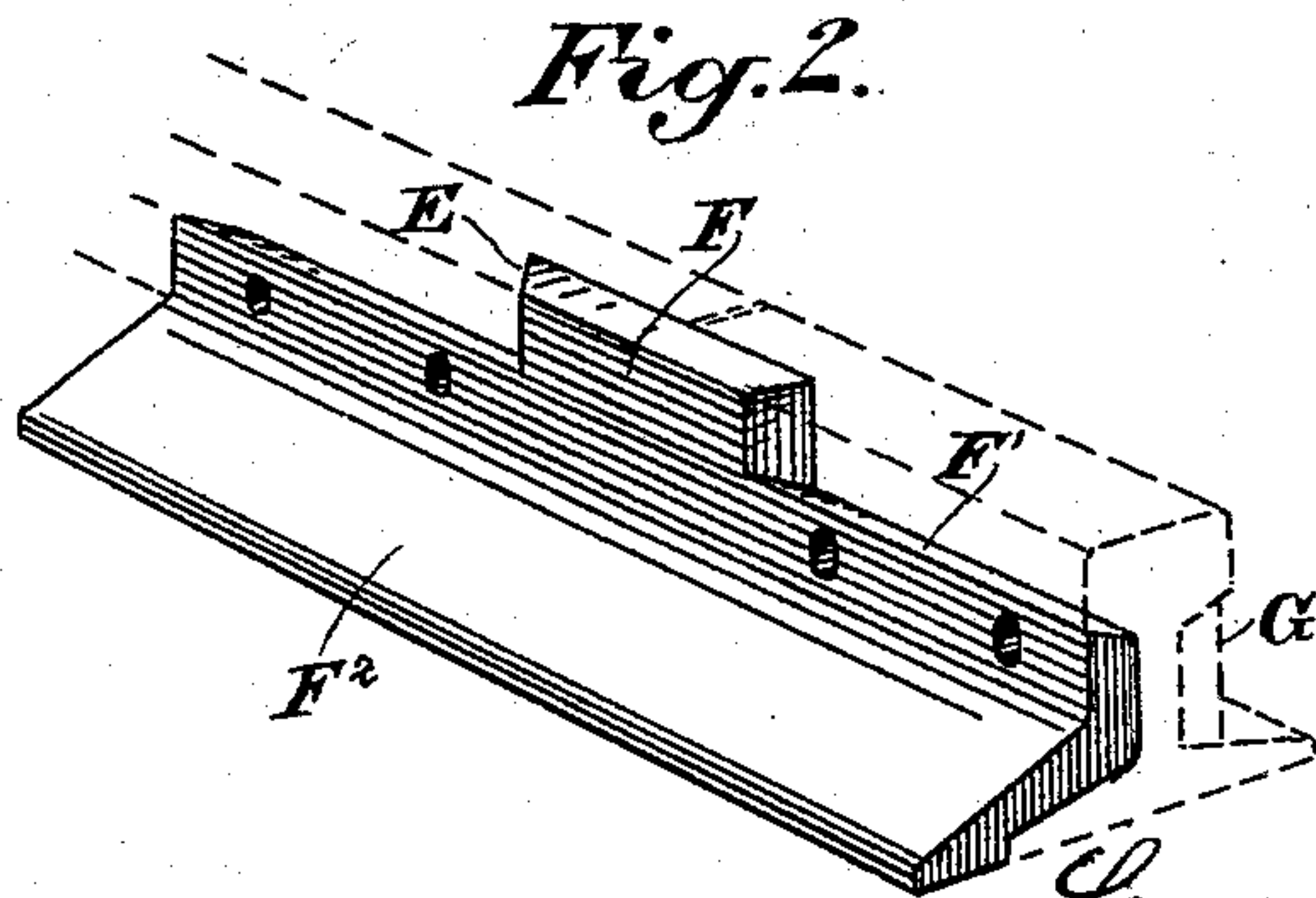
No. 578,882.

Patented Mar. 16, 1897.

*Fig. 1.*



*Fig. 2.*



Witnesses,

*J. H. Morse*  
*H. F. Aschbeck*

Inventor,

*Leonard W. Kennedy*  
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# UNITED STATES PATENT OFFICE.

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## RAILWAY-RAIL JOINT.

SPECIFICATION forming part of Letters Patent No. 578,882, dated March 16, 1897.

Application filed June 29, 1896. Serial No. 597,319. (No model.)

*To all whom it may concern:*

Be it known that I, LEONARD W. KENNEDY, a citizen of the United States, residing at Oakland, county of Alameda, State of California, have invented an Improvement in Railway-Rail Joints; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to improvements in joints for the meeting ends of railway-rails, and a means for uniting and supporting them.

It consists in certain details of construction, which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 represents a plan view of my improved joint. Fig. 2 is a perspective view of the joint-support and plate.

The object of my invention is to bridge the space necessarily left between the ends of the rails to accommodate expansion and to provide a means for connecting and supporting the meeting ends of railway-rails, and especially to form a continuous line of travel upon which the flanges of the wheels pass over the joints, so as to prevent bruising and battering the latter and the wear which ordinarily takes place on account of the shocks caused by the wheels passing over the more or less open joints of the rails.

A A are the heads of the meeting ends of two rails, B the web, and C the bottom flanges upon which the rails rest upon the ties or other supports.

In order to properly apply my improved joint, I cut away a portion of the head A of the rails at points near their abutting ends. This cut-away portion removes so much of the head of the rail as to leave a space which is essentially in the vertical plane of the side of the web B. This portion may be cut away with beveled ends, as shown at E.

The joint-plate F fits into this beveled recess, the upper part of the plate being made of a corresponding thickness with the portion of the rail-head which has been cut away and having the same beveled ends, so that when laid into this recess it practically fills it up and makes the top flush with the top of the rail.

The plate extends in each direction from

the cut-away portion beneath the head of the rail, which is thus supported upon these extensions F'. The lower portion F<sup>2</sup> of the plate follows the contour of the lower flange of the rail and extends over and beyond the edge of the flange, so as to also rest upon the tie or other support of the rail. This construction thus provides the beveled joint portion F, the supporting extension F' upon which the heads of the rail rest on each side of the joint, and the part F<sup>2</sup>, which is in turn supported upon the lower flange of the rail, and when bolted to the rails the whole is united into a vertically-supporting structure. The movement of the wheel across these beveled joints is jarless and smooth from end to end of the bevel, and there is no perceptible blow or hammering when the wheel passes over it. The diagonal channels are cut in the form of a dovetailed bevel in the rails, the upper part of the flange F fitting into these openings, so that a lock is formed which holds the joint together independent of any bolts or fastenings and prevents any shifting sidewise of the joint, while at the same time providing a continuous support across the meeting ends of the rails and the inclined or beveled joint over which the wheels pass, as previously described.

That portion of the plate which fits against the web is made essentially vertical or to coincide with the side of the web, and below this it is carried outwardly and downwardly, fitting over the lower flanges C of the rails and itself resting upon the tie or support upon which the rail is carried, as previously described.

In the present case I have shown an ordinary fish-plate G upon the opposite side of the rail and bolted through to the one having the flanges in upward extension, as shown, thus binding the rails and plates firmly together and forming a perfectly smooth and even diagonal or beveled joint over which the wheels must pass.

The plate F or splice-bar is bolted through the webs of the rails and the fish-plate G on the opposite side by means of the bolts and nuts shown, and even if these bolts are loosened or removed the dovetailed connection of the plate and the rail-heads will prevent



either of them moving laterally so long as the rails remain approximately in contact at the abutting ends. The plate is introduced as the rails are laid and cannot be removed without lifting the rail. This would require that the spikes be drawn.

The parts are mutually supporting and so interlocked that all parts must move together, and even if the bolts should come loose the parts could not separate or interfere with the wheels of passing trains.

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

1. A railway-rail joint consisting of rails having the head cut away a short distance each way from the end upon one side, said cut-away portions having inwardly-diverging end walls forming a dovetail recess, and a plate adapted to fit the form of the side of the

rail, having a dovetail head or extension to fit said recess and form a lock to hold the sections of the rails together and prevent a lateral shifting of the joint.

2. A joint-plate for the meeting ends of railway-rails, consisting of a body portion, the lower part of which is formed to rest upon the lower flanges of the rails, an extension beneath the rail-heads upon which they form contact each side of the joint, and a dovetail bevel extension projecting up flush with the upper surface of the rails at one side of the web, and forming a lock to hold the sections of the rail against lateral shifting of the joint.

In witness whereof I have hereunto set my hand.

LEONARD W. KENNEDY.

Witnesses:

S. H. NOURSE,

JESSIE C. BRODIE.