

No. 629,314.

Patented July 18, 1899.

T. DONAHUE.  
RAILWAY RAIL JOINT.

(Application filed July 12, 1897. Renewed June 16, 1899.)

(No Model.)

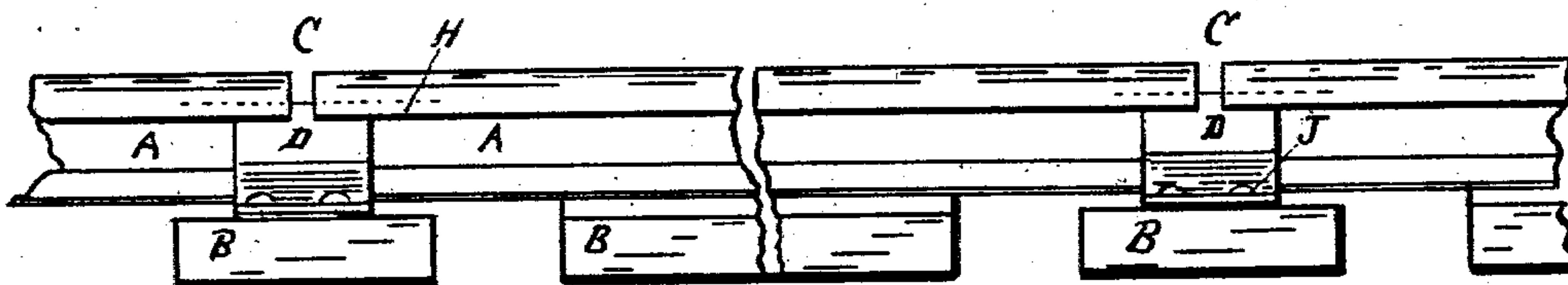


Fig. 1.

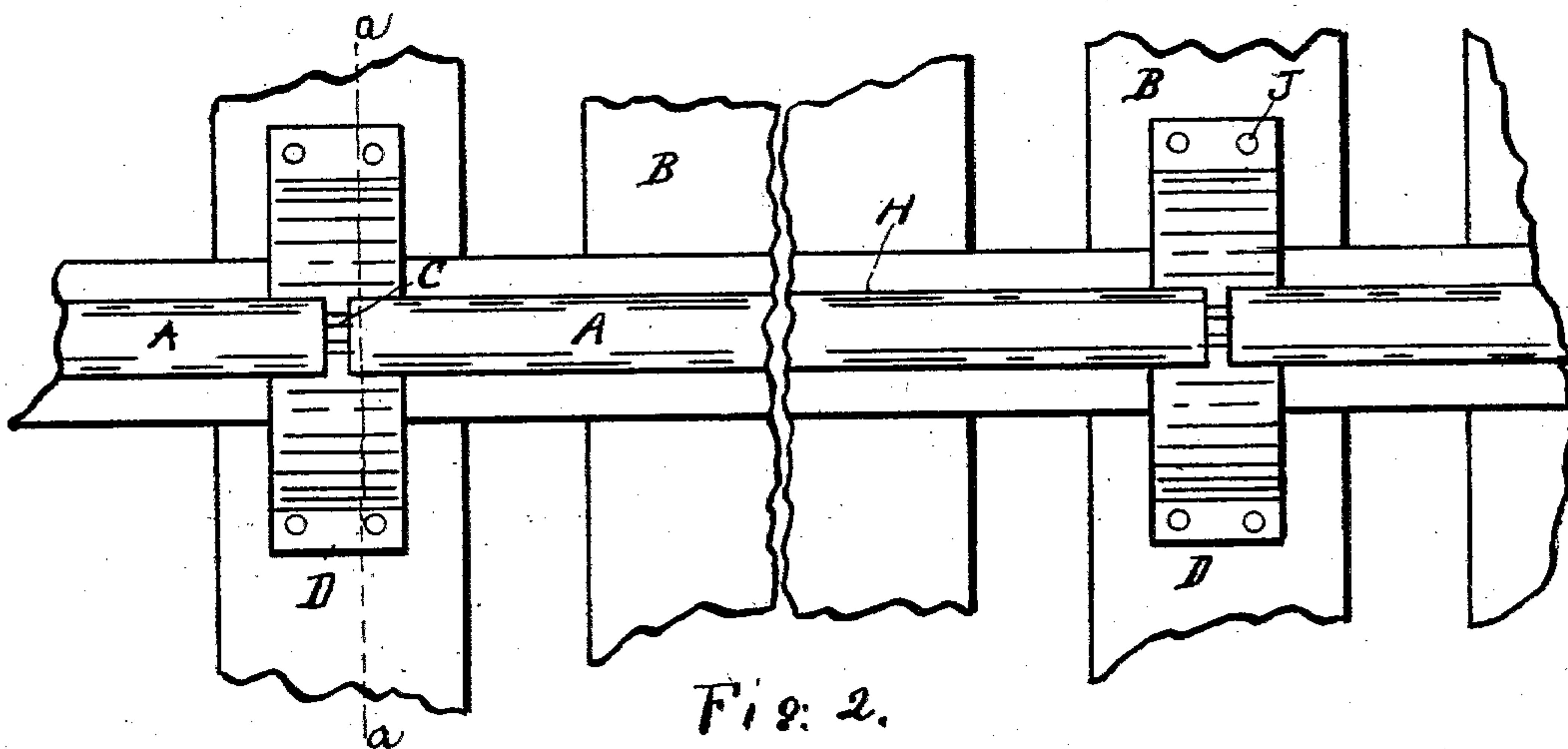


Fig. 2.

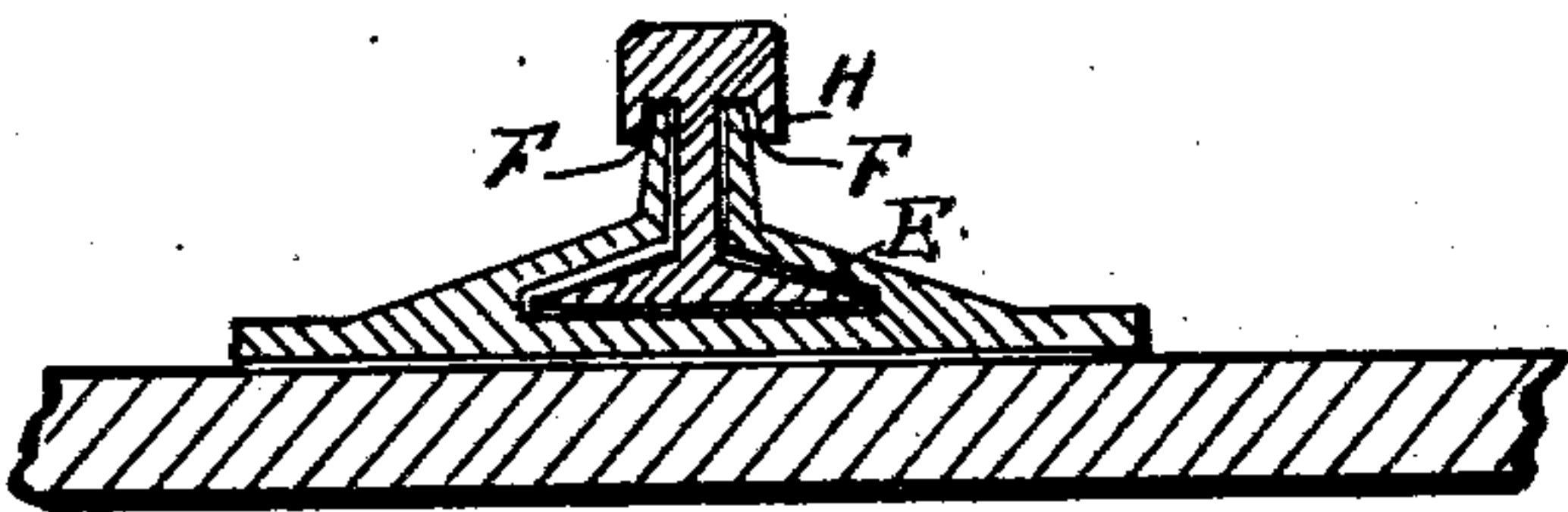


Fig. 3.

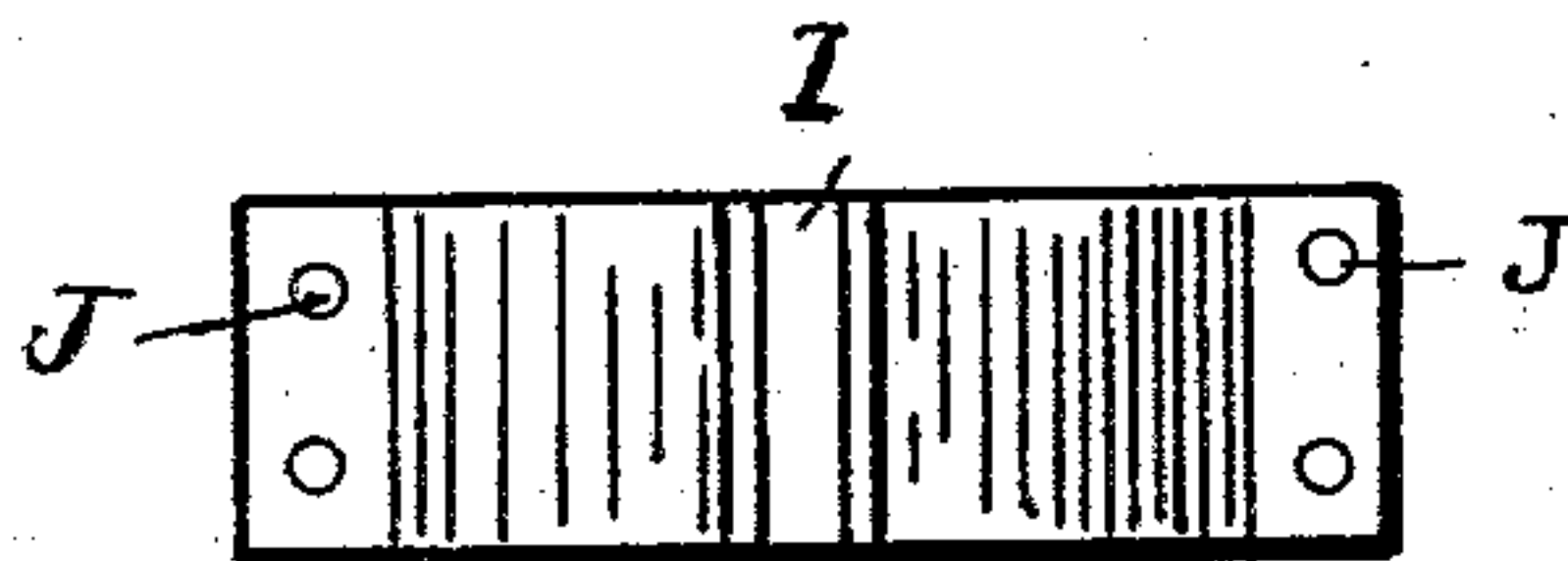


Fig. 4.

Witnesses  
James M. Billig  
Jas H Hopkins

Inventor  
Thomas Donahue  
By his Attorney Lucius C. West.

# UNITED STATES PATENT OFFICE.

THOMAS DONAHUE, OF LAKE CITY, MICHIGAN, ASSIGNOR TO J. H. LYLE,  
OF PITTSBURG, PENNSYLVANIA.

## RAILWAY-RAIL JOINT.

SPECIFICATION forming part of Letters Patent No. 629,314, dated July 18, 1899.

Application filed July 12, 1897. Renewed June 16, 1899. Serial No. 720,844. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS DONAHUE, a citizen of the United States, residing at Lake City, in the county of Missaukee, State of Michigan, have invented a new and useful Railway-Joint, of which the following is a specification.

This invention has for its object to make in effect as near as possible a continuous rail when considering its solidity, to economize in the use of bolts, and to better provide for contraction and expansion of the rail.

In the drawings forming a part of this specification, Figure 1 is a broken side elevation, Fig. 2 a plan, Fig. 3 a cross-section on line *a* in Fig. 2, and Fig. 4 is a plan view, of the joint-coupling.

Referring to the parts of the drawings pointed out by letters, A A are the rails end to end, as in an ordinary railway, and B B are the ties. On the ties where the joint between the rails comes—as, for instance, at C C—I locate my joint-coupling D. This coupling is all made solid, having a recess E to receive the ends of the rails A, as in Fig. 3. The ends of the rails fit into each end of this recess in the coupling, as in Figs. 1 and 2. The rails are provided with a vertical groove F F on each side and receive the upper edges of the upwardly-extending flanges H of the coupling each side of the channel I. The couplings

are bolted or spiked down to the ties, as at J J. By this means no bolts are needed to pass horizontally through the sides of the coupling and through the rails, and the coupling is firm and solid, and yet since the rails are loose in the couplings they are free to contract and expand.

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

The railway joint-coupling, made of a single piece and having the upwardly-extending flanges and an interior recess conforming to the shape of the web and base-flange of the rail, and adapted to receive the contiguous ends of the two rails therein, combined with the rails having the usual base-flange, web and tread portion, and having the grooves in the under side of the tread portion to receive the flanges of the joint-coupling, whereby the joint is held firmly without the use of bolts through the flanges and stem, substantially as set forth.

In testimony of the foregoing I have hereunto set my hand in the presence of two witnesses.

THOMAS <sup>his</sup> × DONAHUE.  
mark

Witnesses:

GEO. S. STOUT,  
L. SABLE.