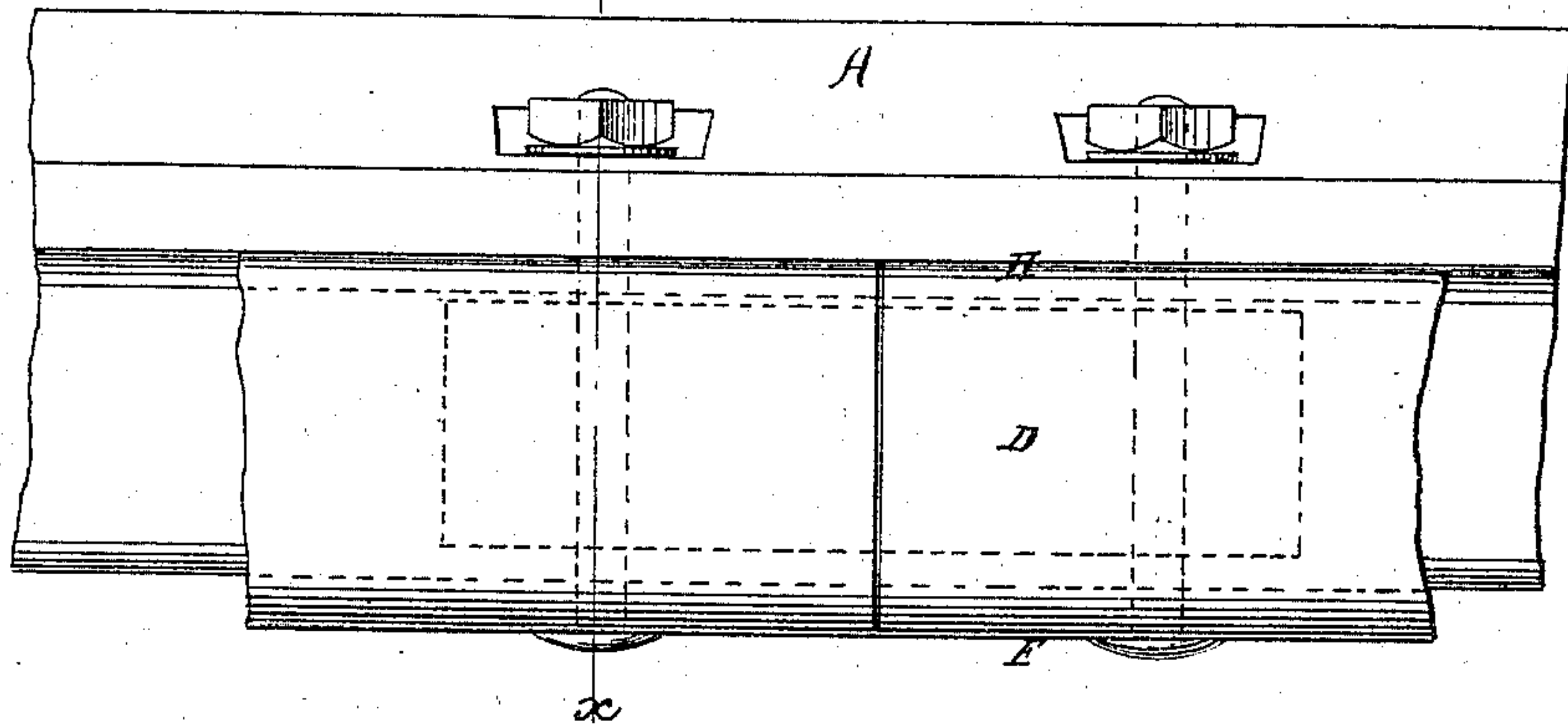


H. G. ANGLE.  
Railroad Rails.

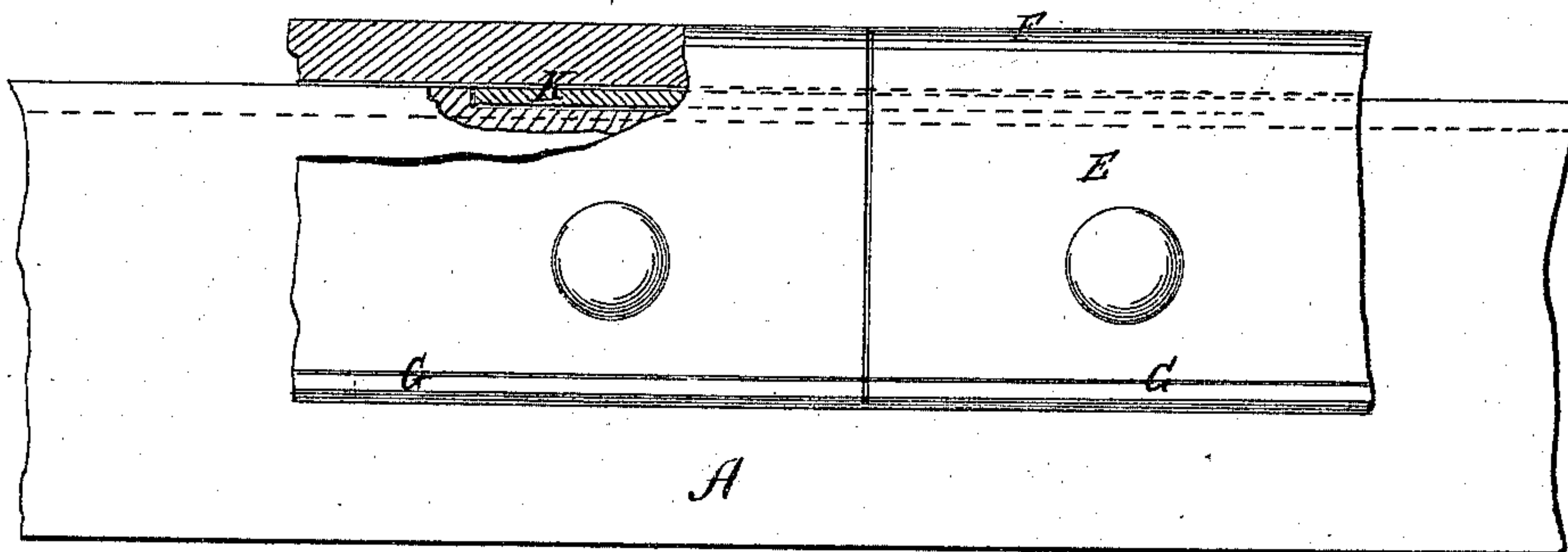
No. 137,337

Patented April 1, 1873.

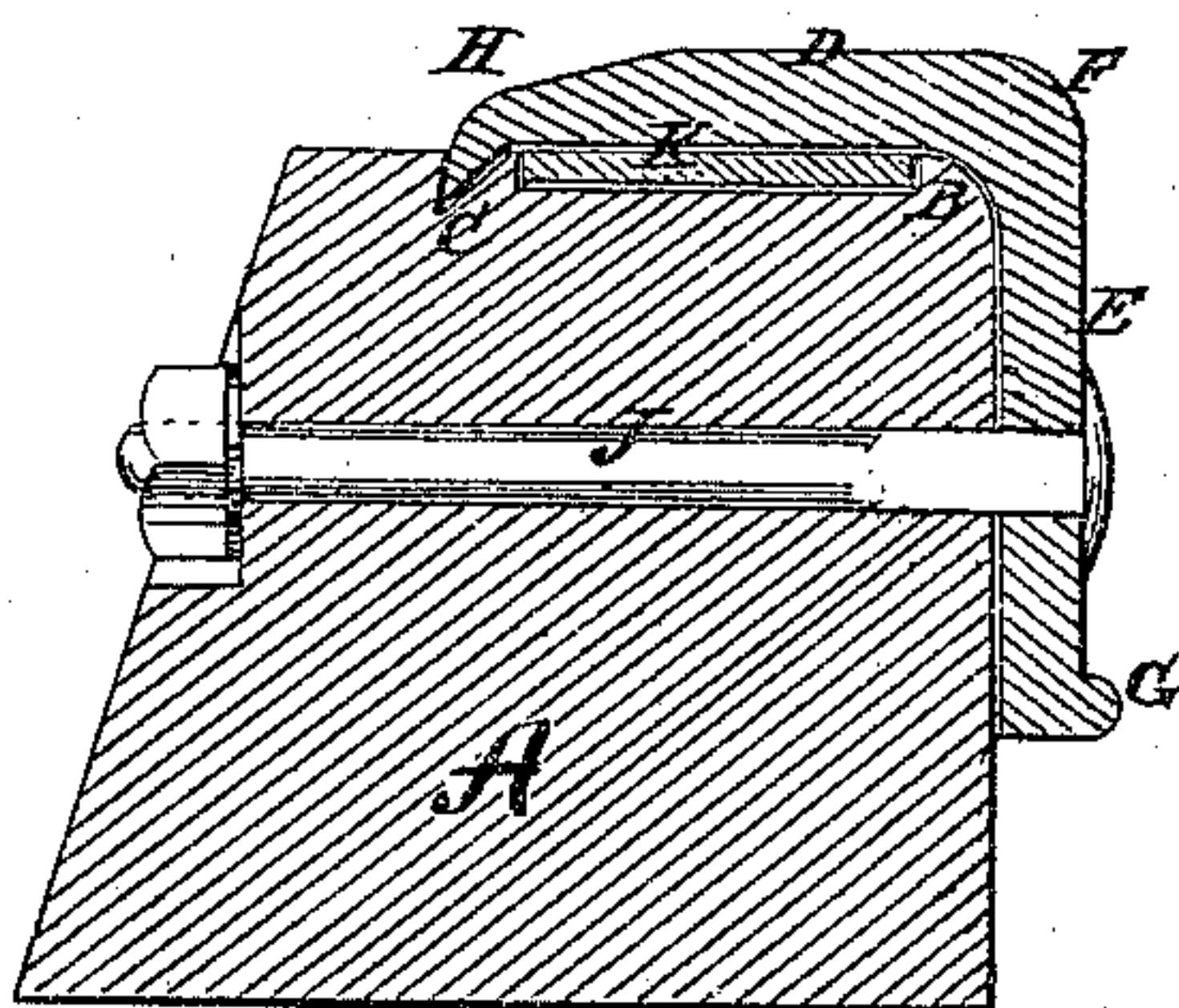
*Fig. 1*



*Fig. 2*



*Fig. 3*



Witnesses:

*A. W. Almquist*  
*C. Edqvist*

Inventor:

*H. G. Angle*

PER

Attorneys.

# UNITED STATES PATENT OFFICE

H. GATES ANGLE, OF CHICAGO, ILLINOIS.

## IMPROVEMENT IN RAILROAD RAILS.

Specification forming part of Letters Patent No. **137,337**, dated April 1, 1873; application filed January 18, 1873.

*To all whom it may concern:*

Be it known that I, H. GATES ANGLE, of Chicago, in the county of Cook and State of Illinois, have invented a new and Improved Railway Rail, of which the following is a specification:

My invention is an improvement in the class of rails formed of wooden stringers or timbers, and metal angle-plates applied thereto. The improvement consists in the combination of parts as hereinafter described, and as indicated in the claim.

Figure 1 is a top view of two sections of my improved rail, and one section of a wood stringer. Fig. 2 is a side elevation of Fig. 1 with a part sectioned, and Fig. 3 is a cross-section of Fig. 1 taken on the line *x x*.

A represents the wood stringers or sleepers, which are to be arranged along the ties, and butted together end to end to support the rails; and may be spiked down thereon in any approved way, and, if preferred, embedded in the road-bed a part of their height. These stringers are rounded at their upper inner corner, as at B. D and E represent my improved angle-bar-shaped rails to be supported on these stringers, as shown, the part D, which is thick and strong, being on the top to receive the treads of the wheels, and the part E, which is thin and light, being arranged on the inside of the stringer to receive the lateral thrust of the flanges, and also to sustain the weight of the train. At F the corner is

rounded to correspond to the shape of the tread of a car-wheel. G is a strengthening-rib formed along the lower edge of the part E to prevent the breaking of this part laterally by the vertical strain. H is a lip turned down on the outer edge of the part D, and forced into the top of the stringer when the rail is laid to hold it against working off laterally and in case the bolts J work loose; also, to act in conjunction with the bolts for holding them on the stringers. K is a strong flat plate let into the top of the stringers flush with the surface where the rails meet to prevent the ends from being forced into the wood as they would otherwise be.

Rails of this character re-enforced with wood of sufficient strength to make the combined strength of the two equal to that of the common all-metal rails can be furnished much cheaper than the said all-metal rails. The lip H aids in preventing lateral movement of the plate K.

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

The improved rail formed of the wooden stringers, the metal angle-rail D E having the lip H taking into the groove C, and the metal bearing-plate K, all as shown and described.

H. GATES ANGLE.

Witnesses:

D. HARRY HAMMER,  
ALBERT L. RICE.