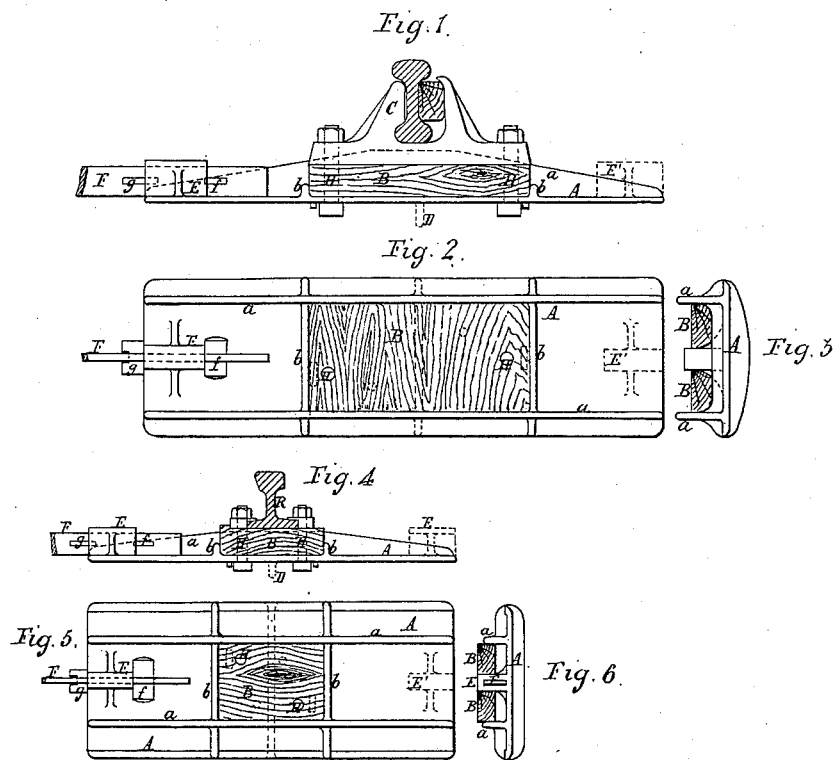


(No Model.)

C. H. DENHAM.
CAST IRON RAILWAY SLEEPER.

No. 304,622.

Patented Sept. 2, 1884.



Witnesses,
Robert Everett
J. L. Coombs

Inventor,
Charles H. Denham.
By
James L. Norris,
Atty.

UNITED STATES PATENT OFFICE.

CHARLES H. DENHAM, OF HOWRAH, BENGAL, INDIA.

CAST-IRON RAILWAY-SLEEPER.

SPECIFICATION forming part of Letters Patent No. 304,622, dated September 2, 1884.

Application filed May 26, 1884. (No model.) Patented in India November 6, 1876, No. 61, and in England June 28, 1877, No. 2,490.

To all whom it may concern:

Be it known that I, CHARLES HENRY DENHAM, a citizen of England, residing at Howrah, Bengal, India, have invented a new and useful Improvement in Cast-Iron Railway-Sleepers, (for which I have obtained a patent in Great Britain, No. 2,490, dated June 28, 1877, and in India, dated November 6, 1876, No. 61,) of which the following is a specification.

My invention relates to a construction of cast-iron sleepers for railways, which I will describe, referring to the accompanying drawings.

Figure 1 represents a longitudinal section, Fig. 2 a plan, and Fig. 3 an end view, of a sleeper according to my invention applied to a double-headed rail secured in a chair; and Figs. 4, 5, and 6 are corresponding views of a similar sleeper applied to a flanged rail secured by clips.

The sleeper consists of the oblong plate A, having the two longitudinal ribs *a a* and the two transverse ribs *b b*, forming between them a rectangular space, in which is placed the block of wood B, constituting a cushion for the rail R or its chair C. The under side of the plate may have a transverse rib, as indicated at D. A socket, E, is provided at one

end of the plate to receive the tie-bar F, and it is convenient to have a similar socket at the other end, as indicated at E', so that if either socket should be broken the other may be used on turning the sleeper round.

For securing the tie-bar F the cotter *f* and gib *g* are applied as shown; but the one being made a little wider than the other their positions may be inverted where it is necessary to make a slight variation in the gage. The chair or clip bolts H are passed through both the plate and the wooden cushion.

Having thus described the nature of my invention and the best way I know of performing the same, I claim—

A metallic railway-sleeper consisting of an oblong plate constructed on its upper surface with ribs for the reception of a block of wood to cushion the rail, and at its end with the socket to receive within it one end of a tie-rod, substantially as described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 21st day of April, A. D. 1884.

CHAS. H. DENHAM.

Witnesses:

R. ROSKELL PAYNE,
FRED. PALMER.