J. T. RICHARDS.

BEARING FOR RAILROAD RAILS.

APPLICATION FILED OCT. 16, 1907.

916,489. Patented Mar. 30, 1909.

Fig. 1.

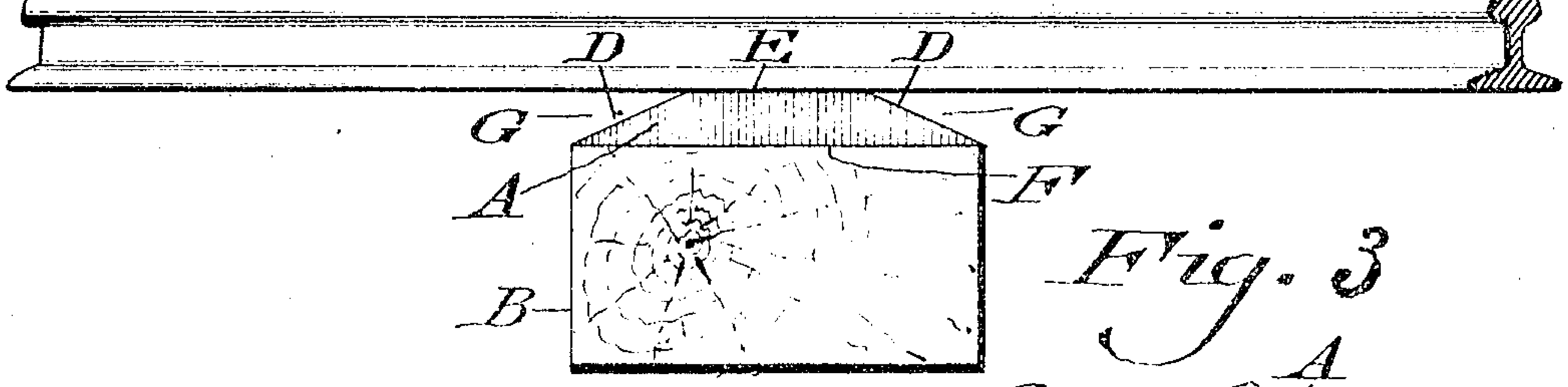


Fig. 2.

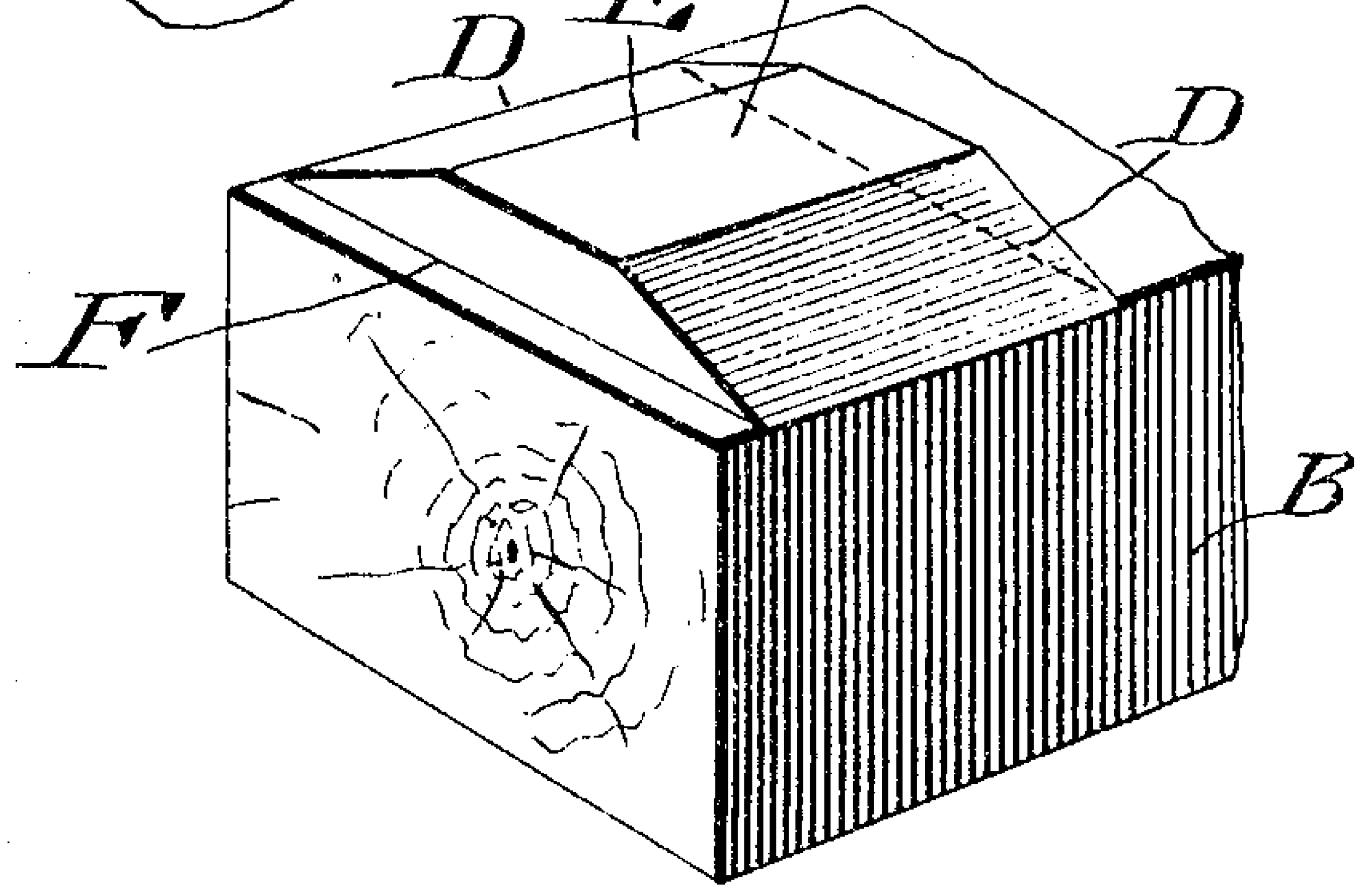
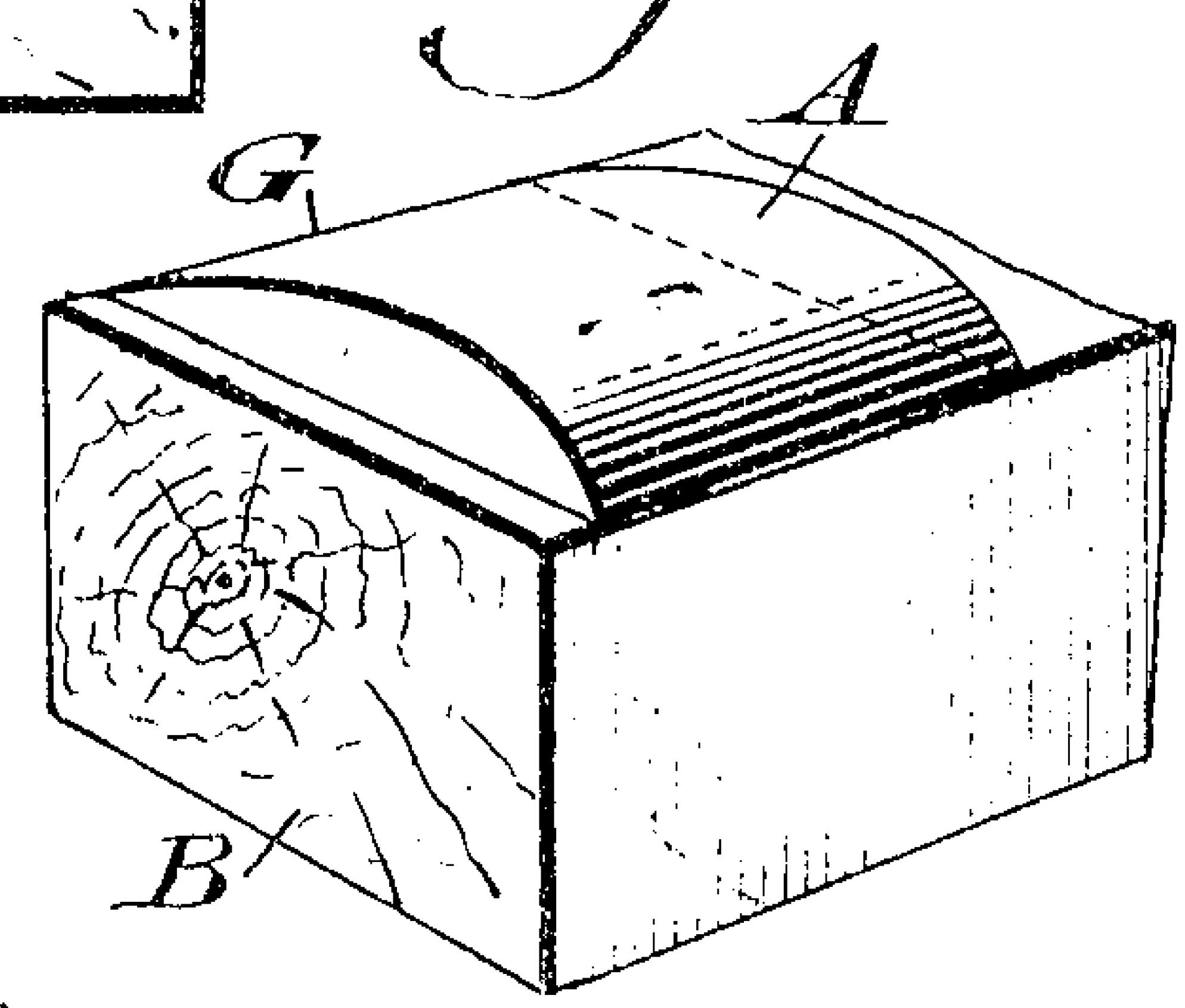


Fig. 3



Witnesses

P. F. Nagle.

L. Douville.

Inventor

Joseph T. Richards

By Wiedersheim & Fairbanks.

Attorneys

UNITED STATES PATENT OFFICE.

JOSEPH T. RICHARDS, OF PHILADELPHIA, PENNSYLVANIA.

BEARING FOR RAILROAD-RAILS.

No. 916,489. Specification of Letters Patent. Patented March 30, 1909.

Application filed October 16, 1907. Serial No. 397,660.

To all whom it may concern:

Be it known that I, JOSEPH T. RICHARDS, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Bearing for Railroad-Rails, of which the following is a specification.

My invention consists of a bearing for a railroad rail comprising a solid body having a centrally raised portion on which the rail is adapted to be supported directly and faces on the upper side extending laterally from said portion tapering to the side terminals of the body and having a flat underside to conform to the corresponding upper face of a cross tie or other support, whereby the wave motion or deflection imparted to a rail when occupied by an engine, car or train passing thereover will not cause the rail to bear obliquely on the cross-tie or base support and rock the same, while, on the contrary, said support will remain unmoved and steady in its normal position. The bearing is the full width of the cross tie or support and so is in a measure an integral part of the cross tie, the bearing being thereby prevented from imparting any independent motion to said cross tie or support or having its edges cut into the tie.

Figure 1 represents an end elevation of a rail support embodying my invention. Fig. 2 represents a perspective view of the form shown in Fig. 1. Fig. 3 represents a perspective view of another form thereof.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawing:—A designates a rail bearing, which is mounted on the cross-tie or base-support B, and on which is seated the rail C. Said rail support, in Figs. 1 and 2, is composed of a solid plate or plates, or bar or bars, or other body of metal, wood or any other material somewhat of the form of a truncated pyramid, that is to say, its sides or upper faces D, D, are sloping or tapering, leaving the top E of less width than the bottom F, it being noticed that the rail rests on said top as a raised portion, while spaces G exist between the bottom of the rail and said sides D. The underside or face of the body is flat so as to conform to and rest solidly upon the flat upper face of said cross tie or support B.

It is well known that when the rail is occupied by a running engine, car or train, wave motions or deflections are imparted to the rail in vertical direction, especially between the cross-ties or other base supports consequently when such motion reaches the spaces G, the relative wave or deflected portion of the underside of the rail enters said spaces without imparting downward pressure upon the sides D of the piece A, so that the cross-tie or base support B is not turned or rocked on its bed, while on the contrary, by this invention, the rail remains flat on its bed, and so retains its seat undisturbed.

In Fig. 3, the top of the bearing piece A is rounded or arch-shape, the rail being adapted to rest on the crown thereof.

The bottom or under side of the bearing A is of the same width or substantially the same width as the cross tie, so that when the rail is loaded, the ends of the bottom or under side will not cut into the tie, and so the bearing and tie work integrally together receiving the same weight when the rail is loaded, while permitting the deflection of the rail as stated. The base supports are thus held against lateral displacement and the rail remains flat on its bed and is undisturbed from its seat.

While I have specified certain means for carrying out my improvements, I do not wish to be limited exactly to the same, but desire to make such changes as may come within the scope of the novelty involved.

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

1. A tie plate formed of a solid body having its base adapted to be in contact throughout with the upper face of a rail support and that portion of its top surface forming the rail support narrower than the bottom surface, and sides inclining downward and outward from the narrower central portion of the top to the sides giving greater width at the bottom and leaving spaces between the rail and said inclined sides to permit of the deflection of the adjacent portion of the rail.

2. A tie plate bearing formed of a solid body having the central portion of its upper face receiving the rail narrower than the bottom face, and sides inclining downwardly and outwardly on opposite sides, longitudinally of the rail, leaving spaces between the rail and said inclined sides to permit of the deflection of the adjacent portion of the rail, said tie plate adapted to and having its under face of substantially the width of its base support.

3. A rail bearing composed of a tie plate formed of a solid body applicable to and adapted to be fitted solidly on the upper face of a cross tie which supports the same, said body having an under face which is adapted to be in contact throughout with said upper face of the tie support, that portion of its top surface which forms the rail-supporting portion being narrower than its under face and its sides inclining downward and outward from the central portion of its top surface to the sides, leaving spaces between the rail and said inclined sides to permit of the deflection of the adjacent portion of the rail.

JOSEPH T. RICHARDS.

Witnesses:

CHAS. C. RIFE,

GEO. O. QUEALE.