(No Model.)

P. BOGLER.

METAL RAILWAY TIE.

No. 598,692. Patented Feb. 8, 1898.

Fig. 1.

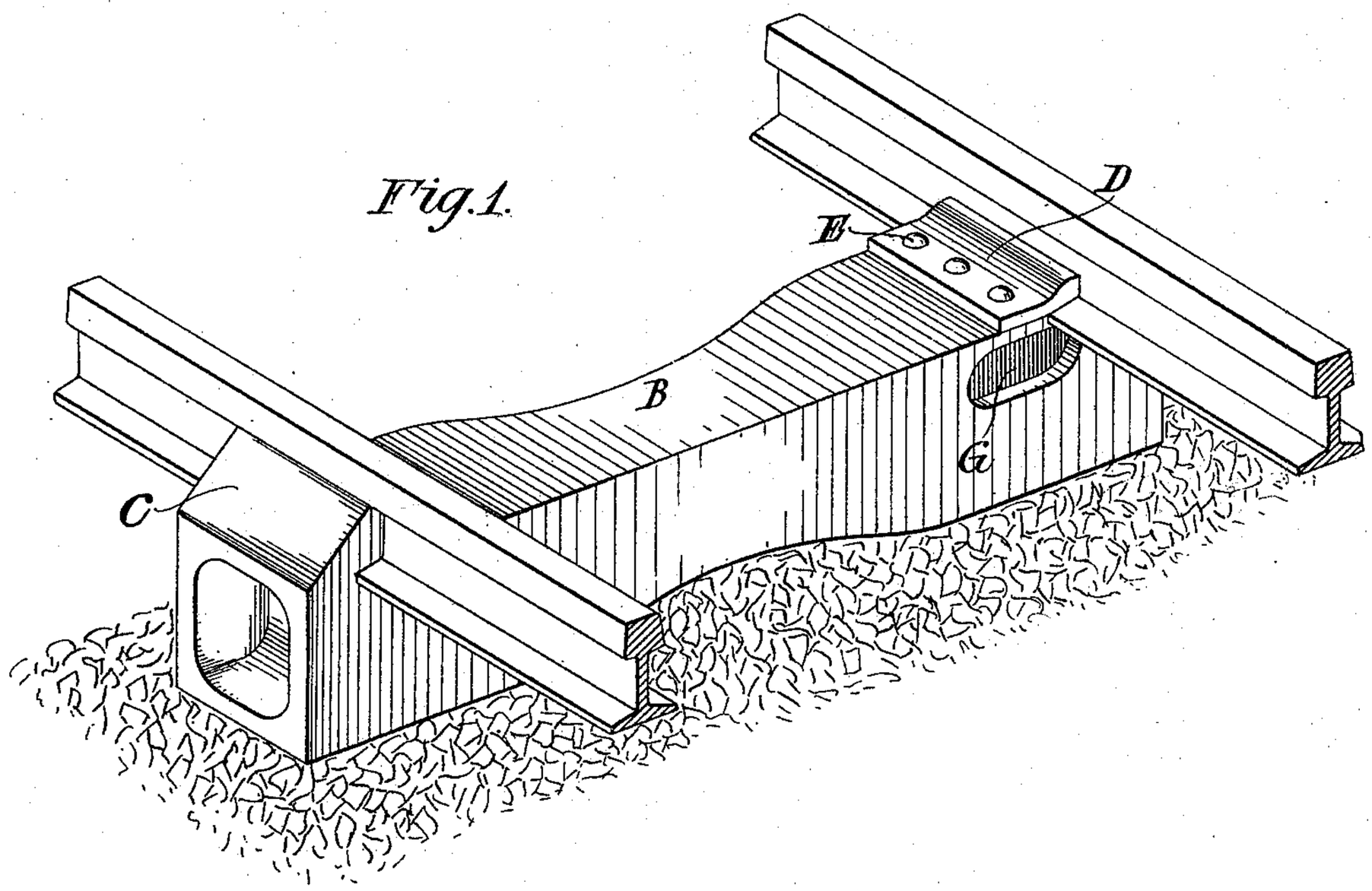


Fig. 2.

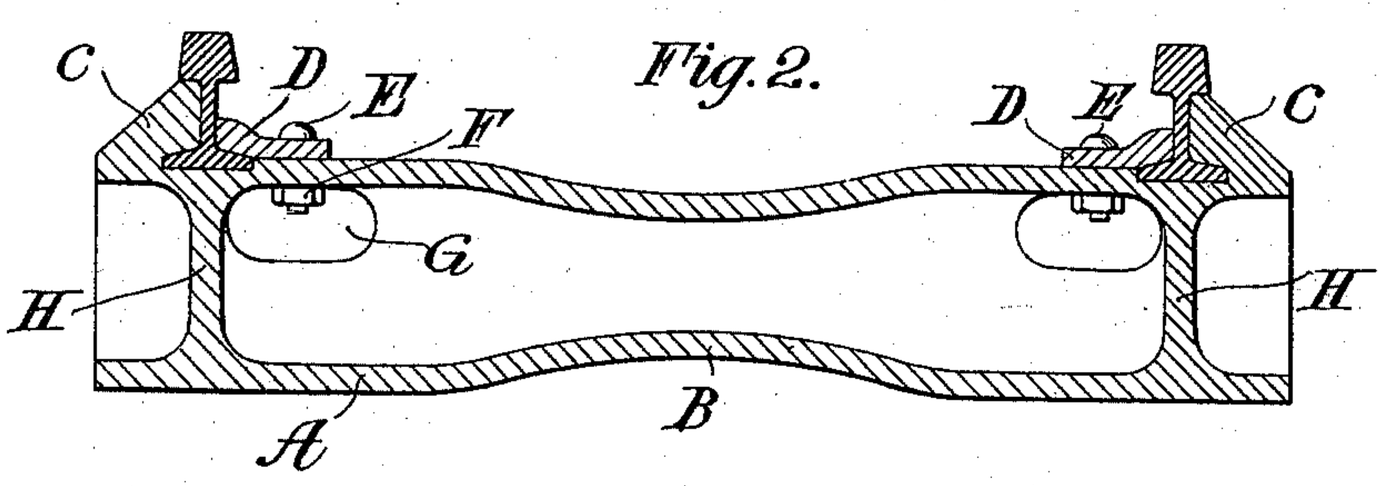
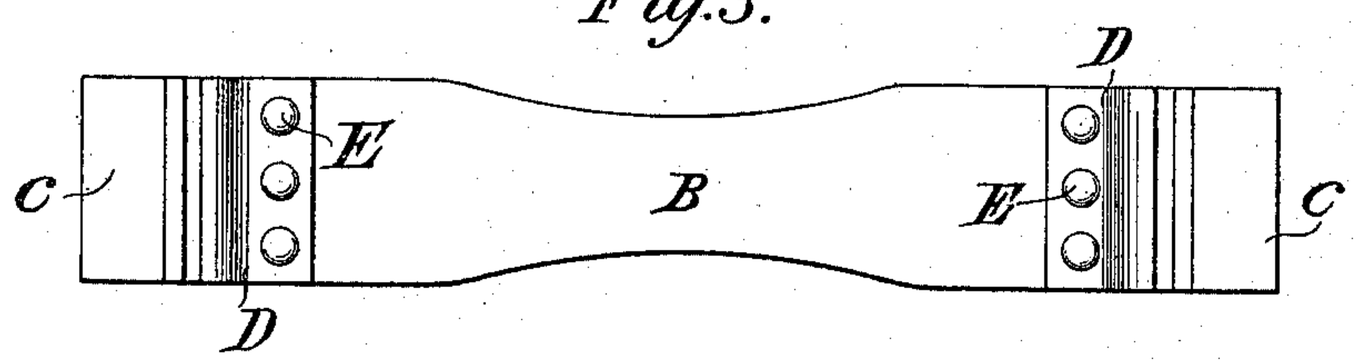


Fig. 3.



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UNITED STATES PATENT OFFICE.

PHILIP BOGLER, OF ALAMOSA, COLORADO.

METAL RAILWAY-TIE.

SPECIFICATION forming part of Letters Patent No. 598,692, dated February 8, 1898.

Application filed April 7, 1897. Serial No. 631,087. (No model.)

To all whom it may concern:

Be it known that I, PHILIP BOGLER, a citizen of the United States, residing at Alamosa, in the county of Conejos and State of Colorado, have invented a certain new and useful Improvement in Metal Railway-Ties, of which the following is a specification.

My invention relates to a new and useful improvement in metal railway-ties, and has for its object to provide a simple, cheap, and effective device of this description which will firmly hold the rails against spreading, and which when embedded in the road-bed will be prevented from crawling sidewise by the thrust of the trains passing thereover; and a further object of my invention is to avoid the necessity of using fish-plates or chairs and yet firmly hold the rails, while at the same time permitting them to go and come with the changes of temperature.

With these ends in view this invention consists in the details of construction and combination of elements hereinafter set forth, and then specifically designated by the claim.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, its construction and operation will now be described in detail, referring to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a perspective of my improvement, showing two railway-rails secured thereon; Fig. 2, a central longitudinal section of a tie made in accordance with my improvement; and Fig. 3, a plan view of the tie, the rails being omitted.

In carrying out my invention as here embodied I form the tie by casting in such manner as to provide a body A, which is of less diameter at its center than at the ends thereof, as indicated at B, and the object of this formation is to hold the tie in the ballast or road-bed against sidewise movement. Upon the upper surfaces of the tie, at the ends thereof, are formed the blocks C of a shape adapted to fit the flange-web and inside of the head of the rail, as clearly shown in Fig. 2, and I also prefer to form grooves in the upper surface of the tie for the seating of the rails, thereby avoiding the necessity for chairs, and the blocks C serve the purpose of fish-plates upon the outside of the rails, while the plates D, which clamp the inner flanges of the rails, answer the same purpose upon the inner side thereof. These plates D are secured in place by means of the bolts E, which pass through suitable holes therein and corresponding holes in the upper portion of the tie and are held in place by the nuts F, run upon their lower flange ends.

In order that access may be had to the interior of the tie for manipulating the nuts, suitable openings G are formed in the sides thereof, and these openings should be of sufficient size to permit the free passage of a person's arms from both sides of the tie, thus allowing the ready use of a wrench for the manipulation of the nuts.

In securing rails to ties made in accordance with my improvement the rails are first set within the grooves and against the blocks, after which the plates D are placed in position and held by the bolts, as just described. This arrangement permits of the ready removal of the rails at any time by simply backing off the nuts and removing the bolts.

It is obvious that a railway-track constructed of my improved ties cannot spread, neither can the ties thereof crawl sidewise when properly ballasted, and in order that but little vibration may be transmitted to the hollow portion of the tie and to increase the strength thereof without increasing the thickness I form beneath the rail-seats the bridges or supports H. Thus the entire weight transmitted to the tie from the rails will be supported by these bridges, thus avoiding the possibility of injuring the ties, even though they be made of exceedingly thin material, and another effect of these bridges is to deaden the sound occasioned by the passage of a train.

Having thus fully described my invention, what I claim as new and useful is—

The herein-described combination of a metallic railway-tie cast in a single piece having a hollow oblong body, the walls thereof being curved in toward the center, to prevent a sidewise movement of said tie, transverse grooves formed on the top wall for the reception of the rails, undercut lugs projecting out

over the grooves to fit over the flange of the rail, and bridges underneath the grooves for sustaining the pressure brought to bear on the rails, plates bolted to the top wall of the tie and projecting over the grooves for holding the rails in place, said tie having openings in the side walls thereof opposite said plates, as and for the purpose described.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

PHILIP BOGLER.

Witnesses:
S. S. WILLIAMSON,
XAVER WALTHART.