

No. 790,014.

PATENTED MAY 16, 1905.

E. L. TAYLOR.
METALLIC RAILWAY TIE.
APPLICATION FILED JUNE 14, 1904.

Fig. 1.

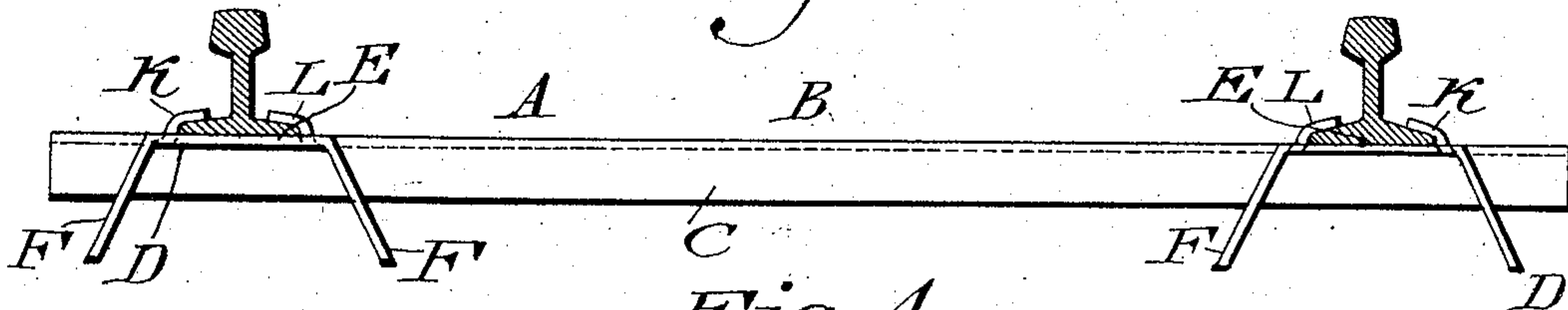


Fig. 4.

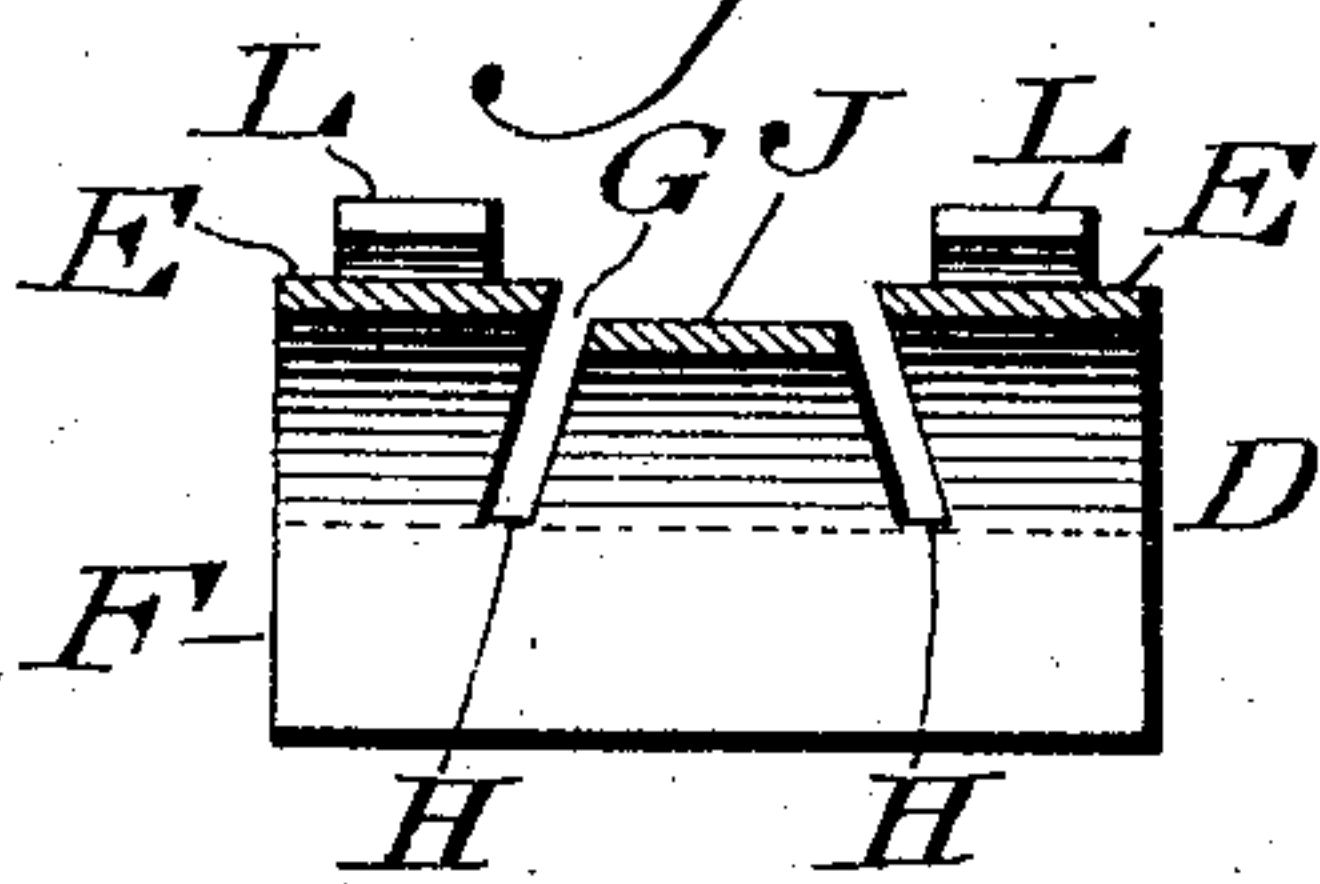


Fig. 2.

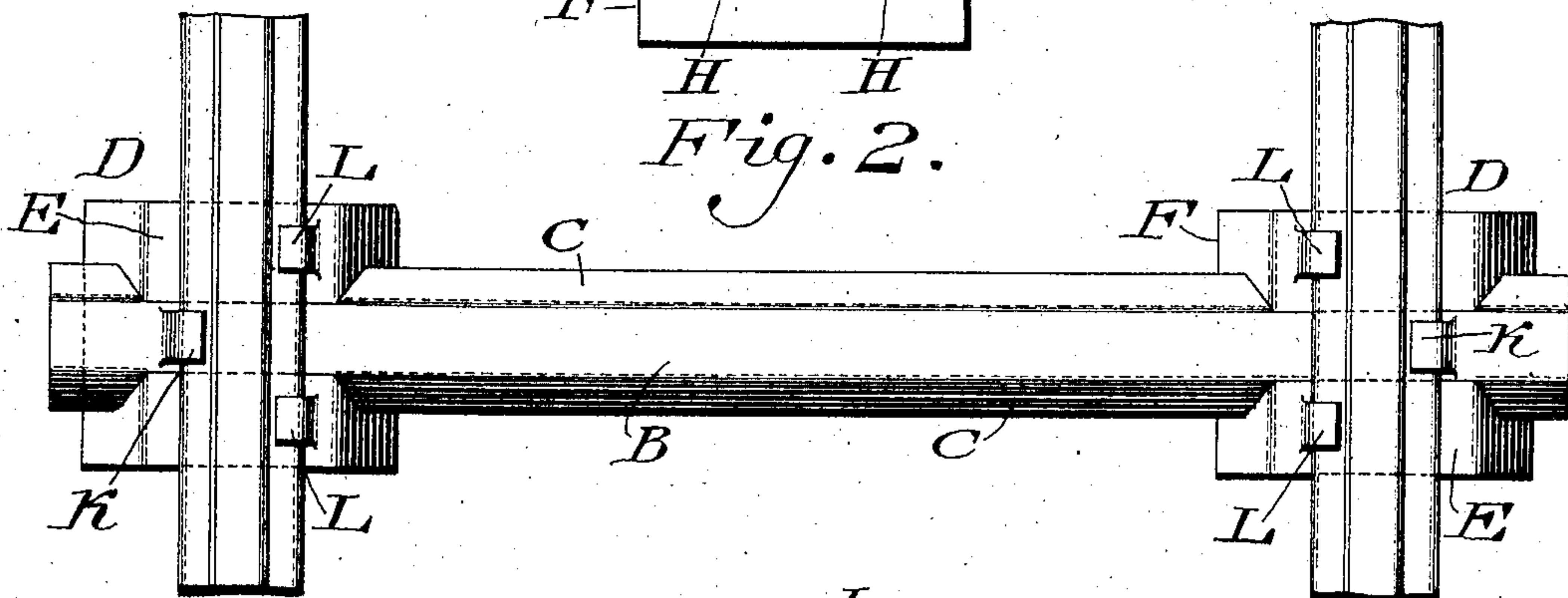


Fig. 3.

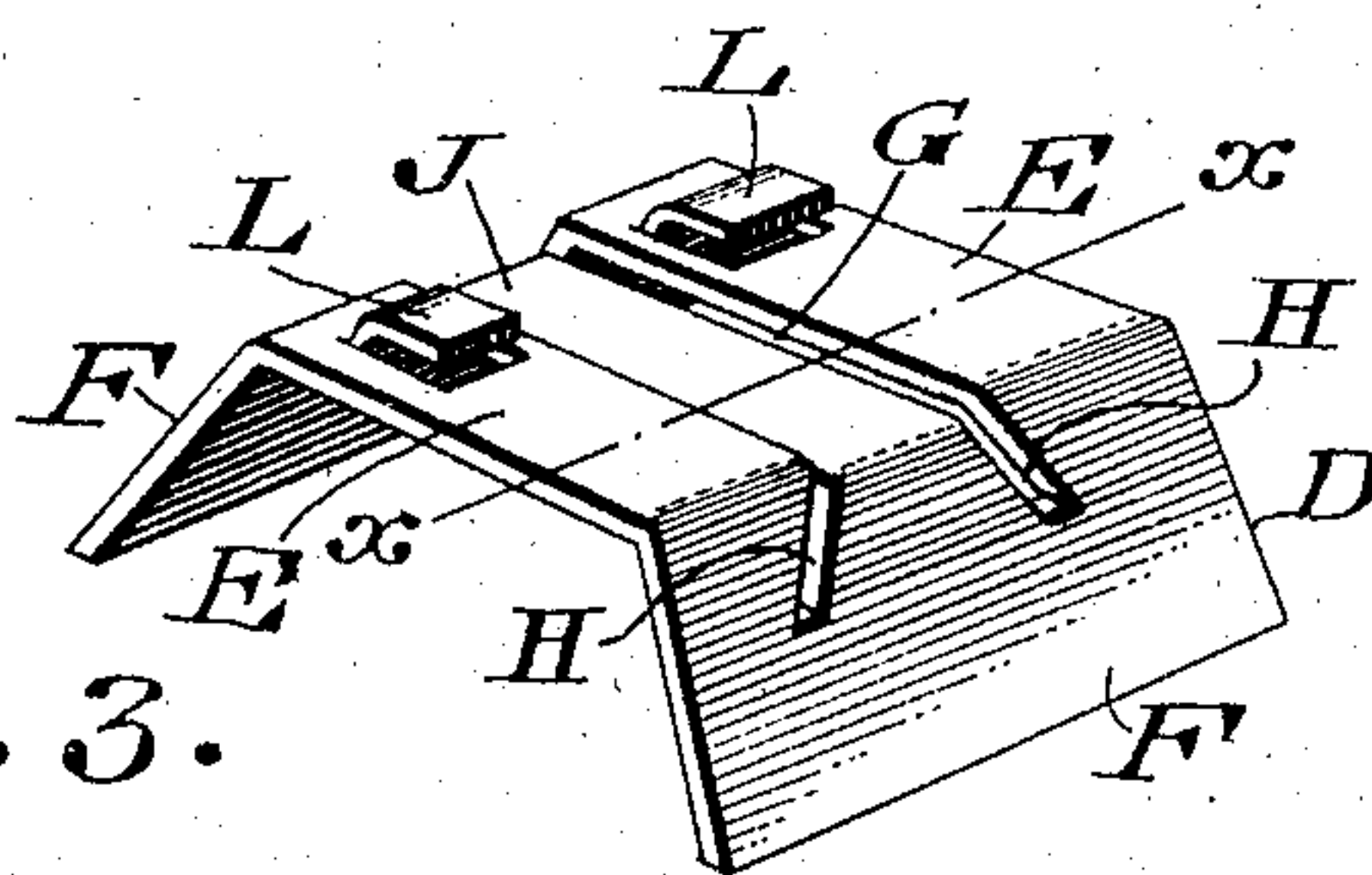
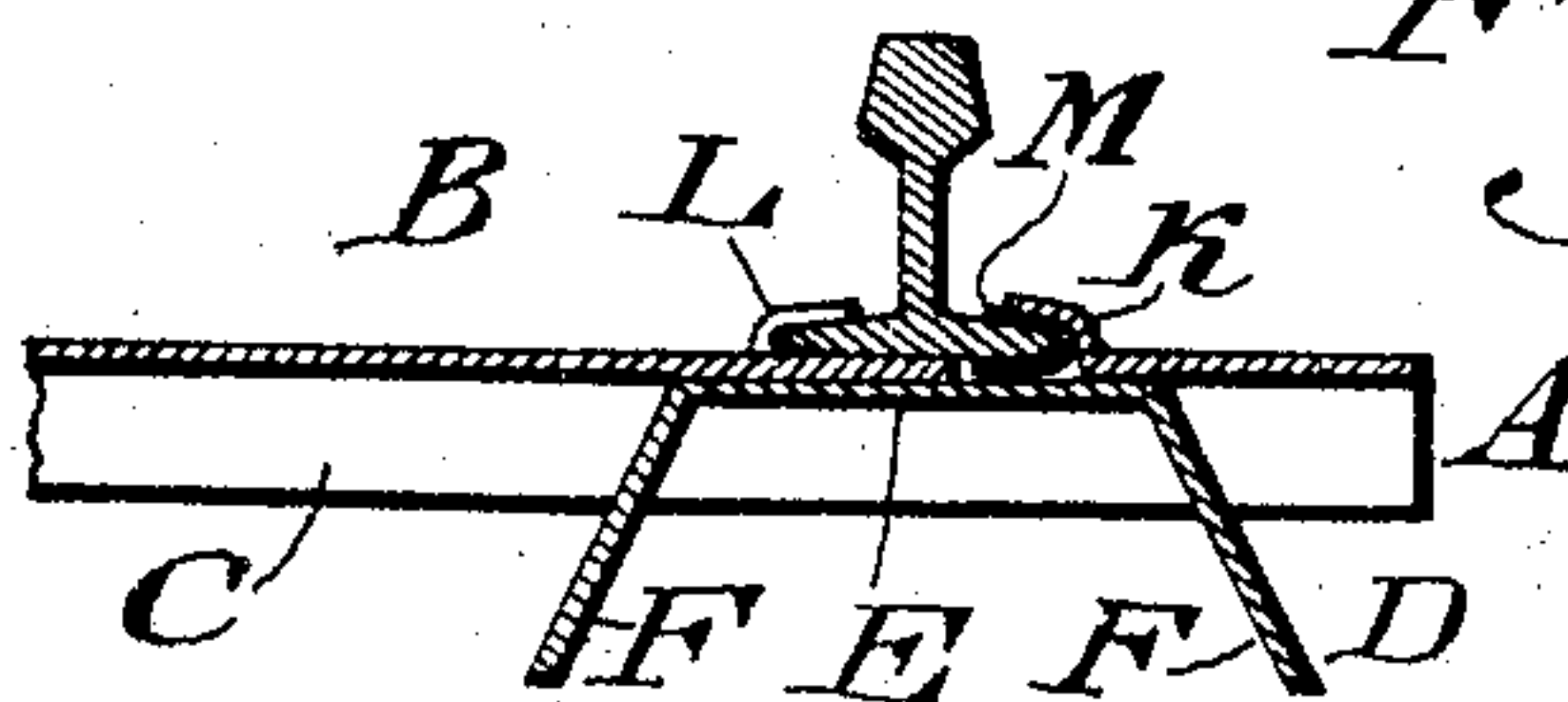


Fig. 5.



Witnesses

P. F. Nagle. Fig. 6.
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METALLIC RAILWAY-TIE.

SPECIFICATION forming part of Letters Patent No. 790,014, dated May 16, 1905.

Application filed June 14, 1904. Serial No. 212,534.

To all whom it may concern:

Be it known that I, ENOCH L. TAYLOR, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Metallic Railway-Ties, of which the following is a specification.

My invention consists of a metallic railway-tie composed of a cross-bar of the form of an inverted trough, the sides or legs of which diverge from the top of the bar downwardly, and a cheek-piece at each end of said bar, the same being adapted to engage the outer side of the base of each rail, and bearings of the form of an inverted trough, the sides or legs of which diverge from the top of said bearings downwardly, the legs of said bearings being at a right angle to the legs on the cross-bar, said bearings being slotted angularly through their legs and across the top thereof, so as to receive the cross tie or bar when placed in position, said bearings also having a plurality of cheek-pieces or lugs which are disposed to engage the inner side of the flange of the rail, the whole forming secure anchorage against lateral displacement or shifting of the track and a permanent-gage lock for the rails.

The invention further consists of a filling-piece adapted to embrace the base of the rail and be engaged by a cheek-piece of the cross-bar or of the bearings, so that the tie may be used for rails of variable shapes and thicknesses, permitting also different sections of rails to be used or exchanged without loss and without disturbing the alinement of the track in its place in the ballast or road-bed.

Figure 1 represents a side elevation of a metallic railway-tie embodying my invention, including the rails in vertical section. Fig. 2 represents a top or plan view thereof. Fig. 3 represents a perspective view of one of the bearings employed. Fig. 4 represents a section on line $x x$, Fig. 3. Fig. 5 represents a vertical section showing an applied filling-piece embodying my invention. Fig. 6 represents a perspective view of said filling-piece.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings, A designates a cross bar or tie proper, the same being constructed of metal of the form of an inverted trough and composing the top B and the legs C depending therefrom, said legs flaring or diverging from the top downwardly.

D designates bearings for the cross bar or tie proper, the same being constructed of plates of sheet metal of inverted-trough form composed of the top E and legs F depending therefrom, said legs flaring or diverging from said top downwardly, it being noticed that the legs of said bearings are at a right angle to those of the cross-bar.

In the tops E of the bearings are the transversely-extending parallel slots G, and in the legs F are the slots H, which flared downwardly from the slots G and are continuous thereof.

The portions of the tops of the bearings between the slots G are sunken, forming the depressed seats J, which receive the top of the cross-bar and cause the same to rest flush with the tops of the bearings, it being noticed that the legs C of the cross-bar occupy the slots G H, thus interlocking the cross-bar with said bearings and prevent rising of said bar, while the top of the cross-bar rests on the seats J and the lower ends of the legs C rest on the lower terminal walls of the slots H, thus firmly supporting the cross-bar, it being noticed that owing to the inverted-trough form of the cross-bar and the bearings said parts will be firmly anchored in the road-bed, and so prevented from displacement or shifting in any direction.

On the top of the cross-bar, near the ends thereof, are the cheek-pieces K, which are adapted to embrace the outer sides of the rails, which latter are supported on the tops of the cross-bar and bearings, said cheek-pieces being punched out of said bar in upward direction, and so are integral therewith.

On the tops of the bearings, on the inner sides thereof, are the cheek-pieces L, which are punched out of the same in upward direction, and so are integral with the same, they being adapted to embrace the inner sides of the flanges of the rails on opposite sides of the top of the cross-bar, it being seen that as the cheek-pieces K and L embrace opposite sides

of the flanges of the rails the latter will be most firmly locked and held.

Where a rail of reduced size is used, in order to avoid disturbing the alinement of the track in its place in the ballast or road-bed I employ the filling-piece M, which is somewhat of U shape and adapted to embrace either side of the flange or base of a rail and be embraced by either of the lugs, as shown in Fig. 5, and thus the rail may be securely held by said lugs by being supported on the cross-bar and bearings, as previously described the filling-piece forming a gage protector and adjuster when changes of rail-sections occur or various rail-sections are used at the same time.

Various changes may be made in the details of construction shown without departing from the general spirit of my invention, and I do not, therefore, desire to be limited in each case to the same.

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

1. In a metallic railway-tie, a cross bar or tie proper with downwardly-depending legs at suitable angle of flaring, and a bearing therefor with downwardly-depending legs also of the same angle of flaring and slotted substantially as described conjointly interlocking both bar and bearing and means for jointly and firmly interlocking with the flange of a rail on both sides thereof.

2. In a metallic railway-tie, a bearing for a cross bar or tie proper formed of an inverted-trough-shaped section having sides or legs depending flaring from the top thereof, transversely-extending slots in the tops of said bearing, downwardly-flaring slots in the legs of said bearing, and cheek-pieces on the tops of said bearing integral therewith, the flaring slots in the legs being continuous of the slots in the top of said bearing.

3. In a metallic railway cross-tie, a bearing for a cross bar or tie proper composed of a top, legs depending therefrom, transversely-extending parallel slots in said top, and a depressed seat in said top between said slots.

4. In a metallic railway cross-tie, a bearing for a cross bar or tie proper composed of a top, downwardly-flaring legs depending therefrom, transversely-extending parallel slots in said top, a depressed seat in said top between said slots, and downwardly-flaring slots in said legs continuous of the parallel slots of said top.

5. In a metallic railway-tie, a reversible filling-piece of substantially U shape adapted to embrace either side of the flange of a rail and to be engaged by a lug on a tie member, said piece being independent of both the rail and tie member.

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Witnesses:

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