

C. L. FREVERT.
RAILWAY TIE.
APPLICATION FILED MAR. 15, 1909.

943,926.

Patented Dec. 21, 1909.

Fig. 1.

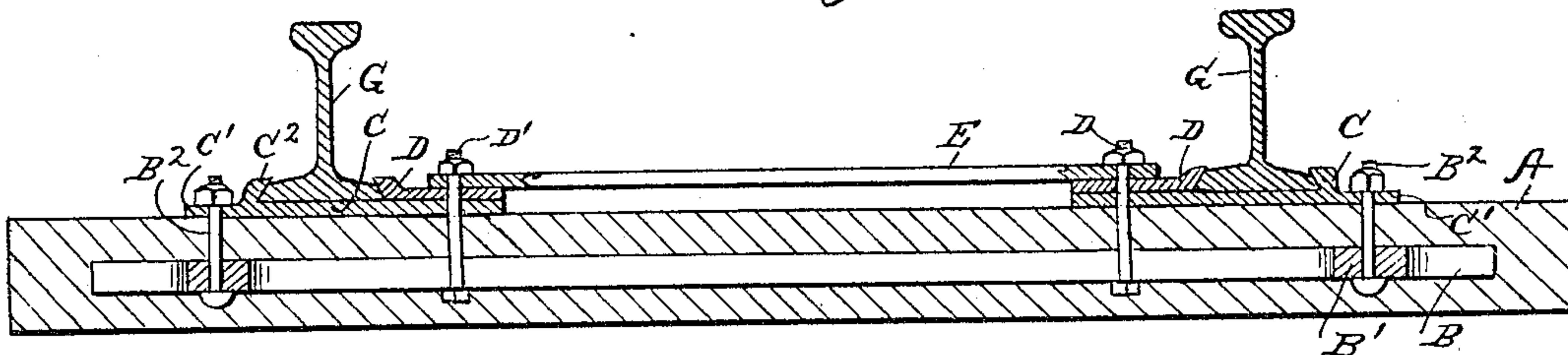


Fig. 2.

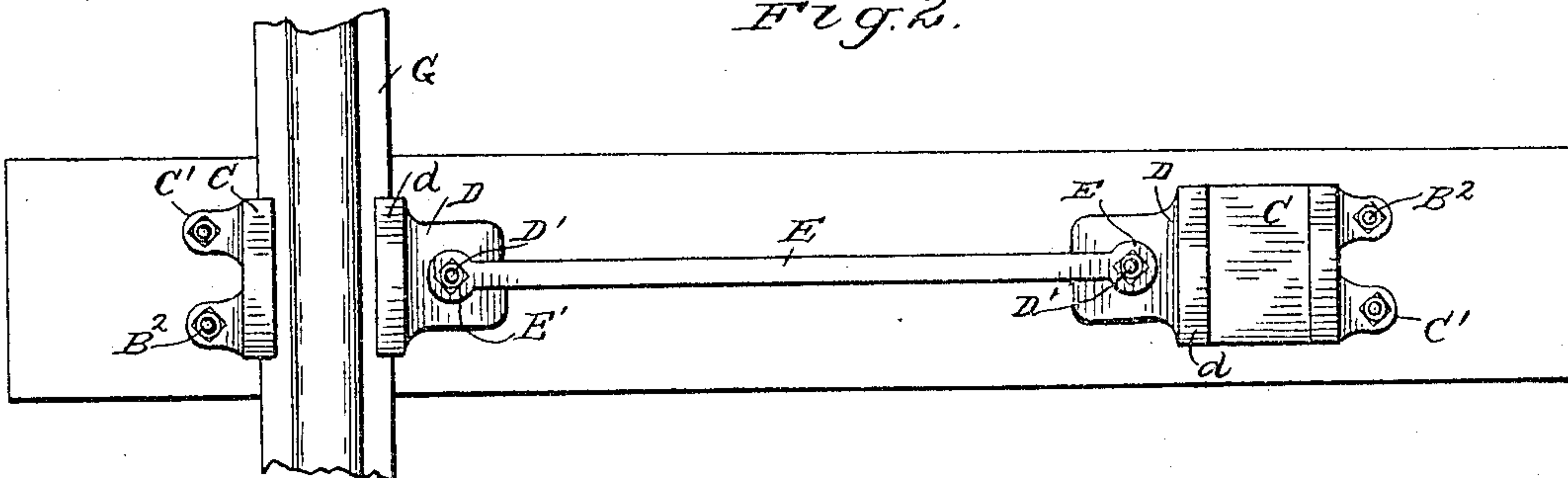


Fig. 3.

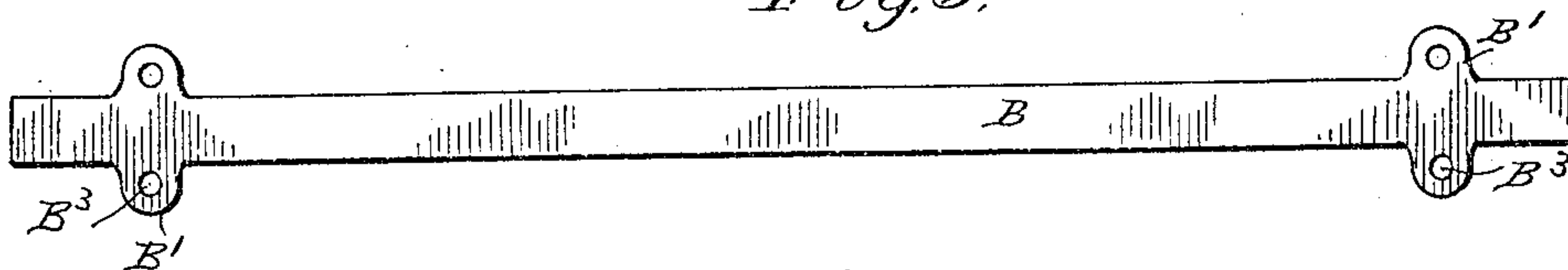


Fig. 4.

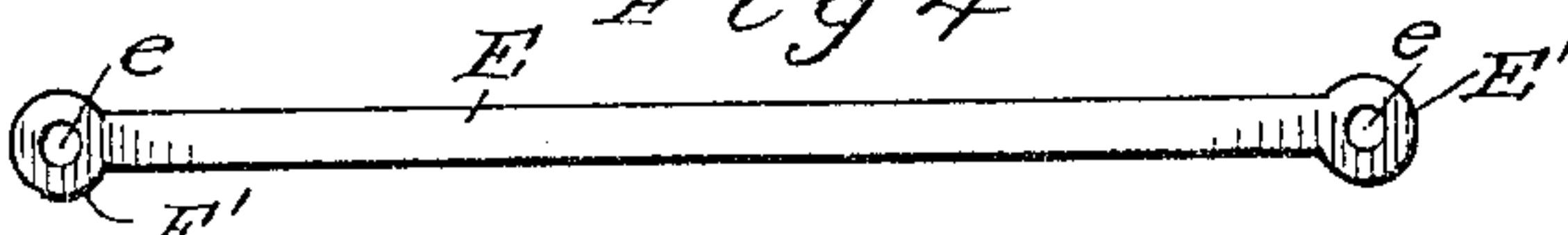


Fig. 5.

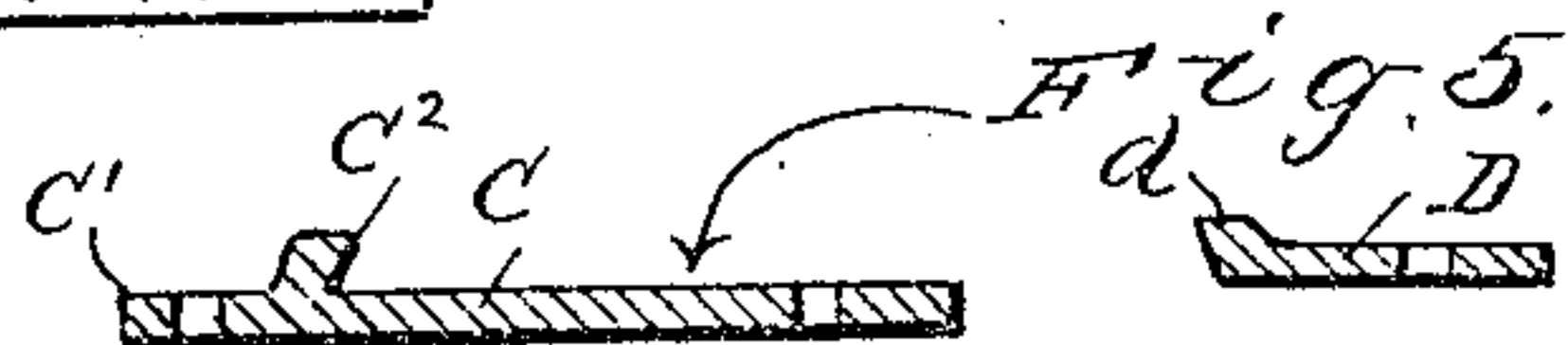


Fig. 6.

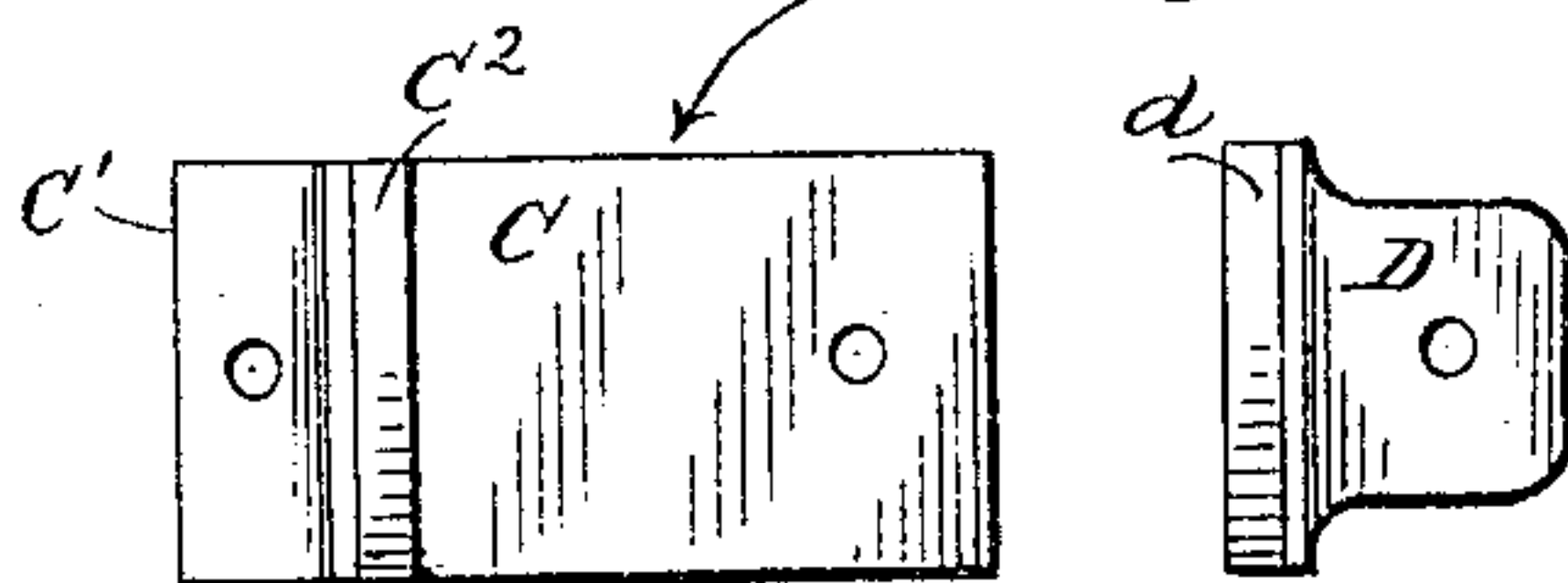
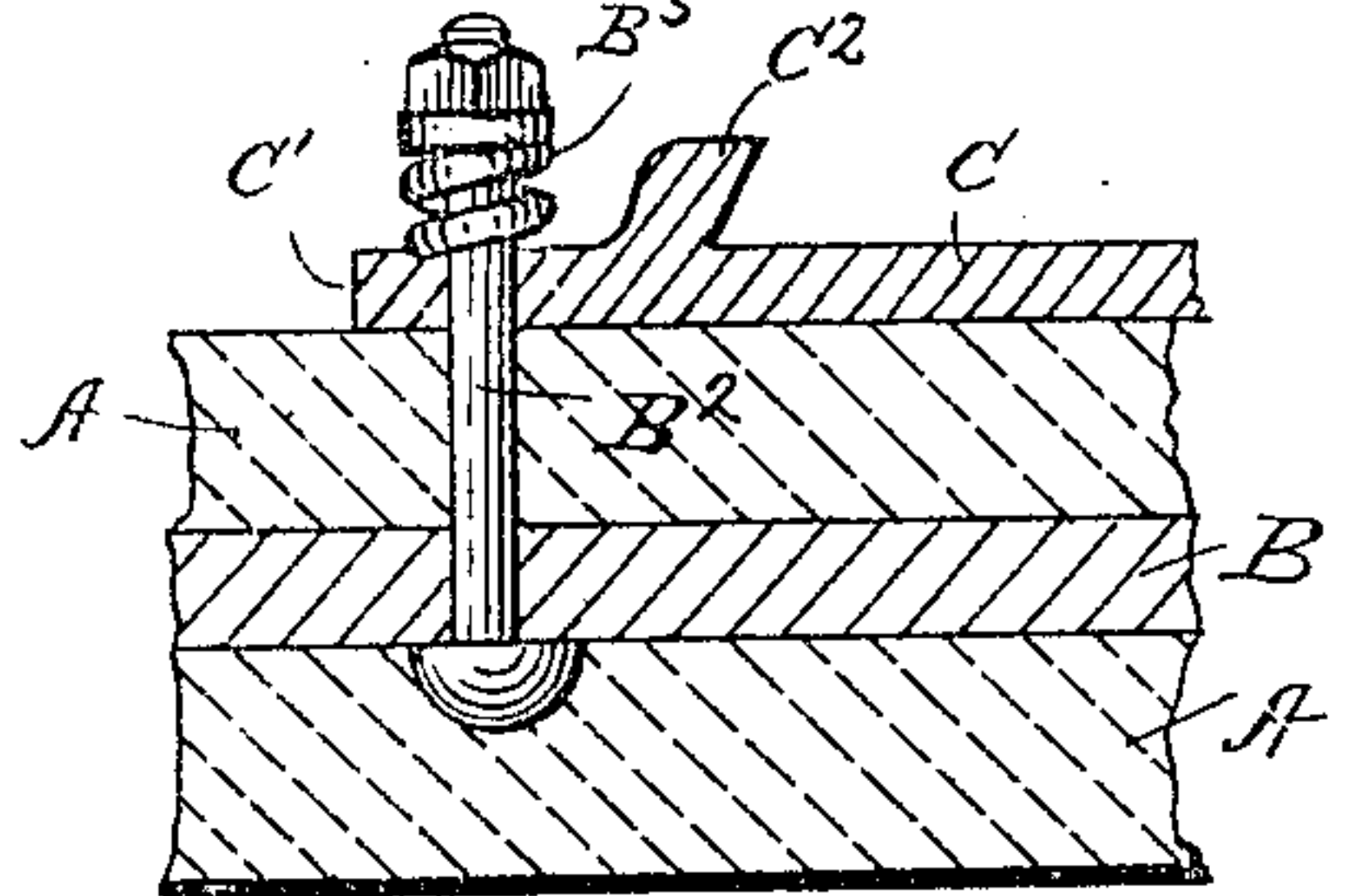


Fig. 7.



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UNITED STATES PATENT OFFICE.

CHARLES L. FREVERT, OF MINIER, ILLINOIS.

RAILWAY-TIE.

943,926.

Specification of Letters Patent.

Patented Dec. 21, 1909.

Application filed March 15, 1909. Serial No. 483,534.

To all whom it may concern:

Be it known that I, CHARLES L. FREVERT, a citizen of the United States, residing at Minier, in the county of Tazewell and State of Illinois, have invented certain new and useful Improvements in Railway-Ties, of which the following is a specification.

This invention relates to improvements in reinforced concrete cement ties, and chair appliances, but more particularly that class of railway ties that are reinforced their entire length, and means for connecting the chairs to the reinforced portion of the tie.

This invention further relates to the means for tying the chairs together between the rails thereon.

This invention further relates to the removably secured side plates on the chairs and means for securing the same to the chairs in combination with a tie bar.

This invention further relates to the serrations on the chairs and also the spring attachment to the bolts thereof.

With the foregoing and other objects in view, the invention consists in the details of construction and in the arrangement and combination of parts to be hereinafter more fully set forth and claimed.

In describing the invention in detail, reference will be had to the accompanying drawings forming part of this specification, wherein like characters denote corresponding parts in the several views, in which:

Figure 1, illustrates the device in a longitudinal vertical section exhibiting the reinforcing bar within the cement tie. Fig. 2, illustrates a plan view of the device. Fig. 3, illustrates the metallic reinforcing bar detached from a tie. Fig. 4, illustrates the tie bar in detail. Fig. 5, illustrates in section a chair and removably secured side thereof. Fig. 6, illustrates the same device in plan view. Fig. 7, illustrates in side elevation a chair and removably secured side with serrations therein. Fig. 8, illustrates in a sectional view enlarged a portion of the tie and reinforcing bar with chair attached thereto by a bolt and spring thereon.

This invention consists of a concrete railway tie A, provided with a reinforcing bar B, which is formed with ears B', and bolt holes B². This reinforcing bar is embedded in the cement tie, having bolts B², attached thereto which extend upwardly for securing steel chairs on the top of a cement tie. The steel chairs referred to have ears C', on the

outside thereof which are integral with the rib C², and plate portion C. A removably secured side D, having a rib d, is attached to the plate of said chair C, through the medium of bolt holes in those parts by bolts D'. Said bolts also secure a tie bar E, to said removably secured side through the medium of bolt holes e, extending through the ends E', of said tie bar E. This construction of railway cement ties offers greater resistance to the impact of cars as the reinforcing bar B, extends beyond the rails G, consequently the stress in the cement tie A, will extend the full length of the tie beyond said rails. The double ears C', give greater stability to the chairs C, in combination with the tie bar E, being connected directly to opposing chairs, independent of the tie A, as any undue strain on one side of a track will be minimized by the tie bar E, which will pull from the opposing side of the track, thus dividing the strain between the opposing rails G.

In Fig. 7, a modified form of securing the chair C, and removably secured side is indicated, the part C, having serrations C³, and the other part D, having similar serrations D⁴, said serrations preventing the parts from slipping when bolted together.

In Fig. 8, a spiral spring B⁵, is attached to the bolt B², under the nut thereon, which acts in a measure similar to a lock nut, as the least tendency for the nut to become disengaged from its accompanying bolt B², would be checked by the resiliency of said spring B⁵, as the spring maintains the same pressure against the nut when first secured thereon.

I do not limit my invention to the exact construction as herein indicated, as other devices may be employed and come within the scope of my device.

That which I desire to claim and secure by Letters Patent is:

1. A concrete cement railway tie provided with a reinforcing bar within said concrete cement tie, chairs on top of said concrete cement tie, bolts connecting said chairs to said reinforcing bar, tie rods attached to said chairs, as specified.

2. A concrete cement railway tie provided with a reinforcing bar, ears on said reinforcing bar, bolts extending through said ears, said bolts attached to chairs, tie bars connecting said chairs, as specified.

3. A concrete cement railway tie, a rein-

forcing metal bar within said concrete cement railway tie, in combination with chairs, removably secured side plates on said chairs, tie bars attached to said chairs and removably secured side plates, as specified.

4. A concrete tie provided with a reinforcing bar embedded therein, chairs positioned on said tie, bolts extending through the chairs and reinforcing bar having springs thereon, said chairs being formed in two parts, the lower parts having serrations on

their upper surfaces and the upper parts having serrations on their lower surfaces engaging with the serrations of the lower parts, and a tie bar bolted to the chairs and the reinforcing bar.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES L. FREVERT.

Witnesses:

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