

No. 870,255.

PATENTED NOV. 5, 1907.

J. SMITH.
COMPOSITE RAILWAY TIE.
APPLICATION FILED APR. 3, 1907.

Fig. 1

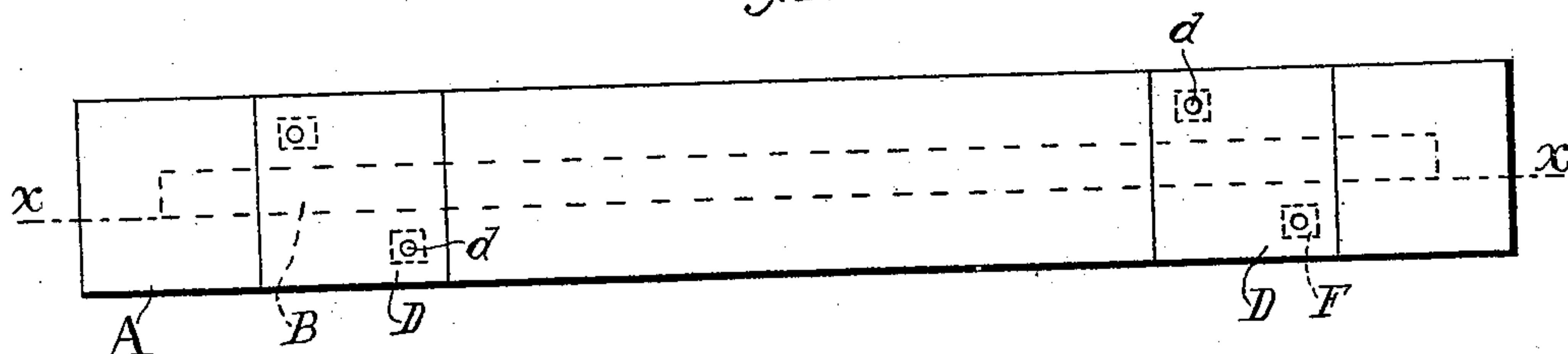


Fig. 2

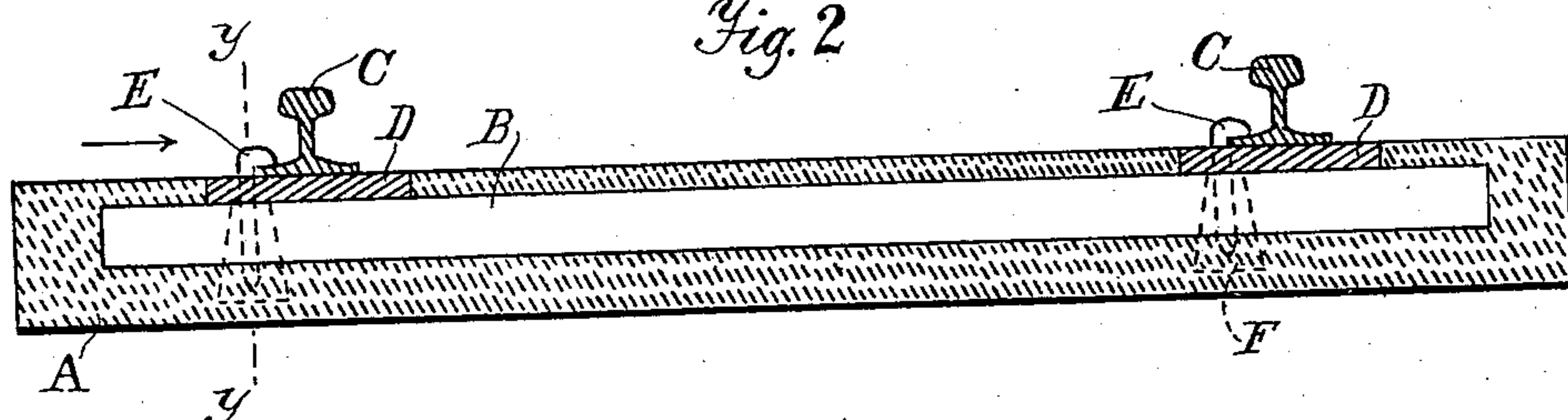


Fig. 3

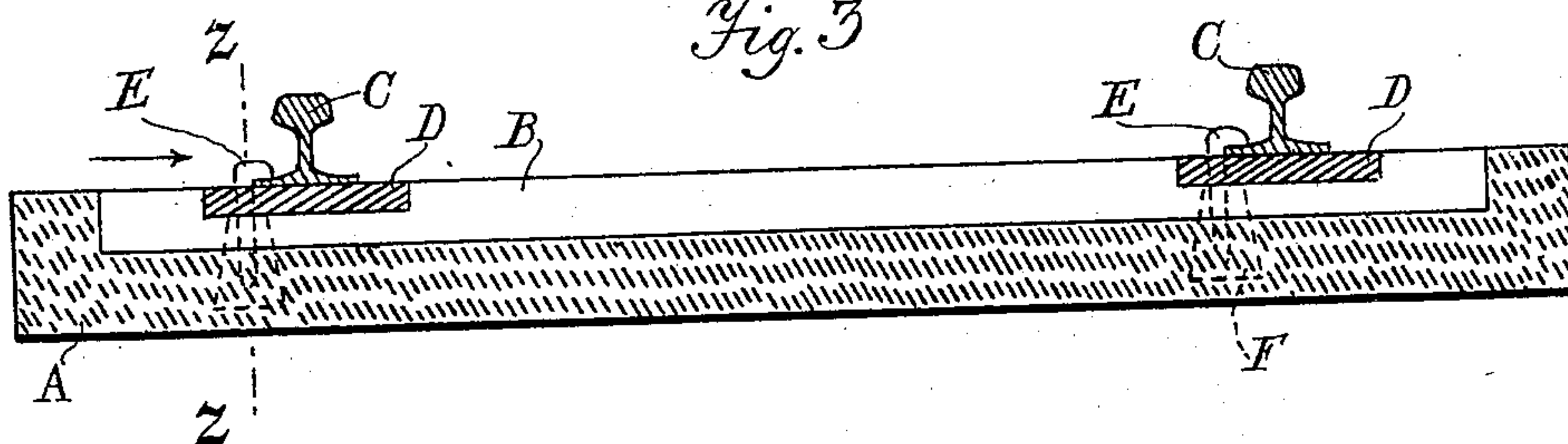


Fig. 4

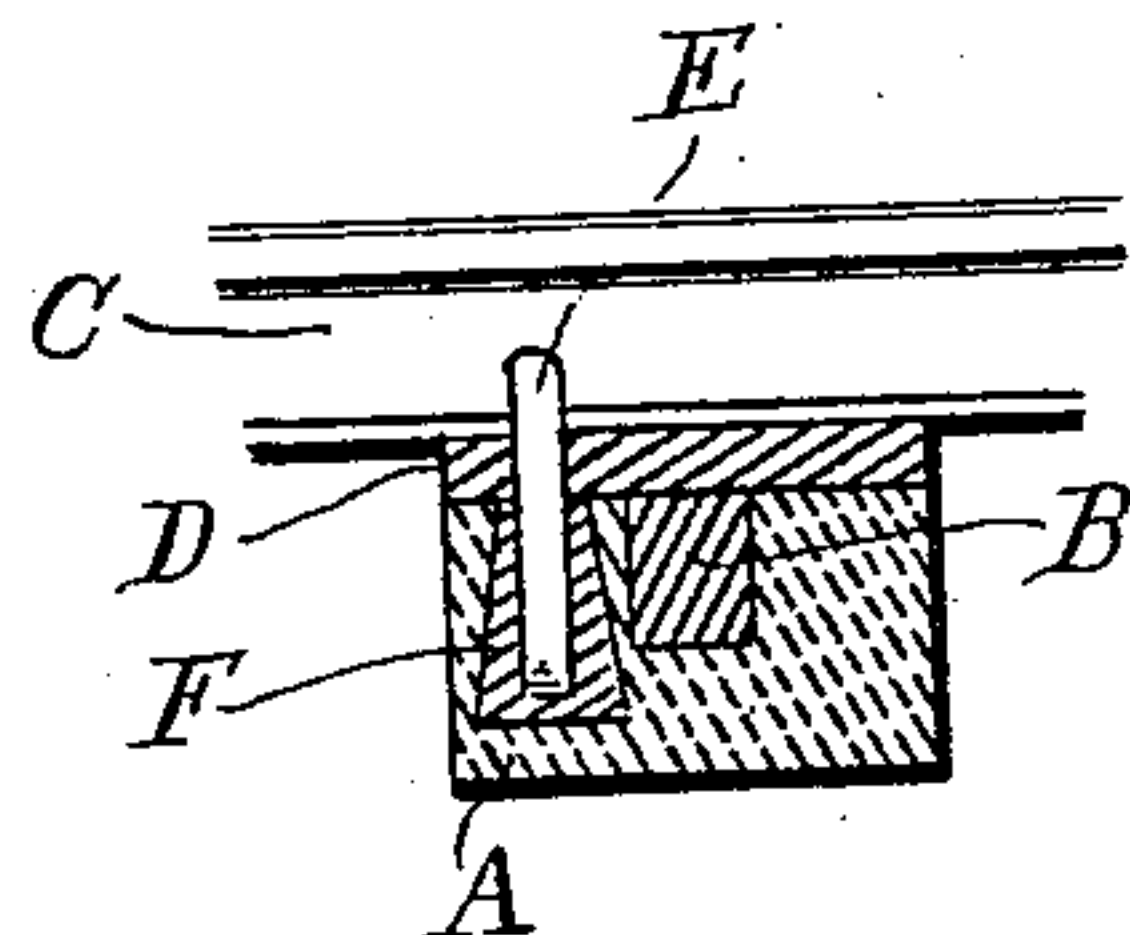
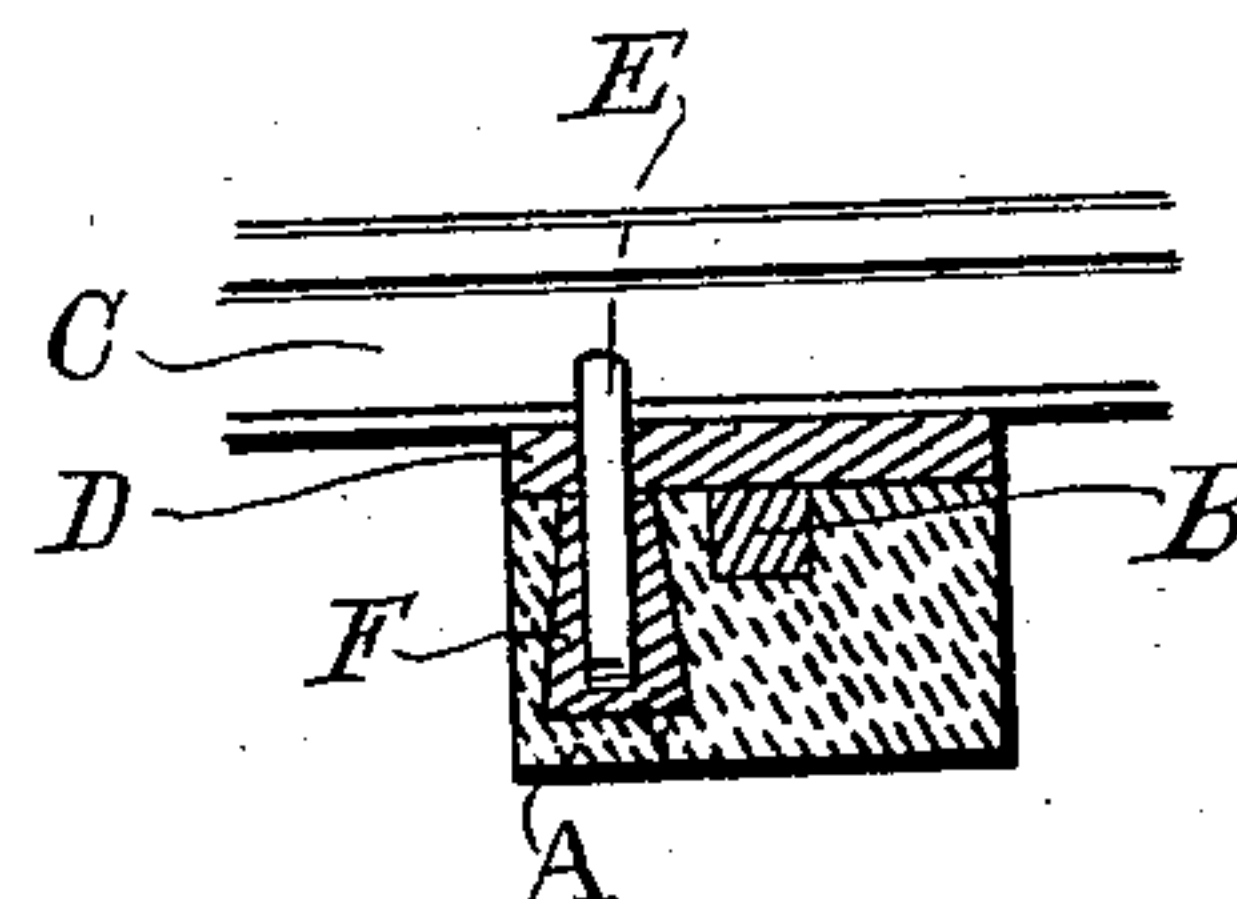


Fig. 5



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN SMITH, OF EL PASO, TEXAS.

COMPOSITE RAILWAY-TIE.

No. 870,255.

Specification of Letters Patent.

Patented Nov. 5, 1907.

Application filed April 3, 1907. Serial No. 366,079.

To all whom it may concern:

Be it known that I, JOHN SMITH, a citizen of the United States, residing at El Paso, in the county of El Paso and State of Texas, have invented certain new and useful Improvements in Composite Railway-Ties, of which the following is a specification.

My invention relates to composite railway ties, and belongs to that class of railroad sleepers which are constituted partly of cement or concrete and partly of iron and wood.

The object of my invention is the production of a railway tie of the type defined, having specially constructed parts particularly arranged with respect to each other whereby it is believed great strength and durability result, and, at the same time, the needed elasticity of the tie is preserved, and the manner of securing the rails to the tie unchanged from present sufficient methods.

I accomplish the object stated by fashioning and associating the parts as illustrated in the accompanying drawings, of which

Figure 1 represents a top plan view. Fig. 2 is a longitudinal, vertical section on the line $x-x$ of Fig. 1, with rails added and shown in section. Fig. 3 is a similar section of a modified construction of my invention. Fig. 4 represents a cross-section on the line $y-y$ of Fig. 2, and Fig. 5 is a like cross-section on the line $z-z$ of Fig. 3.

Like letters are used to refer to like parts throughout the description and drawings.

The letter A designates the body of my invention. It is formed of cement or other desired plastic compound.

Lengthwise in the cement body A is embedded a steel bar B. The purpose of the bar is to give strength and rigidity to the body of my invention, but, the bar possesses such an amount of elasticity as may be found desirable depending upon the weight of the rails and rolling stock employed. I do not limit myself to any particular length, breadth or thickness of the bar with respect to the dimensions of the body of my invention.

The railway rails are marked C, as shown in all the views after Fig. 1. The rails rest upon the tie plates D, also embedded in the cement, and the tie plates rest upon the bar B.

The rails C are secured by spikes E in the customary manner, the spikes E being driven through suitable orifices d in the track plates on both sides of the rails, into the pyramidal wooden blocks F which are embedded in the body of the tie in the course of its construction. I do not limit myself to the size or number of the blocks F, which, it will be observed, are located upon opposite sides of the bar B.

Figs. 3 and 5 show a modified form of my invention. In those views, the bar B instead of being wholly embedded in the material of the body of my invention is arranged for its main portion flush with the top of the said body. The tie plates are also flush with the top of the tie, and suitable recesses are formed in the bar to receive them. That form of construction results in binding all the parts into a particularly strong whole, and, in some instances it is to be preferred where very heavy service is expected. It will be understood that the tie plates being in recesses in the bar as illustrated in Fig. 3 cannot separate, and the rails being secured to the tie plates are also insured against any widening of the distance between them. The construction is slightly more costly than that shown in Figs. 1, 2 and 3.

Having now described my invention and explained the mode of its operation, what I claim is—

1. A composite railway tie, comprising a body portion formed of plastic compound, a stiff metal bar embedded lengthwise in the said body portion, the said bar having recesses in its upper surface near its ends, tie plates also embedded in the said body and resting upon the said bar within the said recesses, the said tie plates having orifices through them for the passage of the spikes, and blocks embedded in the said body portion on both sides of the said bar and beneath the tie plates to receive the spikes, substantially as described.

2. A composite railway tie, comprising a body portion formed of plastic compound, a steel bar embedded lengthwise in the said body portion, tie plates also embedded in the said body portion and resting upon the said bar, the said tie plates having orifices through them for the passage of the spikes, and pyramidal wooden blocks embedded in the said body portion on both sides of the said bar and beneath the said orifices in the tie plates to receive the spikes, substantially as described.

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

JOHN SMITH.

Witnesses:

SAM B. GILLET,
W. B. WARE.