

C. L. SEYLER.  
RAILROAD TIE.  
APPLICATION FILED NOV. 15, 1913.

Patented July 7, 1914

1,102,693.

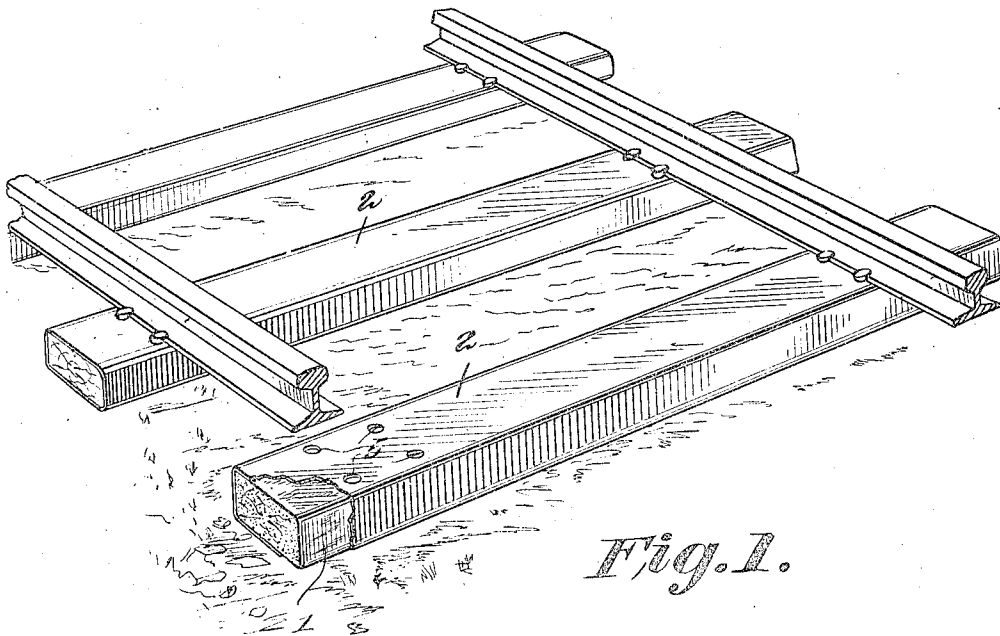
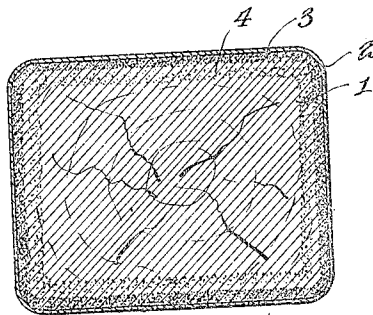


*Fig. 1.*

*Fig. 2.*



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# UNITED STATES PATENT OFFICE.

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## RAILROAD-TIE.

1,102,693.

Specification of Letters Patent.

Patented July 7, 1914.

Application filed November 15, 1913. Serial No. 801,193.

*To all whom it may concern:*

Be it known that I, CHARLES LYNN SEYLER, a citizen of the United States, residing at Academy, in the county of Pocahontas and State of West Virginia, have invented certain new and useful Improvements in Railroad-Ties, of which the following is a specification.

My invention relates to railroad ties, and the object thereof is to provide a device of this character which is more durable, efficient, and less expensive in the long run than the tie in use at the present day.

In carrying out my invention, I first take a piece of wood having the same general contour as the ordinary wooden tie, and apply thereto any well known preservative, such for example as creosote. I then heat a steel jacket to the proper temperature and insert the said length of wood into this jacket, whereupon the latter when cooled is shrunk onto the wooden core. This manner of producing ties not only insures against relative displacement of the core and the jacket, but effectively preserves the wooden core so that the tie, considered as an entirety, will be extremely durable. Owing to the highly heated condition of the jacket it will be obvious that the exterior of the wooden core will become charred, so that in reality there will be a charred surface, and a creosoted portion of the tie immediately beneath the said charred surface to resist any tendency of the core toward decay. It will be understood when the wooden core is subjected to the action of the preservative that the latter will permeate the wood about an inch or two beneath the outside surface, and that the charring which is produced by the shrinking of the heated jacket upon the core will only affect a relatively small depth of the exterior surface of the wood.

To the accomplishment of the recited object, and others subordinate therewith, the preferred embodiment of my invention resides in that construction and arrangement of parts hereinafter described, illustrated in the accompanying drawings, and embraced within the scope of the appended claims.

In said drawings:—Figure 1 is a perspective view of the tie constructed in accordance with my invention, and Fig. 2 is a transverse sectional view thereof.

In said drawings, 1 designates the wooden core, and 2 the metallic jacket. The wooden core is preliminarily subjected to any suitable

preserving process, although I preferably employ creosote for this purpose, and then the said core is introduced into the metallic jacket 2, which has been previously heated to the proper temperature. This jacket is constructed of such dimensions that it will barely receive the wooden core when in heated condition, from which provision it will be manifest that as the said jacket cools it will contract tightly about the core and insure for all practical purposes a substantially integral structure or combining of the jacket and core. During the process of shrinking the jacket upon the core the exterior portion of the core will become charred, as at 3, to a depth say of one-quarter of an inch, while the creosote 4 which penetrates farther into the wood will remain unaffected. It is well known that the charring of the exterior surface of wood will preserve it over a long period of time. It is also a well recognized fact that the application of creosote promotes the longevity of wood. So that when advantage is taken of these two means of preservation from a novel manner of applying the jacket to the core it will be understood that many marked advantages ensue. Among these advantages will be mentioned the minimizing of the amount of wood employed, the increased strength of the tie, the preventing of splitting of the ends and the wear of the tie upon the ballast, and the fact that the ties are less bulky to handle.

The means for connecting the rails to the tie consists of a plurality of openings 5 drilled at each extremity into which spikes are adapted to be driven. This arrangement eliminates the employment of fish-plates, and permits the use of heavier spikes without causing a splitting of the tie. Furthermore the spikes driven in through these openings will be more or less supported during their penetration and be thereby prevented from bending back with respect to the rail.

It should be understood that in its broader aspect the invention comprehends the employment not only of the various means described, but of equivalent means for performing the recited functions. While the arrangement shown is thought at the present time to be preferable, it is desired to reserve the right to effect such modifications and variations thereof as may come fairly within the scope of the appended claims.

What is claimed, is:—

1. A railroad tie comprising a wooden core, and a metallic jacket shrunk upon said core.
- 5 2. A railroad tie comprising a wooden core treated with a preservative, and a metallic jacket shrunk upon said core.
3. A railroad tie comprising a wooden core having an exterior charred surface and

a creosoted portion immediately beneath 10 said charred surface, and a metallic jacket adapted to lie contiguous said surface.

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

CHARLES LYNN SEYLER.

Witnesses:

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