

UNITED STATES PATENT OFFICE.

JOHN L. BOONE, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN COMPOSITION RAILROAD TIES.

Specification forming part of Letters Patent No. 127,553, dated June 4, 1872.

SPECIFICATION.

To all whom it may concern:

Be it known that I, JOHN L. BOONE, of San Francisco, county of San Francisco, State of California, have invented an Improved Railroad Tie; and I do hereby declare the following description is sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention or improvement without further invention or experiment.

My invention relates to an imperishable "railroad tie," which will possess many points of superiority over the wooden tie ordinarily used, and which has the further advantage of being cheaply made out of materials which are practically inexhaustible.

In order to make my imperishable "railroad tie," I take fiber of any kind, either animal or vegetable—such, for instance, as hair, moss, pulu, grass, or any of the numerous qualities or kinds of fiber—which can easily be found in every climate and on every soil. Wood or its bark, beaten up so as to separate its fibers, can also be used, or bits or strips of any animal or vegetable matter can be employed.

The fiber which I employ I thoroughly saturate with asphaltum or other equivalent preservative, which will, when cool, consolidate the fiber into a coherent mass and prevent its decay. This can be done either by immersing the fiber in a tank of the liquid or granulated asphaltum, or the asphaltum can be poured over the fiber after it has been placed in the molds. I prefer the former method. The fiber thus saturated when placed in the molds

will then be subjected to pressure, hydraulic or otherwise, and the mass violently compressed so as to form a block or log of the proper or desired shape and size to make the tie or sleeper.

Foreign substances can also be introduced into the block if desired, either for the purpose of giving the tie greater breaking resistance, or, in combination with the asphaltum, to hasten the cooling and settling of the mass.

A "railroad tie" constructed in this manner will be found to possess many advantages over wood. It will be imperishable, and will possess a degree of elasticity exceeding wood; besides many other useful points of advantage.

Any desired shape can be given to the tie, and various combinations of asphaltum and other substances can be applied in order to quicken the hardening process after compression, and to render it insensible to the heat of the sun.

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

A "railroad tie" or equivalent block, consisting of fiber saturated with asphaltum or equivalent preservative, formed into the desired shape by compression in molds.

In witness whereof I hereunto set my hand and seal.

J. L. BOONE. [L. S.]

Witnesses:

C. M. RICHARDSON,
NOAH HART.