(No Model.)

L. M. CLARK.

RAILROAD TIE.

No. 332,490. Patented Dec. 15, 1885.

Fig. 1.

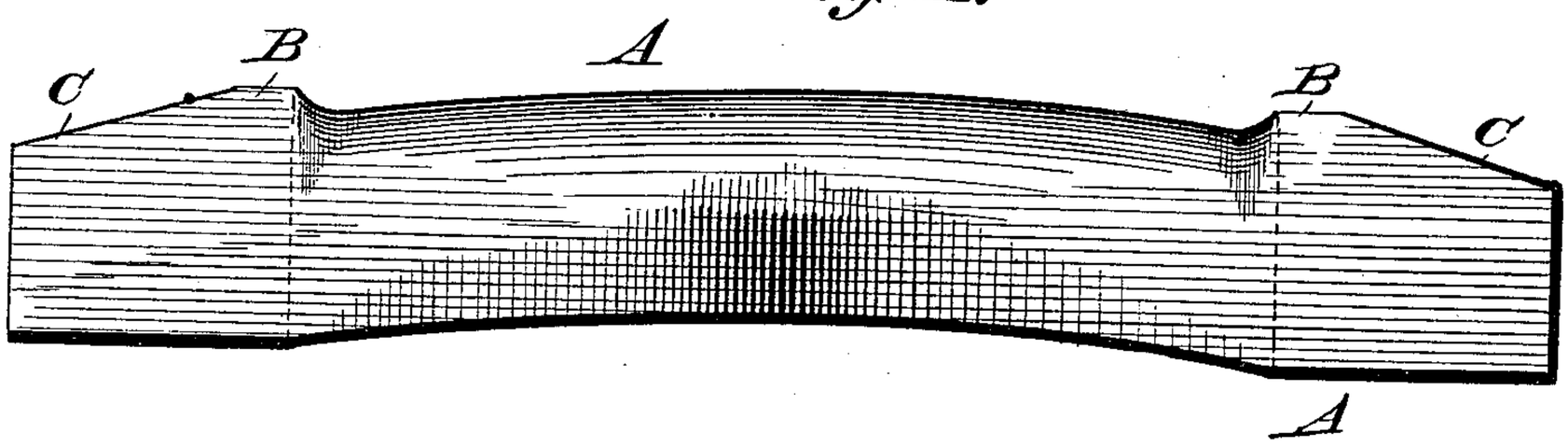


Fig. 2.

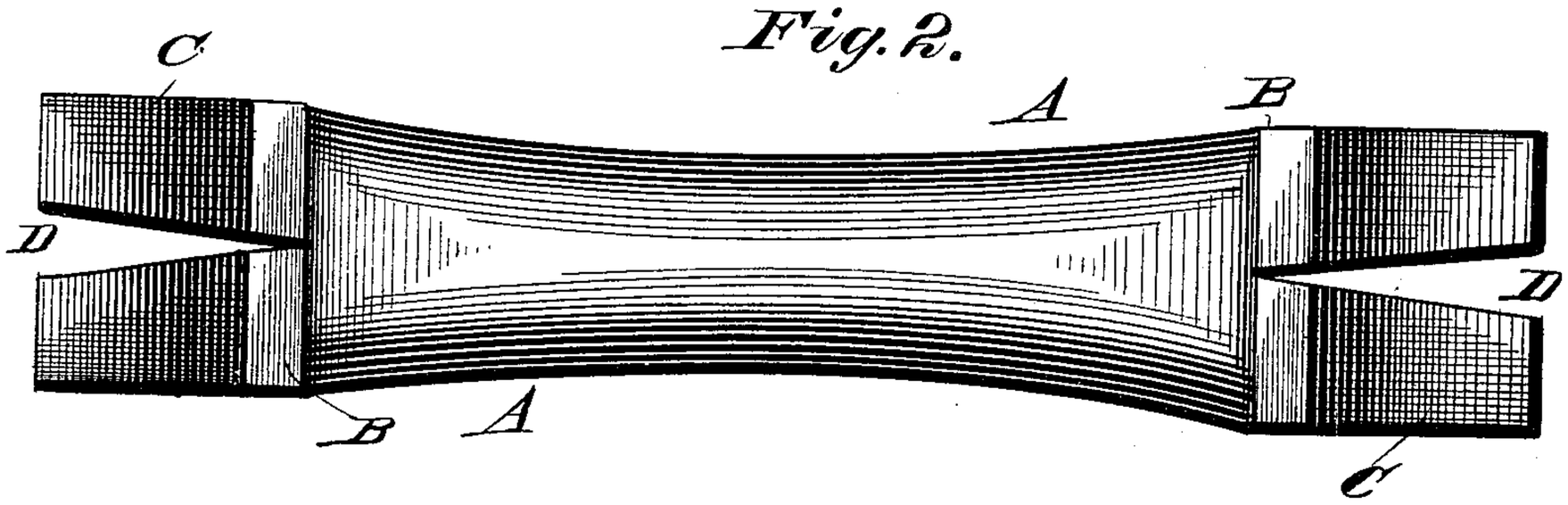
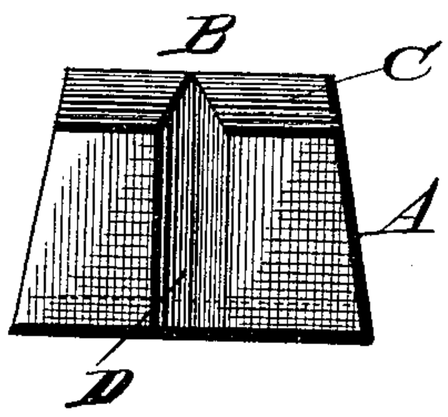


Fig. 3.



WITNESSES

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LEWIS M. CLARK, OF HARPER, KANSAS.

RAILROAD-TIE.

SPECIFICATION forming part of Letters Patent No. 332,490, dated December 15, 1885.

Application filed May 26, 1885. Serial No. 166,772. (No model.)

To all whom it may concern:

Be it known that I, LEWIS M. CLARK, of Harper, in the county of Harper and State of Kansas, have invented certain new and useful Improvements in Railroad-Ties; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

This invention consists in certain improvements in railroad-ties; and it has for its objects to so construct the tie that it will be more durable and may be more firmly bound and held in the bed or ballast, as more fully hereinafter specified.

The wooden ties as heretofore constructed have been found to decay directly under the rails, initially weakening them so that they will give way or break down at such points long before the main portion is seriously affected. This is owing to defective construction, which permits water to collect or lodge under the rail and rot the tie in the immediate vicinity, and further proves a source of objection, as the pressure of the rails when a train passes over them forces the water so collected through the pores of the body of the tie, causing the whole to rot or decay more rapidly than would be the case if the water could be kept out. The ties as formerly constructed also have been subject to the rotting action of water, as the water collects under them and remains in contact with their central portions, giving them no proper chance to dry from time to time. By my invention these objections are entirely obviated, and, in addition, a tie is produced that will set more firmly in the ballast of the bed and produce a better support for the rails, as more fully hereinafter described.

In the drawings, Figure 1 is a side elevation of one of my improved ties. Fig. 2 represents a top view. Fig. 3 represents an end view of the same.

The letter A indicates the tie, which is made of the usual dimensions, substantially. The upper portion of the tie between the rail-seats B is arched and rounded, so as to shed the water from the top between the rail-seats. The outer ends of the ties at each side of the rails are beveled, as shown by the letter C, so as to shed the water at the sides of the rails. This, it will be evident, prevents any possible collection of water under the rails, as the rail-seats are elevated, and water will run off from below the rails in all directions. One or both sides of the tie between the ends are hollowed or made concave, so as to better shed the water which may fall on the top of the tie and assist in holding the tie in the ballast, as more fully hereinafter explained. The lower side of the tie is arched or made concave between the points immediately under the rail-seats, so that while the tie sets solidly at the ends upon the ballast or bed the intermediate portion will be raised above the bed and out of contact of any water that may collect upon the bed, thus overcoming the most usual source of decay—that occasioned by the rotting action of the water.

In order to permit the tie to readily season and harden at the ends, the said ends, from the rail-seats to the extremities, are cut out or bifurcated at D, as indicated, which permits the sap to readily evaporate and any collected water to dry out after the ties are laid, so as to form and maintain a hard and solid support for the rails. The hollowed or curved sides of the ties are beveled from the upper part to the bottom, as shown in Figs. 2 and 3 of the drawings, so that they will not only shed the water, but form a broad base or seat, which, in conjunction with the curved sides, supports the tie firmly upon the bed or ballast and prevents longitudinal shifting, as the ballast binds in the hollow sides and locks the ties in position.

The ties as thus constructed, it will be seen, will not only permit sap to readily evaporate for the purpose of seasoning, as above mentioned, but prevent any water from effecting a lodgment under the rails or under the ties, and thus the usual sources of rot are entirely obviated and a more durable tie is obtained, which has the further advantage of more securely setting in the ballast, thus securing a more substantial and a safe track when laid.

Having described my invention, I claim—

1. A railroad-tie made of wood and having each end vertically bifurcated below and to the outer side of the adjacent rail-seat, in order

to rapidly shed rain-water from said seat and to cause the tie to weather rapidly.

2. A railroad-tie having its upper surface arched and rounded or beveled to shed rain and its ends vertically bifurcated to weather more rapidly, substantially as specified.

3. An arched railroad-tie having one or both of its sides concaved or dished inwardly, substantially as and for the purposes described.

4. An arched railroad-tie having bifurcated or slotted ends and one or both of its sides concaved or dished inwardly, substantially as and for the purpose specified.

5. An arched railroad-tie having one or both of sides concaved, its ends bifurcated, and wider at their base than at their tops, and formed with elevations for the rails to rest upon, all substantially as described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

LEWIS M. CLARK.

Witnesses:
M. D. ADAMS,
M. L. MCCLURE.