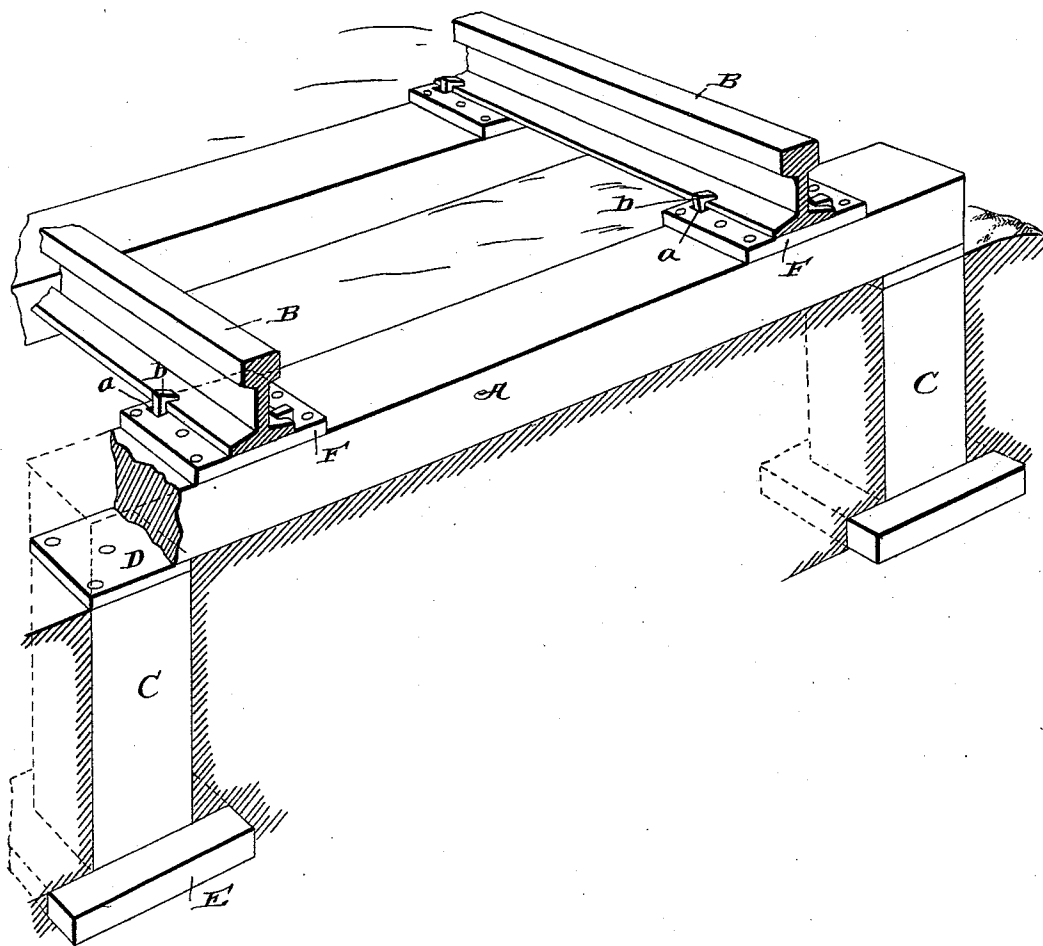


(No Model.)

E. GAY.
CONSTRUCTION OF RAILWAYS.

No. 536,465.

Patented Mar. 26, 1895.



Witnesses:
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UNITED STATES PATENT OFFICE.

ELIJAH GAY, OF SOUTH RIVERSIDE, CALIFORNIA.

CONSTRUCTION OF RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 536,465, dated March 26, 1895.

Application filed January 3, 1895. Serial No. 533,751. (No model.)

To all whom it may concern:

Be it known that I, ELIJAH GAY, a citizen of the United States, residing at South Riverside, in the county of San Bernardino and State of California, have invented certain new and useful Improvements in the Construction of Railways; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in railways; and it has for its general objects to provide means adapted to prevent the objectionable sinking or settling of the sleepers or ties and means for prolonging the usefulness of the sleepers or ties by preventing the rails from cutting into the same.

With the foregoing ends in view, the invention will be fully understood from the following description and claims when taken in connection with the annexed drawing, in which the figure is a sectional perspective view of a portion of a railway constructed in accordance with my invention.

Referring by letter to said drawing:—A, indicates the sleepers or ties of my improved railway which may be formed of wood and of the ordinary shape and size, and which may be placed at suitable intervals in or upon the roadbed in the usual manner.

B, indicates the rails which may also be of the ordinary construction, and C, indicates pillars or posts which are arranged beneath the sleepers or ties at opposite ends thereof as shown. These pillars or posts C, which may be of the proportional size illustrated or smaller in cross section, are provided at their upper ends with metal cap plates D, which are fixed in position by nails or screws and are designed and adapted to protect the posts against the action of water or moisture and are also designed to prevent the upper ends of the posts from being split and broken by the weight and shock imposed on the ties or sleepers by passing trains. At their lower ends, the said pillars or posts C, are mounted upon flat pieces E, of stone, metal, or wood which serves to prevent sinking or settling of

the pillars and consequently the sleepers or ties, which is an important desideratum.

As will be readily perceived by reference to the drawing the rails B, are mounted, not directly over the pillars or posts C, but at points between the said pillars and the middle of the ties. By reason of this arrangement a degree of elasticity is preserved in the track which is an important advantage.

F, indicates metallic plates which are interposed between the rails B, and sleepers or ties A, and are connected by nails, spikes or the like to the latter. These plates F, are designed and adapted to prolong the usefulness of the sleepers or ties by preventing the rails from cutting or sinking into the same and they are provided with apertures as *a*, for the passage of spikes *b*, through the medium of which the rails are connected to the sleepers in the ordinary manner.

A railway embodying my invention may be constructed almost as cheaply as the ordinary railroad; and it will be seen from the foregoing that by reason of my improved devices, sinking or settling of the sleepers or ties is effectually prevented and the objectionable necessity of frequently raising and placing ballasts under the same is obviated. It will also be seen from the foregoing that the rails are prevented from cutting or sinking into the ties and that therefore the ties will last much longer than when the rails rest directly upon them.

When the ground that the road is built on is hard or stony, pieces of board placed horizontally below the ends of the sleepers or ties may be employed in lieu of the posts C, herebefore described.

Having described my invention, what I claim is—

1. A railway comprising sleepers or ties, pillars or posts C, arranged under the sleepers or ties and the rails mounted upon the sleepers or ties at points between the pillars or posts C, and the middle of the ties, substantially as and for the purpose set forth.

2. The herein described railway comprising sleepers or ties, metal plates F, connected to the upper side of the sleepers or ties and hav-

ing apertures *a*, the rails arranged on the
plates *F*, spikes taking through the apertures
of the plates and connecting the rails to the
sleepers or ties, the pillars or posts *C*, ar-
5 ranged under the sleepers or ties and having
metal cap plates at their upper ends, and flat
pieces of stone, wood or other suitable ma-
terial arranged beneath the lower ends of the

pillars or posts all as and for the purpose set
forth. 10

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

ELIJAH GAY.

Witnesses:

ROBERT O. JONES,
ALBERT TERRY.