No. 813,006.

PATENTED FEB. 20, 1906.

J. B. JOHNSON.

RAILROAD TIE.

APPLICATION FILED NOV. 2, 1905.

Fig. 1.

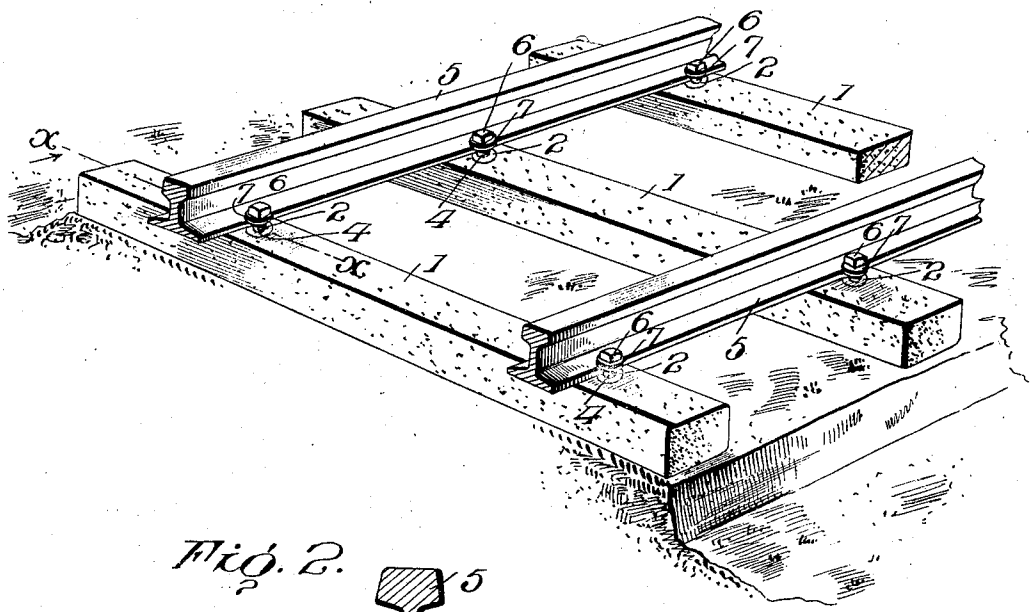


Fig. 2.

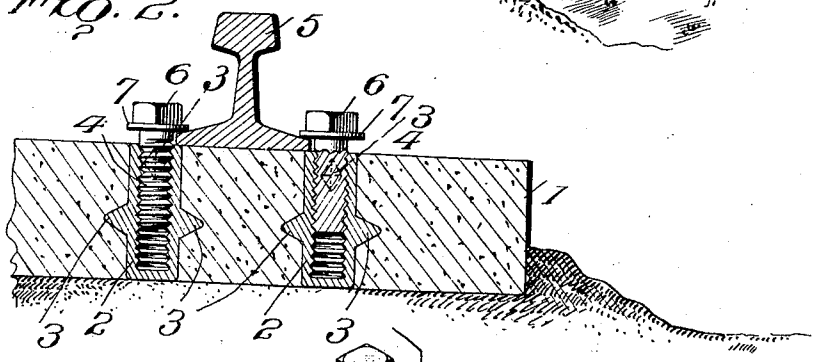
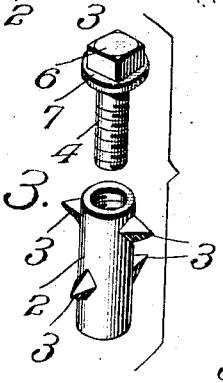


Fig. 3.



Witnesses

Inventor

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UNITED STATES PATENT OFFICE.

JOHN B. JOHNSON, OF MOUNT VERNON, SOUTH DAKOTA.

RAILROAD-TIE.

No. 813,006. Specification of Letters Patent. Patented Feb. 20, 1906.

Application filed November 2, 1905. Serial No. 285,607.

To all whom it may concern:

Be it known that I, JOHN B. JOHNSON, a citizen of the United States, residing at Mount Vernon, in the county of Davison and State of South Dakota, have invented certain new and useful Improvements in Railroad-Ties, of which the following is a specification.

Owing to the growing scarcity of timber, the cost of railroad-ties has increased so rapidly that many attempts have been made to provide a substitute for timber out of which the ties could be manufactured at a sufficiently low cost to enable them to be generally adopted.

The object of this invention is to provide a railroad-tie which is so designed as to enable it to be formed out of clay or other plastic material, which is afterward baked or otherwise hardened.

A further object is to provide a tie which will be very inexpensive, which under the ordinary wear will have an indefinite life, and which is provided with means for holding the rails rigidly in position.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings, in which—

Figure 1 is a perspective view of a railroad-tie constructed according to my invention. Fig. 2 is a longitudinal sectional view through a portion of the tie and showing the position of the sockets therein. Fig. 3 is a detail perspective view of one of the sockets and a rail-clamping bolt.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The numeral 1 designates a railroad-tie of the usual shape, which is preferably formed of some plastic material and which has a pair of sockets 2 embedded therein at each end. One of the sockets 2 is intended to be upon each side of each of the rails, and they are so spaced as to always hold the rails in proper gage. The exteriors of the sockets 2 are provided with radially-projecting teeth or arms 3, which engage with the mass out of which the tie is formed and prevent any turning of the sockets. It will be observed that these teeth 3 taper to a point and are formed with angular edges, which insure a firm engagement with the plastic mass. The interiors of the sockets 2 are threaded for the reception of bolts 4, the heads of which engage with the base of the rails 5 to hold the latter securely in position. The upper portions of the heads of the bolts 4 are square or faceted, as seen at 6, to enable the bolts to be readily placed in position or withdrawn by a wrench or other suitable tool, while the base or lower part of the head is provided with an annular flange 7, which projects outwardly and bears against the base of the rails. Should the sockets 2 extend entirely through the tie, as shown in the drawings, the lower ends thereof are closed, so as to prevent dirt or other extraneous matter from getting into the threads and interfering with the operation of the bolts 4.

In the application of my device it will be apparent that all that is necessary is to place the rails in position and screw the bolts or rail-clamping members 4 in position. This will greatly decrease the cost of track construction, inasmuch as the rails are always held in proper gage and unskilled labor can be employed.

Since clay is a material which can be found in practically inexhaustible quantities, it will be evident that the principal cost for manufacturing these ties will be for the molding and baking of the clay and the construction of the sockets, and this will not greatly exceed the cost of the wooden ties in common use. Attention may also be called to the fact that these ties will be much more desirable than metal ties, inasmuch as they are not acted upon by the elements, and therefore require less attention after their installation and will also be much more durable.

Having thus described the invention, what is claimed as new is—

1. The combination of a railroad-tie, sockets embedded therein and provided with projecting teeth or arms, and rail-clamping members fitting within the sockets.

2. The combination of a railroad-tie, interiorly-threaded sockets embedded therein and provided with externally-projecting arms or teeth, and a rail-clamping bolt fitting within the socket.

3. The combination of a railroad-tie formed of plastic material, sockets embedded therein and provided with externally-projecting arms or teeth, and rail-clamping members fitting within the sockets.

4. The combination of a railroad-tie formed

of plastic material, internally-threaded sockets embedded therein, angular teeth projecting from the exterior of the sockets, and rail-clamping bolts fitting within the sockets.

5. The combination of a railroad-tie formed of plastic material, internally-threaded sockets embedded therein and extending entirely through the tie and having their lower ends closed, angular teeth projecting from the exterior of the sockets, and rail-clamping bolts fitting within the sockets, the heads of said bolts having their upper portions faceted while their base is provided with an annular flange.

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

JOHN B. JOHNSON. [L. S.]

Witnesses:
GEHART J. HANSON,
THEODORE B. JOHNSON.