2 Sheets--Sheet 1.

T. R. TIMBY.
Railway-Ties.

No. 145,258. Patented Dec. 2, 1873.

FIG. 1.

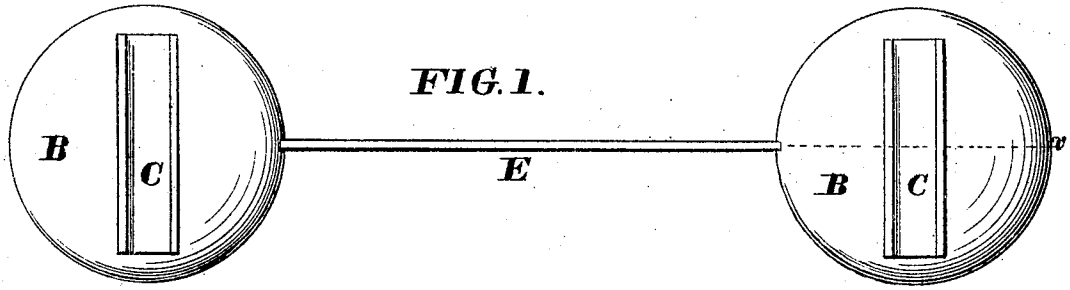


FIG. 2.

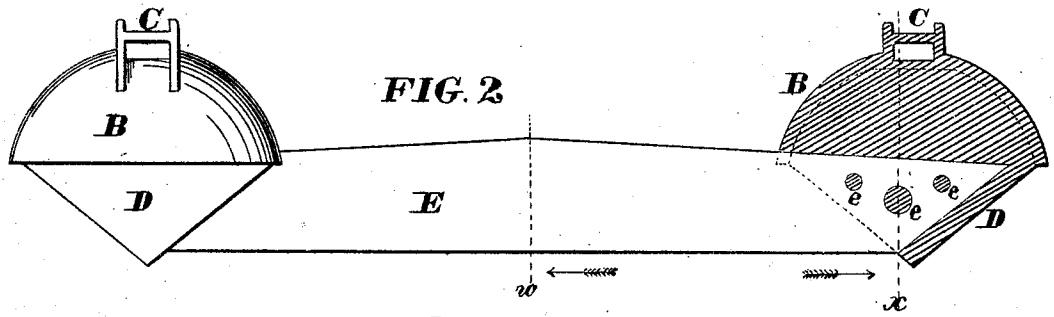


FIG. 3.

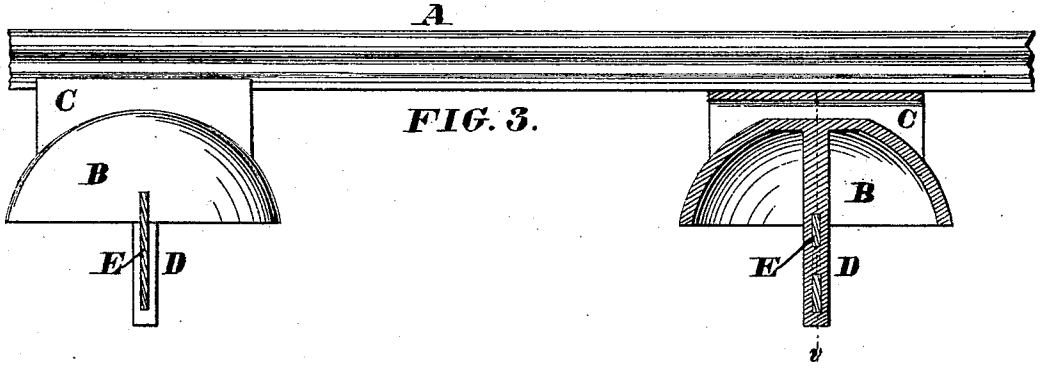
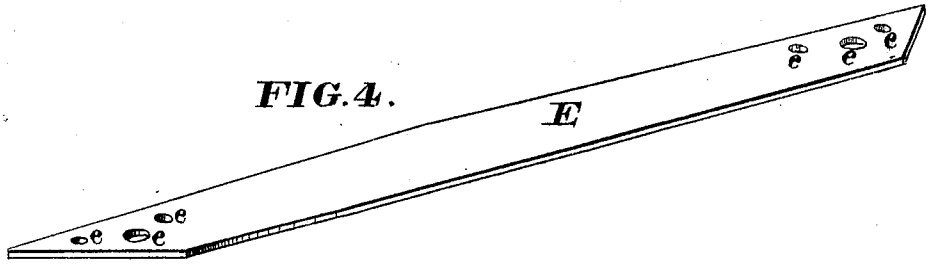


FIG. 4.



WITNESSES:
Walter Allen
Jacob Ebeitlin.

INVENTOR:
Theodore R. Timby
By Knight Bros Attorneys.

2 Sheets--Sheet 2.

T. R. TIMBY.

Railway-Ties.

No. 145,258. Patented Dec. 2, 1873.

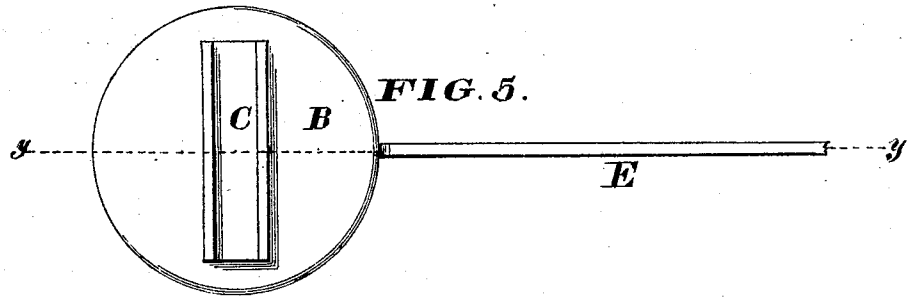


FIG. 5.

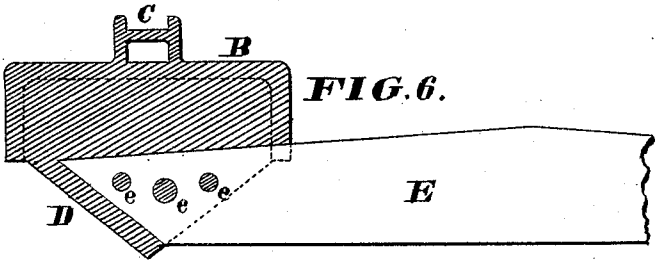


FIG. 6.

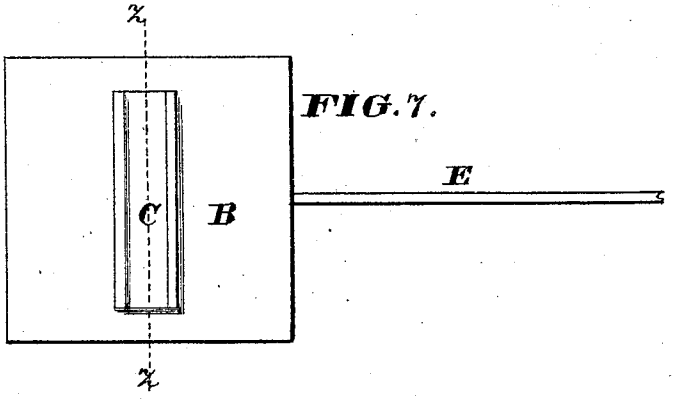


FIG. 7.

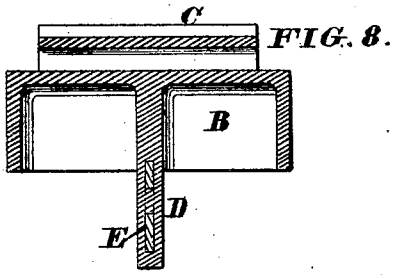


FIG. 8.

WITNESSES:

Walter Allen

Jacob Scheitlin

INVENTOR:

Theodore R. Timby

By Knight Bros Attorneys.

UNITED STATES PATENT OFFICE.

THEODORE R. TIMBY, OF TARRYTOWN, NEW YORK.

IMPROVEMENT IN RAILWAY-TIES.

Specification forming part of Letters Patent No. **145,258**, dated December 2, 1873; application filed September 27, 1873.

To all whom it may concern:

Be it known that I, THEODORE R. TIMBY, of Tarrytown, in the county of Westchester and State of New York, have invented an Improvement in Railway-Ties, of which the following is a specification:

This invention consists in connecting two rail bearings or supports on opposite sides of the track by means of a transverse tie, consisting of a wrought-iron plate placed in a vertical or nearly vertical plane, and secured to the bearings by casting them upon its ends, as hereinafter described.

In the accompanying drawings, Figure 1 is a plan view of a rail-tie illustrating my invention. Fig. 2 is an elevation of the same, one end being shown in section on the line *v*, Figs. 1 and 3. Fig. 3 shows an elevation of one rail with two of the ties in section—one on the line *w* and the other on the line *x*, Fig. 2. Fig. 4 is a perspective view of the wrought-iron tie-bar detached. Fig. 5 is a plan view of one of the tie-bearings under a slightly modified form. Fig. 6 is a section on the line *y y*, Fig. 5. Fig. 7 is a plan view illustrating another modification. Fig. 8 is a section on the line *z z*, Fig. 7.

The rail-bearings B B are preferably made hollow underneath, and with a flanged projection, C, on top, constituting a seat for the rail A. A web or projection, D, underneath embraces the end of the wrought-iron tie-bar E, holes *e e* being formed near the ends of the bar E, into which holes the molten metal runs. The body B of the bearing may have a concavo-convex form, hemispherical on top, as illustrated in Figs. 1, 2, and 3, or circular with a flat top, as shown in Figs. 5 and 6, or angular, as shown in Figs. 7 and 8. The bearing itself is not claimed as new, nor is the invention limited to the form of the bearing, which form may be variously modified without departing from the essential principles of the invention. In constructing the device, the tie-bar E of steel or wrought-iron with perforated ends is set on edge, with its ends in molds adapted to form the castings B C D, and the said castings are then formed by running the molten metal into the molds upon and around the ends of the bar. Each pair of bearings is thus durably and immovably connected. In using the invention, the ties are laid crosswise of the track, and the rails A, which may be of any common or suitable form, are set in the flanged seats C. Figs. 1 and 2 each show a pair of bearings, connected by a tie and adapted for the reception of a pair of rails. Fig. 3 shows two adjacent bearings for one rail of the track, and a rail, A, placed thereon. The said rails may be clamped to their seats C by a device which I propose to describe in a separate application for Letters Patent. The bearings B afford solid support to the rails on the principle well known with bearings of this general form. The flat tie-bar E, being placed in vertical or nearly vertical plane, meets with no considerable vertical resistance from the ground, but cuts into the earth to accommodate itself to the positions of the castings B C D, and is thus relieved of vertical strain. The tie-bar is flexible horizontally, and has thus a further facility of accommodation to the rails. It, at the same time, offers an unyielding resistance to the spreading of the rails. The mode described of casting the bearings on the ends of the tie-bar dispenses with the need of screws, bolts, rivets, or other separate means of attachment, which are costly, and, furthermore, are always liable to become loose. The web D constitutes an anchor to prevent any lateral motion of the rail-bearing B.

The following is claimed as new:

The railway-tie herein described, consisting of a flat bar, E, set in a vertical or nearly vertical plane with bearings B C D cast on its ends, in the manner described.

T. R. TIMBY.

Witnesses:

OCTAVIUS KNIGHT,

WALTER ALLEN.