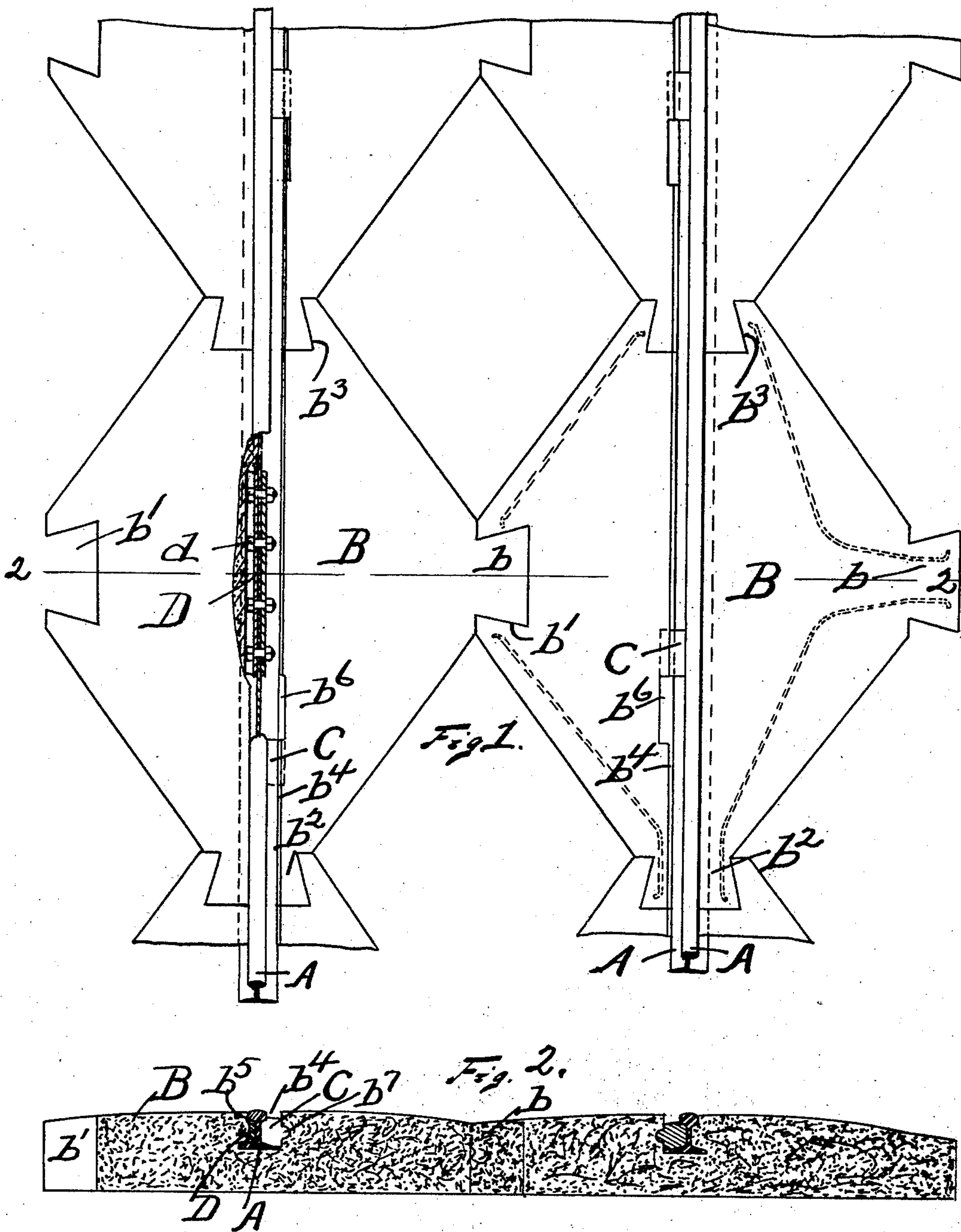


No. 715,049.

Patented Dec. 2, 1902.

J. FREUND.
RAIL BED FOR RAILROADS.
(Application filed Aug. 18, 1902.)

(No Model.)



Witnesses
Henry Hippel
Margaret Sullivan

Inventor
Joseph Freund
by W. C. Lord
his Atty.

UNITED STATES PATENT OFFICE.

JOSEPH FREUND, OF WAMPUM, PENNSYLVANIA.

RAIL-BED FOR RAILROADS.

SPECIFICATION forming part of Letters Patent No. 715,049, dated December 2, 1902.

Application filed August 18, 1902. Serial No. 120,155. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH FREUND, a citizen of the United States of America, residing at Wampum, in the county of Lawrence and State of Pennsylvania, have invented new and useful Improvements in Rail-Beds for Railroads, of which the following is a specification.

This invention relates to rail-beds for railroads; and it consists in certain improvements in the construction thereof, as will be hereinafter fully described, and pointed out in the claims.

The invention is illustrated in the accompanying drawings, as follows:

Figure 1 shows a plan view of a railroad having rail-beds arranged according to my invention. Fig. 2 shows a section on the line 2 2 in Fig. 1.

A marks the rail, which is of the ordinary form; B, the rail-beds. The rail-beds have formed in them the tenons b and mortises b' , the two being adapted to form an interlocking means between the beds for maintaining a fixed lateral relation between them, or, in other words, for preventing the spreading of the rails. The beds are also provided with tenons b^2 and mortises b^3 , these forming an interlocking means for maintaining a fixed longitudinal relation between the beds.

The beds are diamond-shaped in general contour. This gives a large surface and still permits of the introduction of implements for the adjustment of ballast, &c. This shape also brings the interlocking means into proper relation with the greatest strength of the intermediate material.

The beds are provided with the grooves b^4 . These extend diagonally across the beds. The outside of the groove is fastened to fit the outer surface of the rail. The groove is of sufficient width to permit of the rail being introduced directly from the top of the groove, and wedge C is arranged between the opposite side of the groove and the opposite side of the rail and forces the rail against the surface b^5 , holding it in proper position. The groove is provided with a series of enlargements b^6 , by means of which the wedges C may be introduced. The groove is provided with the undercut b^7 , and the wedge is formed to fit in this undercut portion, thus locking the wedge against displacement upwardly.

This arrangement of the wedge locks the rail against the bottom of the groove.

I prefer to form these beds of cement and to place the fish-plates D, with the bolts d , in the side of the groove and secure them in place as the bed is formed.

What I claim as new is—

1. As articles of manufacture, rail-beds for railroads one for each rail, having formed integrally therewith interlocking means for maintaining a fixed lateral relation between the beds.

2. As articles of manufacture, a series of rail-beds for supporting a rail having formed integrally therewith interlocking means for maintaining a fixed longitudinal relation between the beds.

3. As articles of manufacture, rail-beds for railroads one for each rail having formed integrally thereon a mortise-and-tenon interlocking means for maintaining a fixed lateral relation between the beds.

4. As articles of manufacture, a series of rail-beds for supporting a rail, having formed immediately thereon mortise-and-tenon interlocking means for maintaining a fixed longitudinal relation between the beds.

5. As an article of manufacture, a rail-bed, diamond-shaped in general contour and having a groove therein arranged diagonally to the bed.

6. As articles of manufacture, rail-beds for railroads, diamond-shaped in general contour; said beds being arranged to place the rail diagonally thereon and having formed immediately thereon interlocking means for maintaining a fixed lateral relation between the beds.

7. As articles of manufacture, a series of rail-beds, diamond-shaped in general contour and arranged to have the rail placed diagonally thereon, and having formed immediately thereon interlocking means for maintaining a fixed longitudinal relation between the beds.

8. As articles of manufacture, a series of rail-beds for railroads, one series for each rail having formed integrally therewith interlocking means for maintaining a fixed lateral and longitudinal relation between the beds.

9. As articles of manufacture, a series of rail-beds for railroads one series for each rail, having formed immediately thereon mortise-

and-tenon interlocking means for maintaining a fixed lateral and longitudinal relation between the beds.

10. As articles of manufacture, a series of
5 rail-beds for railroads one series for each rail;
said beds being diamond-shaped in general
contour and arranged to have the rails placed
diagonally thereon; said beds having formed
thereon interlocking means for maintaining
10 a fixed lateral and longitudinal relation be-
tween the beds.

11. As an article of manufacture, a rail-bed
having a groove therein against which one
side of the rail abuts in combination with the
15 wedge arranged between the opposite wall
and the opposite side of the rail.

12. As an article of manufacture a rail-bed
having a groove therein against which one
side of the rail abuts in combination with the
20 wedge arranged between the opposite wall
and the opposite side of the rail; said groove
being provided with enlargements for the in-
troduction of the wedge.

13. As an article of manufacture a rail-bed
25 having a groove against the side of which one
side of the rail abuts the opposite side of the
groove being undercut in combination with
the wedge, arranged between said opposite

wall and the opposite side of the rail, the
wedge being formed to fit the undercut for 30
the purpose described.

14. As an article of manufacture a rail-bed
formed of cement having a groove therein for
the reception of the rail in combination with
a fish-plate secured in the bed at the side of 35
the groove in the formation of the bed.

15. As an article of manufacture, a series
of rail-beds of cement, one series for each rail
and each bed being provided with a mortise- 40
and-tenon construction for uniting them lat-
erally and longitudinally and each being pro-
vided with a groove b^4 , one side b^5 being
shaped to conform with the rail, the opposite
side b being provided with an undercut b^7
and the enlargements b^6 ; in combination with 45
the wedge C arranged to fit the undercut b^7 ;
and the fish-plate D secured in the side of
the groove in the formation of a bed.

In testimony whereof I have hereunto set
my hand in the presence of two subscribing 50
witnesses.

JOSEPH FREUND.

Witnesses:

W. H. GROVE,
MATTHEW GUNTON.