

(No Model.)

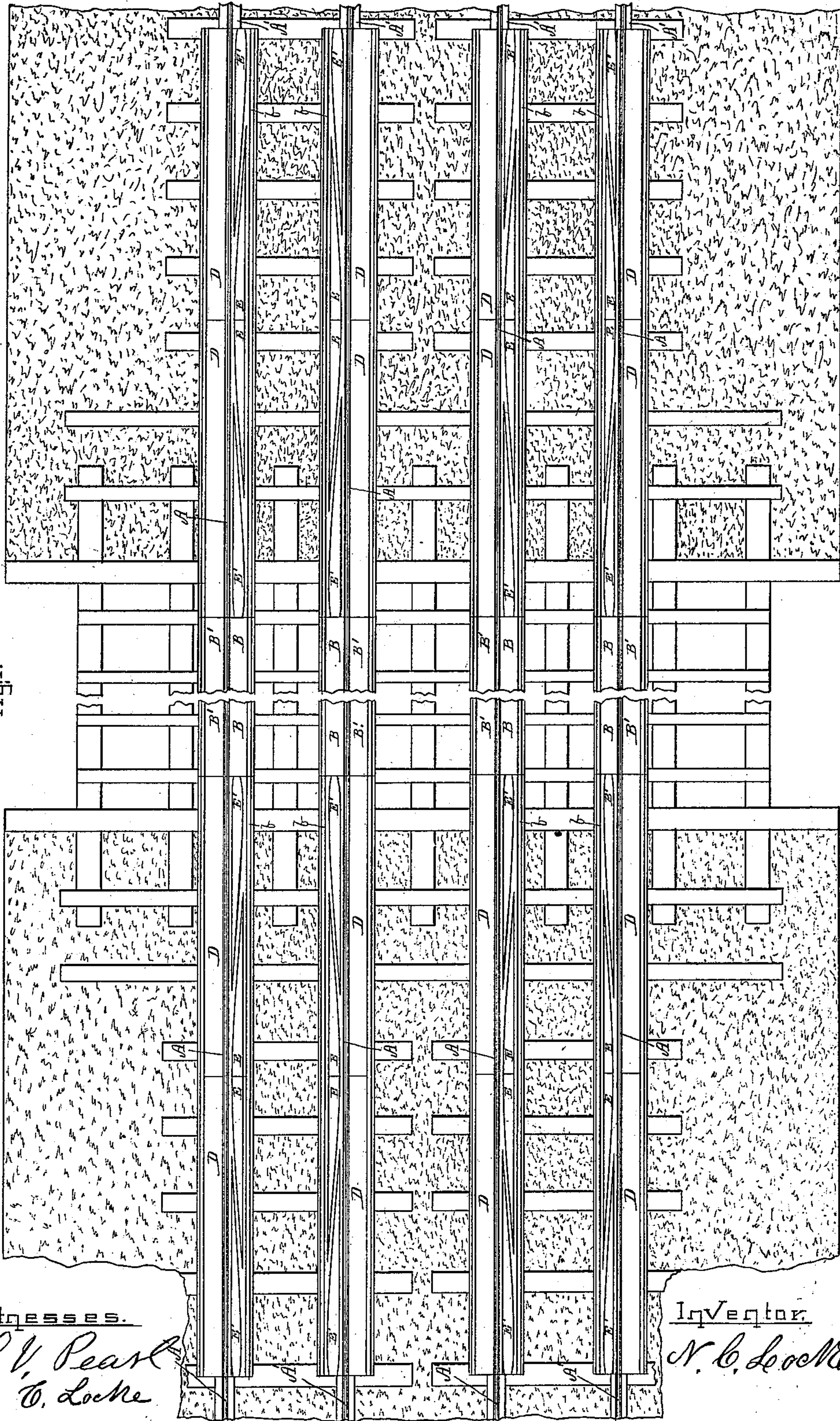
3 Sheets—Sheet 1.

N. C. LOCKE.
SAFETY TRACK FOR RAILROADS.

No. 364,121.

Patented May 31, 1887.

Fig. 1.



Witnesses.

O. V. Pearl
A. C. Locke

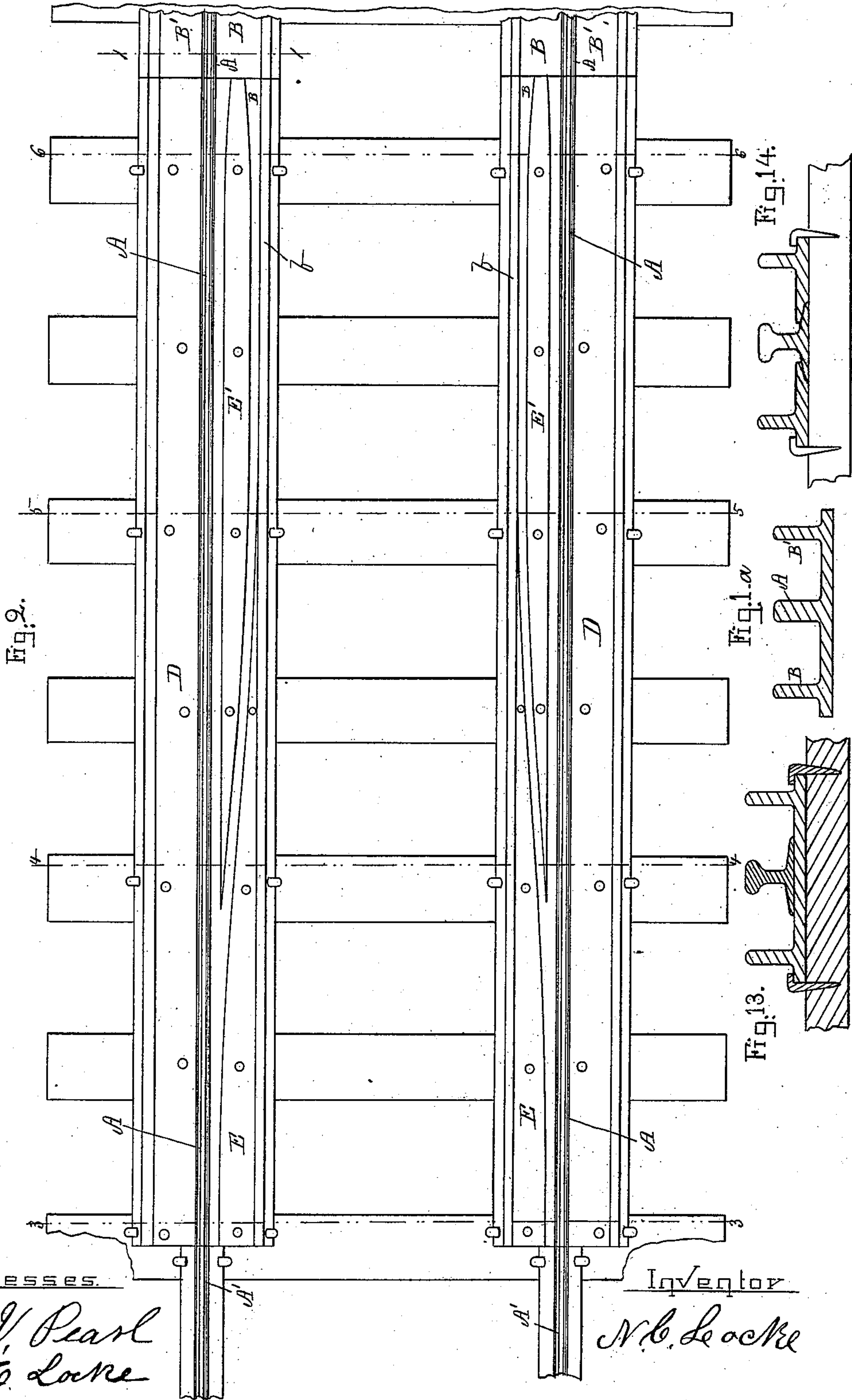
Inventor

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3 Sheets—Sheet 3.

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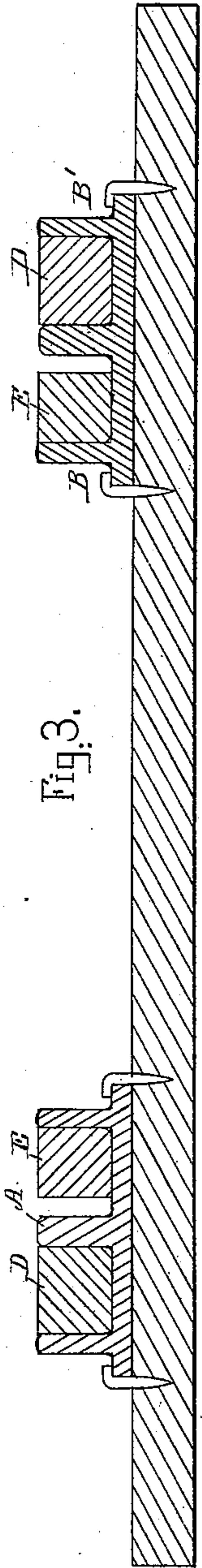


Fig. 3.

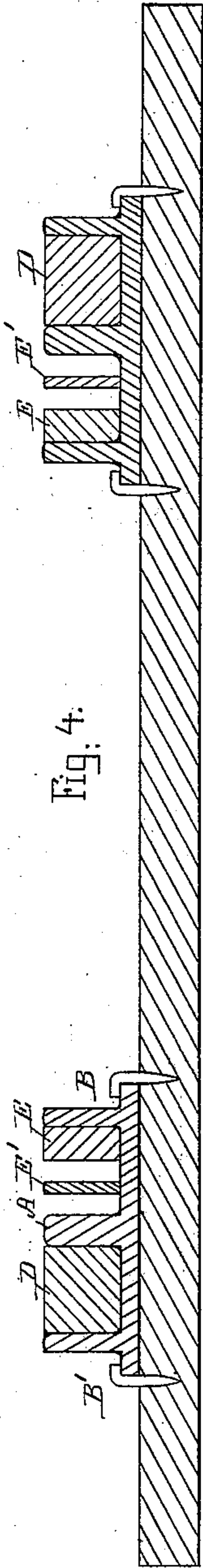


Fig. 4.

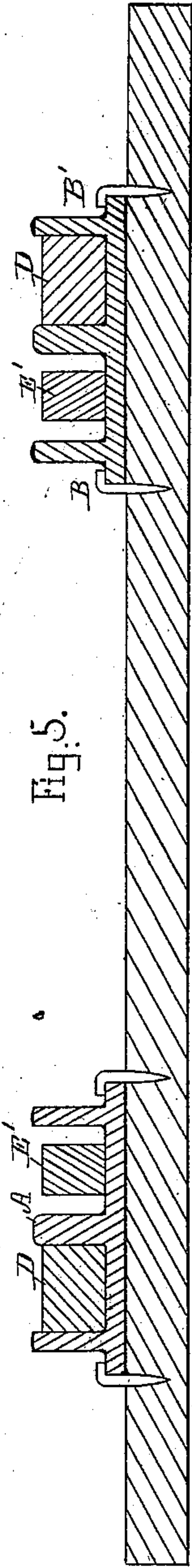


Fig. 5.

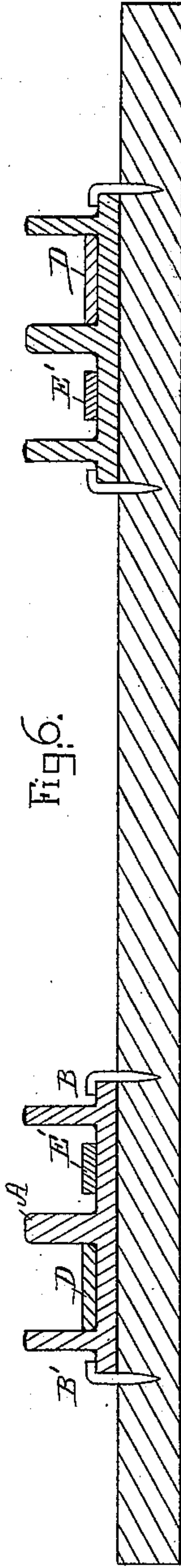


Fig. 6.



Fig. 7.

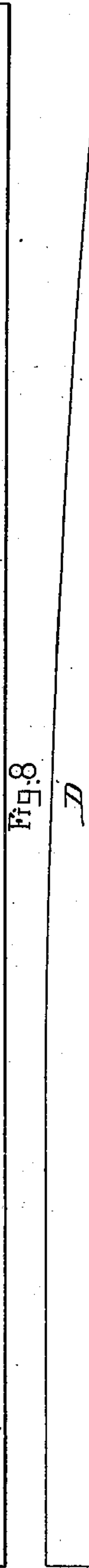


Fig. 8.

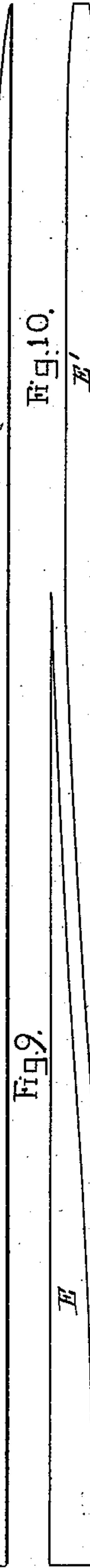


Fig. 9.

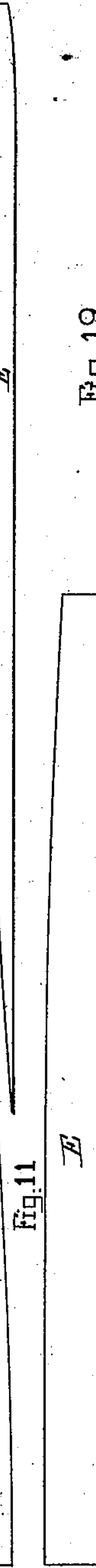


Fig. 10.



Fig. 11.



Fig. 12.

Witnesses

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UNITED STATES PATENT OFFICE.

NATHANIEL CHASE LOCKE, OF SALEM, MASSACHUSETTS.

SAFETY-TRACK FOR RAILROADS.

SPECIFICATION forming part of Letters Patent No. 364,121, dated May 31, 1887.

Application filed March 31, 1887. Serial No. 233,225. (No model.)

To all whom it may concern:

Be it known that I, NATHANIEL CHASE LOCKE, of Salem, in the county of Essex and State of Massachusetts, have invented a new and useful Safety-Track for Railroads, of which the following is a specification, reference being had to the accompanying drawings, making a part hereof.

The object of my invention is to provide a safety-track for railroad-bridges and dangerous sections of the road to receive the car-wheels in case they leave the rails, and to return them again to their proper place without injury to the train or track or road-bed.

My invention consists in a safety-rail with grooves upon each side sufficiently large to receive the wheels when they leave the main rail, along which grooves the wheels can travel, together with inclined planes and a frog arranged to restore a derailed train to the track.

Heretofore guards have been used to prevent the wheels of cars when derailed from going very far from the track upon either side; but no provision has been made to prevent the wheels from coming in contact with the bridge-timbers or ties, to the destruction of the train or road-bed. By my invention whenever the wheels leave the rails they are caught in a safety-track, which extends along each side of the main rail in the form of a gutter, which receives the wheels and allows them to travel therein until the wheels are raised to the level of the main track, and are replaced in their proper position without materially affecting the rate of speed or producing any injurious jar.

Figures 1 and 2 are plan views, illustrating my invention. Figs. 1^a, 3, 4, 5, and 6 are sections on lines 1 1, 3 3, 4 4, 5 5, and 6 6 of Fig. 2. Figs. 7, 8, 9, 10, 11, and 12 are details, Figs. 7 and 8 being a plan and side view of one member of my safety-switch; Figs. 9 and 10, plans, and Figs. 11 and 12 side views, of the inner parts of my safety-switch. Figs. 13 and 14 are modifications.

In Fig. 1, A is the main rail. B and B' are safety-rails placed one upon either side of rail A, and consist of a track of sufficient width to allow the car-wheels to travel freely

therein, as clearly shown in Fig. 1^a, which is a section showing the main rail A and the safety-rails B B'. Rail A is shown in Figs. 1 and 2 as rolled in one piece with B and B'; but this construction may be obviously modified. (See, for examples, Figs. 13 and 14.)

In Figs. 7 and 8, D is a wedge-shaped piece of iron, which is shown in place in Figs. 1 and 2 and in cross-section in Figs. 3, 4, 5, and 6. Pieces E and E' are shown detached in Figs. 9, 10, 11, and 12, and in place in Figs. 1 and 2, and in cross-section in Figs. 3, 4, 5, and 6. These pieces D E E' are secured within the safety-rails B and B' at some distance from the bridge, or near where the double or safety rail meets the single or common rail A', and safety-rails A B B', without the pieces D E E', extend over the bridge or other dangerous place between the safety-switches A D E E'. There is sufficient space upon either side of piece E' to allow the flange *l* of the wheel to pass between track A, and piece E', or, in case the wheel is off the track, between E' and the guard *b* of safety-rail B, and sufficient space between E' and E to allow the flange of the wheels to pass between them as the car is returned to track A by my safety-switch.

The operation is as follows: Ordinarily, of course, the wheels will run upon the usual rails, A A'; but whenever the wheels become derailed they are received by rails B and B', the right-hand wheel by B and the left-hand wheel by B', or vice versa, thus preventing their coming in contact with the ties, and allowing them to continue along in the safety-tracks a safe distance, or until they reach the safety-switch D E E', when the wheel in B', on one side of the track, will travel up the incline D, and the wheel in B on the other side will travel up the incline E', the flange of the wheel in B passing between E' and *b*, and the flange of the wheel in B' passing up the incline D until the flange of the wheel in B strikes the frog E, the flange being then between E and E', and the frog E guiding the wheels slightly and gradually to one side until the flange of the wheel in B' passes over rail A and enters the space between rail A and frog E, the flange of the wheel in B at the same time entering the space between the other frog

E and the other rail A—that is, the safety-switch replaces the derailed wheels upon the tracks A.

It will be observed that while the flange of the wheel in track B is simply brought against or in proper relation with the side of rail A, the flange of the opposite wheel in B' is raised to the top of rail A and carried across rail A until the wheel drops into place with its flange in proper relation to the inside of rail A, the tread, of course, upon rail A.

What I claim is—

1. The safety-rail above described, composed of the rail A and the trough-like tracks B B', substantially as and for the purpose specified.

2. In combination, rails A, inclines D upon

the outside of rails A, and frogs E E E' E' between rails A, the whole forming a safety-switch, substantially as described.

3. In combination, rails A, two pairs of inclines, D D D D, butt to butt, and on the outside of the rails, two pairs of frogs, E E, butt to butt, on the inside of the rails, and two other pairs of frogs, E' E', point to point, and between the rails A A, substantially as described.

4. In combination, two sets of safety-switches, A D E E', with the safety-rails A B B' between them, substantially as described.

NATHANIEL CHASE LOCKE.

Witnesses:

EDWARD S. BEACH,
JOHN R. SNOW.