

(No Model.)

J. N. SARGENT.

RAILROAD FROG.

No. 328,815.

Patented Oct. 20, 1885.

Fig 1

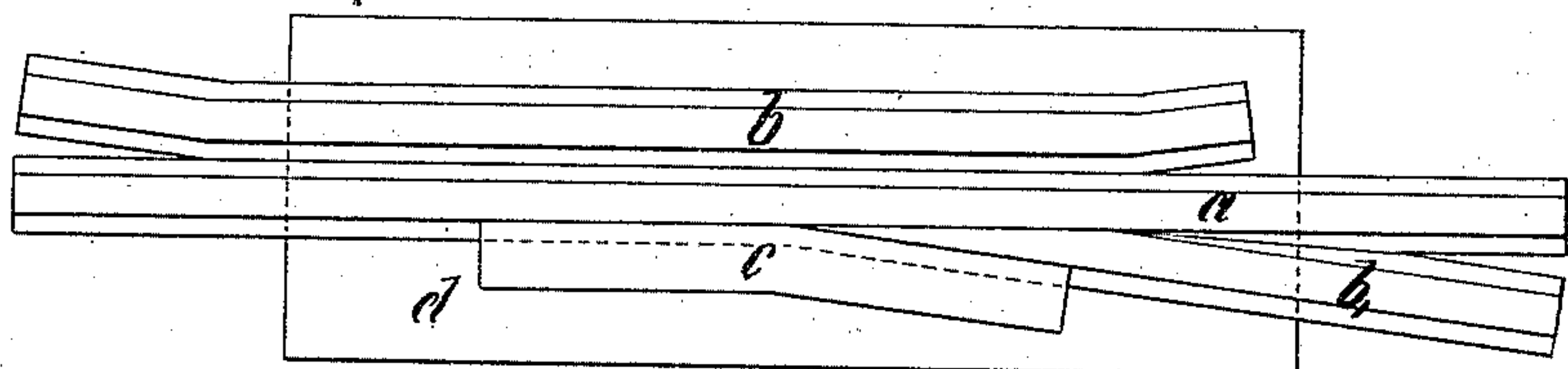


Fig 2

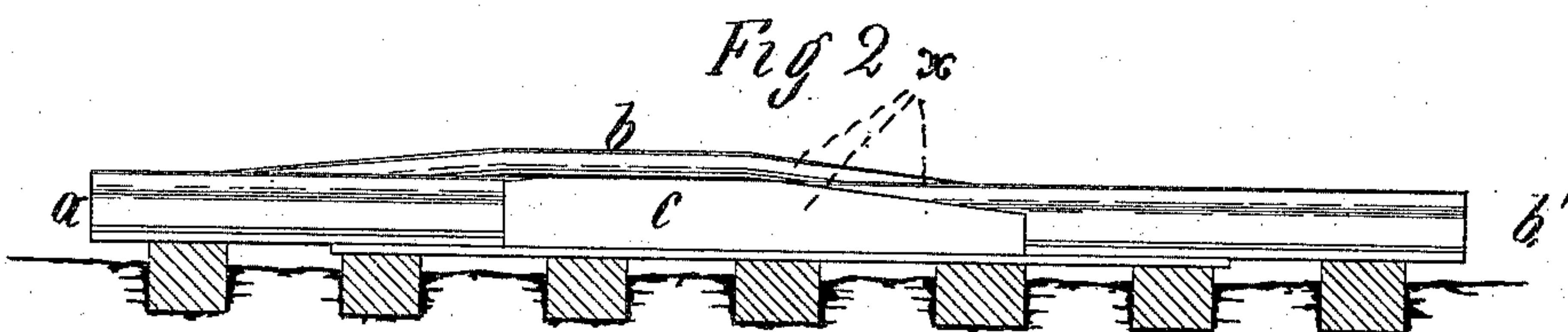


Fig 5.

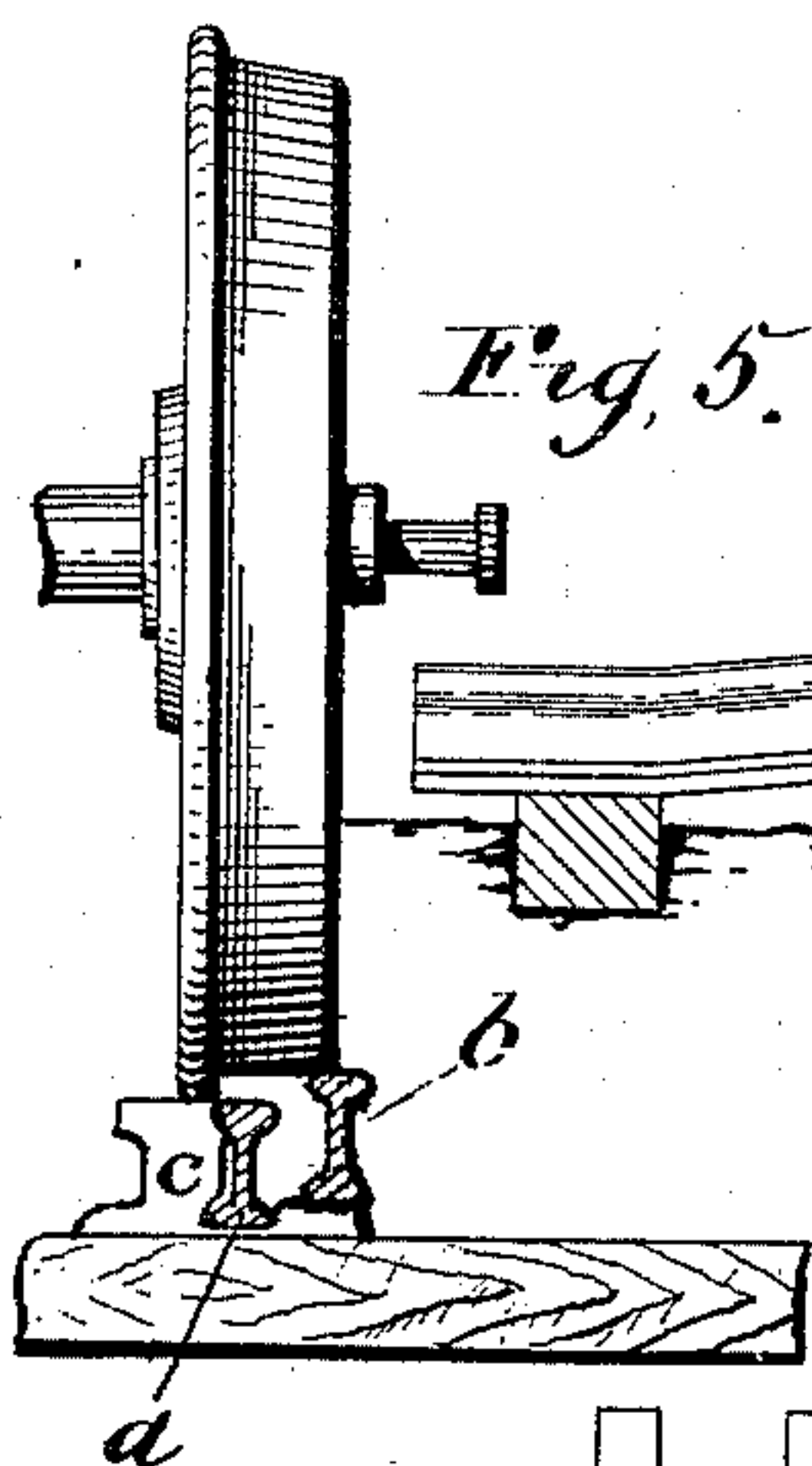


Fig 3

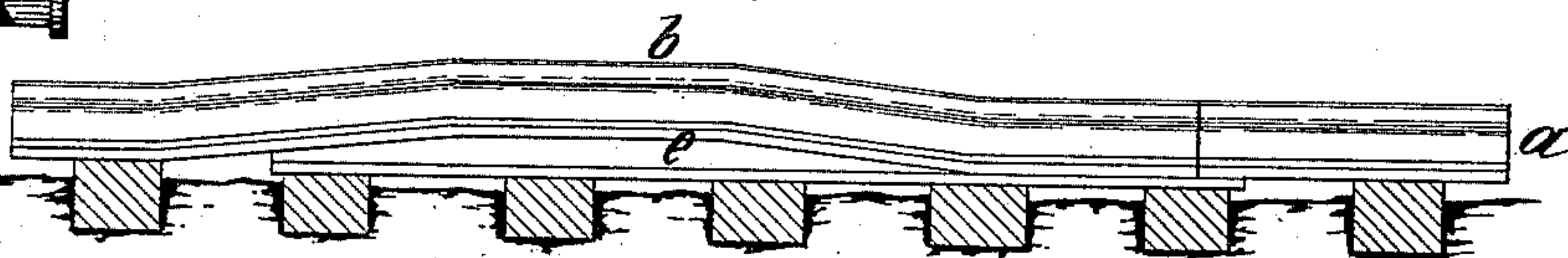
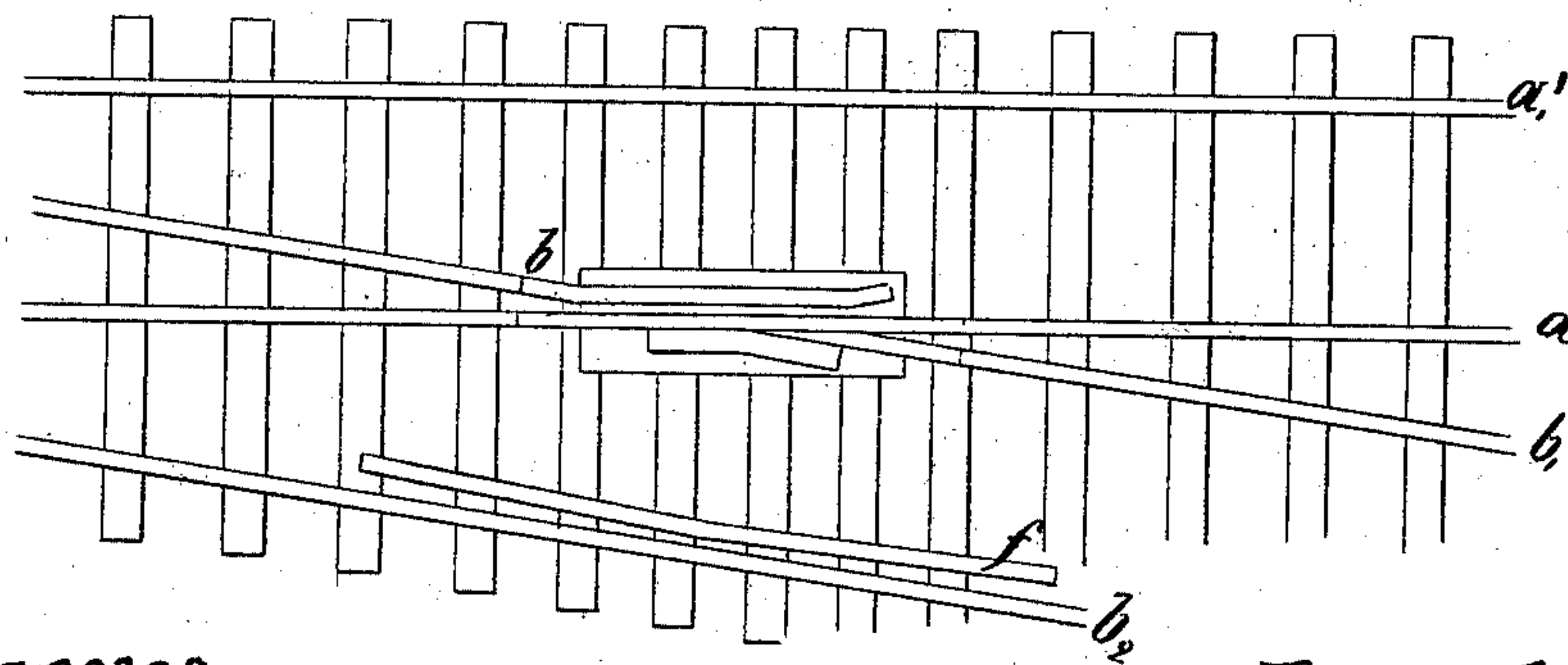


Fig 4



Witnesses:

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JOHN N. SARGENT, OF AURORA, INDIANA.

RAILROAD-FROG.

SPECIFICATION forming part of Letters Patent No. 328,815, dated October 20, 1885.

Application filed April 24, 1884. Serial No. 129,144. (No model.)

To all whom it may concern:

Be it known that I, JOHN N. SARGENT, a citizen of the United States, residing at Aurora, in the county of Dearborn and State of Indiana, have invented certain new and useful Improvements in Railroad-Frogs, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to railroad-frogs, and is adapted to all kinds of tracks where steam, horse, or hand cars may be used.

The objects of my invention are to dispense with the railroad-frog and guard-rail on the main track now so commonly in use, and in their stead substitute a simple and much more safe, durable, and inexpensive device, whereby the rails in the main track are left continuous and unbroken. By this arrangement a train can pass the intersection of a side track with as great speed and as much safety as it can the other parts of the track.

To this end my invention consists in the construction, arrangement, and combination of parts which will be fully described hereinafter and the points of novelty of which will be specifically set forth in the claims.

In the drawings, Figure 1 represents a section of the inside rails of the main and side tracks, the lifting-bar, and bed-plate. Fig. 2 represents the elevated rail, the continuous rail, lifting-bar, and bed-plate, as seen from the side-track side. Fig. 3 represents the elevated rail, continuous rail, double wedge-shaped support, and bed-plate. Fig. 4 represents a section of the main and side tracks embodying my invention. Fig. 5 is a cross-section of my improved frog, taken on the lines *s*, Fig. 4, showing the relative position of wheel, inner rail of main track, and lifting-bar when weight of the wheel is transferred over the inner rail of the main track from the inner rail of the side track.

a represents the continuous rails of the main track.

b represents the elevated rail, which is a continuation of the inside rail of the side track, and extends a considerable distance beyond the point where the inside rails of the main and side tracks intersect.

c represents the lifting-bar, which is situated on the outside of the continuous rail at a point opposite where the inside rails of the main and

side tracks intersect, and extends the entire length of the frogs to each side of the intersecting point. This bar is constructed with an angle in the center, which, when the bar is in position, is opposite the point of intersection. The acuteness of the angle is always made to conform to the angle made by the intersection of the inside rails of the main and side tracks.

d represents the bed-plate.

e represents a double wedge-shaped bar, which supports the elevated rail.

f represents the guard-rail of the side track.

b' represents the inside rail of the side track on the outside of the continuous rail of the main track.

a' represents the outside rail of the main track.

b'' represents the outside rail of the side track.

x represents the elevated rail *b*, side-track rail *b'*, and lifting-bar *c* at the point of intersection, as shown in Fig. 2.

The operation is as follows: The switch being thrown for the cars to enter the side track, the wheels on the inside of the side track are gradually raised by the elevated rail up and over the continuous rail of the main track until the flange of the wheel rests on the lifting-bar. The guard-rail on the side track causes the outside wheels to hug close to the outside rail of the side track, so that the flanges of the inside wheel are carried over the continuous rail and onto and down the top of the lifting-bar until the face of the wheels rests on the rail proper of the side track. In moving the cars out of the side track, the flanges of the inside wheels enter upon the lifting-bar, and are carried up until the face of the wheel rests upon the elevated rail *b*, which raises the wheel still higher until the flange passes over the continuous rail without contact.

It will be observed that the elevated rail *b* and block *c* extend the entire length of the frog, and are placed opposite the point of intersection, which entirely prevents the flange of the wheel from striking or riding on the main rail. It will further be seen that the continuous rail, elevated rail, and lifting-bar rest on a common bed-plate, which keeps the different parts of the frog in their proper relative height.

The intersecting ends, as is shown by the letter *x*, of the side-track rail extend beyond the point of meeting on opposite sides of the

continuous rail. In this way the tread of the wheel is made to strike the elevated rail *b* before the flange reaches the continuous rail. The wheel is thus carried up and over the continuous rail without contact.

Having thus described my invention and the best means at present known to me for operating the same, what I desire to secure by Letters Patent is—

10 1. In a railroad-frog, the combination, with the elevated rail located as described, of the double wedge-shaped support therefor, the whole being arranged on a suitable bed-plate, substantially as described.

2. In a railroad-frog, the combination, with 15 the main track, of the elevated rail *b*, double wedge-shaped supports therefor, and a lifting-bar, *c*, constructed with an angle in its length, substantially as described.

The foregoing specification of invention 20 signed by JOHN N. SARGENT this 17th day of April, A. D. 1884.

JOHN N. SARGENT.

Witnesses:

W. R. STEDMAN,
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