B. BEVELANDER.

STREET RAILWAY SWITCH.

No. 176,161. Patented April 18, 1876.

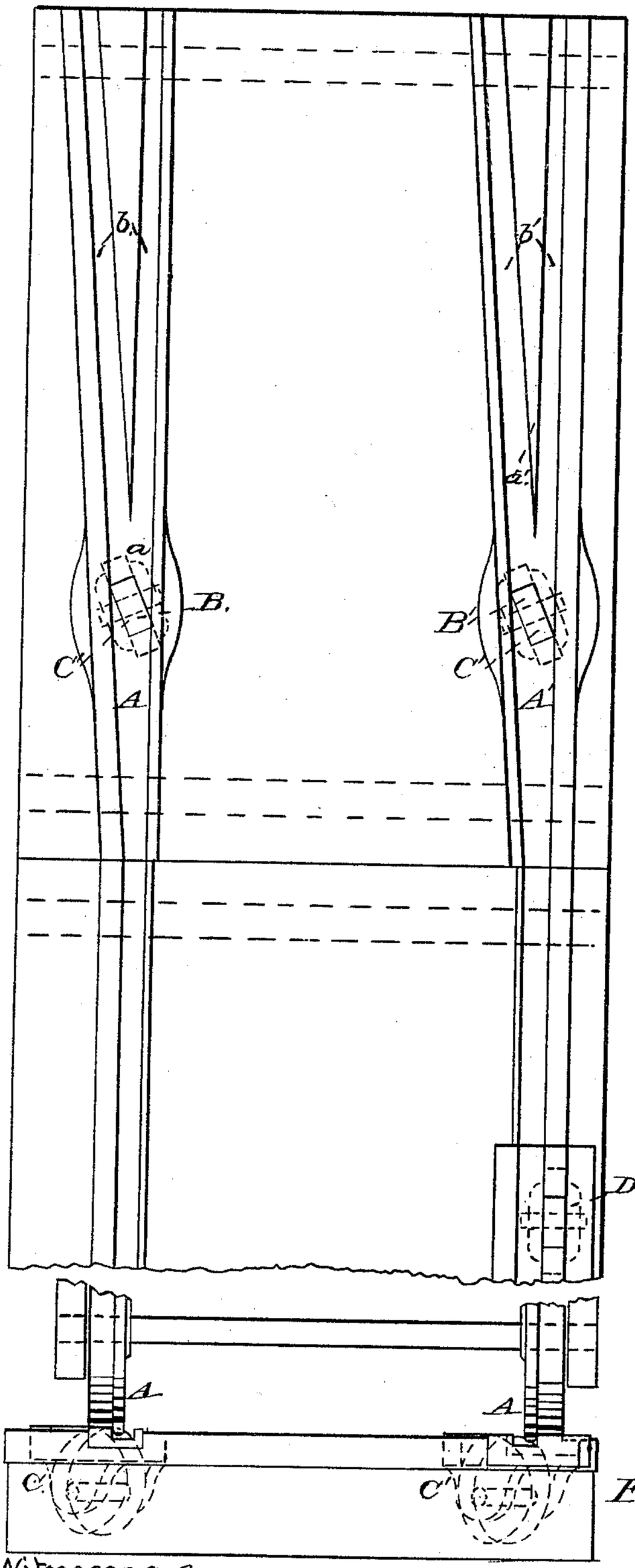

Fig. 1.

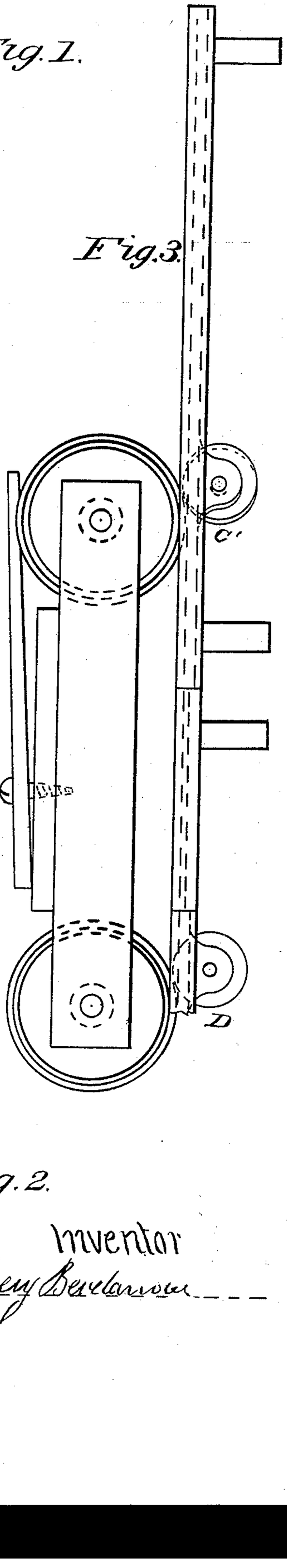

Fig. 3.

Fig. 2.

Witnesses
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BENJAMIN BEVELANDER, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN STREET-RAILWAY SWITCHES.

Specification forming part of Letters Patent No. **176,161**, dated April 18, 1876; application filed January 31, 1876.

To all whom it may concern:

Be it known that I, BENJAMIN BEVELANDER, of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Horse-Railway Switch, of which the following is a specification:

This invention has for its object a horse-railway switch so constructed that the transfer of the car from one track to another shall be automatic.

I will explain my invention with the aid of the accompanying drawing, forming a part of this specification.

Figure 1 is a plan of the switch, showing my invention. Fig. 2 is a vertical cross-section of the same, and Fig. 3 is a side elevation.

The frogs A A′ are plain solid castings, with short immovable tongues or points *a a′* and converging grooves *b b′*. Immediately in front of the tongues *a a′* are the diagonal openings *c c′*, arranged at a somewhat greater angle in relation to the main track than the angle formed by the converging tracks. Arranged to revolve on suitable bearings beneath the openings are the guiding-wheels B B′, adjusted to operate in the openings, rising above the level of the grooves about half the height of the flange-rails, and closing the openings. The surface of the grooves abutting the openings is built up to correspond with the curvature of the wheels.

The above description embraces the principal features of my invention. If, however, it is desirable to assist the sliding of the rear car-wheels as the front ones enter the switch, the wheel D may be inserted in the outer main rail to rise slightly above the tread, and help the action of the guiding-wheels in throwing the car onto the switch by relieving the friction caused by the "creep."

The operation of switching is regulated by the brake; for instance, if it is desirable to continue on the straight track, the brakes are not applied, and the car-wheels pass the guiding-wheels without developing any friction, and consequently are not turned from a straight direction. When, however, it is necessary to turn from the straight or main track, the brake is applied sufficiently to create a friction between the contiguous surfaces of the car-wheels and guiding-wheels, thus causing the guiding-wheels to throw the front wheels onto the side track.

It is requisite merely to cause the car-wheels to revolve less easily than the guiding-wheels to insure their operation.

Having thus fully described my invention, I claim and desire to secure by Letters Patent—

1. In a horse-railway switch, the guiding-wheels *c c′*, arranged to project their peripheries diagonally across the grooves in the frogs at an angle greater than that of the converging rails, substantially as and for the purpose described.

2. In a horse-railway switch, the combination of the frog A with the guiding-wheel *c*, substantially as described.

3. The combination of the frog A and guiding-wheel, substantially as described, with the wheel D, all arranged and operating substantially as described.

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