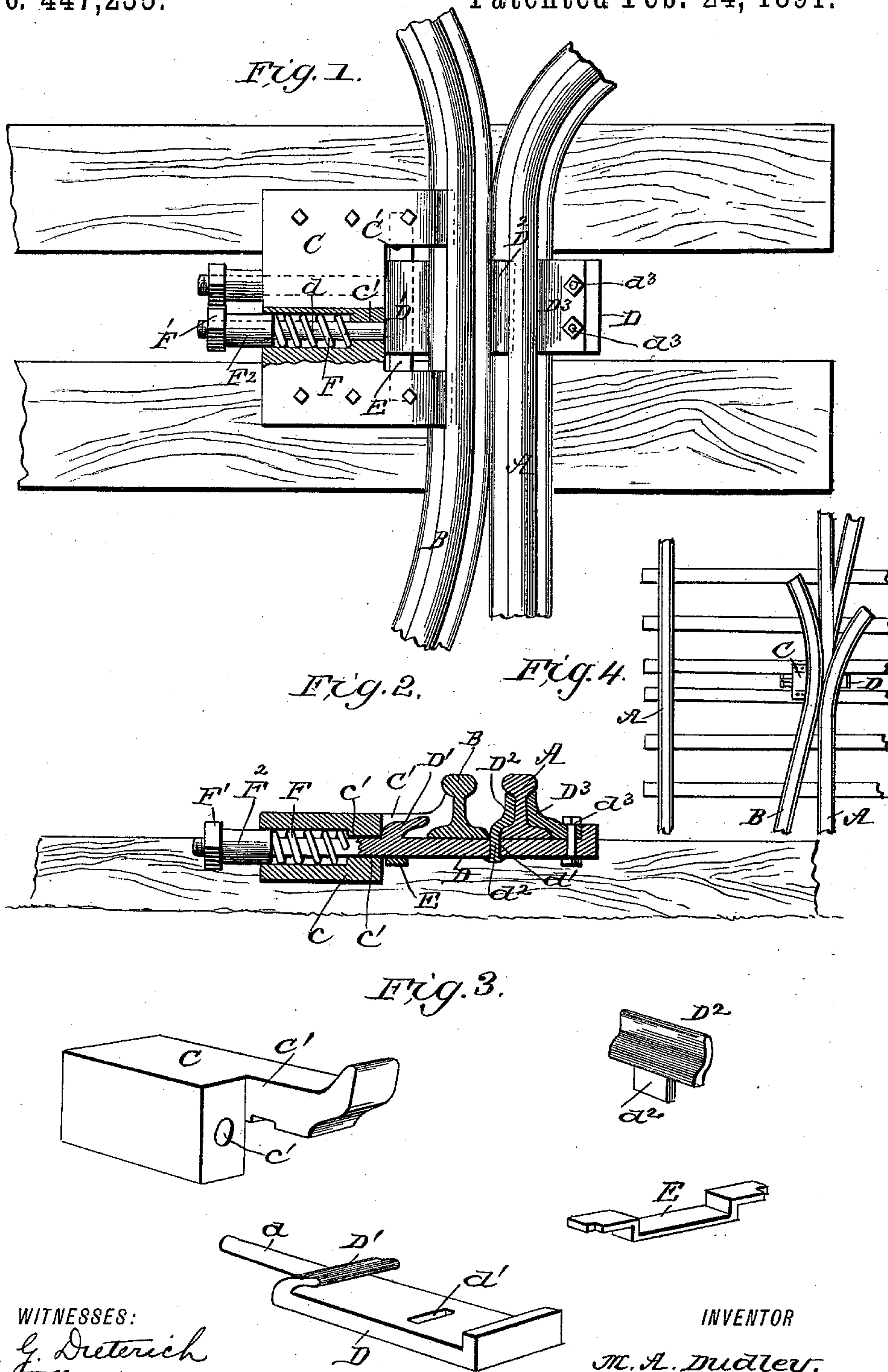


(No Model.)

M. A. DUDLEY.
RAILROAD FROG.

No. 447,235.

Patented Feb. 24, 1891.



WITNESSES:
Fred G. Dieterich
Jos. A. Ryan

INVENTOR
M. A. Dudley
BY *M. A. Dudley*
ATTORNEY

UNITED STATES PATENT OFFICE.

MASON A. DUDLEY, OF BUFFALO FORGE, VIRGINIA.

RAILROAD-FROG.

SPECIFICATION forming part of Letters Patent No. 447,235, dated February 24, 1891.

Application filed May 26, 1890. Serial No. 353,281. (No model.)

To all whom it may concern:

Be it known that I, MASON A. DUDLEY, of Buffalo Forge, in the county of Rockbridge and State of Virginia, have invented a new and useful Improvement in Railroad-Frogs, of which the following is a specification.

My invention relates, generally, to railroad-frogs, and particularly to a spring-frog, the object of which is to provide a frog that shall be safe at all times no matter whether all the parts are in proper working order or not.

A further object is to provide a frog of the character described that shall be cheap, simple, and durable in construction, safe, and efficient in operation.

With these objects in view my invention consists of a fixed wing-rail, a plate sliding beneath the same, and a movable wing-rail secured to the plate, said plate being adapted to be sprung outwardly when the wheel passes; and my invention consists, further, in certain details of construction and combination of parts, as will be hereinafter explained.

In the drawings forming a part of this specification, Figure 1 is a top plan view of my improved frog. Fig. 2 is a central vertical section of the same. Fig. 3 shows in detail the various parts detached; and Fig. 4 is a portion of track, showing the position of my improved frog.

Referring to the drawings, B indicates a fixed rail, which is secured to the cross-ties in the usual manner. A brace C is secured upon the inner side of said rail, said brace being spiked to two adjacent ties, and between the ties is a depending portion *c*, preferably integral with the brace. The depending portion is formed with one or more horizontal bores *c'*, extending transversely to the rail B, and through said bore or bores are passed the bolts *d*, formed integral with the inner side of the sliding plate D, the movable rail A being secured to the outer end of said plate between the rail-braces D² and D³, the brace D² having an ear *d*², adapted to pass through an aperture *d'*, formed in the plate D, the end being clinched or riveted beneath the said plate. The brace D³ is secured by the bolt and nut *d*³. The sliding plate is supported and guided by the clip or strap E, said strap being secured to either the brace C or to the cross-ties. It is preferred, however, to have

the ends of said guiding-clip rest in recesses formed in the brace C. This brace is recessed on its outer face at C', and working in said recess is a shoulder D', formed integral with the plate D, the purpose of said shoulder being to limit the outward movement of the sliding plate and movable rail.

To return the movable rail to its normal position, I employ spiral springs F, said springs being coiled around the ends of the bolts *d*, the inner ends of the bores *c'* being enlarged to permit the insertion of the springs and form a shoulder for them to bear against. The inner ends of the bolts are threaded to receive the nuts F', washers or sleeves F² being interposed between the springs and nuts, as shown. The shoulder D' is so arranged that it engages the rail B, and outer rail A cannot move outwardly a distance sufficient to permit a wheel to slip between the rails, and should the bolts become broken the movement will be limited in precisely the same manner.

My improved device is placed a short distance in advance of the frog, and is arranged, as usual, to permit the passage of wheels in one direction, and when the wheel enters at an oblique angle the movable rail will be sprung out sufficiently to permit the wheel to pass, and the moment the wheel has passed the springs will force the rail back to its normal position. Should the bolts and springs become broken, the shoulder D' will still abut against the rail B and limit the movement of the outer rail, so that it will be impossible for a wheel to slip between the rails, as is so often done with the ordinary switch. All of the operative parts being beneath the rails, there is little or no danger of the parts being broken.

Many of the frogs now in use have their bolts and connecting parts broken by dragging chains or brake-rods. These accidents could not occur with my improvement.

Having thus described my invention, what I claim as new is—

1. In a railway-frog, the combination, with a fixed wing-rail, of a spring-actuated slide-plate arranged beneath the same, and a movable wing-rail secured to the said plate, substantially as shown and described.

2. In a frog, the combination, with a fixed wing-rail, of a sliding plate arranged beneath

the same and provided with a shoulder to engage the fixed rail, and a movable rail secured to the sliding plate, substantially as shown and described.

5 3. The combination, with a fixed wing-rail, of a brace secured contiguous therewith, a plate sliding beneath the rail and provided with bolts sliding in the brace, and a shoulder adapted to engage the fixed wing-rail, and a
10 movable wing-rail secured to the sliding plate, substantially as shown and described.

4. The combination, with the fixed wing-rail, of its brace recessed and apertured as described, the sliding plate arranged beneath the
15 rail and provided with bolts sliding in the brace and a shoulder adapted to engage the rail, the

movable wing-rail secured to the outer end of the plate, and springs arranged upon the inner ends of the bolts to return the movable wing-rail to its normal position, substantially
20 as shown and described.

5. The combination, with the fixed rail B, of the brace C, recessed at C' and bored at c, the plate D, provided with the shoulder D' and bolts d, the movable rail A, braces D² and
25 D³, guiding-clip E, springs F, and nuts F', all arranged and adapted to operate substantially as shown and described.

MASON A. DUDLEY.

Witnesses:

JAMES M. UPDIKE,
JOSEPH S. MCCLURE.