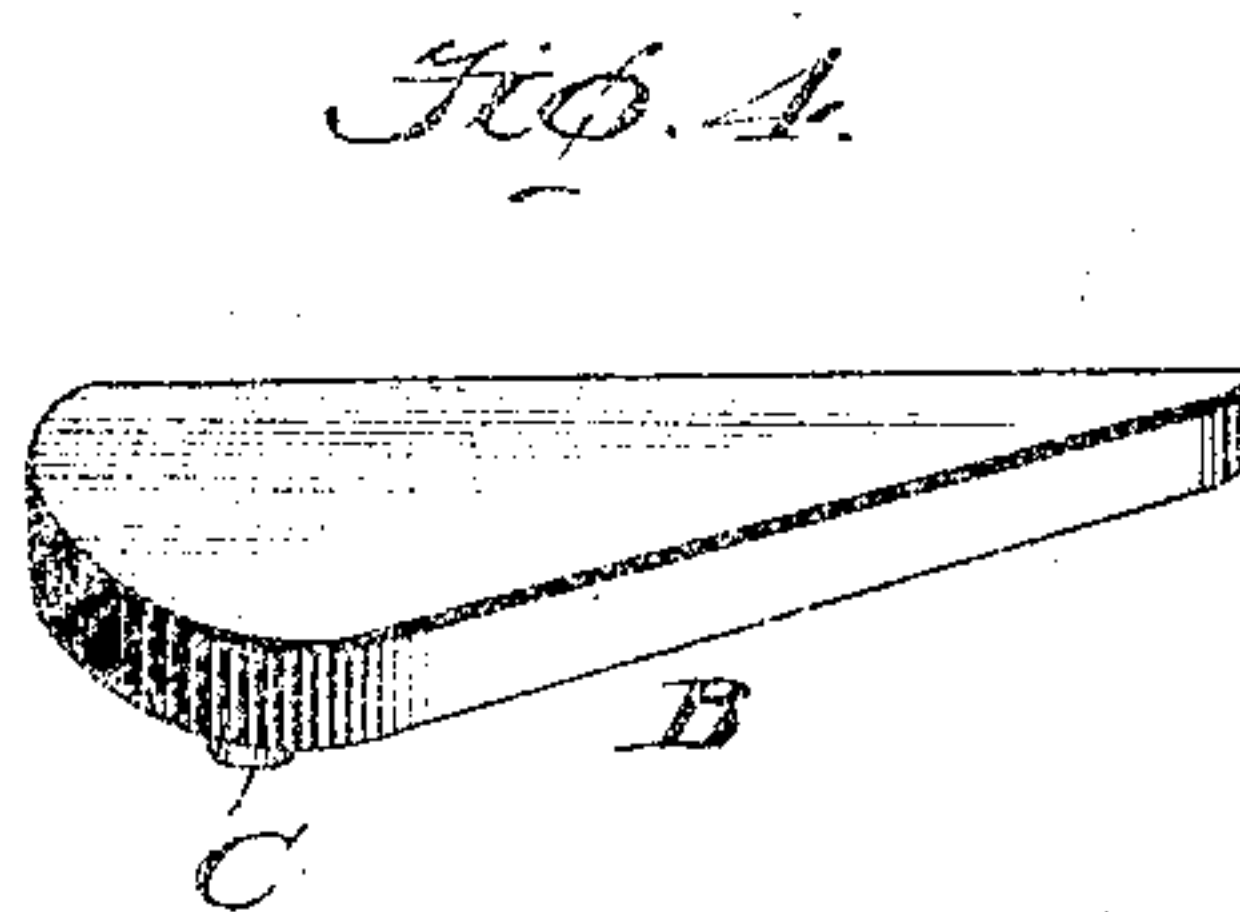
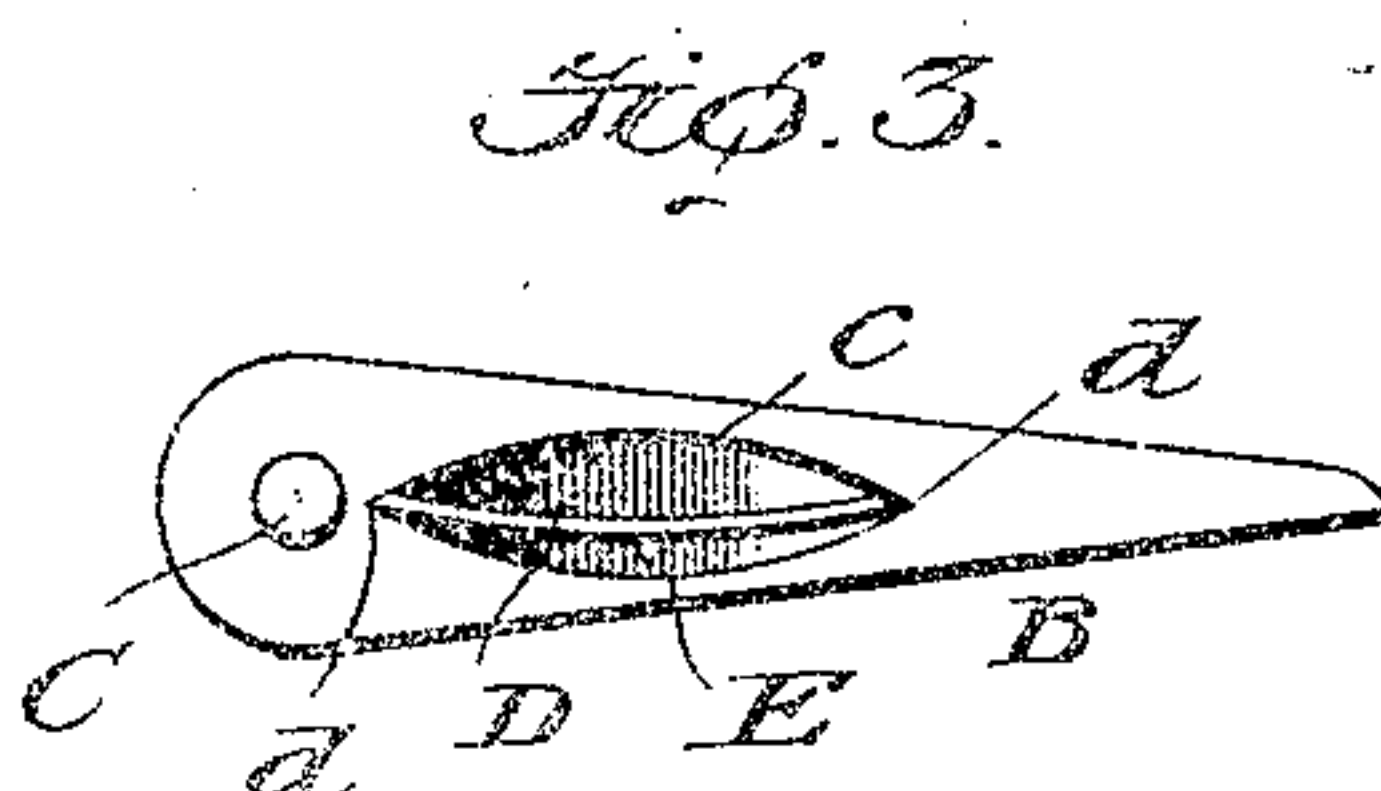
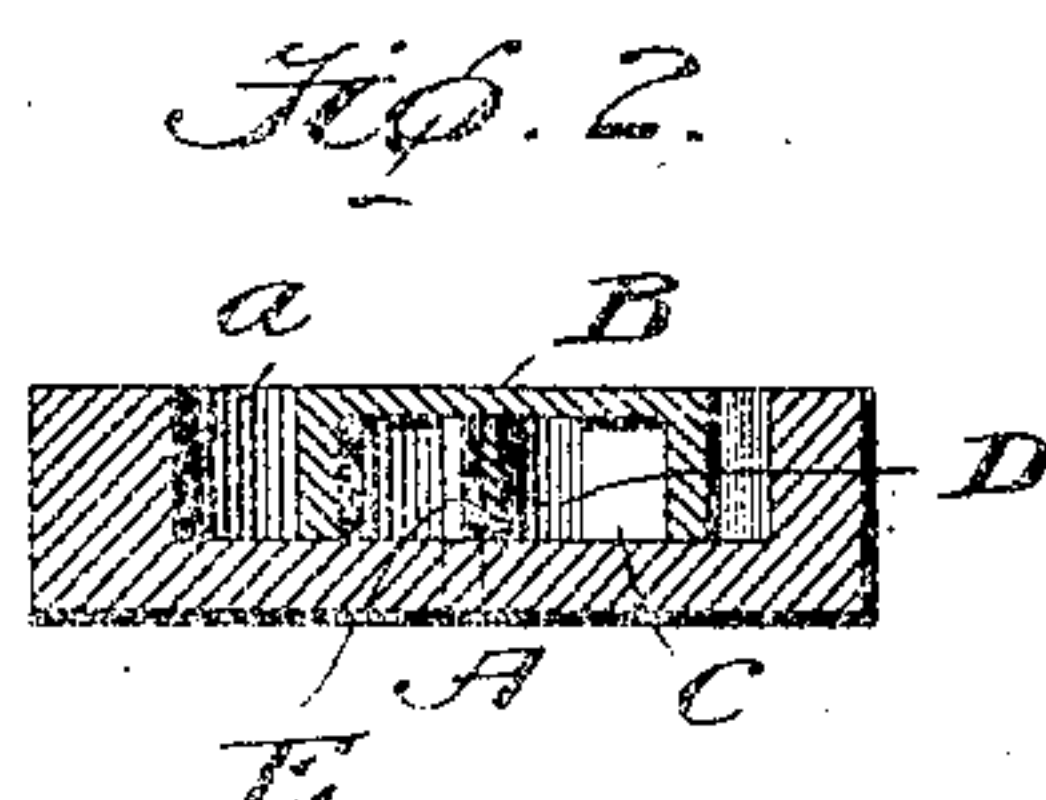
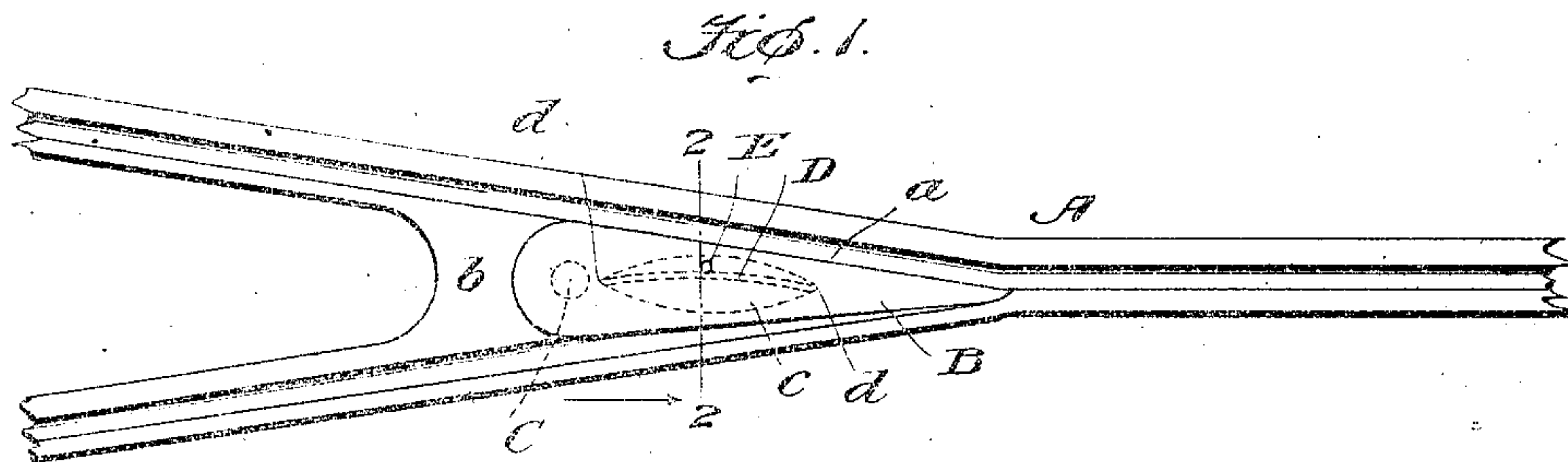


J. H. LANEY.  
RAILWAY PROG.  
APPLICATION FILED OCT. 27, 1908.

933,040.

Patented Aug. 31, 1909.



Inventor

Witnesses

*[Signature]*  
R. J. Doyle

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Attorney

# UNITED STATES PATENT OFFICE.

JOHN H. LANEY, OF MINNEAPOLIS, MINNESOTA, ASSIGNOR OF ONE-HALF TO FRANK A. REXFORD,  
OF MINNEAPOLIS, MINNESOTA.

## RAILWAY-FROG.

933,040.

Specification of Letters Patent.

Patented Aug. 31, 1909.

Application filed October 27, 1908. Serial No. 459,712.

*To all whom it may concern:*

Be it known that I, JOHN H. LANEY, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Railway-Frogs, of which the following is a specification.

My present invention has to do with railway frogs of the movable-rail type; and it seeks the provision of a frog constructed with a view of assuring a switch remaining open, and one which is simple and inexpensive in construction and in which the spring employed is housed in and protected by the movable rail and is, therefore, not liable to be deranged or broken or affected by the elements.

To the attainment of the foregoing the invention consists in the movable-rail frog hereinafter described and particularly pointed out in the claims appended.

In the accompanying drawings which are hereby made a part hereof: Figure 1 is a plan view of a movable-rail frog constituting a practical embodiment of my invention; the movable-rail or tongue being shown in its normal position. Fig. 2 is a transverse section, taken in the plane indicated by the line 2--2 of Fig. 1. Fig. 3 is an inverted plan view of the movable rail or frog, illustrating the housing of the spring therein. Fig. 4 is a perspective view of the movable-rail or frog *per se* as the same appears when removed from the fixed body of the frog.

Similar letters designate corresponding parts in all of the views of the drawings, referring to which: A is the fixed body of the best practical embodiment of my invention of which I am cognizant. The said body A is provided in its upper side at *a* with a space for the play of the movable-rail or tongue, hereinafter described, and is also preferably provided, in rear of the said space *a* with a concave abutment *b*. Otherwise the body is preferably of the ordinary, well known construction, though it obviously may be of any other construction consonant with the purpose of my invention without involving departure from the scope of the same as defined in the claims appended.

B is the movable-rail or tongue comprised in my improvements. C is the pintle fix-

ing the center of movement of said rail or tongue, and D is the spring which has for its office by coöperation with a fixed abutment E to normally and yieldingly hold the rail or tongue B in and return it to the position shown in Fig. 1.

As shown in Figs. 1 and 3, the movable rail or tongue B is provided in its underside with a chamber *c* which is of general elliptical form in outline and is provided with sharp ends *d*. In the said chamber *c* is arranged the spring D which is slightly bowed and bears at its ends in the sharp ends *d* of the chamber, and at an intermediate point of its length against the abutment E which latter is preferably in the form of a pin, fixed to and rising from the bottom of the space *a* in body A, as shown. The pintle C of the rail or tongue B is preferably, though not necessarily, fixed with respect to the rail or tongue B and made to bear in a complementary socket in the body A.

It will be manifest from the foregoing that the heel of the rail B is disposed and adapted to work against the abutment *b*, and consequently shock or strain imposed against the point of the rail and toward the heel thereof will not be placed on the pintle C. It will also be manifest that the rail or tongue B will be yieldingly held in and returned to the position shown in Fig. 1, and yet will give laterally to the wheels of a train passing in the direction indicated by arrow in said figure so as to enable said train to freely and safely traverse the frog, and, subsequently to the passage of the train, will certainly return to and remain in the position shown.

It will further be readily understood from the foregoing that the tongue B alone is subjected to the blows and shocks incidental to the passage of a train and that it houses and protects against injury the housed spring D. From this latter it follows that the rail B also prevents rain, snow and moisture from gaining access to the spring, and consequently there is no liability of the rail or tongue becoming clogged or otherwise impaired.

By reference to Fig. 1, it will be readily understood that when the spring D is reversed and the abutment E is arranged at the opposite side of the spring, with reference to the position of the abutment shown in Fig. 1, the movable rail or tongue B may



be made to return to and normally rest against the opposite side of the play space *a* in body A.

It will be gathered from the foregoing that in addition to the advantages hereinbefore ascribed to my novel frog, the same is simple and inexpensive in construction, and, as a whole, is well adapted to withstand the shocks and strains and the general usage to which railway frogs are ordinarily subjected.

Having described my invention, what I claim and desire to secure by Letters Patent, is:

1. The combination in a railway frog, of a body having a play space and an abutment therein, a movable rail disposed in said space, and a spring housed in said movable rail and bearing at an intermediate point of its length against said abutment.

2. The combination in a railway frog, of a body having a play space and abutment therein, a swinging rail disposed in said space and having a chamber in its underside terminating in sharp ends, and a spring arranged in said chamber with its ends in the sharp ends thereof and bearing at an intermediate point of its length against said abutment.

3. The combination in a railway frog, of a body having a play space and a fixed abutment therein, a rail pivoted in the space and having in its underside a chamber of general elliptical form terminating in sharp ends,

and a bowed spring arranged in the chamber with its ends in the sharp ends thereof and bearing at an intermediate point of its length against the fixed abutment.

4. The combination in a railway frog, of a body having a play space and a pin-like abutment fixed therein and also having a concave abutment at one end of the space, a rail pivoted in the space and having a rounded heel opposed to the concave abutment and also having in its underside a chamber of general elliptical form terminating in sharp ends, and a bowed spring arranged in the chamber with its ends in the sharp ends thereof and bearing at an intermediate point in its length against the pin-like abutment which is received in the chamber.

5. The combination in a railway frog, of a body having an abutment, a swinging rail connected with the body and having in its underside a chamber which is of general elliptical form with sharp ends, and a bowed spring arranged in the chamber with its ends in the sharp ends thereof and bearing at an intermediate point of its length and in the chamber against the said fixed abutment.

In testimony whereof I affix my signature in presence of witnesses.

JOHN H. LANEY.

Witnesses:

F. A. REXFORD,  
GEO. E. YOUNG,  
OLGA H. OLSEN.