

(No Model.)

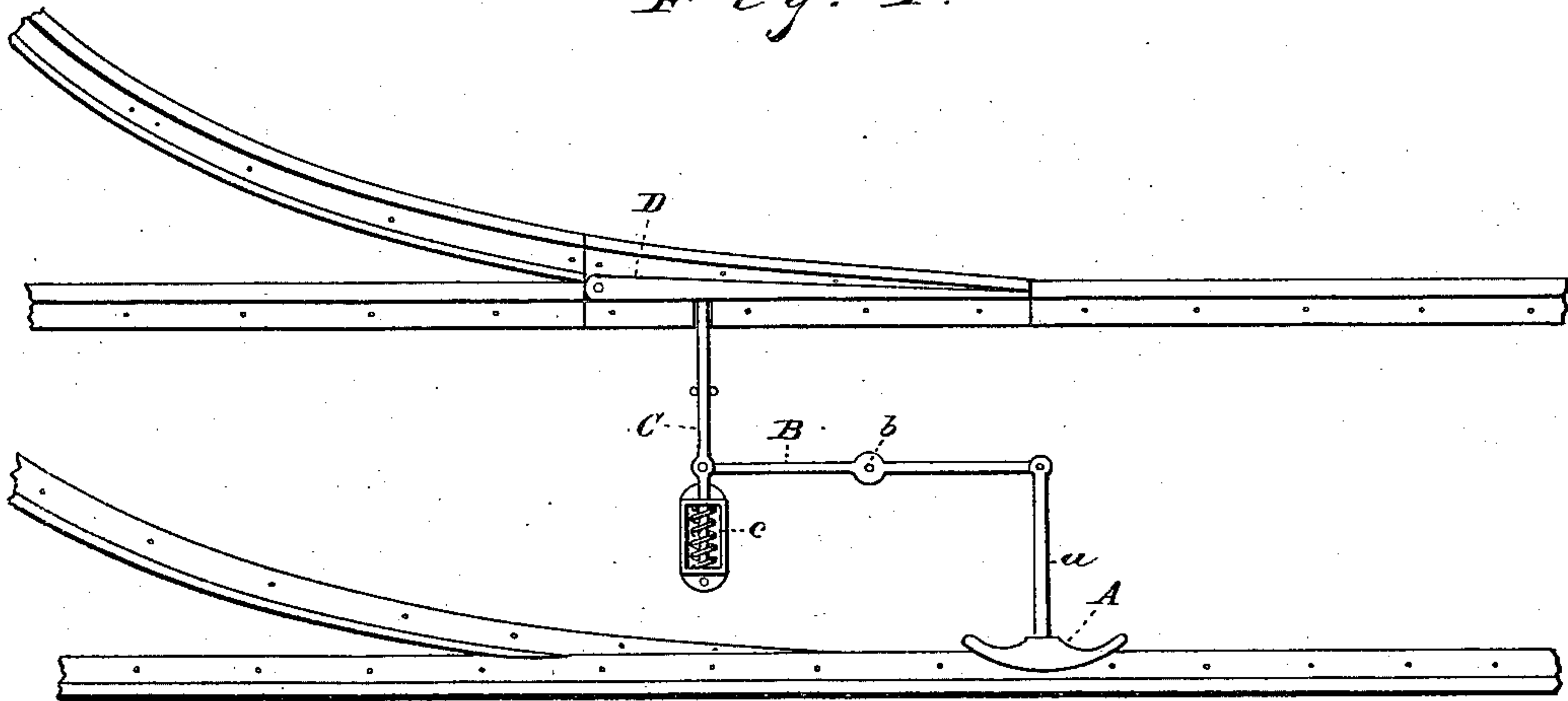
E. BILL.

AUTOMATIC STREET RAILWAY SWITCH.

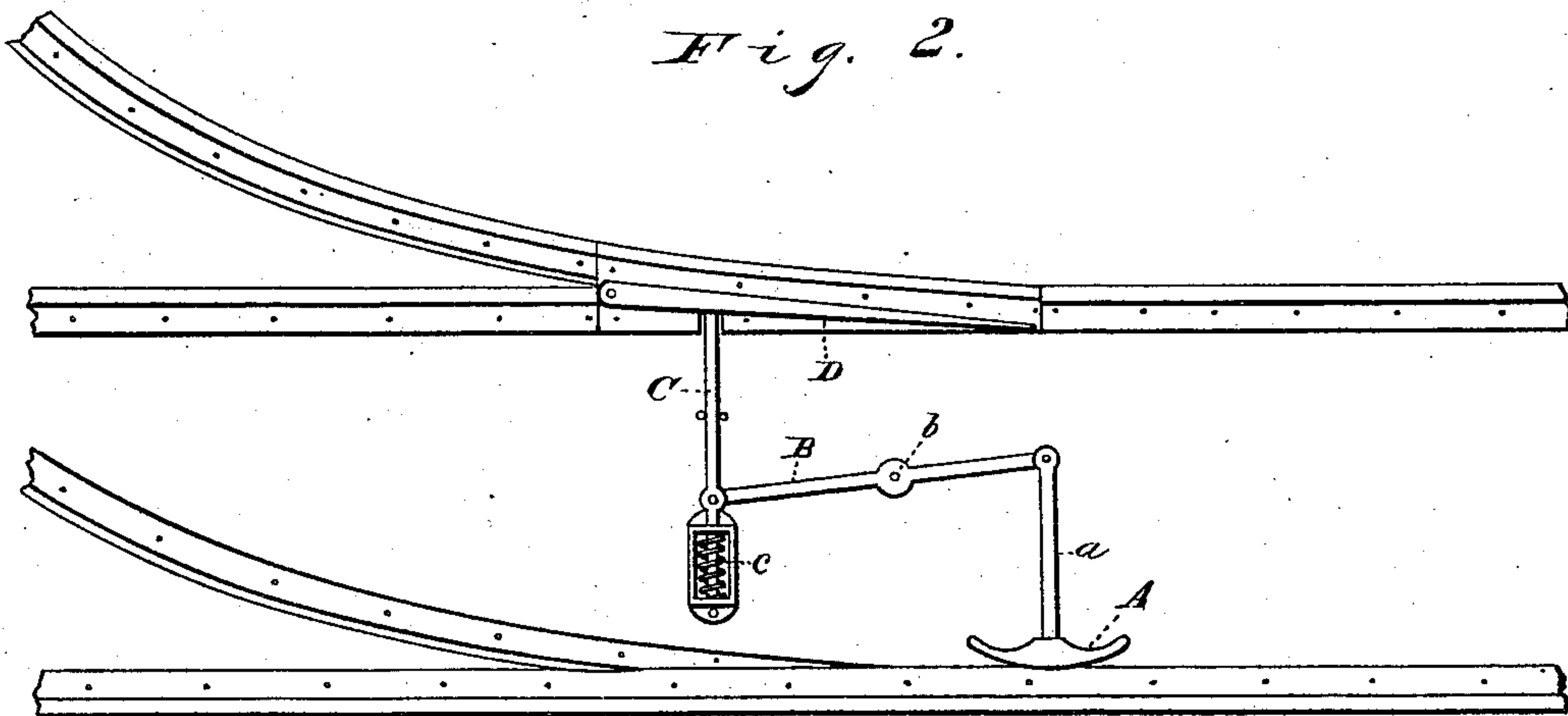
No. 291,138.

Patented Jan. 1, 1884.

*Fig. 1.*



*Fig. 2.*



WITNESSES

*W. Engel*  
*Geo. W. King*

*Earl Bill*

INVENTOR

*By Leggett & Leggett*

ATTORNEYS

# UNITED STATES PATENT OFFICE.

EARL BILL, OF CLEVELAND, OHIO.

## AUTOMATIC STREET-RAILWAY SWITCH.

SPECIFICATION forming part of Letters Patent No. 291,138, dated January 1, 1884.

Application filed June 9, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, EARL BILL, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful  
5 Improvements in Automatic Street-Railway Switches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use  
10 the same.

My invention relates to improvements in automatic railway-switches for horse-cars; and it consists in certain features of construction, and in combination of parts hereinafter described, and pointed out in the claims.  
15

In the drawings, Figures 1 and 2 are plan views of a switch embodying my invention, the former showing the switch in its normal condition—that is, closed—the latter showing  
20 the switch open.

A represents a cam-shaped block rigidly secured to the rod *a*, that is pivotally attached to the lever B. This lever is fulcrumed at *b*, and is pivotally attached to the rod C, which in  
25 turn connects with and actuates the tongue D. To some part of the device, preferably as shown, is attached a spring, as at *c*, that actuates the mechanism in the direction that closes the switch-tongue. As shown in Fig. 1, the  
30 switch-tongue is closed, forming a connection on the straight track, on which cars may pass in either direction without any change in the switch. The parts are kept in this position by means of the spring *c*, and it will be seen  
35 that the position of the block A leaves only a sufficient space between it and the contiguous tread of the rail for a free passage of the flanges of the wheels. When a car comes from the curved track onto the switch, the flange of the  
40 wheel will pass behind the tongue D and move it into the position shown in Fig. 2, so that the car may pass onto the straight track without difficulty. If the car approaches from the op-

posite direction, and is required to pass onto the curved track, the team, as it turns its course  
45 toward the curved track, will guide the car in the same direction and cause the flange of the car-wheel to engage the block A, and move it in the position shown in Fig. 2, thereby opening the switch-tongue, so that the flange on  
50 the opposite wheel may enter behind the tongue D and guide the car onto the curved track. It will be seen that the tongue, when the switch is open, is substantially parallel with the adjacent tread of the rail, and the  
55 tongue is of such length that the flange of the forward wheel remains behind it and holds it open until the flange of the rear wheel has entered behind the said tongue.

A stop should be placed behind the block  
60 A, so as to protect the lever B and other parts from unnecessary strain.

A cover should be made to protect, as far as possible, the mechanism herein described.

What I claim is—

1. In an automatic switch, the combination  
65 of a pivoted tongue, a sliding shifting-block situated in close proximity to the rail opposite the tongue, a lever situated between the rails, one end of the said lever being pivoted  
70 to the extension *a* of the sliding block, and a spring-actuated rod pivotally secured to the lever and to the sliding tongue, substantially as set forth.

2. The combination of the block A, the rod  
75 *a*, the lever B, the rod C, the spring *c*, and the tongue D, substantially as described, and for the purpose specified.

In testimony whereof I sign this specification, in the presence of two witnesses, this 2d  
80 day of June, 1883.

EARL BILL.

Witnesses:

ALBERT E. LYNCH,  
CHAS. H. DORER.