

No. 879,256.

PATENTED FEB. 18, 1908.

D. I. GRIFFITH.
RAILWAY SWITCH.

APPLICATION FILED AUG. 13, 1907.

2 SHEETS—SHEET 1.

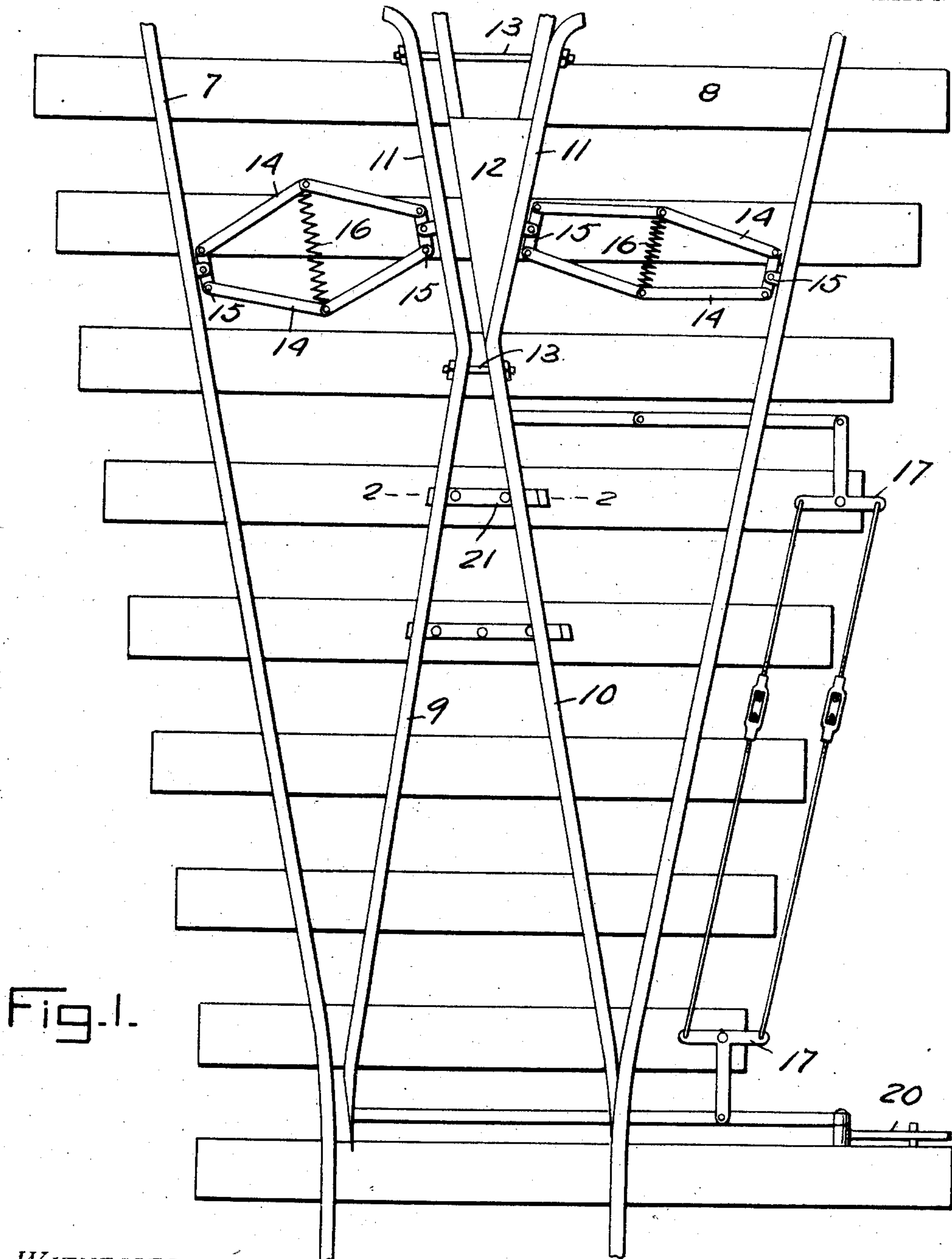


Fig. 1.

WITNESSES:

G. R. Thomas
H. M. Anthony

INVENTOR

David I. Griffith
BY *Charles H. Chandler*

Attorneys

No. 879,256.

PATENTED FEB. 18, 1908.

D. I. GRIFFITH.
RAILWAY SWITCH.

APPLICATION FILED AUG. 13, 1907.

2 SHEETS—SHEET 2.

Fig. 2.

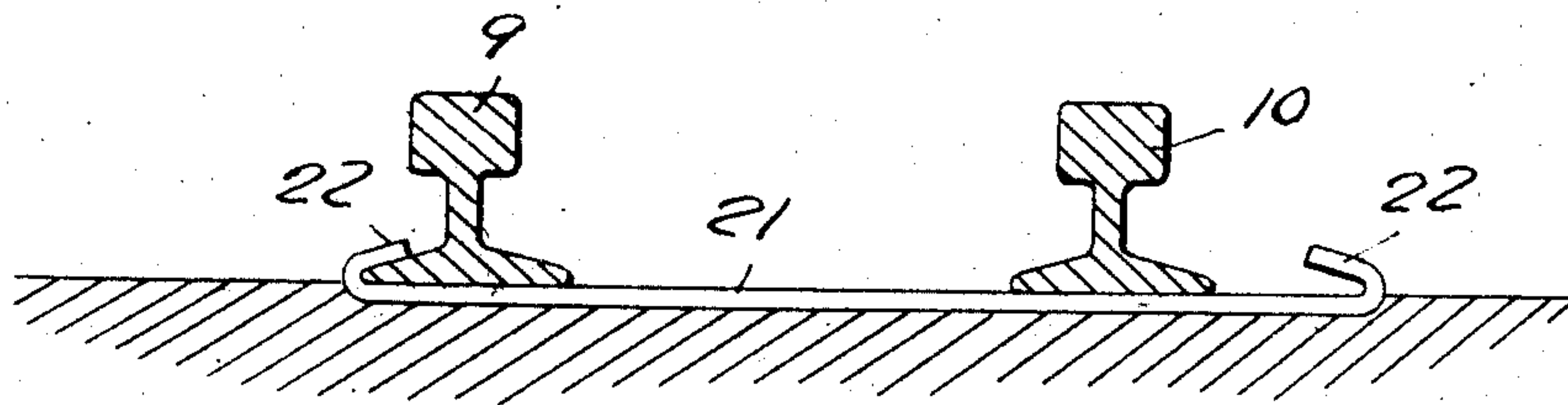


Fig. 3.

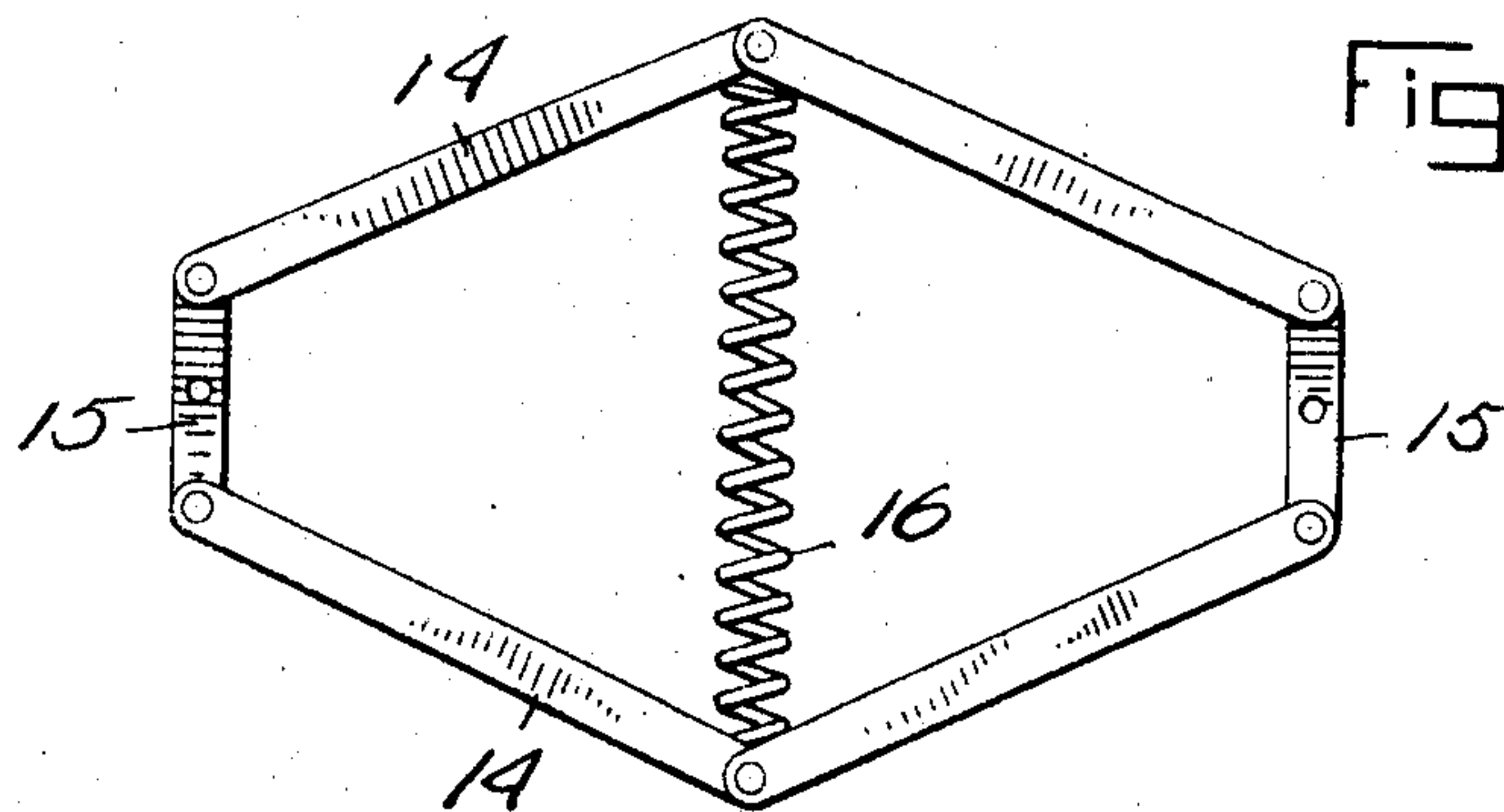
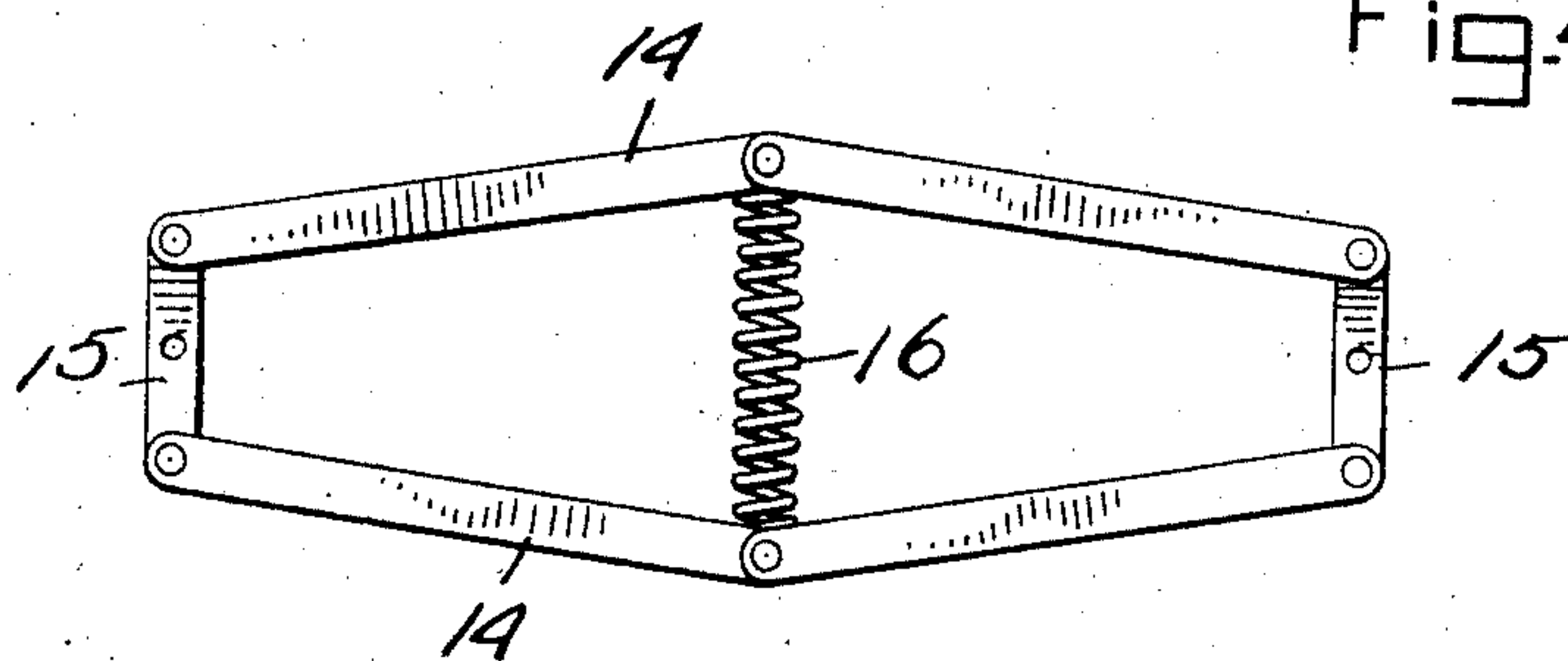


Fig. 4.



WITNESSES:

G. R. Thomas
Attorney

INVENTOR

David I. Griffith

BY Chandler Chandler

Attorneys

UNITED STATES PATENT OFFICE.

DAVID I. GRIFFITH, OF FROSTBURG, MARYLAND.

RAILWAY-SWITCH.

No. 879,256.

Specification of Letters Patent.

Patented Feb. 18, 1908.

Application filed August 13, 1907. Serial No. 388,371.

To all whom it may concern:

Be it known that I, DAVID I. GRIFFITH, a citizen of the United States, residing at Frostburg, in the county of Allegany, State of Maryland, have invented certain new and useful Improvements in 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 appertains to make and use the same.

The present invention has reference to railroad switches and it aims to provide an exceedingly simple, durable, and effective mechanism of that nature.

To this end the invention consists in the particular construction, combination, and arrangement of parts all as hereinafter fully described specifically claimed, and illustrated in the accompanying drawings, in which like parts are designated by corresponding reference numerals, throughout the several views.

Of the said drawings, Figure 1 is a plan view of a section of track with the improved switch closed, Fig. 2 is an enlarged detail section taken on the line 2—2 thereof and showing the stop-rod which limits the movement of the switch rail. Fig. 3 is an enlarged detail view of one of the spring-actuated toggles in its expanded position, Fig. 4 is a similar view of one of the toggles closed, or contracted.

Referring more particularly to the drawings, 7 designates the main track, 8 the side track, or siding, and 9 and 10 the switch rails between whose deflected front ends 11 the usual frog 12 extends, said rails, being connected together by a pair of bolts 13, one of which is disposed adjacent the point of the frog and the other adjacent the outwardly curved extremities of the switch rails.

Disposed between each switch rail and the adjacent track rails is a pair of oppositely-acting toggles 14 arranged transversely of the track towards the outwardly curved end of the switch rails, the members of each pair of toggles having their opposite ends connected together as indicated by the numeral 15, said ends being fastened to the adjacent switch and track rails, as shown. Between each pair of toggles is located an expansible coil-spring 16, which springs thus force the toggles away from each other to normally hold the switch rails out of contact with the sides of the frog, the tension of both springs being equal.

Movement of the switch rails against the action of said spring is accomplished by means of a pair of oppositely-disposed T-shaped or double bell crank levers 17 one of which has a link connection with the deflected end of the switch rail 10, while the other has a similar connection with the diagonally opposite end of the switch rail 9, the levers being connected by means of wires, cables, or rods, maintained taut by a turn-buckle. One of the bell crank levers has an operating lever 20 connected thereto.

From the foregoing description it will be apparent that when the switch operating lever is swung in one direction, the point end of the rail 9 will be withdrawn from contact with the adjacent track rail, while the deflected end of the rail 10 will be simultaneously forced against the adjacent face of the frog, thus closing the switch, to permit an approaching train to continue upon the main track, the point end of the rail 10 being forced into contact with the siding rail at the same time.

The movement of both rails will be reversed when the operating lever is moved in the opposite direction, whereupon the approaching train will be free to pass from the main track to the siding.

The outward movement of the switch rails is limited by a series of stop-rods 21, each of which has its opposite end 22 bent upwardly and directed toward each other said rods being secured in any manner upon the upper face of the ties forwardly of the frog, the switch rails being movable across the upper faces of said rods, as shown in Fig. 2.

What is claimed, is,

1. The combination, with the main and side tracks and the frog formed by the meeting inner rails thereof, of a pair of movable switch rails converging towards the frog and connected together adjacent thereto, the ends of said rails opposite the frog being deflected; means disposed between each switch rail and the corresponding track rail for normally holding the deflected ends of the switch rails out of contact with the sides of the frog; rods mounted upon the ties beneath the switch rails and provided with upstanding ends adapted to contact with and limit the outward movement of the switch rails under the action of said first-mentioned means, the switch rails being movable directly across the upper face of said rods; and means for operating the switch rails

simultaneously, to force the deflected end of one switch rail into contact with the adjacent sides of the frog against the action of the first-mentioned means, and the diagonally opposite end of the other switch rail away from the adjacent track rail, to open or close the switch.

2. The combination, with the main and side tracks and the frog formed by the meeting inner rails thereof, of a pair of movable switch rails converging towards the frog and connected together adjacent thereto, the ends of said rails opposite the frog being deflected a pair of oppositely-acting spring-actuated toggles disposed between each switch rail and the corresponding track rail, said toggles having their opposite ends connected with said rails, for normally holding the deflected ends of the switch rails out of contact with the sides of the frog; and means for operating the switch rails simultaneously, to force the deflected end of one switch rail, against the action of the corresponding pair of toggles, into contact with the adjacent side of the frog, and the diagonally opposite end of the other switch rail away from the adjacent track rail, to open or close the switch.

3. The combination, with the main and side tracks and a frog formed by the meeting inner rails thereof, of a pair of movable

switch rails converging towards the frog and connected together adjacent thereto, the ends of said rails opposite the frog being deflected; a pair of oppositely-acting spring-actuated toggles disposed between each switch rail and the corresponding track rail, said toggles having their opposite ends connected with said rails, for normally holding the deflected ends of the switch rail out of contact with the sides of the frog; rods mounted upon the ties beneath the switch rail and provided with upstanding ends adapted to contact with and limit the outward movement of the switch rails under the action of said toggles, said switch rails being movable directly across the upper face of said rods; and means for operating the switch rails simultaneously, to force the deflected end of one switch rail, against the action of the corresponding pair of toggles, into contact with the adjacent side of the frog, and the diagonally opposite end of the other switch rail away from the adjacent track rail, to open or close the switch.

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

DAVID I. GRIFFITH.

Witnesses:

HENRY GARFIELD ROBERTS,
JOHN W. DEVORE.