

(No Model.)

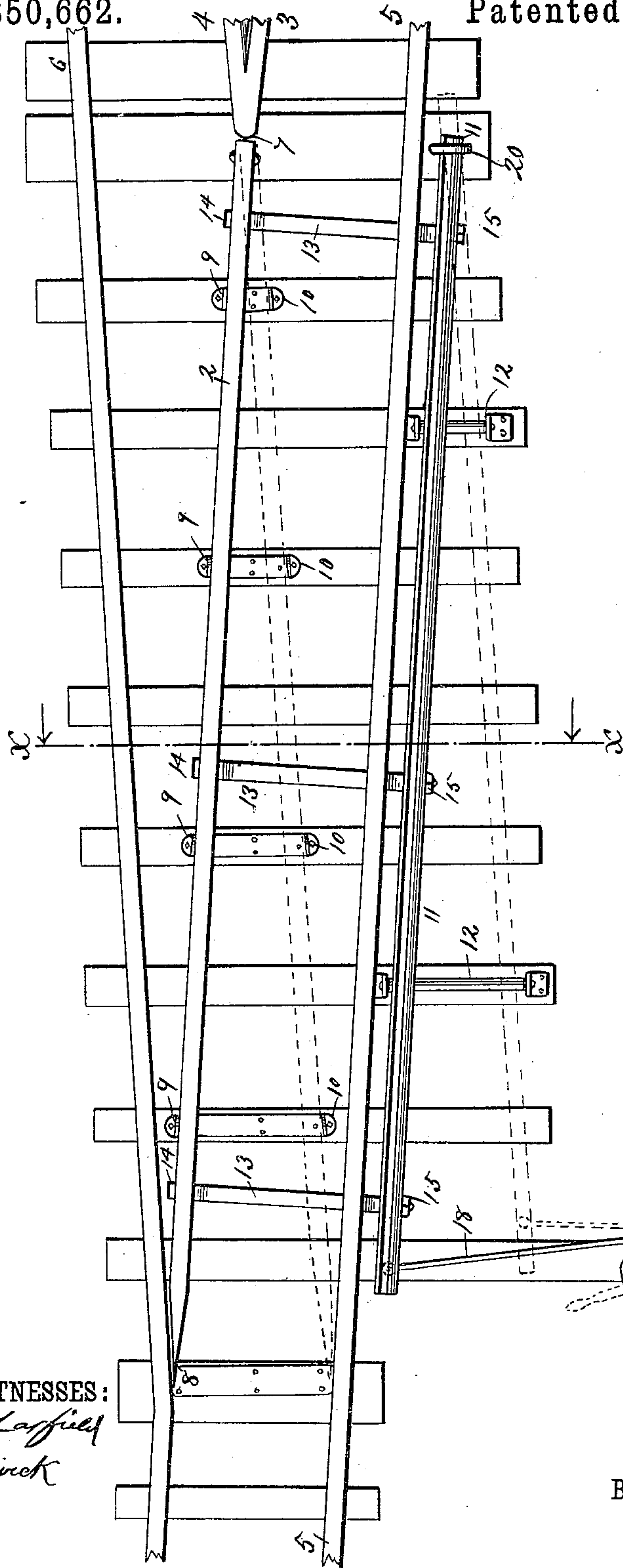
A. CULP.

FROGLESS SWITCH.

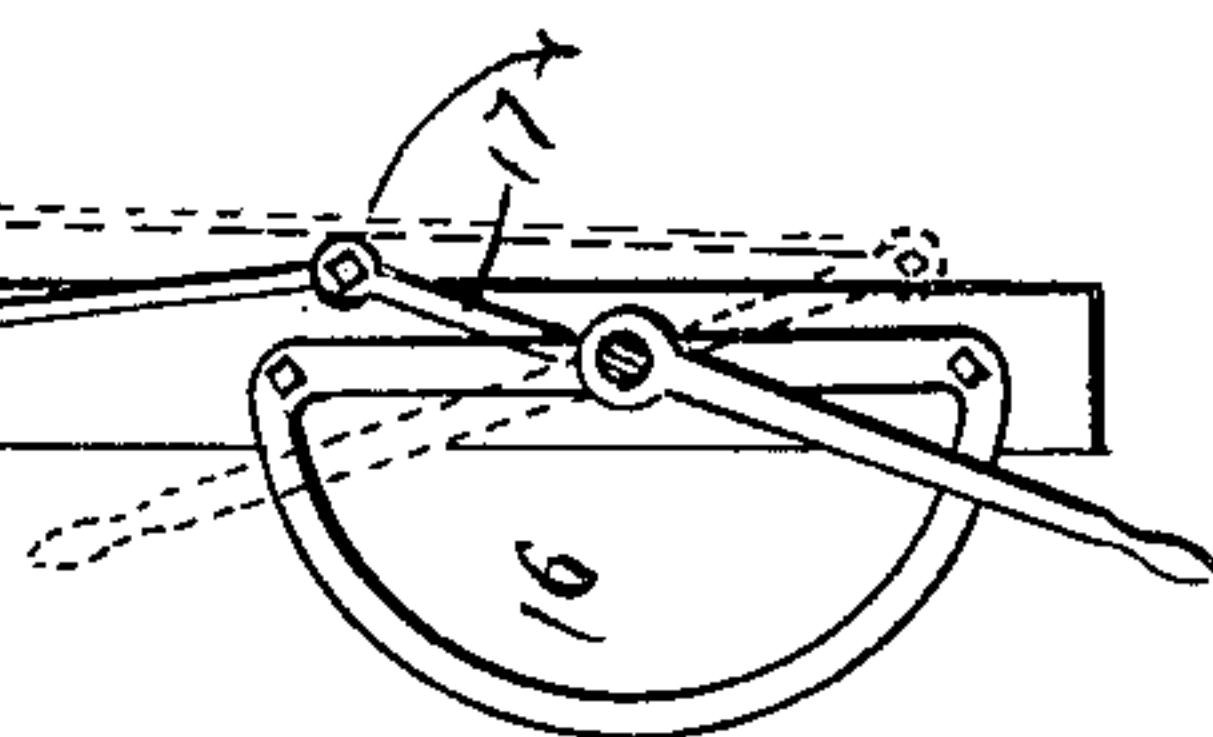
No. 350,662.

Patented Oct. 12, 1886.

*Fig. 1.*



*Fig. 2.*



WITNESSES:

*J. D. Lafferty*  
*C. Sedgwick*

INVENTOR:

*A. Culp*

BY

*Munn & Co.*

ATTORNEYS.

# UNITED STATES PATENT OFFICE.

ABRAHAM CULP, OF MOUNT CARMEL, PENNSYLVANIA.

## FROGLESS SWITCH.

SPECIFICATION forming part of Letters Patent No. 350,662, dated October 12, 1886.

Application filed June 21, 1886. Serial No. 206,124. (No model.)

*To all whom it may concern:*

Be it known that I, ABRAHAM CULP, of Mount Carmel, in the county of Northumberland and State of Pennsylvania, have invented a new and Improved Frogless Switch, of which the following is a full, clear, and exact description.

My invention relates to the construction of a frogless switch that is so arranged that the strain incident to the shifting of the switching-rail is distributed throughout the length of said rail instead of falling, as usual, upon one point, and thereby causing a bending of the rail.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar figures of reference indicate corresponding parts in both the figures.

Figure 1 is a plan view of my improved form of frogless switch, the switch-stand being shown in partial section. Fig. 2 is a cross-sectional view taken on line *xx* of Fig. 1.

In constructing such a switch as the one illustrated in the drawings above referred to I provide a switching-rail, 2, that is secured in any manner desired, so that its butt-end will abut against the meeting ends of the rails 3 and 4, the rail 3 being the inner rail of the main track, while the rail 4 is the inner rail of the siding in connection with which the switching-rail is located, and these rails 3 and 4 are so joined together that their end 7 is of the same size as that of a single rail. The point 8 of the rail 2 is beveled off from each side, so that the end of the rail will fit snugly against the outer rail of the siding, as shown in full lines in Fig. 1, or will fit against the rail 5 of the main track.

In order that the rail 2 may be held from spreading, I provide two sets or series of stops, one set of stops being designated by the number 9, while the other is designated by the number 10, the series marked 9 being to prevent the spreading of the rail when the main track is open, and the series marked 10 being employed to hold the rail when it is moved to a position to open the way to the siding.

In connection with the rail 2 I provide a rail, 11, that is placed along the outside of the rail 5 of the main track, said rail 11 resting

on rollers 12, that are arranged at about right angles to the length of the rail which they support. This rail 11 is placed so that its base faces toward the outer side of the rail 5, and is connected to the rail 2 by a number of tie-rods, 13, there being as many of these rods employed as may be deemed necessary. The rail 2 rests in jaws 14, formed in the extending ends of the rods 13, while the other ends of the rods pass through the rails 11, and are held in place by nuts 15. One end of the rail 11 is held to place by a staple, 20, while the other end is connected to the lever 17 of a switch-stand, 16, by means of a connecting-link, 18, so that as the lever 17 is thrown in the direction of the arrow the rail 11, and with it the rail 2, will be moved to the position shown in dotted line. As the rail 11 is moved as described, it will slide edgewise, and hence the need of providing the rollers 12.

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

1. In a switch, the combination, with the rails 3, 4, 5, and 6, of the switch-rail 2, having its end abutting against the ends of the rails 3 and 4, the rail 11, outside of the rail 5 of the main track, the tie-rods 13, connecting the rails 2 and 11, an operating-lever, 17, and a rod, 18, connecting the lever to the rail 11, substantially as herein shown and described.

2. In a switch, the combination, with the rails 3, 4, 5, and 6, the meeting ends of the rails 3 and 4 being united, as described, of a switch-rail, 2, a rail, 11, supported by rollers 12, rods 13, engaging with the rails 11 and 2, a switch-stand and its lever, and a connecting-rod extending from the lever of the switch-stand to the rail 11, substantially as described.

3. The combination, with the switch-rail, of two series of stops, as 9 and 10, rods 13, formed with jaws 14, which engage with the switching-rail, a rail, 11, to which the rods 13 are secured, a loop, 20, rollers 12, and a switch-throwing mechanism, substantially as described.

ABRAHAM CULP.

Witnesses:

LEVI HOLWIG,  
DAVID MOYLE.