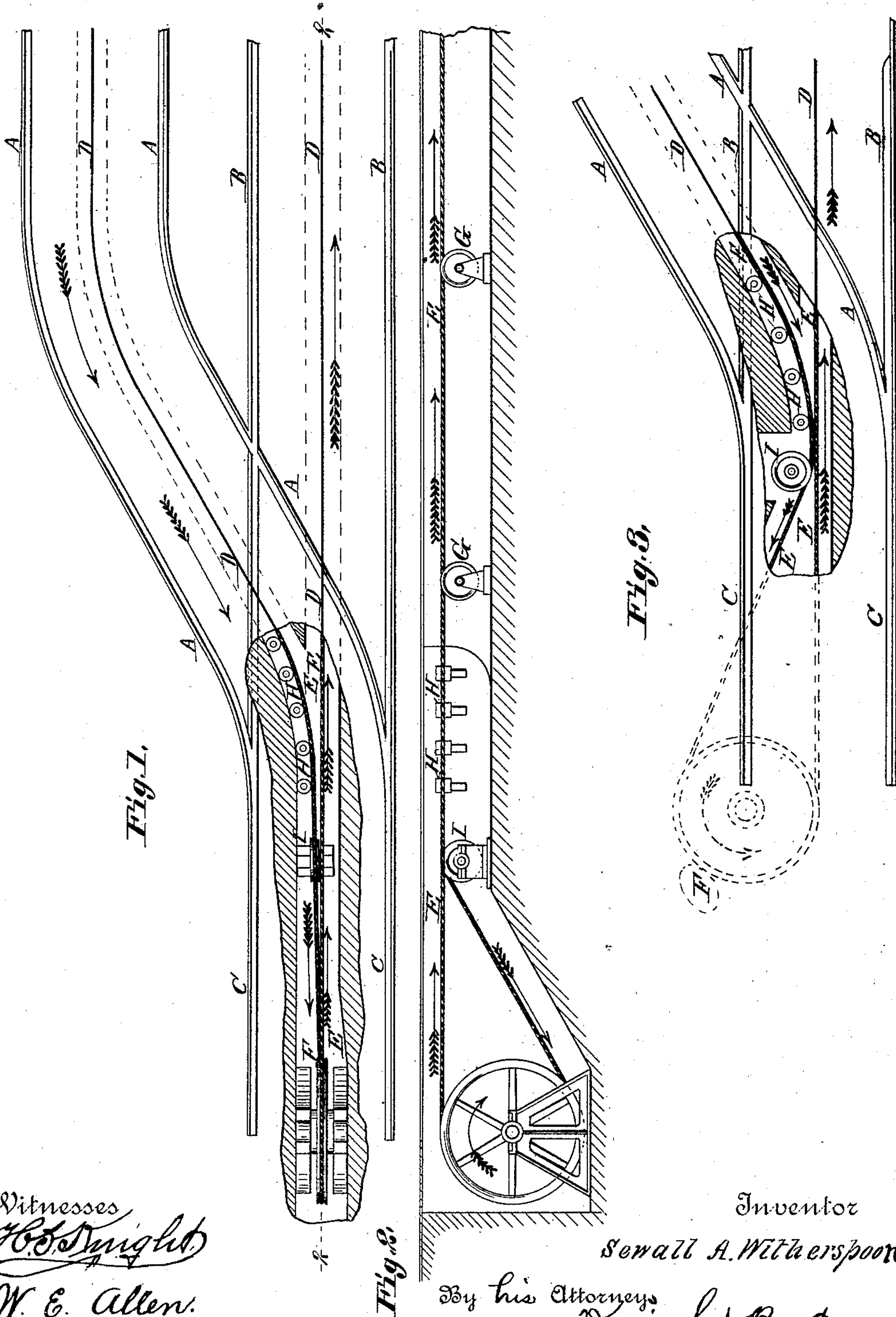


(No Model.)

S. A. WITHERSPOON.
SWITCH FOR CABLE RAILROADS.

No. 354,295.

Patented Dec. 14, 1886.



Witnesses
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SEWALL A. WITHERSPOON, OF ST. LOUIS, MISSOURI.

SWITCH FOR CABLE RAILROADS.

SPECIFICATION forming part of Letters Patent No. 354,295, dated December 14, 1886.

Application filed July 31, 1886. Serial No. 209,704. (No model.)

To all whom it may concern:

Be it known that I, SEWALL A. WITHERSPOON, a citizen of the United States, and a resident of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Switches for Cable Railroads, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, and in which—

Figure 1 is a plan of the device, with parts broken away to show parts beneath. Fig. 2 is a longitudinal vertical section at 2 2, Fig.

1. Fig. 3 is a plan, with parts broken away, showing a modification.

A A are the rails of the incoming car-track.

B B are the rails of the outgoing car-track, and C C are the rails to which both tracks converge and upon which the direction of movement of the car is reversed.

D is the grip-slot.

E is the cable. The direction in which the cable runs is shown by the arrows. In Figs. 1 and 2 the cable is shown passing around a vertical or slightly-inclined wheel or pulley, F, while in Fig. 3 the wheel or pulley F is shown in horizontal position. The device as shown in Figs. 1 and 2 will be first described, and then the modification shown in Fig. 3.

G are the pulleys beneath the cable, on which it is supported.

H are pulleys taking the side strain of the cable at the curve.

I is a pulley over which the cable passes, and from which the cable extends to the lower side of the upright or slightly-inclined wheel F.

The top of the wheel or pulley F may be level with that of the nearest bearing-pulley G.

The grip of a car approaching the switch is thrown off the cable before the grip reaches the pulley I, and the momentum of the grip-car carries it upon the part C C of the track where the grip is in the right position to

engage the outgoing part of the cable, so that no other force is required in switching the cars than that furnished by the cable. While in Figs. 1 and 2 the pulleys I and F are shown in vertical position, in Fig. 3 these pulleys are shown horizontal. These pulleys may, in fact, be inclined at any angle, the essential feature being that the part of the cable between these pulleys shall be removed from the path of the grip while the part of the cable leaving the pulley F shall be in position for the grip to engage it at the point of leaving this pulley, or near said point.

It will be seen that the outgoing cable, at the point where it leaves the pulley, is in line with the main part of the outgoing cable alike in Figs. 1, 2, and 3, or, in other words, that the outgoing cable is in a line tangential to the pulley F.

The direction of movement of the cable may be reversed, but it is believed not without sacrificing some of the advantages of the device.

I claim as my invention—

1. In a cable railroad, the combination of the incoming and outgoing tracks A B, converging to the track C, and the cable converging to about the point of intersection of the grip-slots, and then diverging to the opposite sides of the return-bend pulley F, substantially as and for the purpose set forth.

2. In a cable railroad, the combination of two tracks converging to a single track, and the cable converging in like manner to the point of intersection, and then diverging to the opposite sides of the pulleys F, around which it passes, one side of the pulley being in substantially direct line with the outgoing cable beyond the point of intersection of the grip-slot.

SEWALL A. WITHERSPOON.

Witnesses:

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