

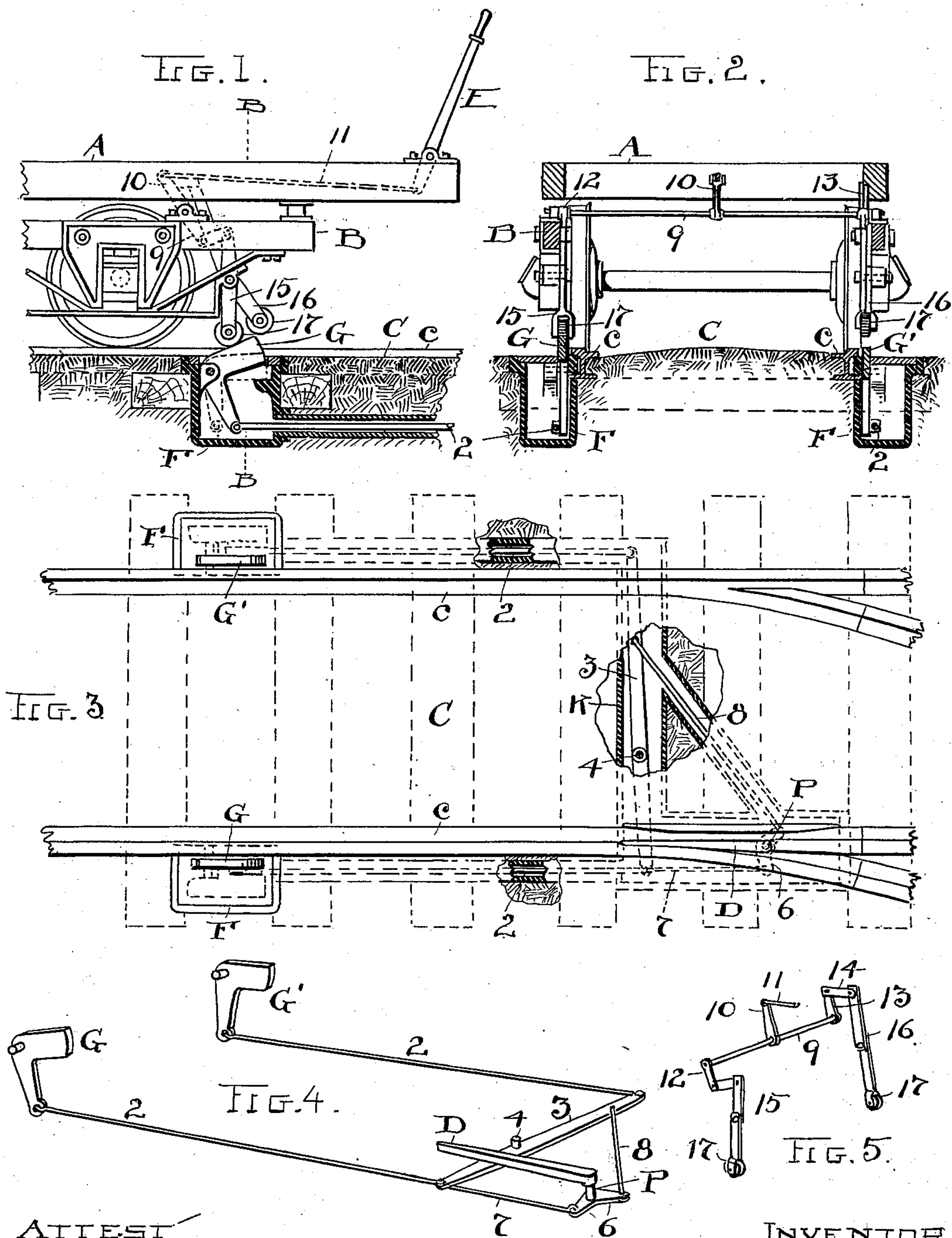
No. 692,747.

Patented Feb. 4, 1902.

W. H. H. WELTON.
SWITCH THROWING DEVICE.

(Application filed May 13, 1901.)

(No Model.)



ATTEST

W. H. H. Welton
H. E. Mudra

INVENTOR

William H. H. Welton

W. F. Fisher ATTORNEY

UNITED STATES PATENT OFFICE.

WILLIAM H. H. WELTON, OF AKRON, OHIO, ASSIGNOR OF ONE-HALF TO
FRANK KIRK, OF CHAGRIN FALLS, OHIO.

SWITCH-THROWING DEVICE.

SPECIFICATION forming part of Letters Patent No. 692,747, dated February 4, 1902.

Application filed May 13, 1901. Serial No. 59,939. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. H. WELTON, a citizen of the United States, residing at Akron, in the county of Summit and State of Ohio, have invented certain new and useful Improvements in Switch-Throwing Devices; and I do declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in switch-throwing devices; and the object of the invention is to provide a device whereby a switch can be thrown from an approaching train or car by an operator on the car and while the car is traveling, all substantially as shown and described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is an elevation of one end of a car having part of my new appliances thereon, and a sectional elevation of a car-track with part of my improved appliances therein, and all adapted to operate as hereinafter fully described. Fig. 2 is a cross-section of a car-track on a line corresponding substantially to B B, Fig. 1. Fig. 3 is a plan view of the track and my improved mechanism located therein and in operative relation. Fig. 4 is a perspective elevation of the track mechanism alone and apart from the track and other parts seen in Fig. 3. Fig. 5 is a perspective elevation of the car mechanism.

In Figs. 1 and 2, A represents the car body or platform, and B the car-track, and the car may be electric or of any other kind of motive power.

C represents in general the car-track with suitable rails c, and D is the switch or switch-tongue, which is adapted to be thrown by my improved mechanism through the operation of lever E or its equivalent on the car—that is, the lever E might be of a rotary instead of a direct acting character. Intermediate of tongue D and the lever E are sundry connecting parts, some of which are carried by the car and others are located in or upon the track or path of the car. The said track mechanism comprises a set of boxes F—two in this instance, though one alone might be used if the switch is to be thrown in one di-

rection only—and these boxes in this instance are upon the outside of the track and immediately adjacent to the rails, and in each box there are supported substantially right-angled levers G G', pivoted at their angle in said boxes, with their shorter arm normally projecting above the cover of the box a slight distance and their longer arm depending from the pivot into the lower portion of the box. Both these levers are alike in their construction and operation and are connected by links 2 with a horizontal bar 3. The said bar is pivoted at 4 and lies transversely of the track in a box K, which in this instance is branched and has an arm also for the connecting-rod 8, which goes across to the farther end of the said bar 3 and the lever-operating rod 2 at that side. These several parts lead up to switch D, which is supported upon a rotatable post P in this instance; but it may be otherwise supported and is rigid with said post. At the bottom of the post there is a cross-bar or oppositely-projecting arms 6, connected by links 7 and 8 with the ends of horizontal bar 3. All the parts thus described and shown in Fig. 4 are located underground or under cover partly along the sides of the track, as seen in Fig. 3, and partly across the track, beneath the surface thereof, so as to be out of the way at all points and avoid obstruction over the track.

The mechanism carried by the car is designed to throw the switch by depressing one or the other of the levers G G', and to this end I employ a simple mechanism (seen in detail in both Figs. 1 and 5) comprising a transverse rod or bar 9, having a rocking arm 10, connected by rod 11 with the operating-lever E, and short arms 12 and 13, respectively projecting in opposite directions from the end of said rod. These arms 12 and 13 are connected by links 14 with rocking levers 15 and 16, respectively, and which have rollers 17 at their lower ends to bear or ride upon the outer exposed surfaces or backs of the track-levers G G'. By constructing and arranging the car-carried mechanism in this way only one of the levers 15 16, respectively, is depressed or thrown down by the corresponding rocking of lever E into actuating position upon track-lever G or G', and hence

the operator has it in his power to depress either one of said track-levers according as he may elect and the direction the car is to take at the switch, and this is done by moving lever E backward or forward. If it be moved into position as in Fig. 1, the mechanism is such that it will depress the near lever G, and lever G' will be thrown up, and the opposite effect will occur if lever E be moved in the opposite direction.

What I claim is—

1. In switch-throwing mechanism, a pivoted switch-throwing lever on each side of a car-track and a box in which each lever is pivoted, a switch and an upright pivoted post therefor, a horizontally-transverse bar pivoted between its sides, and link connections between said bar and the said levers and switch-post, substantially as described.

2. In switch-throwing devices, a car-track and a box at each side thereof, a crank-lever pivoted in each box and having one end adapted to project above the track, a switch and a vertical post 7 carrying the switch, a cross-bar 6 fixed to said post, a transverse bar hav-

ing a pivot 4 between its ends, connecting-rods 2 between said crank-levers and said bar 3, and link 8 connecting one end of bar 3 with bar 6, substantially as described.

3. A switch for railways and a post supporting the switch, a set of switch-throwing levers G, G' and links and equalizing-bars operatively connecting said levers with said post, 7, in combination with a set of levers 10 and 16 to engage and operate said switch-throwing levers G, G', the lever controlled by cross-rod 9 having arms 12 and 13 extending in opposite directions and links 14 connecting said arms with the levers 15 and 16, whereby one or the other of the switch-throwing levers is depressed according as rod 9 is rotated one way or the other, substantially as described.

Witness my hand to the foregoing specification this 4th day of May, 1901.

WILLIAM H. H. WELTON.

Witnesses:

SETH KIRK,

HARVEY MUSSER.