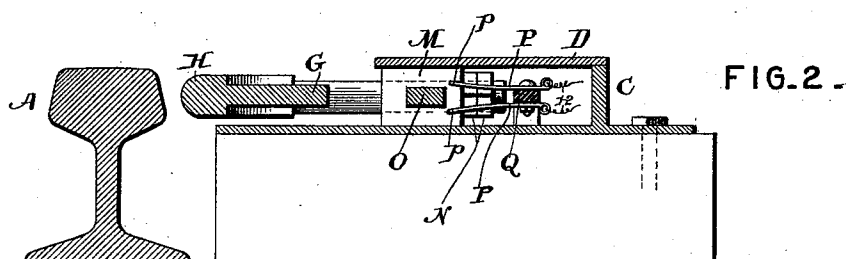
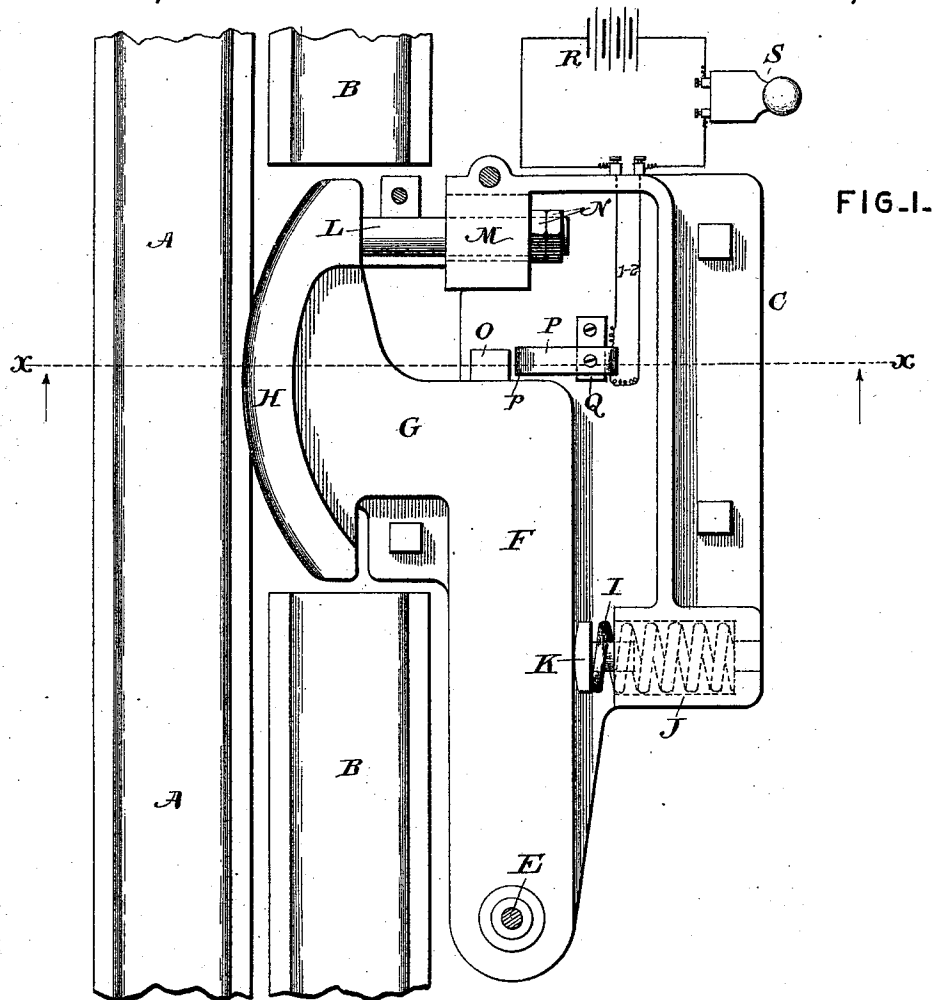


(No Model.)

C. R. ALSOP.
ELECTRIC TRACK SIGNAL.

No. 527,099.

Patented Oct. 9, 1894.



Inventor

Charles R. Alsop

Witnesses

Jas. H. McLaughlin
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By his Attorneys.

C. Snow & Co.

UNITED STATES PATENT OFFICE.

CHARLES RICHARD ALSOP, OF MIDDLETOWN, CONNECTICUT, ASSIGNOR TO
LUCY C. ALSOP, OF SAME PLACE.

ELECTRIC TRACK-SIGNAL.

SPECIFICATION forming part of Letters Patent No. 527,099, dated October 9, 1894.

Application filed November 27, 1893. Serial No. 492,128. (No model.)

To all whom it may concern:

Be it known that I, CHARLES RICHARD ALSOP, a citizen of the United States, residing at Middletown, in the county of Middlesex and State of Connecticut, have invented a new and useful Electric Track-Signal, of which the following is a specification.

This invention relates to electric track signals; and it has for its object to provide an improved signal device of this character employed in connection with railway tracks, and which are adapted to be operated by the wheel of a car so as to complete a circuit with a signal bell or other electrically controlled signaling apparatus.

To this end the main and primary object of the present invention is to simplify the construction of track signals for railways and render the same much more efficient and positive in operation.

With these and other objects in view which will readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination and arrangement of parts hereinafter more fully described, illustrated and claimed.

In the drawings, Figure 1 is a plan view of an electric track signal set up for use. Fig. 2 is a transverse sectional view thereof on the line $x-x$ of Fig. 1.

Referring to the accompanying drawings: A represents one of the rails of a track, adjacent to which rail is arranged the usual guard rail B, and at this point of the track my improved signaling device or apparatus is intended to be used in order to give the proper signal for the passing train. Suitably mounted on the track ties at one side of the rail A, is a chair-box C, cast in a suitable shape to accommodate the several parts of the apparatus contained therein, and is adapted to be inclosed by a removable cap or cover D, which covers the several parts of the apparatus and not only protects the same from snow and ice, but also prevents the apparatus from being tampered with. Pivottally mounted within the chair-box C, at one end on the vertical pivot E, is the horizontal contact lever F. The contact lever F, extends a distance within the chair-box beyond the pivot E, at one end thereof, and is provided at its other

moving end or extremity with the right angularly disposed arm G, having the outer exposed contact edge H. The contact edge H, of the lever arm, projects outside of the cover of the box in reasonably close proximity to one side of the rail A, so as to leave a space there-between and such rail, less than the width of a car wheel flange, which is adapted to pass between the rail and said contact edge so as to move the free end of the contact lever inward within the chair-box, to close the signal circuit in a manner to be presently described, and said contact edge H, is rounded and curved from end to end thereof in order to properly guide the wheel flange at one side thereof, and reduce the frictional contact as much as possible.

The contact lever is normally held in an inactive position with its contact edge disposed close to the track rail, as described, by means of the strong lever spring I, seated in the spring socket J, formed at one side of the chair box and engaging at its outer end the headed follower stud K, which contacts with one side of the contact lever F, at a point intermediate of its ends, in order to impart the tension of the spring to such lever and prevent it from being moved except by the car wheel flange passing at one side thereof. The movable spring-actuated contact lever is guided and adjusted in its movement by the reduced guide stem L, which stem is projected from one extremity of the contact arm G, and is adapted to work through the widened guide lug M, cast at one end of the chair-box, and the inner extremity of said guide stem is threaded to receive the check nuts N, which hold the contact edge of the contact lever out of contact with the track rails, and also provide means for adjusting the distance between these two parts in setting up the apparatus.

The moving end of the contact lever F, inside of the chair-box C, is provided with an off-standing contact lug O, which is adapted to be moved between the separated contact springs P. The separated contact springs P, are provided with out-turned free ends p , which serve to guide the lug O, there-between, and the other ends of said springs are separately fastened to an insulator block Q, se-

cured inside of the chair-box C. To the fastened ends of each of the springs P, are connected the circuit wires 1—2 which have included in the circuit thereof a battery R, and a bell or other suitable electrically controlled signal S. Now it will be apparent that when the car wheel flange passes between the contact edge of the lever F, and the track rail A, the said lever will be moved inward, which movement forces the contact lug O, between the springs P, and thereby closes the signal circuit 1—2, which causes the proper signal to be given.

While I have described and prefer the circuit arrangement just described, it will be obvious that only one of the contact springs P, might be employed and connected with one of the circuit wires while the other circuit wire may be connected to the rail A, so that the flange of the car wheel together with the lug O, will complete the circuit through the rail and the contact lever described, and I will also have it understood that other changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

1. In an electric track signal, the combination of suitably arranged separated contact springs, a signal circuit having the wires thereof connected separately to said springs, and a horizontal spring actuated contact lever mounted to play on a vertical pivot adjacent to one side of a track rail and normally out of contact therewith to leave a space of a width less than a car wheel flange which is adapted to move said contact lever laterally between said contact springs, substantially as set forth.

2. In a track signal, an inclosed chair-box arranged adjacent to a track rail, a stationary contact, included in a signal circuit, mounted within said chair-box, a horizontal spring actuated contact lever arranged to play on a

vertical pivot within said chair box and having a contact lug adapted to be moved against said stationary contact to close the signal circuit, and adjusting devices for adjusting the contact edge of said lever in close proximity to one side of the track rail to leave a narrow space for the flange of a car wheel to pass through substantially as set forth.

3. In an electric track signal, an inclosed chair-box arranged adjacent to a track rail, separated contact springs mounted inside of said chair box and having outturned free ends, a normally open signal circuit having the wires thereof connected separately to said springs, a horizontal spring actuated contact lever mounted to play on a vertical pivot within said box and having a curved rounded contact edge disposed in close proximity to the track rail to leave a space narrower in width than the flange of a car wheel which passes through such space, and an off standing contact lug adapted to be forced by the flange of the car wheel between the outturned ends of said contact springs, substantially as set forth.

4. In an electric track signal, an inclosed chair-box having a spring socket at one side and a widened guide lug at one end, a contact lever pivotally mounted at one end within said chair-box and provided at its other free ends with an arm having a curved rounded contact edge disposed in close proximity to a track rail, and a reduced guide stem adapted to move in said widened guide lug, check nuts adjustably mounted on the free end of said guide stem, separated contacts adapted to receive there-between one end of said contact lever, and a normally open signal circuit having the wires thereof connected separately to said separated contacts, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

CHARLES RICHARD ALSOP.

Witnesses:

GEO. A. COLES,

EUGENE J. CLARK.