(No Model.)

C. F. DE REDON.

RAILWAY SIGNAL.

No. 385,920. Patented July 10, 1888.

Fig. 2.

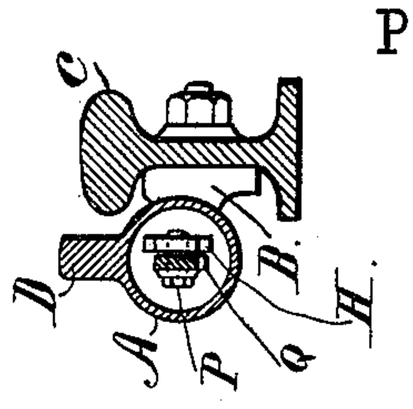
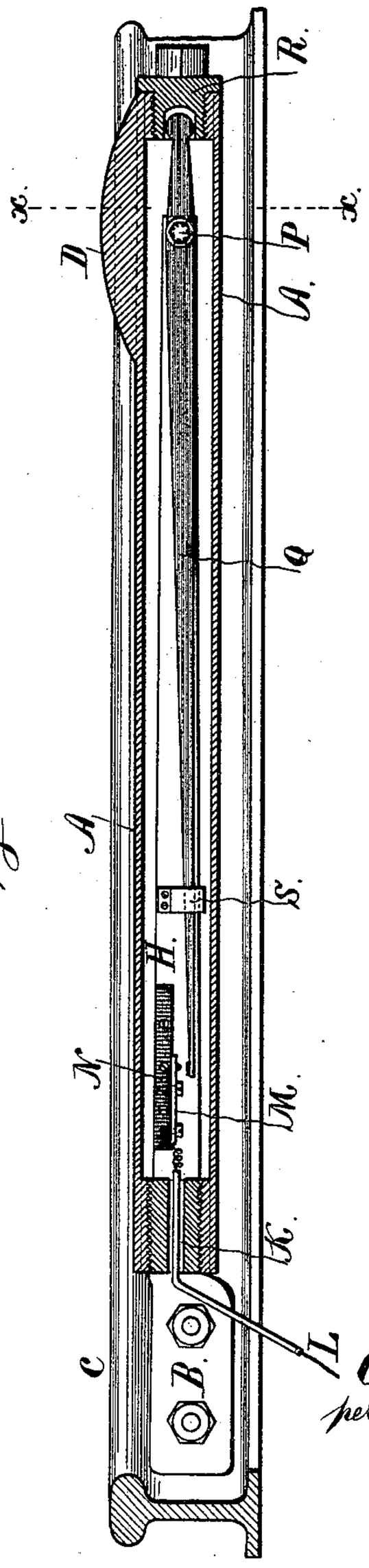


Fig. 1.



Witnesses,
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per
Lemuel W. Serrell,
atty

UNITED STATES PATENT OFFICE.

CONSTANT F. DE REDON, OF NEW YORK, N. Y.

RAILWAY-SIGNAL.

SPECIFICATION forming part of Letters Patent No. 385,920, dated July 10, 1888.

Application filed April 2, 1888. Serial No. 269,255. (No model.)

To all whom it may concern:

Be it known that I, CONSTANT FRANÇOIS DE REDON, of the city and State of New York, have invented an Improvement in Railway-Signals, of which the following is a specification.

In my improved signal a movement is given to the apparatus by the contact thereof of the wheels of a passing train, and the signal is tightly inclosed within the case, so as to be protected from injury by the action of moisture, earth, or other foreign substances.

In the drawings, Figure 1 is a longitudinal section of the apparatus, and Fig. 2 is a cross-section of the same at the line *x x*.

I make use of a tube, A, preferably of steel or similar material, which tube is sufficiently strong not to be bent or sprung by the weight of a man should he attempt to produce a signal by stepping upon the apparatus, and such tube is sufficiently elastic not to be permanently bent by the action of the passing wheels. This tube A is fastened at one end permanently to a rail-bar or fish-plate, B, that is bolted to the side of the track-rail C, and the other end of this tube A is adjacent to the track-rail, but it is unsupported, and upon the top thereof there is a shoe-piece, D, against which the wheels of the passing trains act to slightly spring downwardly or depress the end of the tube A. Within this tube A is a bar, H, one end of which, near the fish-plate B, is permanently connected to the tube A, preferably by a screw-plug, K, inserted into the stationary end of the tube A, and having through the same a hole sufficiently large for the passage of an insulated conducting-wire, L, the inner end of which is fastened to the insulated contact-block M upon the block N, of india-rubber or similar material. This bar H extends along within the tube A, and it is preferably tapering, so that the narrow end supports the pivot P of the contact-lever Q, which contact-lever Q has a short arm that passes into a hole or recess in the end block, R, of the tube A, and the long end of this lever Q is tapering, and it is guided by a loop, S, upon the side of the bar H, and the end of this lever Q is adjacent to the contact-block M, so that when a train passes along, the wheels acting upon the shoe D and springing the tube A, the short end of the lever Q is pressed down and the long end is raised up into contact with the block M, thereby closing the circuit from the insulated block M through the lever Q and tube A to the ground, and bringing into action the bell or other alarm apparatus that is included in the circuit of the conductor L.

The tube A should be of a sufficient length to allow for the springing movement thereof, under the action of the wheels, without any risk of the tube becoming permanently bent thereby, and at the same time this tube A is to be sufficiently stiff to prevent a false signal being given by a person stepping upon the shoe D.

I claim as my invention—

1. The combination, with the railroad-rail and the plate B, bolted thereto, of the tube A, fastened permanently at one end to the plate B, and the other end of the tube being free to spring under the action of the passing wheels, the bar H within the tube A, and the block K, to which such bar H is permanently attached, the pivot P at the distant end of such bar H, the lever Q upon the pivot P, the short end of which lever is acted upon by the moving end of the tube A, and the contact-block M and circuit-wire L, connected to the same, and with which contact-block the long end of the lever Q comes in contact when the loose end of the tube A is depressed, substantially as set forth.

2. The spring-tube A, permanently connected at one end to the track-rail, and the shoe D at the other end, in combination with the stationary bar within the tube and the lever pivoted upon the bar, the short end of which lever receives its motion from the moving end of the tube, and the contact-plate adjacent to the long end of the lever, and circuit-connections whereby the electric circuit is closed by the movement of the tube and lever, substantially as set forth.

Signed by me this 29th day of March, 1888.

CONSTANT F. DE REDON.

Witnesses:

GEO. T. PINCKNEY,

WILLIAM G. MOTT.