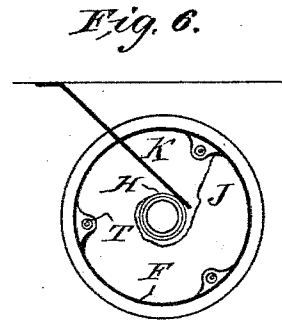
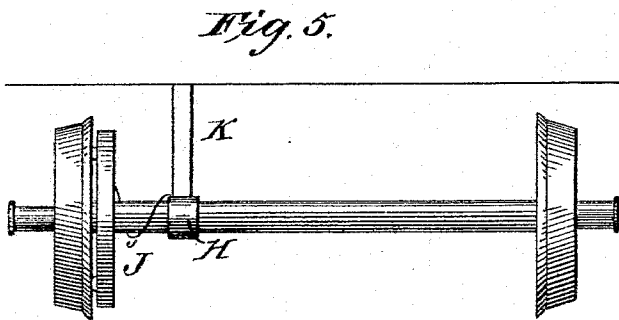
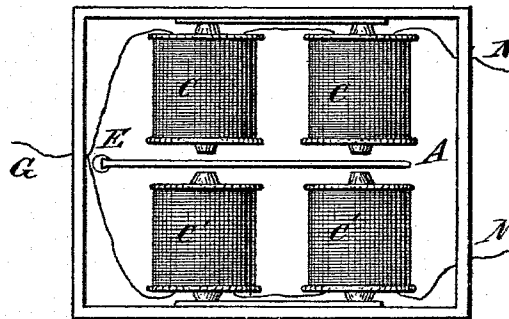
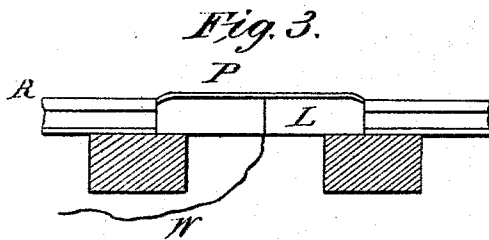
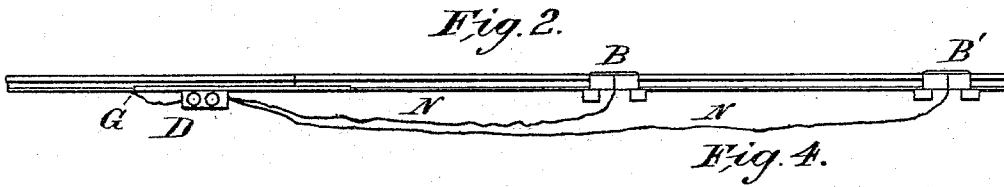
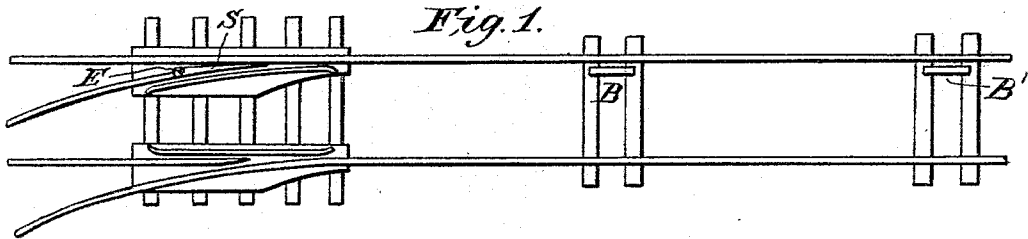


(No Model.)

H. E. LOWE.
SHIFTING RAILROAD SWITCH.

No. 516,100.

Patented Mar. 6, 1894.



Witnesses:
J. P. Row
T. E. Autops

Inventor,
Henry C. Lowe

By *Frederick C. Griswold*
attorney

UNITED STATES PATENT OFFICE.

HENRY E. LOWE, OF MACON, GEORGIA.

SHIFTING RAILROAD-SWITCH.

SPECIFICATION forming part of Letters Patent No. 516,100, dated March 6, 1894.

Application filed September 1, 1893. Serial No. 484,575. (No model.)

To all whom it may concern:

Be it known that I, HENRY E. LOWE, a citizen of the United States, residing at Macon, in the county of Bibb and State of Georgia, have invented certain new and useful Improvements in Shifting Railroad-Switches by Electricity; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to an improvement in electric appliances for shifting railroad switches, and its object is to provide a practical device, as hereinafter described, for conducting the current from the car to corresponding electric appliances in the track.

Figure 1 shows a plan of the track in which lies the ordinary movable switch "S," beneath which is incased, in a water tight box, a double set of electro-magnets. (See Fig. 4 for enlarged view.) Between these magnets plays an iron bar "A," Fig. 4, which is firmly attached to the switch by pin "E," Figs. 1 and 4, and which changes from one side to the other according as it is attracted to the one set of magnets or the other, carrying with it the switch above the ground.

"B" and "B'," Figs. 1 and 2, represent metal contact plates fastened to insulated blocks resting on cross ties or other substance on which rail is laid; and connected by insulated wire "N" Figs. 2 and 4, with magnets, "D," Fig. 2, or C, C, and C', C', Fig. 4; though the position of said plates, whether just inside the rail or elsewhere, as well as their distances from the switch and from each other, are immaterial. The current from the car or engine is sent by the ordinary thumb button through the metal brush K, Figs. 5 and 6, which rests in contact with commutator H, which is insulated from the axle; thence through insulated wire J, thence to metal spring, F, which is bolted to wheel in sections, or to axle, (and which is overlaid with hard rubber to prevent charging the wheel or axle) and at such points as will come in contact with plates, B and B', Figs. 1 and 2. As the car proceeds down toward the switch, the but-

ton being pressed, the current flows through K, Figs. 5 and 6, which is fastened to bottom of car, thence through commutator, H, wire, J, and spring, F, which is the circuit closer upon contact with plates, B and B', Figs. 1 and 2, thence along the insulated wire, N, to magnets C, C and C' C' to ground wire, G, Figs. 2 and 4. When the contact is made between spring, F, Fig. 5, and plate B' Figs. 1 or 2, the current flows through one set of magnets and draws the iron bar, A, Fig. 4, to that side, if not already there which of course carries the switch with it. When contact is made with plate B, Figs. 1 and 2, the current flows through the opposite set of magnets and the iron bar, A, is drawn to that side and sets the switch in a corresponding direction.

Fig. 3 is an enlarged view of contact plates B or B', Figs. 1 and 2, P, representing metal contact plate, L, insulated block, R, the rail and W, the insulated wire.

Fig. 6 is a cross section of Fig. 5.

The best mode of using the foregoing device is to attach it to the ordinary trolley wire system of street railroads, but the mechanism can be applied to any switch and car.

The essential distinctive characteristics of this invention are the devices by which the current is conducted from car to switch, to wit, the metal brush, K, Fig. 5, the insulated commutator, H, connected by insulated wire to metal spring, F, the spring, or collar, F, adjusted as described, the contact plates, B and B', connected by insulated wire to their respective sets of magnets, and the composite device of a double set of magnets between which plays the iron bar, A, Fig. 4, which is firmly attached to the switch above.

I claim—

The combination of the car, a projecting metal brush, an insulated commutator and its connecting insulated wire suitably attached to an insulated metal spring or collar (sectionally adjusted), all adapted through contact plates on the track and electric appliances to actuate the switch.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY E. LOWE.

Witnesses:

J. P. LOWE,
T. E. AITOE.