

(No Model.)

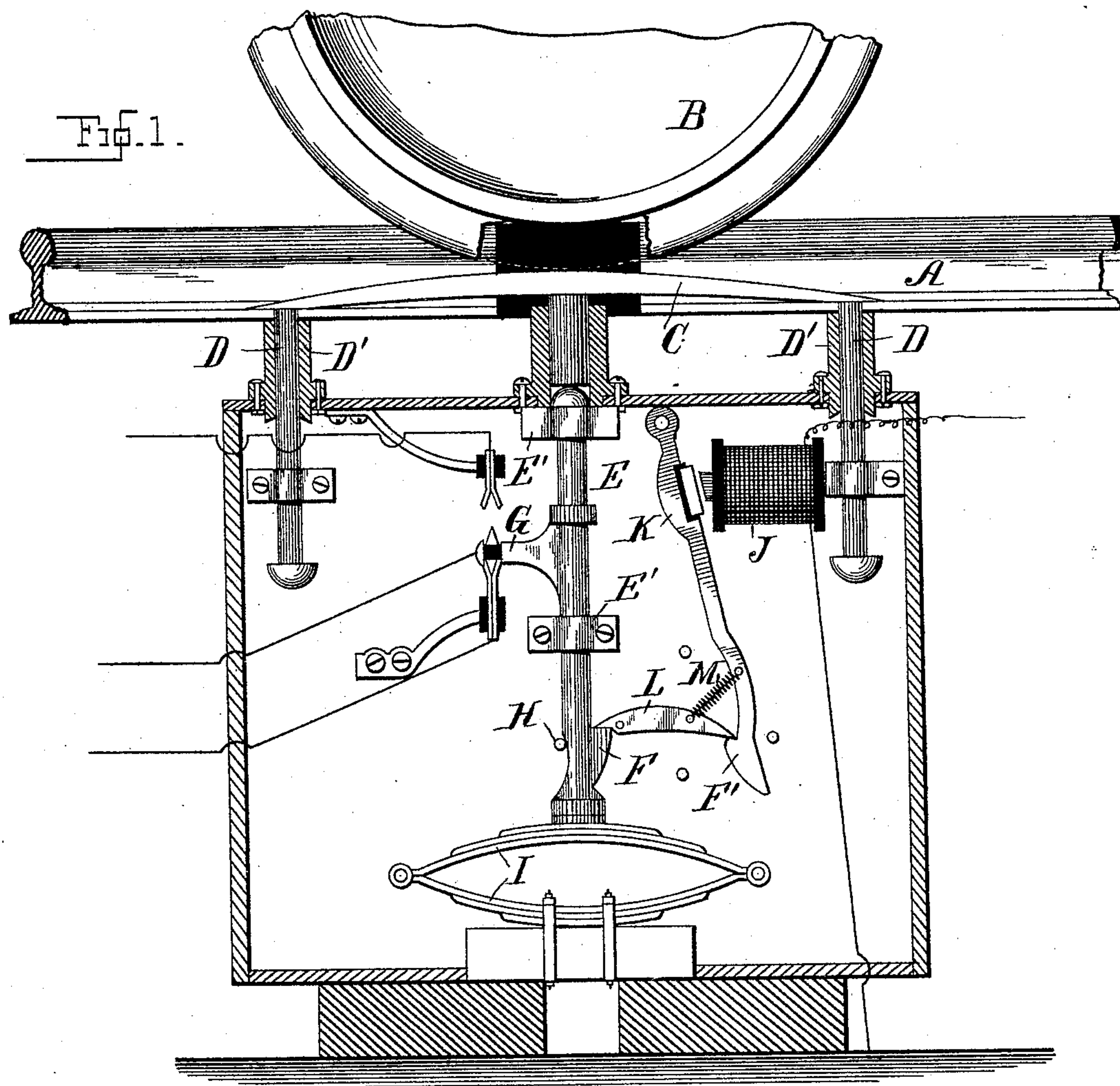
2 Sheets—Sheet 1.

E. DEMING.

ELECTRIC MACHINE FOR RAILWAY SYSTEMS.

No. 528,465.

Patented Oct. 30, 1894.



Witnesses
W. H. Routland
Leocadia M. Lennan.

Inventor
Edward Deming
By his Attorney,
Edward P. Thompson

(No Model.)

2 Sheets—Sheet 2.

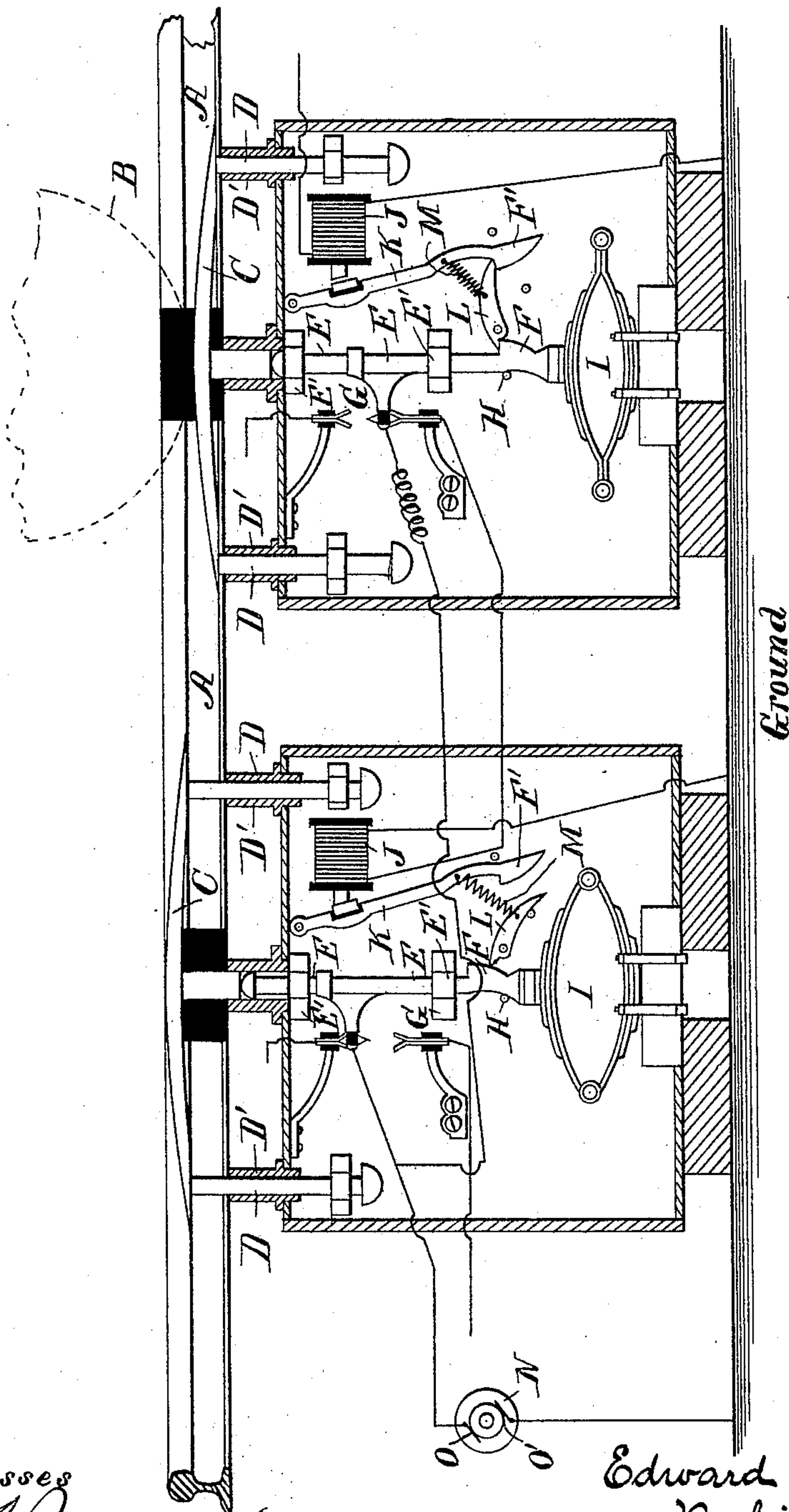
E. DEMING.

ELECTRIC MACHINE FOR RAILWAY SYSTEMS.

No. 528,465.

Patented Oct. 30, 1894.

Fig. 2.



Witnesses
Wm. A. Courtland
Leocadia M. Lemman.

Inventor
Edward Deming,
By his Attorney,
Edward P. Thompson

UNITED STATES PATENT OFFICE.

EDWARD DEMING, OF NEW YORK, N. Y., ASSIGNOR OF THREE-FOURTHS TO SAMUEL CORN, HENRY CORN, ADOLPH KAUFMAN, AND ISAAC STERN, OF SAME PLACE.

ELECTRIC MACHINE FOR RAILWAY SYSTEMS.

SPECIFICATION forming part of Letters Patent No. 528,465, dated October 30, 1894.

Application filed May 27, 1893. Serial No. 475,738. (No model.)

To all whom it may concern:

Be it known that I, EDWARD DEMING, a citizen of the United States of America, residing at New York, in the county and State of New York, have invented certain new and useful Improvements in Electric Track-Machines for Railway Systems, (Case No. 7,) of which the following is a specification.

My invention relates to mechanism by which a locomotive or train of cars on any given block may open an electric circuit and at the same time close an electric circuit through a magnet which operates to close another circuit at a preceding or following block.

All the details of the invention are set forth in the accompanying drawings, in which—

Figure 1 shows all the elements of the invention, the view being an elevation mostly in section and including one of the wheels of a car whose flange is operating the device. Fig. 2 is a similar view on a smaller scale and more in outline of two of the mechanisms shown in Fig. 1, together with such of the electric circuits which are necessary to explain the operation.

The phase of the right hand device is similar to that shown in Fig. 1, while that at the left is normal, having been set in its normal position because of the operation which has taken place in the right hand device.

The device embodying the invention consists of the combination with the track A and with the wheel B of a T-trip C vertically movable and provided with guide rods D in bearings D', a vertically movable bar E arranged in bearings E', and provided with a projection F at its lower end, and with a circuit closer G near its center, the bar E being loose in its bearings, and guided laterally by a pin H on the opposite side from the projection F, a spring I reacting against the bar E in a direction opposite to that of the pressure wheel B, of a magnet J having an armature K within inductive relation thereto, and provided with a projection F', a catch L connected to the armature K by a spring M, and for the purpose of simultaneously holding down the bar E, and holding away the armature K from the magnet J, by resting upon the projections F, F', while extending the spring

M. A duplication of the above named elements is found at the left of those just described, and similarly lettered, the magnet on the left being in circuit with said circuit closer or switch, and with a generator N.

The circuit from the generator may be traced through the left hand magnet J by passing from the pole O to the circuit closer G on the right to the magnet J on the left, then to ground, and finally to the pole O'.

The operation is as follows:—Referring to the right hand track machine the wheel B presses down the trip C. The bar E is also moved downward and the circuit closer G completes the circuit through the magnet J on the left. The spring I is so compressed that the catch L comes upon the projections F, F', and the spring M becomes distended, while at the same time the armature K is moved away from the magnet J. The wheel is supposed to have moved previously over the left hand track machine, and set it in the same manner as just described with reference to the right hand machine. Just as soon as the circuit is closed through the left hand magnet the armature K thereof is attracted to the catch L and consequently releases the bar E and the trip and circuit closer and springs return to their normal positions.

As an illustration of the use of my invention it may be stated that when the left hand trip C is down there is a train on the block between the two track machines. As soon as the said trip rises it serves as a signal that the said train has left said block and that therefore said block is safe for passage by a second train.

I claim as my invention—

1. The combination with a rail and wheel thereon, of a vertically movable trip located in the path of said wheel, a vertically movable bar in the path of the trip, an electric switch carried by said bar, a spring bearing against said bar and resisting its action, a pivoted catch for engaging and retaining the bar in its lowest position, and a magnet whose armature is in the path of said catch.

2. The combination with a rail and wheel thereon, of a vertically movable trip located in the path of said wheel, a vertically movable

bar in the path of a trip, an electric switch carried by said bar, a spring bearing against said bar and resisting its action, a magnet, a pivoted armature for the magnet, and means for
 5 holding the bar in its lowest position and the armature away from its magnet, said means consisting of a pivoted catch, between the said bar and said armature, and a spring by which the catch is suspended from said armature.

15 3. The combination with a rail and wheel thereon, of a vertically movable trip located in the path of said wheel, a vertically movable bar in the path of a trip, an electric switch carried by said bar, a spring bearing against said
 15 bar and resisting its action, a magnet, a pivoted armature for the magnet and a catch for holding the bar in its lowest position and the armature away from its magnet, said means consisting of a pivoted catch, between the said
 20 bar and said armature, and a spring by which the catch is suspended from said armature.

4. The combination with a rail and wheel thereon, of a vertically movable trip located in the path of said wheel, a vertically movable
 25 bar in the path of a trip, an electric switch carried by said bar, a spring bearing against said bar and resisting its action, a magnet, a pivoted armature for the magnet, and means for

holding the bar in its lowest position and the armature away from its magnet, a second set 30 of elements substantially as the above in which the magnet is in circuit with said switch, said means consisting of a pivoted catch, between the said bar and said armature, and a spring by which the catch is suspended from 35 said armature.

5. The combination with a rail and a wheel thereon, of a trip in the path thereof, guide rods for the trip, bearings for the rods, a movable bar in the path of said trip, an arm upon 40 the bar carrying a circuit closer, a projection upon the bar, a magnet, an armature therefor having a projection, a catch for resting upon the projections in predetermined positions, and a spring resisting the action of the bar in 45 a direction opposite to that of the pressure of the said wheel.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 23d day of May, 50 1893.

EDWARD DEMING.

Witnesses:

WILLIAM A. COURSEN, Jr.,
 EDWARD P. THOMPSON.