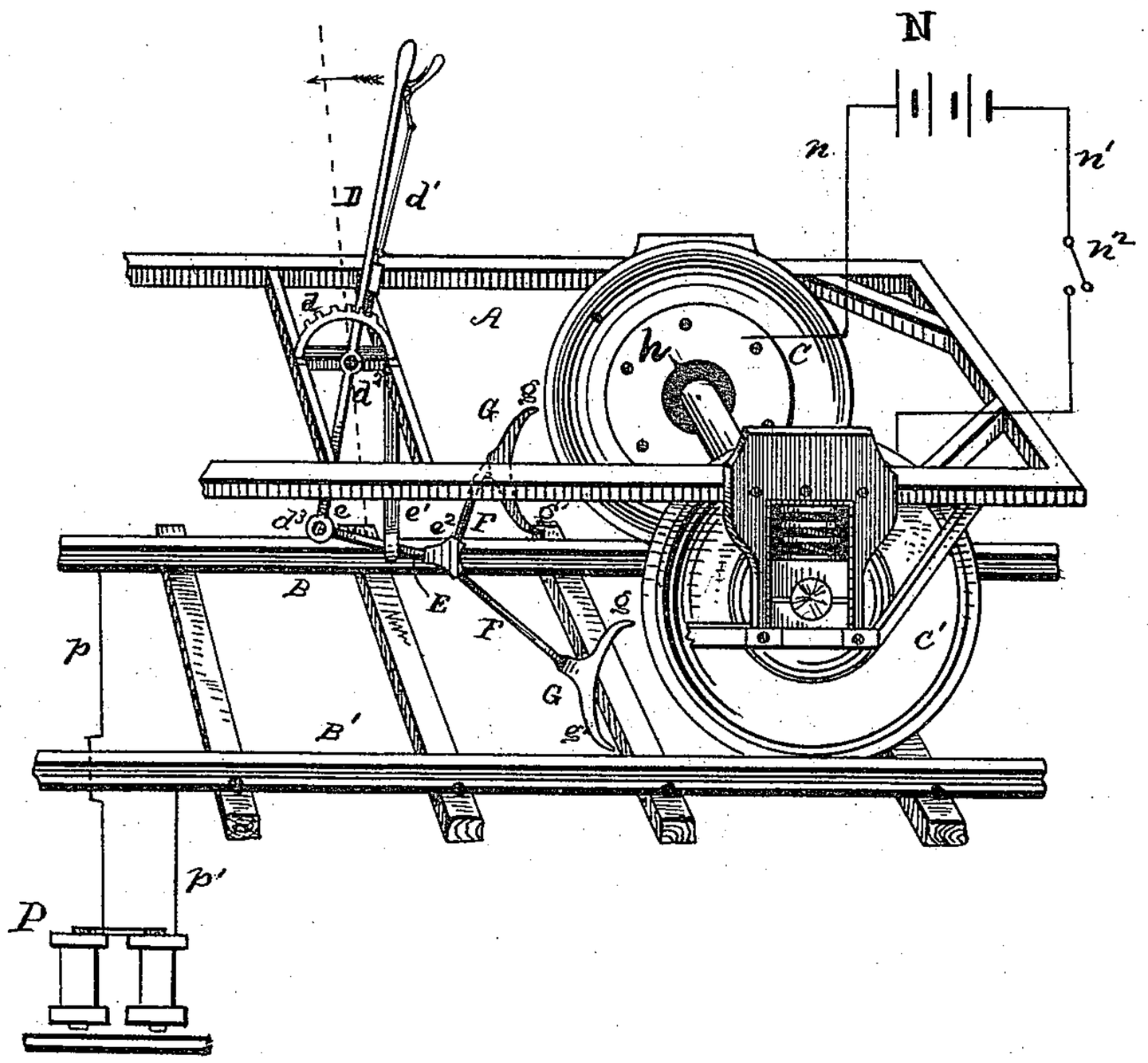
(No Model.)

M. WHELESS.

AUXILIARY CONTACT FOR ELECTRIC RAILWAYS.

No, 441,213. Patented Nov. 25, 1890.



Witnesses
Thos. H. Houghton.
H. E. Lowell.

Inventor
Malone Wheless.
per W. H. Singleton.
Attorney

UNITED STATES PATENT OFFICE.

MALONE WHELESS, OF NASHVILLE, TENNESSEE, ASSIGNOR TO THE WHELESS ELECTRIC RAILWAY COMPANY, OF ALEXANDRIA, VIRGINIA.

AUXILIARY CONTACT FOR ELECTRIC RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 441,213, dated November 25, 1890.

Application filed July 14, 1890. Serial No. 358,623. (No model.)

To all whom it may concern:

Be it known that I, MALONE WHELESS, a citizen of the United States, residing at Nashville, in the county of Davidson and State of Tennessee, have invented certain new and useful Improvements in Auxiliary Contacts for Electric Railways; and I do 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 drawing, and to the letters of reference marked thereon, which form a part of this specification.

The figure is a perspective view of part of a car-truck provided with the invention.

This invention relates to an improvement in appliances to be used on electric street-railway systems, more particularly to that class wherein a current passes from the rail to a wheel, or conversely.

In an application filed by me March 15, 1890, Serial No. 343,984, and allowed May 1, 1890, there is shown a system wherein a battery-circuit having its source of supply on the car is used. The current of this circuit passes from one of a pair of car-wheels into the line of rails on one side and then through various devices and onto the other line of rails and up through the other car-wheel of the pair and back to battery. Now in operating a car having this circuit, should the car be stopped so that one wheel or both of the pair in circuit should rest on some obstruction, say, a piece of dirt between the wheel and the rail, the circuit would be broken and the current would not flow when the switch was closed. Ordinarily a brush would keep the truck clean; but should the dirt stick and the brush not remove it, then the circuit would be broken. To prevent this and to insure the completion of the circuit I have devised the auxiliary circuit-closer, hereinafter set out.

In the annexed drawing, the letter A indicates an ordinary car-truck on the rails B B′, and having the pair of wheels C C′, insulated at *h* from the axles, to which the battery-wires are connected, as fully set forth in the application referred to. In the present case I have illustrated this construction by the battery N, having the wires *n n′*, the latter with a switch n^3, running to the insulated wheels. From one line of rails B a wire *p* runs to the magnets P in a trap, and from the magnets P another wire *p′* runs to the other line of rails B′. These magnets have the armature p^3, the movement of which opens and closes the power-line. Extending downwardly is the operating-handle D, having the ratchet *d* and pawl *d′*. This handle is pivoted at d^2 to the timbers of the car. To the lower end d^3 of the handle D is pivoted the end *e* of a rod E, which passes loosely through a hanger *e′*, and has at its other end the socket e^2. Secured in this socket e^2 are the divergent arms F F. These arms extend outwardly and carry at their outer ends the contacts G G. These contacts are somewhat crescent-shaped, having the ends *g g′*, the latter having, preferably, sharp edges. These contacts are in the planes of the treads of the car-wheels and the lines of rails. The range of movement of these contacts is such that when the upper end of the handle is thrown forward the contacts are pressed back and their ends bear against the wheels and the rails. Should a car be stopped and on attempting to start it by closing the battery-circuit the car should refuse to move, the operator, by moving the handle D, would place the contacts G G between the wheels and the rails spanning the obstruction. If the obstruction should be a large mass of dirt, too large for the contact to span it, then the sharp end *g′* would cut through and bear on the rail.

Having described my invention, what I claim is—

1. The combination of a car having insulated wheels to which circuit-wires are connected, and the line of rails with an auxiliary contact located between the wheels and the rails, as set forth.

2. The combination of a car having insulated wheels to which circuit-wires are con-

nected, and the line of rails with an auxiliary contact placed in the plane of the treads of the wheels and of the lines of rails, as set forth.

3. The auxiliary contact device consisting of the handle D, the rod E, arms F F, and the contacts G G, as set forth.

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

MALONE WHELESS.

Witnesses:
J. CHESTER ROBERTS,
GRAHAM L. GORDON.