(No Model.)

W. M. BROWN.

AUXILIARY ELECTRIC CONTACT.

No. 589,412. Patented Sept. 7, 1897.

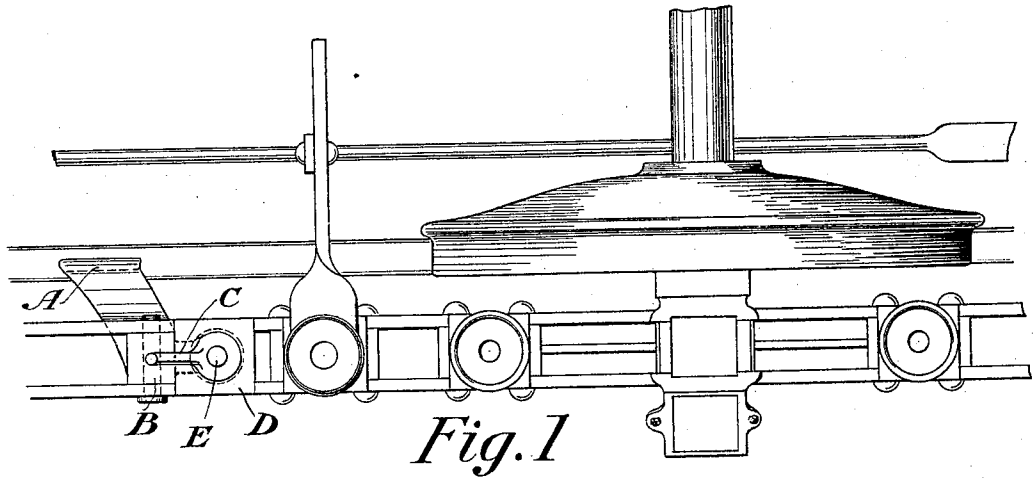


Fig. 1



Fig. 1a.

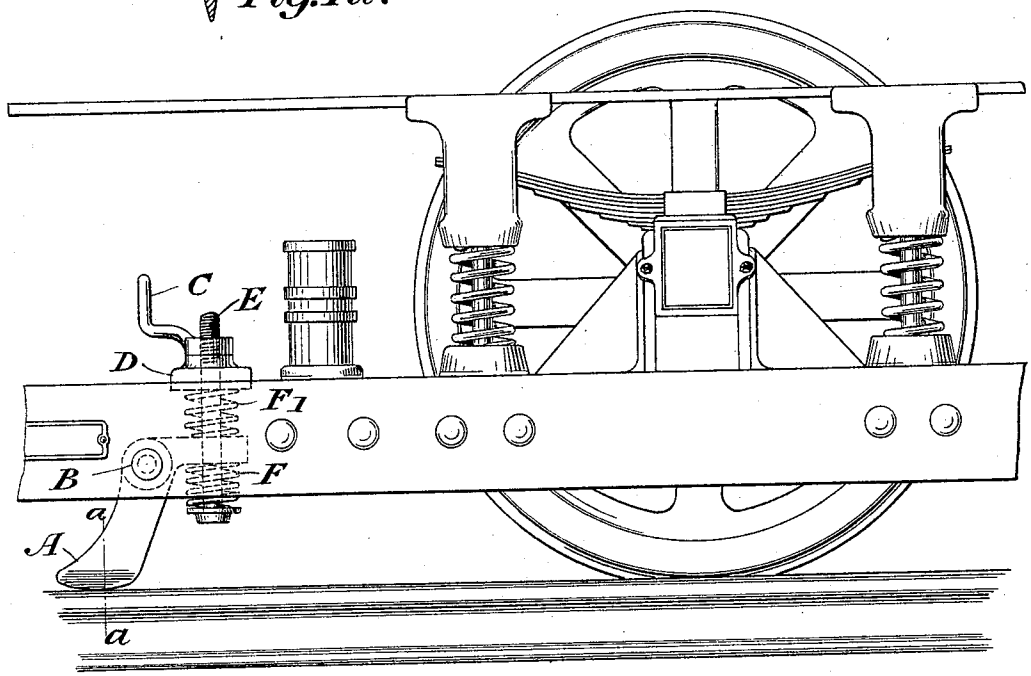


Fig. 2.

WITNESSES

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AUXILIARY ELECTRIC CONTACT.

SPECIFICATION forming part of Letters Patent No. 589,412, dated September 7, 1897.

Application filed February 23, 1897. Serial No. 624,661. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM MILTON BROWN, of Johnstown, Cambria county, Pennsylvania, have invented certain new and useful Improvements in Auxiliary Electric Contacts, of which the following is a specification.

My invention is especially designed for use with electric-railway vehicles as an auxiliary contact to be put in service during snow-storms or such times as the track-rails may be covered with mud, dust, or other material of an insulating character.

The object of my invention is to provide a contact having a metallic knife-edge which can be powerfully pressed against the track-rails and pierce through any insulating substance to make good contact with the track-rails.

The principal delays to which electric railways are subjected in times of snow-storms are not due to the inability of the vehicle to forge its way through the snow, but are due to the fact that the wheels of the vehicle mount upon a layer of snow and are no longer enabled to get sufficient electrical power.

While it is seldom that electric vehicles are delayed because of the presence upon the rails of mud or dust, much harm is done to the motors thereby, for current is delivered to them irregularly and intermittently.

By the use of my improved auxiliary contact direct engagement can be made with the track-rail at all times, so that regular and continuous current will always be delivered to the motors and a snow-storm will not delay the vehicle because of lack of power.

Referring to the drawings, Figure 1 is a plan view of a portion of a truck with one of my improved contacts attached. Fig. 2 is a side view thereof. Fig. 1ª is a section of the knife-contact A on the line *a a*.

Between the side bars of the truck is rigidly secured the block D, having a vertical opening through which passes the bolt E. The horizontal pin B is also secured between the side bars of the truck, the contact A being pivoted upon B.

F is a powerful compression-spring, and one end thereof engages a head on the lower end of E, the other end of the spring engaging the horizontal arm portion of the contact A. F′ is a similar spring between D and the upper side of said arm portion.

The adjusting-lever C screws upon the threaded end of the bolt E. By turning the lever in one direction the springs F and F′ are compressed and the horizontal arm of A is raised sufficiently to press the knife strongly against the rail. As the lever is turned in the other direction rod E is lowered and springs F and F′ lengthened. As the horizontal end of the contact A is held by the springs in a central position between D and the head of E it lowers as E lowers, so raising the knife-edge from the rail.

It is evident that the form of device shown and described may be modified in many ways, and I do not, therefore, limit myself to any particular method of securing the device to the truck, nor to the particular portion of the vehicle upon which I have located the device. For example, I may secure the device below the car-platform and provide, instead of the handle C, a lever that can be operated by the foot of the operator.

What I claim, and desire to protect by Letters Patent, is—

1. The combination with a contact-maker carried by an electrically-propelled vehicle, of a spring-pressed, knife-edged contact device in multiple therewith for contacting with the same side of the circuit, and means for retaining said device either in an operative position or in an inoperative as desired.

2. A pivoted and spring-pressed contact-shoe having a knife-edge and carried by an electrically-propelled vehicle in multiple circuit with the regular contact-making devices carried thereby for contacting with a given side of a circuit, in combination with means for retaining said shoe in an inoperative position when it is not needed for use.

3. In an electrically-propelled vehicle, the combination with the side bars of the truck, of a contact-shoe pivoted thereto, a vertical post encircled by springs which engage one end of said shoe, and means for raising or lowering said post to throw said shoe into or out of engagement with the railroad-rail.

4. In an electrically-propelled vehicle, a pivot between the side bars of the truck, a contact-shoe pivoted thereon, a block resting upon said side bars, a post movable within said block, springs encircling said post and engaging one end of the pivoted shoe, and means for raising or lowering said post.

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

WILLIAM MILTON BROWN.

Witnesses:
W. J. MURPHY,
H. W. SMITH.