

(No Model.)

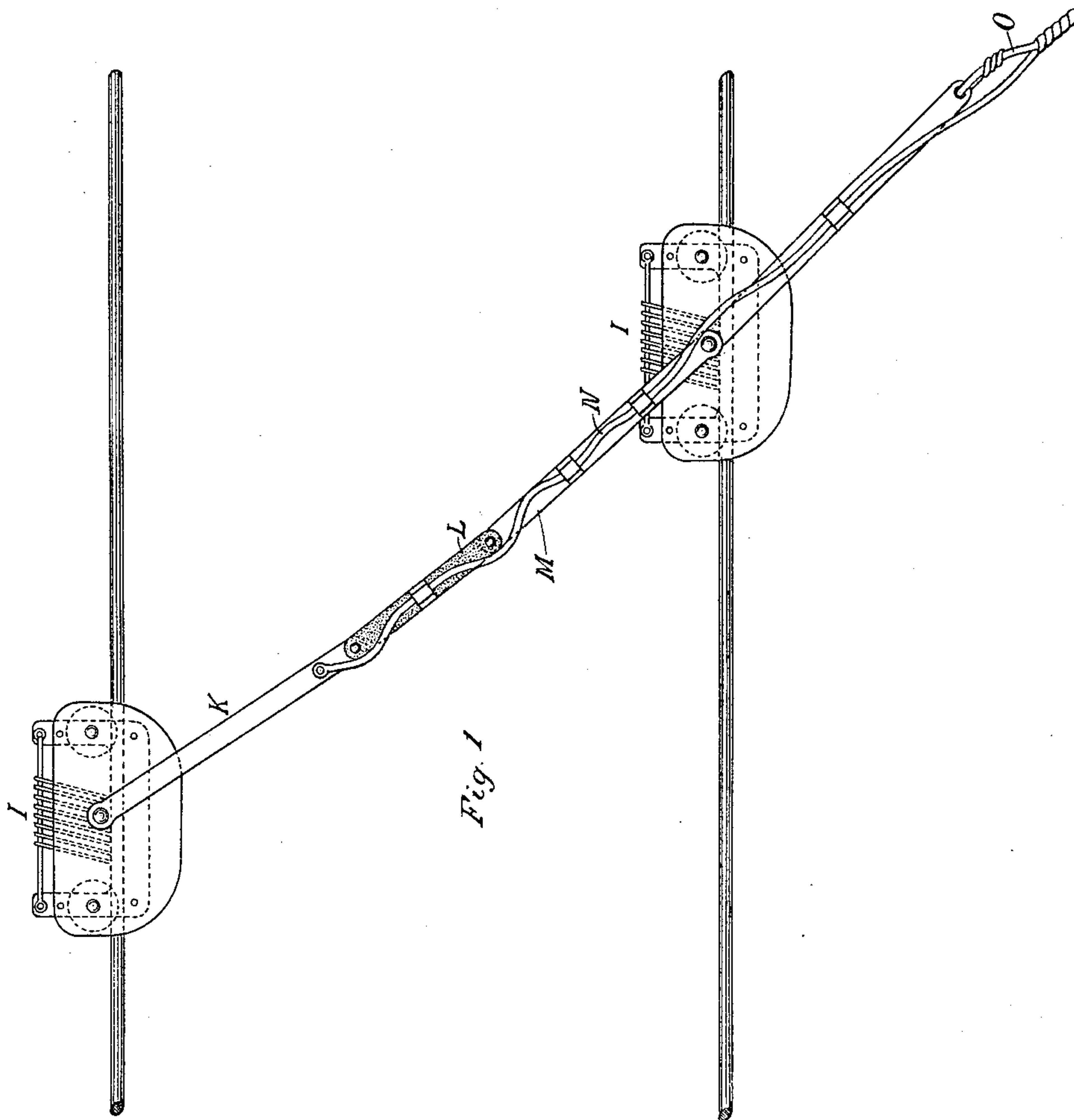
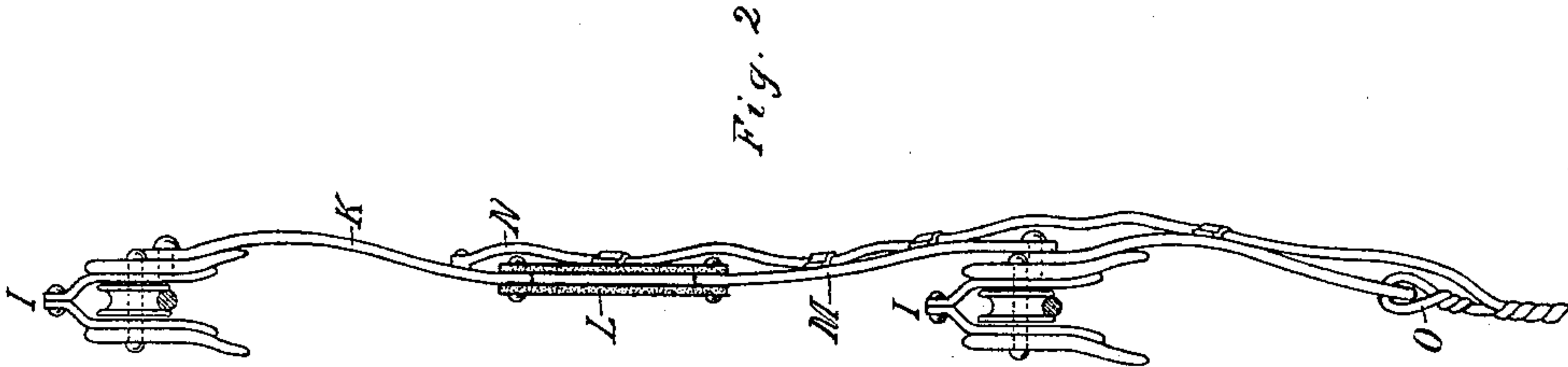
2 Sheets—Sheet 1.

J. L. BLACKWELL.

CONTACT DEVICE FOR ELECTRIC RAILWAYS.

No. 389,281.

Patented Sept. 11, 1888.



WITNESSES,

S. McCauldwell.
G. Renault

INVENTOR,

Josiah Low Blackwell
by Brutley & Knight,
attys.

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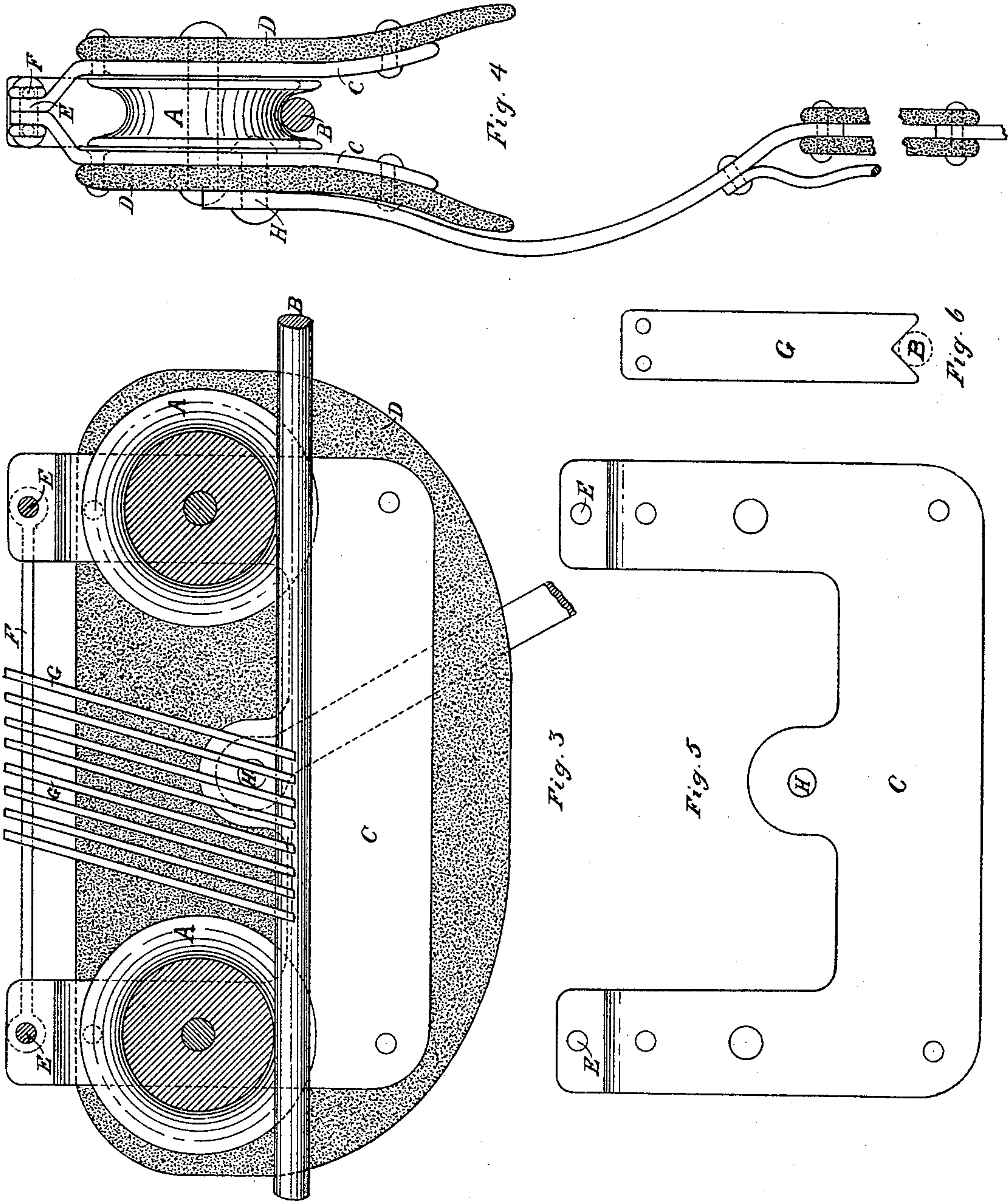
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WITNESSES,

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UNITED STATES PATENT OFFICE.

JOSIAH LOW BLACKWELL, OF NEW YORK, N. Y.

CONTACT DEVICE FOR ELECTRIC RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 389,281, dated September 11, 1888.

Application filed May 24, 1888. Serial No. 274,887. (No model.)

To all whom it may concern:

Be it known that I, JOSIAH LOW BLACKWELL, a citizen of the United States, residing at New York, in the county of New York, State of New York, have invented certain new and useful Improvements in Contact Devices for Electric Railways, of which the following is a specification.

My invention relates to contact devices for an elevated conductor system for electric railways; and it consists in various devices for the transmission of an electric current between the motor in a moving vehicle and the conductors connected with the generating-station.

My invention relates especially to that class of electric railways in which double elevated conductors are used, and connection between each of said double conductors and the motor on a moving vehicle constantly maintained.

In the accompanying drawings, Figures 1 and 2 are side and end views of a double elevated conductor system, wherein the conductors are placed one above the other and show the contact devices and the devices by which the two contact devices are joined together and attached to the moving vehicle. Fig. 3 is a central longitudinal section of one of said contact devices. Fig. 4 is an end elevation of said contact device. Figs. 5 and 6 are details of construction of said contact device.

In Figs. 3, 4, 5, and 6, A A represent the flanged wheels of a contact device bearing upon the surface of the conductor B.

C C represent metal forms, so bent and fastened together as to constitute the frame-work and guard-plates of the contact device.

D D represent side pieces, of leather or any insulating and non-resonant material, attached to and projecting below C C.

E E represent the points at which the metal frame-works, composed of the two pieces C C, are fastened together.

F F represent the bars extending between the points E E, upon which bars are strung and loosely hung plates of conducting material G G, the lower ends of which rest upon the surface of the conductor, and are adapted to easily slide along it in whichever direction the contact device may move, giving an additional security of constant electrical contact.

H represents the point of attachment between

the contact device or trolley and the device which connects the trolley with the motor upon a vehicle.

It will be readily seen that all the above-described parts are easily and cheaply constructed; that the depending plates, in conjunction with the trolley-wheels, insure effective electrical contact with the conductor; and that the side pieces, of insulating and non-resonant material, projecting below the metallic frame-work reduce the rattle of the revolving wheels to a minimum and also prevent the trolley from falling from the conductor.

In Figs. 1 and 2, I I represent the contact devices or trolleys, and K, L, and M represent, respectively, the three links by which the conductors in a two-wire system are joined together, of which the middle link, L, is composed of electrically non-conducting and flexible material. By the use of such a third link one trolley is always perfectly insulated from the other, and the direction in which the trolleys are to move along the conductors can be easily and quickly changed. O O represent the flexible conductors, by means of which electrical connection is maintained between the trolleys and the motor on the vehicle, and by which also the trolleys are pulled along the line-conductors.

I claim—

1. The combination, in an electric railway, of a suspended overhead wire, and a contact device adapted to travel thereon, having bearing-wheels, with a frame on opposite sides of said wheels, in which they are journaled, and non-resonant pieces attached to said frame.

2. A trolley or contact device for an electric conductor, having a metallic frame and contact-rollers therein and non-resonant sides secured to the frame.

3. A trolley or contact device for an electric conductor, having a metallic frame and contact-rollers and non-resonant guards secured to the frame and extending below the wire.

4. A trolley or contact device for an electric conductor, having metallic contact parts and leather sides, substantially as and for the purposes set forth.

5. In combination with a two-wire system of electrical conductors, two trolleys or contact devices, one for each wire, each trolley having

a metallic link pivoted on it, and the said two links connected by a third link of non-conducting material.

5 6. In combination with a two-wire system of electrical conductors, two trolleys or contact devices, one for each wire, each trolley having a metallic link pivoted on it, and the said two links connected by a third link of flexible and non-conducting material.

10 7. The combination, with an overhead suspended line-wire, of a traveling contact device or trolley therefor, having a series of trailing contact-pieces loosely supported above the wire, so as to trail either way according to the
15 direction of movement.

8. In combination with a two-wire system of electrical conductors, two trolleys or contact

devices, one for each wire, each trolley having a metallic link pivoted on it, and the said two links connected by a third insulating-link. 20

9. In combination with a two-wire system of electric conductors, two trolleys or contact devices, one for each wire, each trolley having a metallic link pivoted on it, with an intervening insulating-link, and a conductor leading from 25 the upper link along the other two links to the opposite trolley, whereby one trolley may be pulled by the other and electrical connection maintained with both.

JOSIAH LOW BLACKWELL.

Witnesses:

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W. H. CROSBY.