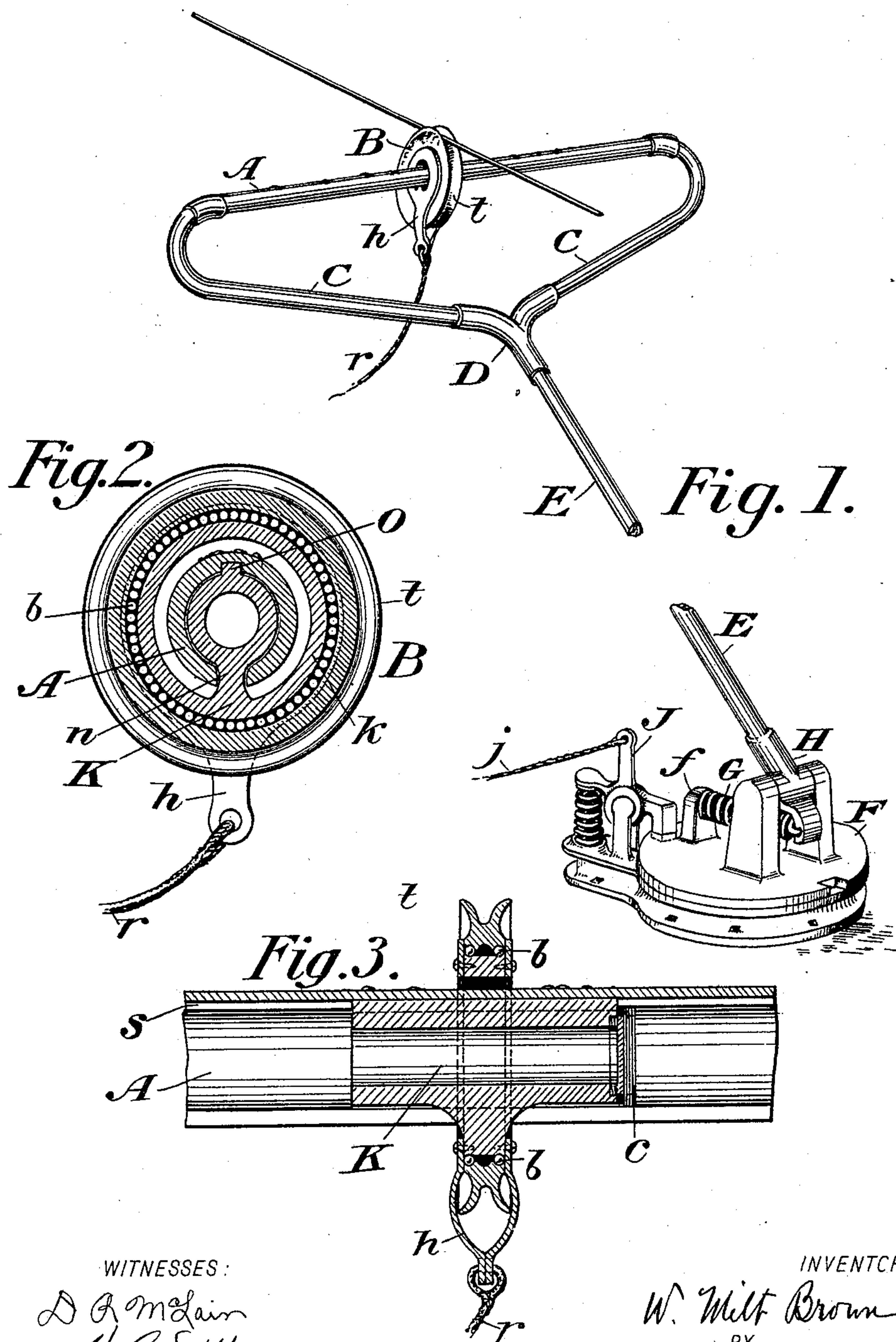


(No Model.)

W. M. BROWN.
ELECTRIC TROLLEY DEVICE.

No. 582,259.

Patented May 11, 1897.



WITNESSES:
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UNITED STATES PATENT OFFICE.

WILLIAM MILTON BROWN, OF JOHNSTOWN, PENNSYLVANIA, ASSIGNOR TO
THE STEEL MOTOR COMPANY, OF SAME PLACE.

ELECTRIC TROLLEY DEVICE.

SPECIFICATION forming part of Letters Patent No. 582,259, dated May 11, 1897.

Application filed December 16, 1896. Serial No. 615,897. (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
5 useful Improvements in Electric Trolley Devices, of which the following is a specification.

My invention relates to electric trolley devices of that class used upon railway-cars to establish contact with a suspended conductor.

10 The object of my invention is to produce a trolley device for electric railways or kindred arts of such improved construction that the contact-maker will readily adjust itself to sudden changes in the vertical or lateral position of the conductor and yet always retain
15 the same relative position therewith, thus reducing to a minimum the wear on both conductor and contact-maker.

To this end my invention comprises,
20 broadly, a carriage carrying a contact-maker, said carriage being adapted to slide transversely within a tube, and means for imparting upward pressure to said tube.

My invention consists in the novel construction and combination of parts of the transverse tube, the sliding carriage, and the contact-maker, as will be hereinafter pointed out.

Referring to the drawings, Figure 1 is a perspective view of one form of my invention.
30 Fig. 2 is a cross-section through the tube A and the carriage B. Fig. 3 is a longitudinal section through the same.

I show a transverse tube A, carried between the prongs C C, secured to the bifurcated bracket D at the upper end of the pole E, the lower end of E being secured within the bracket H, which is horizontally pivoted to the upper portion of a turn-table F. From a
40 lug f on the said turn-table extends a tension-spring G, which is secured at its other end to the bracket H to give the requisite upward pressure to the contact portions of the device.

J is a key to lock the turn-table, as clearly shown, when the device is in its desired operative position, and j is a cord to release the
45 key J when it is desired to reverse the position of the pole.

B is a carriage comprising the members K, b b, t, h h, and c. The sliding member K,
50 which may be made of any material suffi-

ciently durable, is adapted to slide inside the tube A, and has a neck n, which passes through a longitudinal opening in the bottom of said tube, and a rib o, fitting in a slotted recess s in the top of the tube. The ring k of the sliding member K is connected to it by the neck n and surrounds without touching the tube A. Surrounding k and rotatable thereabout on the balls b b is the contact-wheel t. Securing together these parts are the plates h h, which
55 may also, if desired, serve as a harp to electrically connect the electrical apparatus with the contact t. r is a rope for the usual purpose. An auxiliary contact-brush, as c, may be secured to K to minimize arcing within the
60 tube if K is made of conducting material. It will thus be seen that no accumulation of dust, ice, &c., nor any blistering which the tube may receive from accidental arcing, will interfere with the easy sliding of the carriage.
70

Although I have shown my devices carried upon the free end of a pole, and have even shown many of the details of its construction and that of its base, I do not limit myself to the use of my device with the pole and base
75 here shown and described, for it may be used with many other forms of upward-pressure trolleys. Neither do I limit myself to the exact details set forth, for many modifications may be made in them without losing the advantages of or departing outside the scope of my invention. For example, I may surround that
80 portion of the sliding member K which is within the tube by ball-bearings to aid its easy movement therein. Many changes may also
85 be made in the design of K and of the contact member, here shown as a wheel t.

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

1. In a trolley device for electric railways,
90 in combination, an upwardly-pressed tube having a longitudinal opening, a member adapted to move longitudinally along said tube and bearing on the inside thereof, and a contact-maker mounted upon said moving
95 member.

2. In a trolley device for electric railways, in combination, an upwardly-pressed tube having a longitudinal opening, a member longitudinally movable along said tube and bear-
100

ing on the inside thereof, said member having an outer portion to which is secured the contact-maker, said outer portion being connected to the bearing portion of said member by
5 a neck passing through the longitudinal opening in the tube.

3. A transversely-movable carriage for electric trolley devices comprising in combination a cylindrical member adapted to bear
10 against the inside of a slotted tube, a neck connecting said member with a ring adapted to surround, without touching, the tube, and a contact-maker suitably mounted about said ring.

15 4. A transversely-movable carriage for electric railway devices, comprising in combination a contact-wheel suitably mounted so as to enable it to rotate about a ring, a neck, as *n*, connecting said ring with a cylindrical
20 member adapted to bear against, and move along the inside of a slotted tube, and plates

as *h h*, all substantially as, and for the purpose, set forth.

5. In an electric railway in combination, a suspended conductor, a vehicle carrying a
25 device adapted to press upwardly toward said conductor, a transverse tube secured near the upper end of said device and having a longitudinal opening in the bottom thereof, a carriage bearing against the inside of said tube
30 and having an outer portion connected to the portion within the tube by a neck passing through the said opening, and a suitable contact-maker mounted upon said outer portion of the carriage.

In testimony whereof I have affixed my signature in presence of two witnesses. 35

WILLIAM MILTON BROWN.

Witnesses:

D. S. SHALLENGER,
H. W. SMITH.