No. 762,319. PATENTED JUNE 14, 1904.

D. KEMPT.

CONTACT BOX AND CONDUCTOR FOR ELECTRIC RAILWAYS OR TRAMWAYS.

APPLICATION FILED SEPT 23, 1903.

NO MODEL.

Fig. 1

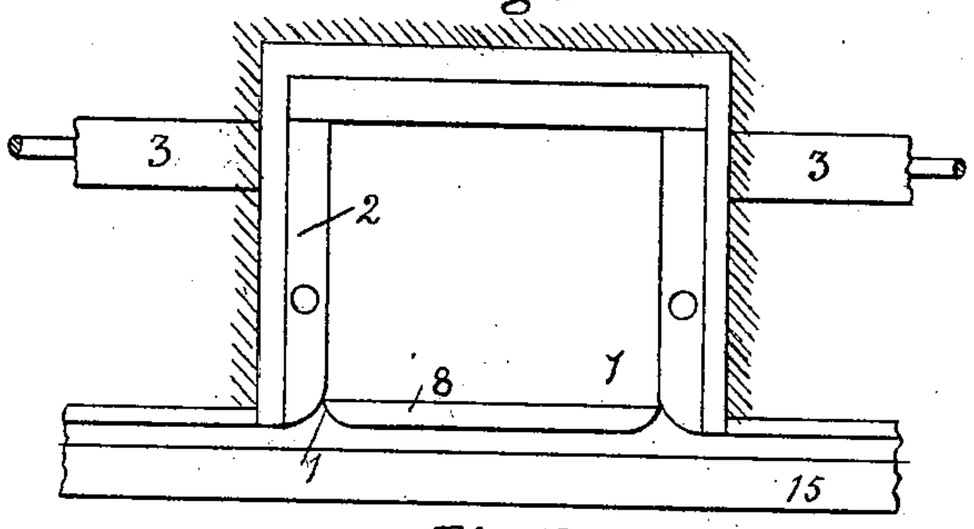


Fig. 2.

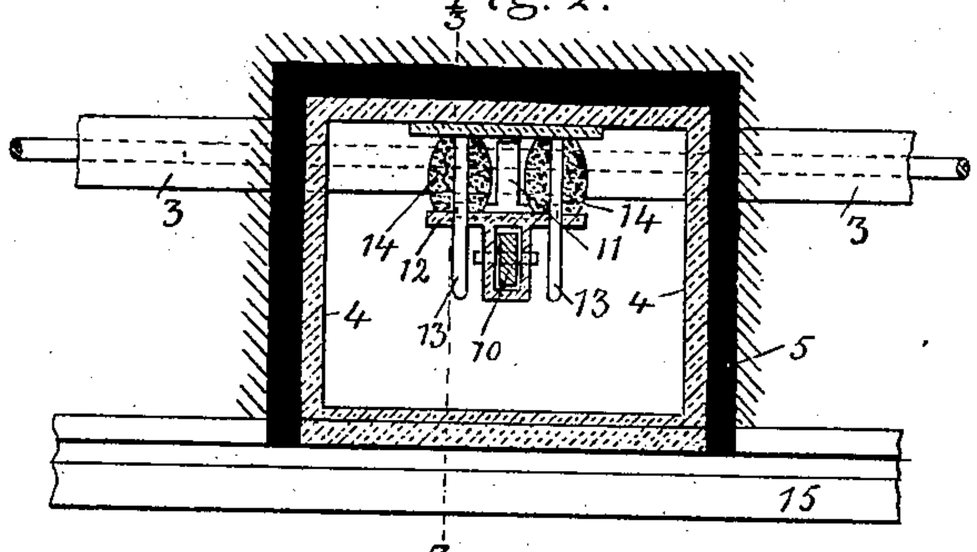


Fig. 3.

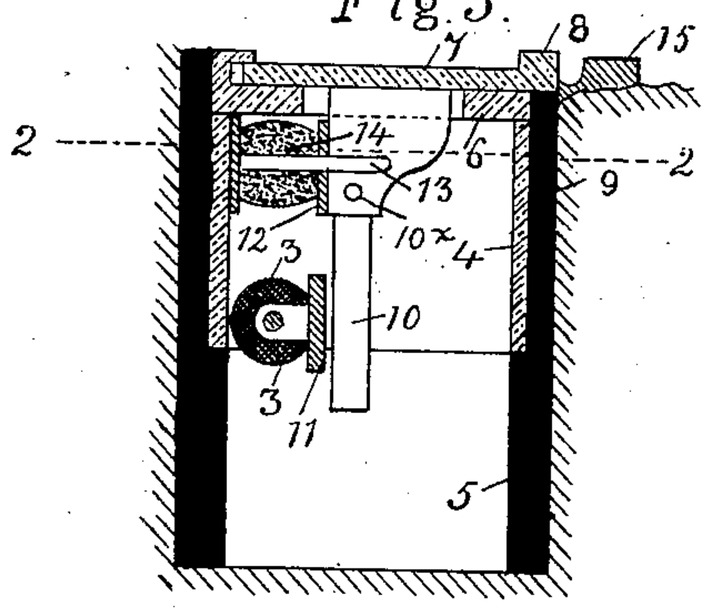
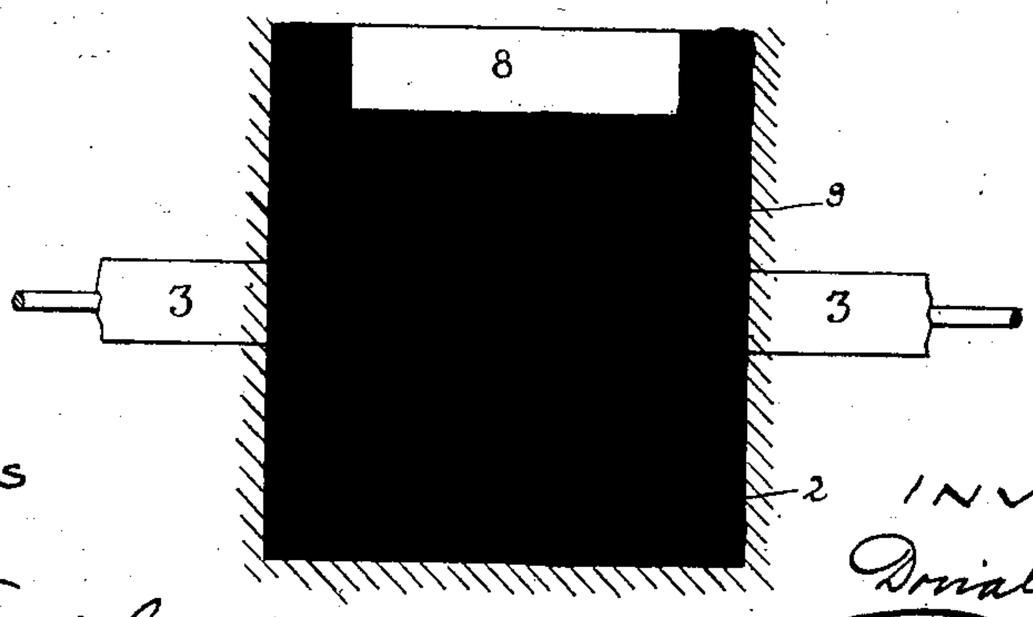


Fig. 4.



WITNESSES

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No. 762,319. Patented June 14, 1904.

UNITED STATES PATENT OFFICE.

DONALD KEMPT, OF BUENOS AIRES, ARGENTINA.

CONTACT-BOX AND CONDUCTOR FOR ELECTRIC RAILWAYS OR TRAMWAYS.

SPECIFICATION forming part of Letters Patent No. 762,319, dated June 14, 1904.

Application filed September 23, 1903. Serial No. 174,329. (No model.)

To all whom it may concern:

Be it known that I, DONALD KEMPT, surgeon dentist, a subject of the King of Great Britain and Ireland, and a resident of Buenos Aires, Argentina, have invented certain new and useful Improvements in Contact-Boxes and Conductors for Electric Railways or Tramways, (for which an application has been filed in Great Britain, Patent No. 5,938, bearing date March 14, 1903,) of which the following is a specification.

This invention has reference to and comprises improvements relating to contact-boxes and conductors for electric railways and tramways; and it consists of improvements in the construction of contact-boxes by means of which electricity is conveyed from the main conductor to collectors arranged on a tramway-car or other railway-vehicle as it passes in succession each contact-box of the series.

In order that others skilled in the art to which my invention relates may understand the nature of my improvements, I have hereunto appended one sheet of explanatory drawings, in which—

Figure 1 is a plan of part of a tramway-rail having a contact-box fitted alongside. Fig. 2 is a sectional plan of the same, taken on the line 2 2 in Fig. 3. Fig. 3 is a sectional elevation at right angles to Fig. 2, taken on the line 3 3 in Fig. 2, while Fig. 4 is an elevation of the side of the contact-box next the rail.

Referring to the figures, at spaced distances apart—say about two-thirds of the length, more or less, of the car to which the improvements are being applied—breaks 1 are formed in the inside edge of one of the rails 15 by cutting away part of the inner edge—say about thirteen inches in length—at each of these breaks and close to the rail; but separated from it by fiber or other suitable insulating material 9 contact-boxes 2 are placed, through which one of the main conductors or cable 3 passes, the rail on the other side of the track being used as the return-conductor.

The casing 2 of each contact-box is of a size to nearly fill the space of the break 1 in the rail and is hollow and rectangular and divided into upper and lower sections 4 and 5. The lower one, 5, is put down first, and after the main conductor 3 is passed through the upper part of it the upper section 4 is bolted or otherwise secured onto it. The upper section has a removable top 6, which is bolted to the part 4, so that it can be easily removed for cleaning or repair. In this top 6 is fitted a sliding plate 7, running in grooves in each side, having a raised edge 8 to correspond with the inner side of the rail, and the gap caused by the break 1 is nearly filled by the edge 8, the front 9 of the contact-box being formed of or covered with non-conducting material. Through the center of the top 6 and attached to the sliding plate 7 is a prong 10, consisting of two parts secured together at $10^{\times}$, which makes contact with a metal plate 11, attached to the main conductor or cable 3 inside the box. To the upper end of this prong 10, but underneath the top, is attached a plate 12, with two rods 13 running through it, on which are springs 14, which may be of rubber, to keep the prong just out of contact till the slide 7 is forced inward by the pressure of one of the conductors on the car. The contact-boxes are partly formed of or covered outside with suitable insulating material.

As the car progresses when the conductors on the car, which may run in the grooves of the rail 15, come opposite each break 1 in the rail they come into contact with the edge 8 of the sliding plate 7, which conductors force inward the said plate, causing the prong 10 to make contact with the metal plate 11, attached to the main conductor 3 within the box, and thus the circuit is completed from the main conductor 3 to the motor on the car through the conductors thereon.

It will be understood that when the plate 7 has its edge 8 in line with the rails and is capable of being touched by the car-wheels there is no electrical connection between the plate and main conductor. When the plate 7 is pressed in to make electrical connection, the car-wheels are not in a position to touch it.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In contact-boxes for transmitting electric current from the main conductor to conductors on electric railway and tramway ve-

hicles the combination of an outer casing, a top plate sliding in grooves therein, a prong secured to said plate, a contact-plate on the main conductor and springs interposed between the prong and the casing substantially as set forth.

2. In contact-boxes for transmitting electric current from the main conductor to conductors on electric railway or tramway vehicles the combination comprising the casing 2, the sliding top plate 7, the prong 10, the plate 12, the rods 13, the springs 14, and the contact-plate 11 substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

DONALD KEMPT.

Witnesses:
F. S. BATTLEY,
F. H. MILLER.