June 9, 1931. T. C. E. ROWLAND ET AL 1,809,492

CURRENT COLLECTOR FOR ELECTRIC TRAMWAY AND RAILWAY VEHICLES

Filed Feb. 13, 1930

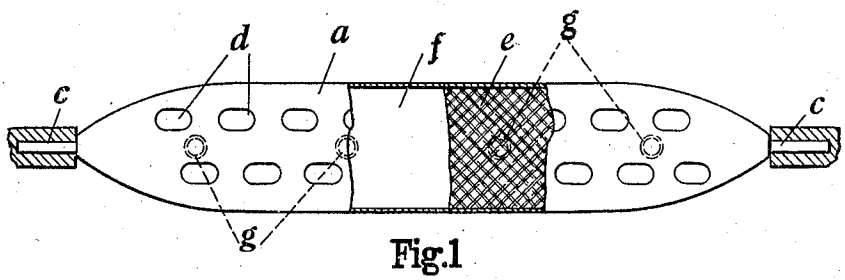


Fig.1

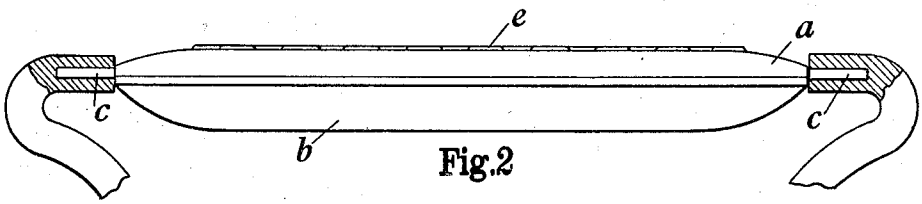


Fig.2

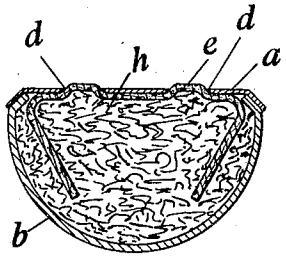


Fig.4

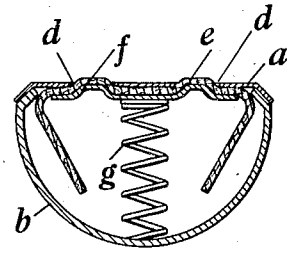


Fig.3

T. C. E. Rowland &
H. M. Dudgeon INVENTORS
By: Mark & Clerk
Attys.

Patented June 9, 1931 1,809,492

UNITED STATES PATENT OFFICE

THOMAS CARLYLE ELLISON ROWLAND, OF SPARKHILL, BIRMINGHAM, AND HECTOR McPHAIL DUDGEON, OF PERRY BARR, BIRMINGHAM, ENGLAND

CURRENT COLLECTOR FOR ELECTRIC TRAMWAY AND RAILWAY VEHICLES

Application filed February 13, 1930, Serial No. 428,186, and in Great Britain February 14, 1929.

This invention relates to the current collecting plates used on the bow or pantagraph types of collectors of electric tramway and railway vehicles. The object of the invention is to provide improved means for lubricating the plate and the overhead conductor. A further object of the invention is to minimize risk of damage to the collector in the event of the plate striking an obstruction.

The invention comprises the combination of a perforated collecting plate and a lubricating medium arranged at one side of the plate. Also the invention comprises the combination with the underside of a rotatable collecting plate, of a counterbalancing body which may serve as a receptacle for lubricant.

Further the invention comprises the combination and arrangement of parts hereinafter described.

In the accompanying sheet of explanatory drawings:—

Figure 1 is a part sectional plan and Figure 2 a front elevation of a lubricated collecting plate constructed in accordance with this invention.

Figures 3 and 4 are cross sections of the plate and the lubricant container respectively showing alternative lubricating means.

In carrying the invention into effect in the manner illustrated, the collecting plate *a* is arranged at the upper side of a hollow container *b*, and at the ends of the container are provided short spindles *c* whereby the device can be pivotally attached to the usual bow or pantagraph.

The plate *a* is formed with perforations *d* and beneath the plate is arranged a sheet or pad of felt or other absorbent material *e*. This may be supported on a grid *f* (Figure 3) and the latter is pressed against the underside of the pad by springs *g* for causing the pad to project slightly through the perforations *d*. The interior of the container may be filled with any convenient lubricant.

Alternatively instead of the springs *g* and grid *f*, a mass of resilient absorbent material *h* may be used for holding the pad *e* in position as shown in Figure 4. The said material *h* may consist of cotton waste or the like saturated in oil.

It will be obvious that by means of the device above described effective lubrication of the plate and of the overhead conductor against which the plate slides can be readily and conveniently maintained.

To avoid risk of injury to the collector in the event of the plate sticking or accidental obstruction on the overhead fittings associated with the conductor, the container is preferably made to a semi-circular or other rounded form, and as its centre of gravity lies below the surface of the plate, the weight of the container naturally tends to keep the plate uppermost. In the event of the plate striking an obstruction, it readily rolls over about the axis of the spindles *c*. On passing the obstruction the plate is brought back to its proper position by the weight of the container.

The invention is not limited to the example above described, and subordinate details may be varied to meet different requirements.

Having thus described our invention what we claim as new and desire to secure by Letters Patent is:—

1. In current collectors of the bow or pantagraph types for electric tramway or railway vehicles, the combination of a perforated collecting plate, a lubricating pad arranged at one side of the plate, and means for pressing the pad into contact with the plate, substantially as described.

2. In current collectors of the bow or pantagraph types for electric tramway or railway vehicles, the combination of a perforated collecting plate, a lubricating pad arranged at one side of the plate, a grid and springs for pressing the pad against the plate, substantially as described.

3. In current collectors of the bow or pantagraph types for electric tramway or railway vehicles, the combination of a perforated collecting plate, a lubricating pad arranged at the underside of the plate, means for pressing the pad against the plate, and a lubricant container, substantially as described.

4. In current collectors of the bow or pantagraph types for electric tramway or railway vehicles, the combination of a perfo-

rated collecting plate, a lubricating pad arranged at one side of the plate, a grid and springs for pressing the pad against the plate, and a lubricant container enclosing the pad and its associated parts, substantially as described.

5. In current collectors of the bow or pantagraph types for electric tramway or railway vehicles, the combination of a perforated collecting plate, a lubricant container arranged at one side of the plate, and end spindles about the axis of which the plate and container can swing, substantially as described.

In testimony whereof we have signed our names to this specification.

THOMAS CARLYLE ELLISON ROWLAND.
HECTOR McPHAIL DUDGEON.