L. A. McCOUBRIE & C. F. RAYDURE.

FOLDABLE SHOE FOR THIRD RAIL ELECTRIC CARS.

APPLICATION FILED JUNE 8, 1912.

1,045,581. Patented Nov. 26, 1912.

2 SHEETS—SHEET 1.

FIG. 1.

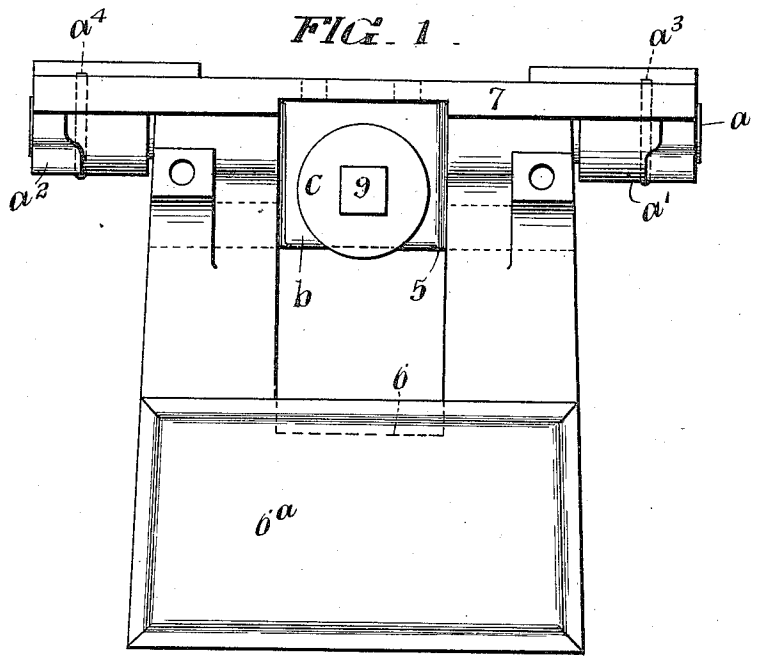
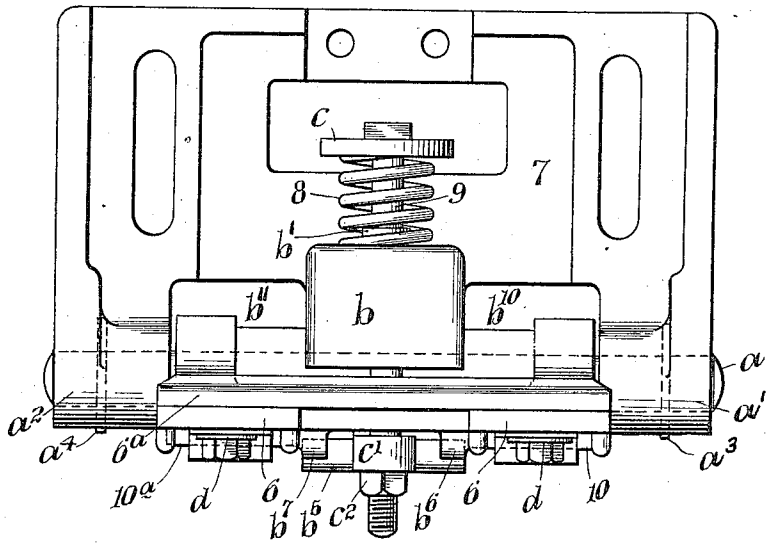


FIG. 2.



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2 SHEETS—SHEET 2.

FIG. 3.

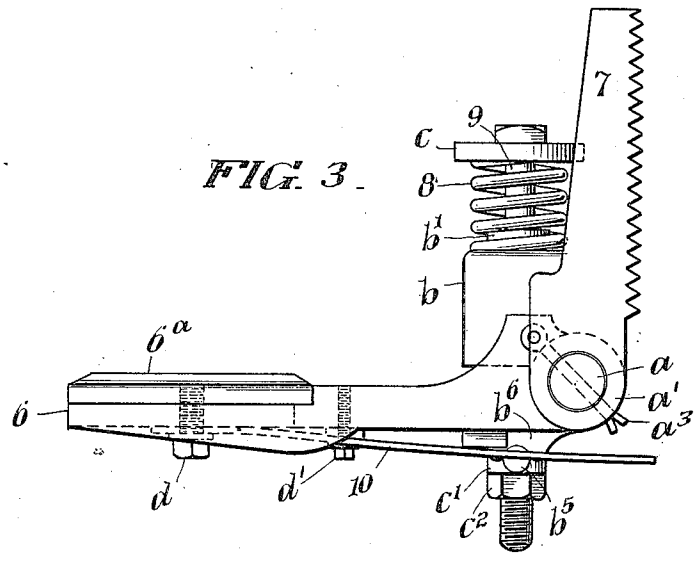


FIG. 4.

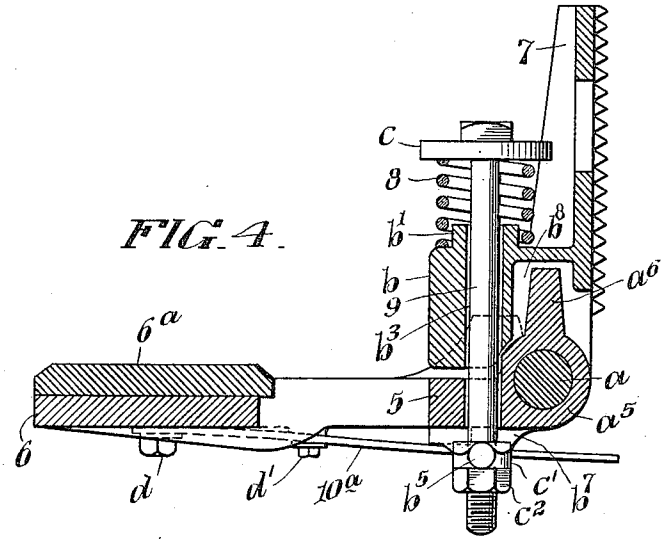
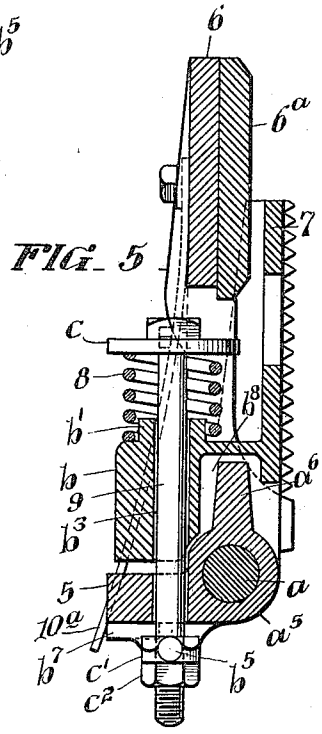


FIG. 5.



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UNITED STATES PATENT OFFICE.

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FOLDABLE SHOE FOR THIRD-RAIL ELECTRIC CARS.

1,045,581. Specification of Letters Patent. Patented Nov. 26, 1912.

Application filed June 8, 1912. Serial No. 702,483.

To all whom it may concern:

Be it known that we, LOUDEN A. McCOUBRIE and CHARLES F. RAYDURE, both citizens of the United States, residing at the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have jointly invented certain new and useful Improvements in Foldable Shoes for Third-Rail Electric Cars, of which the following is a specification.

Our invention has relation to a third-rail shoe for electric cars of the type patented to us under the No. 1,021,420, dated March 26th, 1912, but in the present instance arranged for interurban trolley service to fold out of the way when not in use; and in such connection our present invention relates to the constructive arrangement of such a shoe for the defined purpose.

The nature and scope of our present invention will be more fully understood from the following description taken in connection with the accompanying drawings forming part thereof, in which—

Figure 1, is a top or plan view of a shoe, embodying the features of our said invention. Fig. 2 is a front elevational view thereof. Fig. 3, is a side elevational view of the same. Fig. 4, is a vertical central sectional view through the shoe, showing the contact member of the shoe in an operative relation; and Fig. 5, is a similar view showing the contact member of the shoe in a folded condition, when not in use.

Referring to the drawings 6, is the horizontal shoe-contact member provided with a removable contact-piece 6^a, as clearly shown in Figs. 1, 3 and 4.

7, is the vertical supporting member provided with end journals mounted on a bolt a, as is also the member 6, and both of which members are held in operative relation in respect to each other on the said bolt a, by means of cotter-pins a^3 and a^4, as clearly shown in Figs. 1, 2 and 3.

Centrally and independent of the U-shaped terminal portions readwardly of the member 6, is provided an oblong piece 5, formed into a bearing a^5, and with a tapering vertical projection a^6. The bearing of the piece 5, is mounted on the bolt a, as shown in Figs. 4 and 5.

The supporting member 7, is provided with a rear chambered part b^8, in which extends the tapering projection a^6, of the centrally located piece 5, as clearly shown in Figs. 4 and 5, and which is arranged so as to be afforded a range of back and forth play therein, for a purpose to be presently fully explained. The perforated block-like front projection b, of the supporting member 7, is formed with a seat b^1, for engaging one extremity of a helical spring 8. This spring bears at its opposite extremity against a cap or washer c, carried on a headed vertical bolt 9, and passes downward through the perforation b^3, in the block-like projection b, and through a perforation formed in the independent central piece 5, and carrying on the lower threaded portion of the same beneath the piece 5, a washer c^1, and jam nut c^2.

A cross-pin b^5, is arranged to engage in shouldered recesses b^6 and b^7, formed integral with the bottom of the piece 5, on both sides of the bolt 9, and which passes through the washer c^1, as does also the bolt 9, as clearly shown in Fig. 2, for providing a flexible tensioning connection of the member 7, with the piece 5, and at the same time to afford a limited range of back and forth movement of the latter controlled by the vertical projection a^6, of said piece within the chambered part b^8, of the chamber 7, as will be apparent and clearly understood from Figs. 4 and 5, in which are shown respectively, the operative and the inoperative positions of the said shoe-contact member 6. On the underside of the member 6, as clearly shown in Figs. 2, 3 and 4, are secured at d and d^1, flat springs 10 and 10^a, and at their free extremital portions in bearing contact in operative relation of the shoe-contact member 6, with the under shouldered portions of the central piece 5, as clearly shown in Figs. 2 and 4, for permitting of the member 6, being held up against an electrified rail, not shown, in a manner for instance, as shown in Fig. 4, and when not in use in a position and against the normal weight of the member 6, in its shifted relation out of the way, as in Fig. 5.

In practice it is very necessary in the use of third rail shoes for interurban service to be enabled manually to quickly shift the shoe into a folded condition out of the way so as not to come in contact with obstructions along the road-way. The foregoing described arrangement of a shoe efficiently providing for just such use and with the

least possible labor and time consumed in the handling of the same, to assume either the position as shown in Fig. 4, or in Fig. 5.

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

1. A shoe for electric railways, comprising a vertical supporting member and a horizontal shoe-contact member in pivotal connection with each other, a central piece journaled to the pivot of said two members, flat springs each secured at one of its extremities to said shoe-contact member and in bearing contact at opposite extremities with the central piece and an adjustable spring controlled bolt connection between said supporting member and said central piece, substantially as and for the purposes described.

2. A shoe for electric railways, comprising a vertical supporting-member and a horizontal shoe contact-member in pivotal connection with each other, a central piece journaled to the pivot of said two members and provided with flat bearing surfaces at an angle to each other, flat springs, each secured at one of its extremities to said shoe contact-member and in contact at the opposite extremities with one of said bearing surfaces, said supporting-member formed with a rear chambered part and said central piece formed with a projection to enter said part and means to hold said central piece under tension in its relation with said supporting-member.

In witness whereof, we have hereunto set our signatures in the presence of the two subscribing witnesses hereto.

LOUDEN A. McCOUBRIE.
CHARLES F. RAYDURE.

Witnesses:
THOMAS M. SMITH,
HELEN F. MILLER.