

(No Model.)

3 Sheets—Sheet 1.

N. SEIBERT.
ELECTRIC RAILWAY.

No. 446,475.

Patented Feb. 17, 1891.

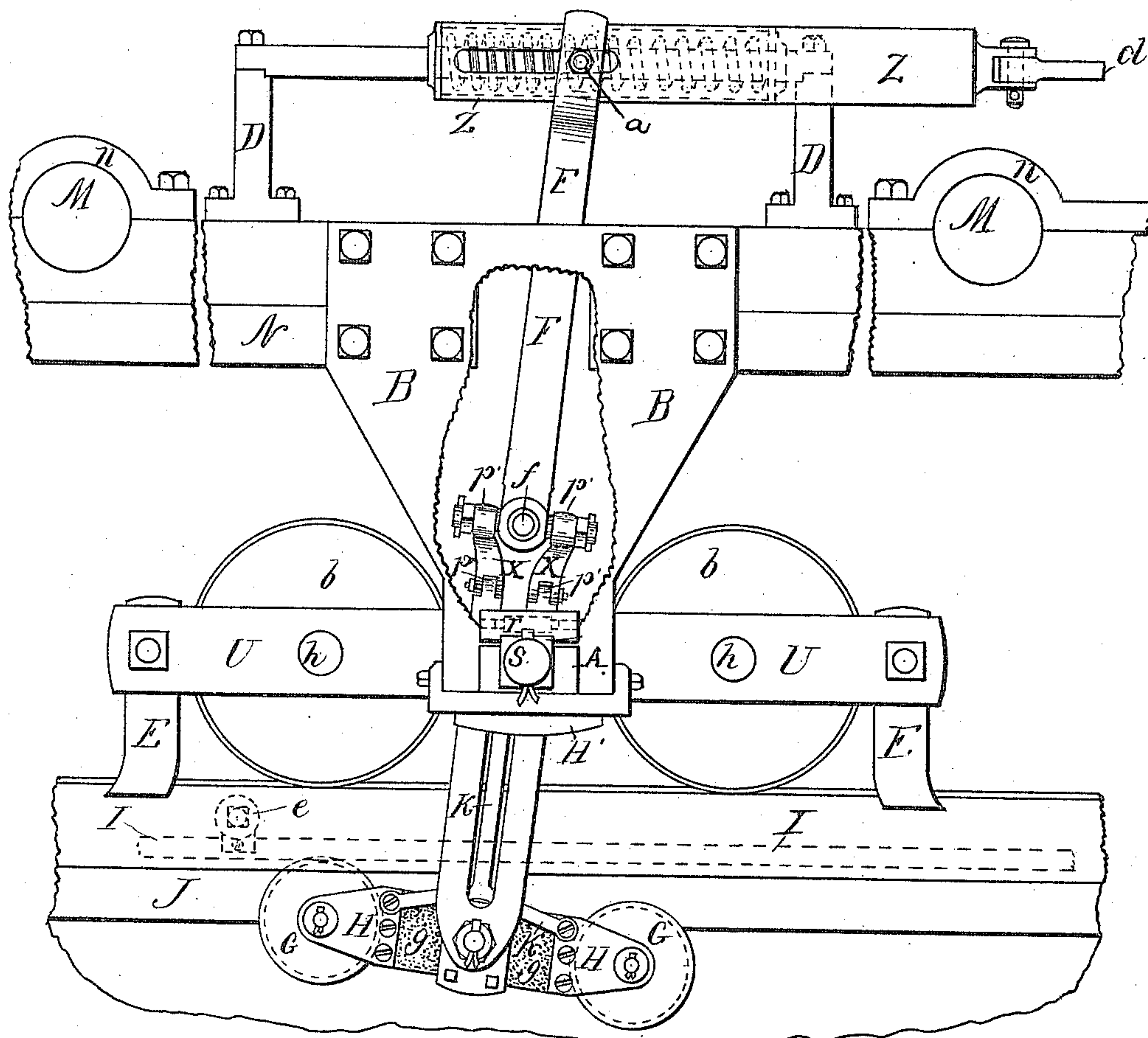


Fig. 1.

WITNESSES

Chas. Spaulding
Charles C. Moss.

INVENTOR

Nicholas Seibert
by A. H. Evans & Co
attys

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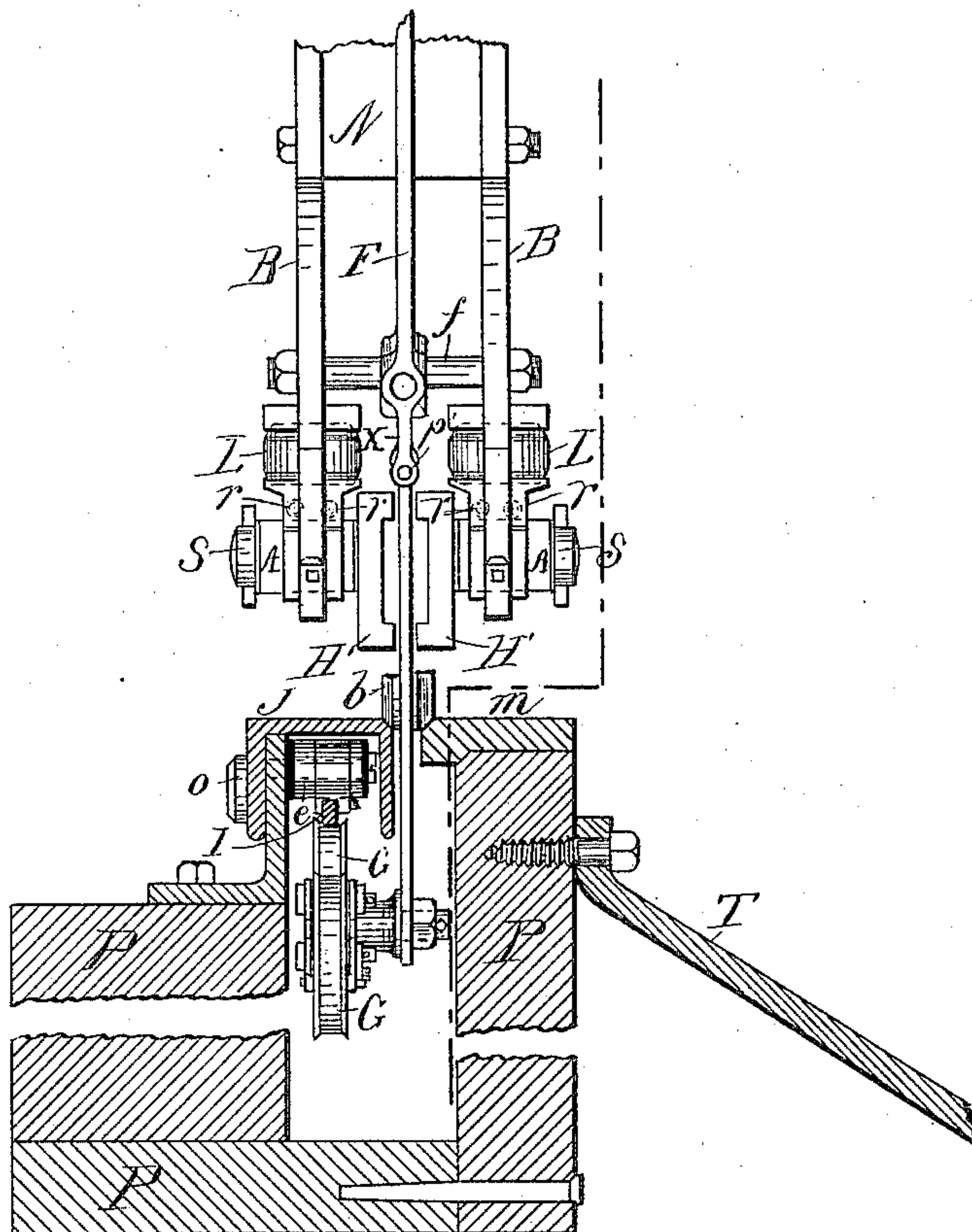


Fig. 2.

WITNESSES

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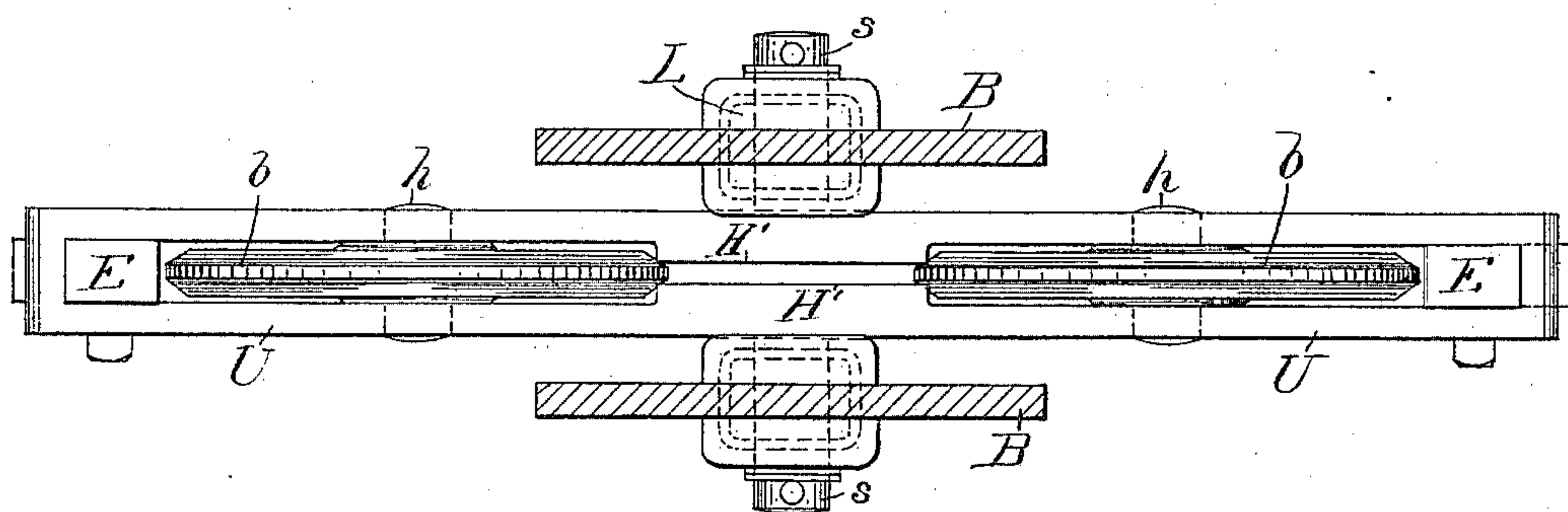
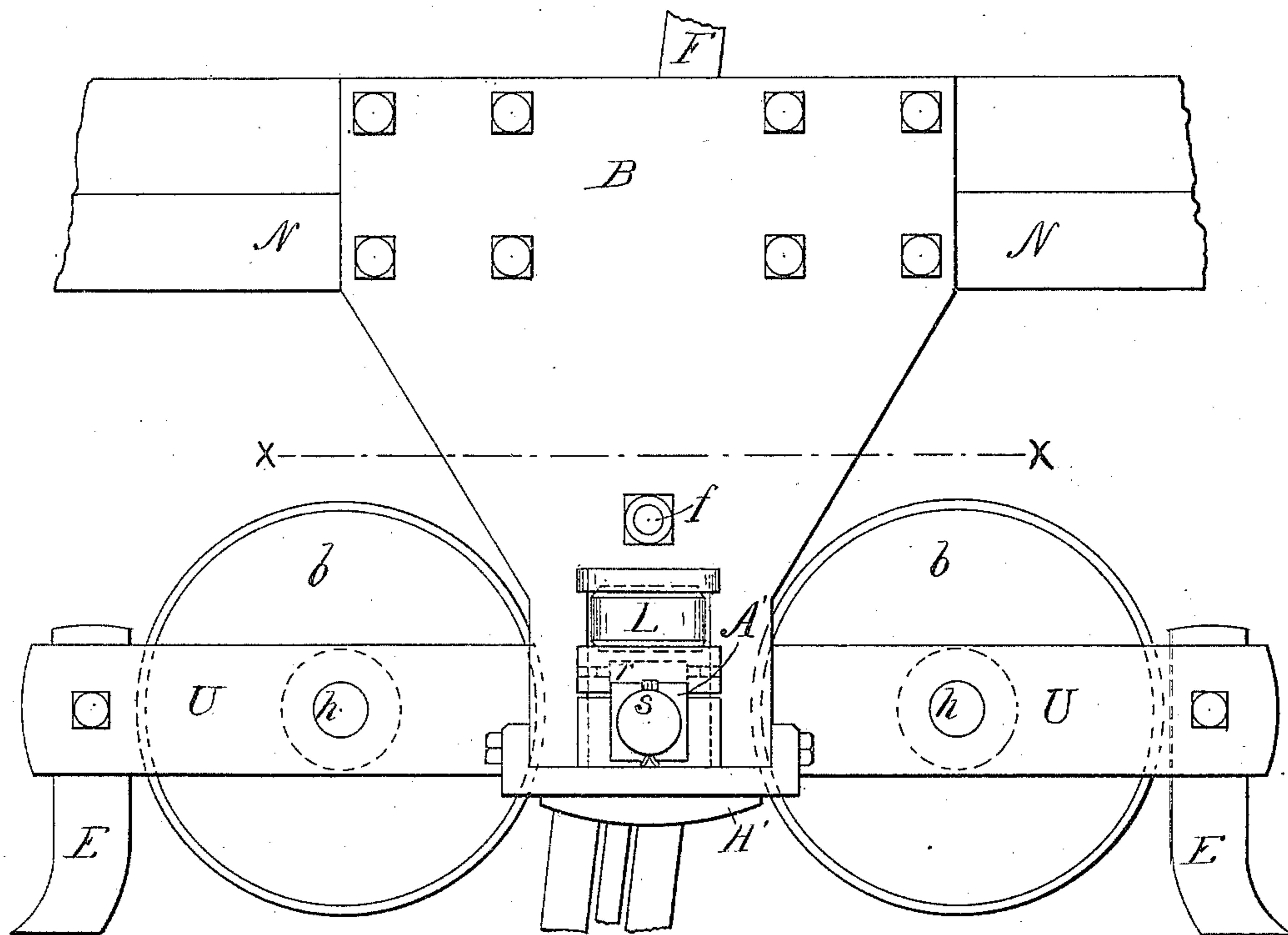
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3 Sheets—Sheet 3.

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No. 446,475.

Patented Feb. 17, 1891.



WITNESSES:

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R. H. Bishop

INVENTOR

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UNITED STATES PATENT OFFICE.

NICHOLAS SEIBERT, OF MALDEN, MASSACHUSETTS.

ELECTRIC RAILWAY.

SPECIFICATION forming part of Letters Patent No. 446,475, dated February 17, 1891.

Application filed May 5, 1890. Serial No. 350,643. (No model.)

To all whom it may concern:

Be it known that I, NICHOLAS SEIBERT, a citizen of the United States, residing at Malden, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Electric Railways, of which the following is a full and clear description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of a part of a railway-truck, showing the supplemental wheeled truck, a part of a housing or subway which contains the main conductor, and the pivoted arm which carries at its lower end the contact-rollers. Fig. 2 is an end view of the same, showing the housing or subway in transverse section. Fig. 3 is a side view of the supplemental wheeled truck and the plate B and adjunctive parts. Fig. 4 is a sectional view of the same on the line xx of Fig. 3.

My invention relates to certain new and useful improvements in electric railways; and it consists in the constructions and combination of devices which I shall hereinafter fully describe and claim.

This invention is an improvement on my application, Serial No. 342,795, filed March 5, 1890, and is designed particularly to provide a simple means for facilitating the rounding of curves and in a mechanism whereby the main-truck frame is permitted to have a lateral motion to accommodate the side movement of the car.

To enable others skilled in the art to make and use my invention, I will now describe the manner in which the same is carried out.

In the accompanying drawings, N represents a longitudinal beam extending along the center of the main truck and forming a part of its frame, and M represents the main axles mounted thereon in suitable boxes n . The main truck has bolted or otherwise secured to it upon opposite sides the downwardly-extending plates B, forming a frame, in the lower ends of which boxes A are mounted and adapted to receive the trunnions S. The truck which carries the plates B consists of two parallel beams U, having journals at their central portions and small wheels in front and rear thereof, while at the outer ends of said beams are secured the clearing-

irons E, which enter the slot in the housing and keep the same clear of obstructions.

The plates B are bolted or otherwise secured to the timber N of the main-truck frame, and the supplemental frame has its wheels b beveled on their edges and adapted to run in the slot of the housing, the above construction being substantially that shown in my said former application and operating substantially in the manner and for the purposes therein stated.

A wooden or other frame P, built in the ground, forms the foundation of the housing or subway and a trough to carry off water, and upon said frame at one side is a track-iron m , while at the other side is an angular plate or track-iron J, separated from the track-iron m a sufficient distance to form a slot for the vertical arm F to move in, as in my former application, the said track-iron or plate J being secured to a second angular plate, which is in turn secured to one of the timbers P of the foundation or base.

In my said former application the arm F was pivoted to move only in planes in the direction of the travel of the car; but I have found that to produce the best results it is necessary to pivot this arm, so that it may also have a lateral movement to accommodate itself to the side vibrations of the car and its main truck, which are very pronounced in rounding short curves. I therefore make the arm, which is mounted on a support f , in two parts or sections, the upper one of which has pivotally hung from its lower end a casting or bracket X, whose lower end is pivotally secured to the upper portion of the lower section of the arm, the said casting or bracket being so pivoted that it may, with the upper end of the rod F, have a lateral movement about its pivots in planes at about right angles to the forward and rear movements of the arm. The lower end of the arm F enters the slot in the housing or subway, and has secured to its side the elastic non-conducting blocks g , to the outer surfaces of which the supports H for the contact-rollers G are secured, as more fully stated in my former application.

I represents the main conductor secured to brackets e in the housing and connected with any suitable source of electric generator or

supply, and K is a wire or conducting-strip leading from the contact-supports G to the motor on the car in any well-known manner.

L is a buffer or cushion let into the frame B, while between the inner sides of the arms of the frame B are secured two spaced plates H, forming a guide for the lower end of the arm F, and just above the boxes A and between them and the main-truck frame are placed small anti-friction rollers r, which permit a free lateral movement of the said main-truck frame.

T is a stay-rod secured to and bracing the vertical timber P of the foundation or base.

The upper end of the arm F has a pin or bolt a, which enters a slot in the side of the barrel Z, mounted on the uprights D on the main truck and provided with a sliding rod and spring operated by a rod and lever on the car to move the rod from one position to another to bring either of the contact-rollers G against the main conductor, as more fully stated in said former application. The arrangement and construction of parts heretofore specified are such that by mounting the main-truck frame so that it may move laterally, and jointing the arm F, in the manner described, the side movement of the car, which would bring a solid arm against the walls of the slot, thereby injuring it, is entirely overcome, as the main-truck frame may move laterally upon its rollers r to accommodate any side movement, while the supplemental wheeled frame or truck and lower section of the jointed arm F, which carries the contact-rollers, always maintain their relative position, and said arm is held in a position where its contact-rollers may always bear squarely against the main conductor.

While the supplemental wheeled frame is prevented from side movement, it may have a vertical movement, which is controlled by the buffers or cushions L.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In electric railways, a main truck, in combination with a supplemental wheeled frame suspended therefrom, and a roller-bearing between the main and supplemental frames, whereby the latter may have an independent lateral movement, substantially as herein described.

2. In electric railways, the slotted housing or subway having a main conductor fixed within it, and a main-truck frame, in combination with a supplemental wheeled truck mounted upon the slotted housing, a roller-bearing between the main and supplemental

truck frames, whereby the former may have a lateral movement on the latter, an arm carried by said main frame and provided with contacts adapted to be alternately brought into engagement with the main conductor, and a conductor leading to the motor on the car, substantially as herein described.

3. In electric railways, the slotted housing or subway having a main conductor fixed therein, and a main-truck frame, in combination with a supplemental wheeled frame below the main-truck frame, the rollers r, interposed between the main and supplemental truck-frames, whereby the former may have lateral movement, a vertical arm carried by the main-truck frame and having the contact-rollers adapted to alternately engage the conductor, and the spaced plates forming guides for the movements of the arm, substantially as herein described.

4. In electric railways, the slotted housing or subway having a main conductor fixed therein, and the main-truck frame, in combination with a two-part vertical arm carried by the main-truck frame and having contact devices at its lower end, a supplemental wheeled frame, and a roller-bearing between the main and supplemental frames, whereby the main-truck frame and upper end of the contact-arm may move laterally independent of the supplemental frame and lower portion of the arm, substantially as herein described.

5. In electric railways, the combination of the slotted housing or subway, the main-truck frame having the arms B, the boxes A, mounted in said arms, a supplemental wheeled frame, a roller-bearing between the boxes and main-truck frame, the two part arm F, the interposed casting or bracket X, to which the two parts of said arm are pivotally connected, the guides H for the lower portion of the arm F, and the contact devices on the lower end of the arm adapted to engage a main conductor in the housing or subway, substantially as herein described.

6. In electric railways, the slotted housing with its main conductor, a main-truck frame adapted to move laterally, a supplemental wheeled frame, and complementary contact devices, in combination with the arm F, formed in two parts, and the casting or bracket X, interposed between and pivotally secured to the adjoining ends of the two parts of the arm, substantially as herein described.

NICHOLAS SEIBERT.

Witnesses:

O. E. SIMMONS,
J. H. SEVERANCE.