

(No Model.)

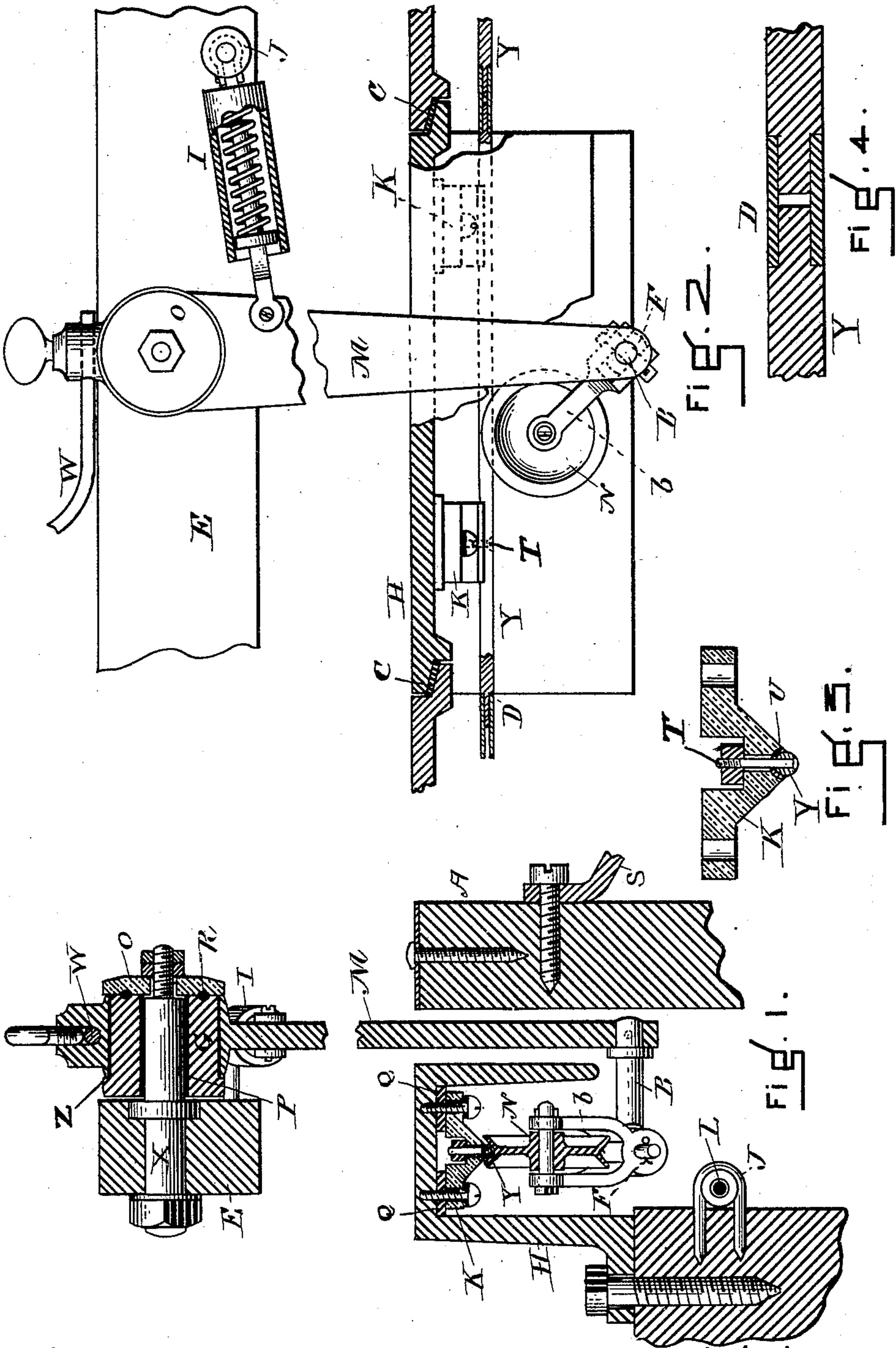
2 Sheets—Sheet 1.

N. SEIBERT.

CONDUIT SYSTEM FOR ELECTRIC RAILWAYS.

No. 432,571.

Patented July 22, 1890.



WITNESSES.

*Louis H. Möller*  
*John R. Snow*

INVENTOR

*Nicholas Seibert*

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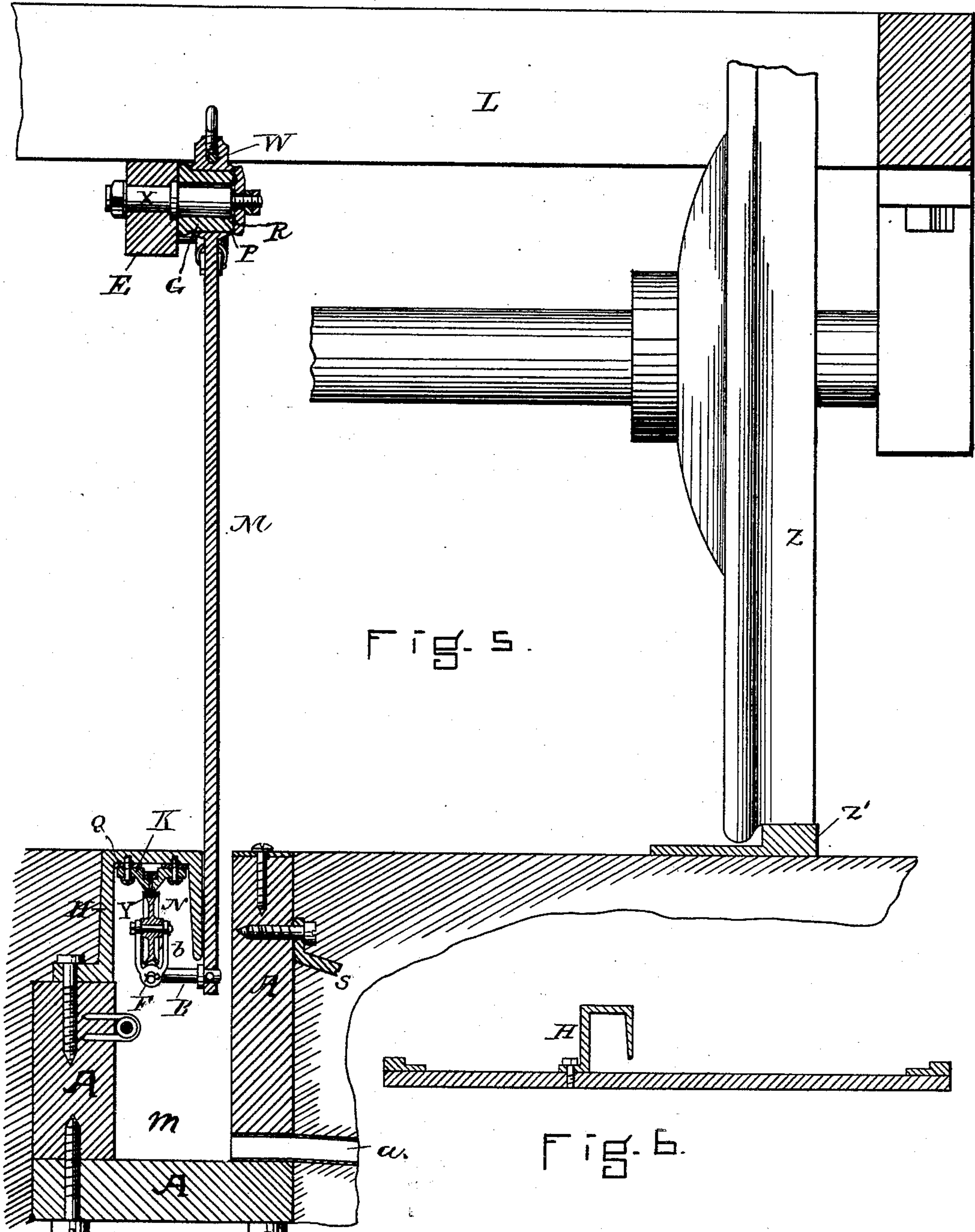


Fig. 5.

Fig. 6.

WITNESSES.

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# UNITED STATES PATENT OFFICE.

NICHOLAS SEIBERT, OF MALDEN, MASSACHUSETTS.

## CONDUIT SYSTEM FOR ELECTRIC RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 432,571, dated July 22, 1890.

Application filed July 24, 1889. Serial No. 318,547. (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 Conduit Systems for Electric Railways, of which the following is a specification.

The object of my invention is to protect the conducting-wire from water or other substances.

The following is a full, clear, and exact description, reference being had to the accompanying drawings.

Figure 1 represents a vertical section of the system. Fig. 2 represents a longitudinal section. Fig. 3 represents a vertical section of the glass bracket. Fig. 4 represents an enlarged view of the joint for the underground wire. Fig. 5 represents a vertical section of the system more complete. Fig. 6 represents a modification of the system for railway-cars not in the streets of cities.

H represents the sectional housing.

Similar letters refer to similar parts throughout the several views.

In Fig. 1, H is the sectional housing; K, glass bracket; Y, conducting-wire; U, asbestos; N, pulley; b, pulley-support; F, joint to accommodate the lateral motion of the car; B, pin; M, arm; P, lining; G, glass bushing; R, rubber packing; O, glass washer; X, stud-pin and joint of arm M; W, conducting-wire to the motor; S, stay-rod; C, rubber packing; D, sleeve for joint; T, screw; I, spring; Q, rubber lining; E, timber; L, part of the car-frame; Z, car wheel; Z', rail; A A A, timber forming a trough m; a, water-channel.

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

First, I will state more fully that the objects in view are not only to protect the conducting-wire from water or other substances, (thereby preventing a grounding of the current,) but to cheapen the construction and make it a permanent fixture, void of all danger both to life and property; and to accomplish the same I make a housing H of iron or other material. I do not confine myself to any particular form; but I prefer that, as shown in the an-

nexed drawings, cast in long or short sections, curved or straight, to suit the road-bed. The bracket K is secured to the sections with rubber between the iron and bracket, also rubber washers under the screw-heads. The conducting-wire Y is turned or pressed smaller one inch in length from the end about one-quarter of its diameter to make room for a sleeve of seamless brass tubing of the same outside diameter as that of the conducting-wire Y and is to slip together in close contact. The wire Y can be attached to the sections in the shop. The car-track is put down in the usual way with the timber somewhat higher under the rail. A trough m is formed by three timbers A A A, as shown in Fig. 5. The housing H is so placed as to be level with the street and the slot for the arm M in the center. The water-channel a can be conducted to a lower part of the roadway.

B is a pin projecting under the housing H at a right angle from arm M, with a joint F to accommodate the lateral motion of the car. Upon joint F there is a forked pulley-support b, carrying a pulley N. The spring I is secured to the frame of the car and attached to the arm M. The arm M moves at its joint at stud-pin X. When it is desired for the car to move on the track the arm M is pressed forward, (by a rod not shown,) which brings the pulley N in contact with the conducting-wire Y. The electric current will then pass from the wire Y to the pulley N, from the pulley to the forked support, thence to pin B, and up the arm M to the wire W and to the motor.

I claim—

1. In combination with an electric railway, the sectional housing H, forming a cover over the wire Y, to protect the said wire from water or other substances, in combination with the bracket K, secured to the sectional housing H, the wire Y, attached to the bracket K, the arm M, with its joint at the stud-pin X, the pin B, projecting under the housing H, with its joint F to accommodate the lateral motion of the car, the pulley-support b, the pulley N, which receives the electric current from the wire Y, the wire conduit W, which transmits the electric current to the motor, and spring I, which presses against the arm M to keep the pulley N in close contact with



the wire Y, substantially as and for the purposes described.

2. In combination with an electric railway, the joint F, formed by the junction of pin B and the pulley-support *b*, to accommodate the lateral motion of the car, in combination with the arm M and its joint formed at the stud-pin X, the wire W to transmit the electric current to the motor, the spring I, which presses against the arm M to keep the pulley N in close contact with the wire Y, the bracket K, the sectional housing H, the trough *m*, composed of three timbers A A A, with its water-channel *a*, substantially as and for the purposes described.

3. In combination with an electric railway, the joint formed at the stud-pin X, with its glass bushing G, rubber lining P, the glass washer R, and rubber ring between the said washer and glass bushing G, in combination with the wire W, transmitting the electric current to the motor, the arm M, the pin B, projecting under the housing H, and pulley-support *b*, the joint F to accommodate the lateral motion

of the car, the pulley N, which receives the current from the wire Y, bracket K, the spring I, to press against the arm M and keep the pulley in close contact with the wire Y, the sectional housing H, the trough *m*, composed of timbers A A A, with its water-channel *a*, substantially as and for the purposes described.

4. In combination with an electric railway, the joint D, Fig. 4, uniting the ends of the wire Y, so that it may be put together and taken apart with ease in case of repairs, in combination with the bracket K, the sectional housing H, the pulley N, which receives the current from the wire conduit Y, the pulley-support *b*, joint F, to accommodate the lateral motion of the car, pin B, the arm M, with its joint at the stud-pin X, spring I, and the wire W, transmitting the electric current to the motor, all substantially as described.

NICHOLAS SEIBERT.

Witnesses:

JOHN R. SNOW,

LAURETZ N. MÖLLER.