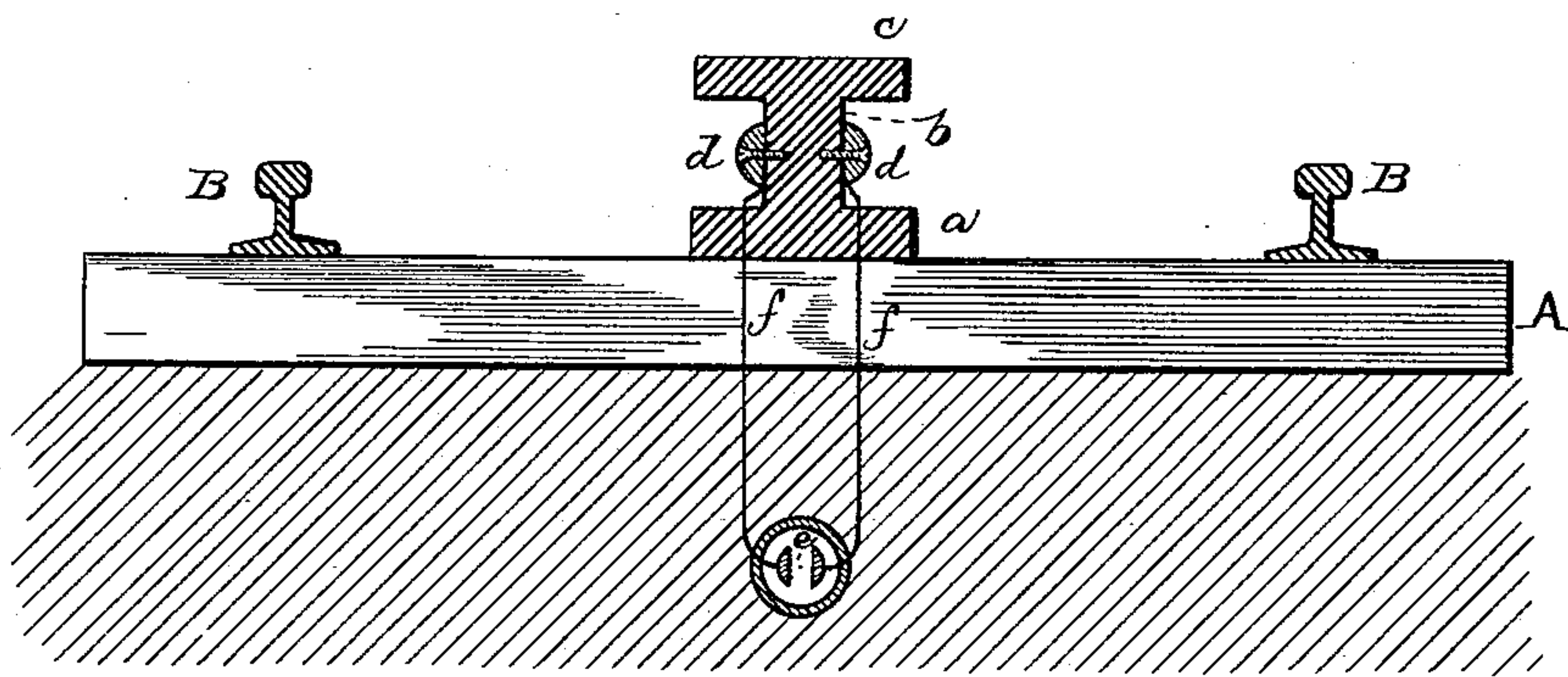


(No Model.)

F. J. SPRAGUE.
ELECTRIC RAILWAY.

No. 338,619.

Patented Mar. 23, 1886.



ATTEST:
E. C. Rowland.
H. W. Fiddle.

INVENTOR:
Frank J. Sprague.
By Oge & Co.
attys.

UNITED STATES PATENT OFFICE.

FRANK J. SPRAGUE, OF NEW YORK, N. Y.

ELECTRIC RAILWAY.

SPECIFICATION forming part of Letters Patent No. 338,619, dated March 23, 1886.

Original application filed April 14, 1882. Divided and this application filed May 6, 1885. Serial No. 164,525. (No model.)

To all whom it may concern:

Be it known that I, FRANK J. SPRAGUE, of New York, in the county and State of New York, have invented a certain new and useful
5 Improvement in Electric Railways, of which the following is a specification.

The object of this invention is to protect the working conductors of an electric railway—that is to say, the conductors from which the
10 motors derive current—when the same are placed above ground, and thereby exposed to rain and snow.

My invention is illustrated in the accompanying drawing, which is a sectional view
15 of the supporting and shielding device, with a tie which carries it, in elevation.

A is a cross-tie of the usual form. B B are the rails of the track, which may or may not form part of the circuit. Extending along
20 the ties between the rails is the support for the working conductors. This is of wood or other suitable insulating material, and consists of a foot, *a*, secured to the tie in any suitable manner, a neck or web, *b*, and a head or
25 cross-piece, *c*, the general shape of the whole being somewhat similar to that of a T-rail.

The working conductors are bars *d d*, of any suitable form, which are secured at suitable intervals to the neck *b*, and are thus covered and protected from the weather by the
30 head *c*, which extends a suitable width on each side.

Main conductors *e* are placed in a tube under ground, and branch conductors *f f* extend
35 from them to the working conductors. From the last, current is taken by the motor through suitable horizontally-placed rollers or other current-collectors carried by said motor. Of course, however, the working con-

ductors may be connected directly with the 40 source of supply.

Instead of a continuous longitudinal support, *a b* may be separate blocks on each tie with the shield *c* supported above them.

Should only one working conductor be used, 45 the shield may, if desired, extend on one side only from the neck, and such working conductor will then be attached to that side of the neck.

This invention is shown and described, but 50 not claimed, in my Patent No. 317,235, dated May 5, 1885, application filed April 14, 1882.

What I claim is—

1. In an electric railway, the combination, with the ties, of the support carried thereby 55 for the working conductors, having a shield upon its upper part for protecting said conductors from the weather, substantially as set forth.

2. The combination, with one or more work- 60 ing conductors of an electric railway, of a support therefor, consisting of a neck or web, to a side or the sides of which said conductors are attached, and an outwardly-extending shield above said conductors, substantially as set forth.

3. In an electric railway, a continuous longitudinal support placed upon the ties, having a neck and an outwardly-extending shield, in combination with the working con- 7 ductors, attached one on each side of the neck, substantially as set forth.

This specification signed and witnessed this 4th day of May, 1885.

FRANK J. SPRAGUE.

Witnesses:

A. W. KIDDLE,
E. C. ROWLAND.