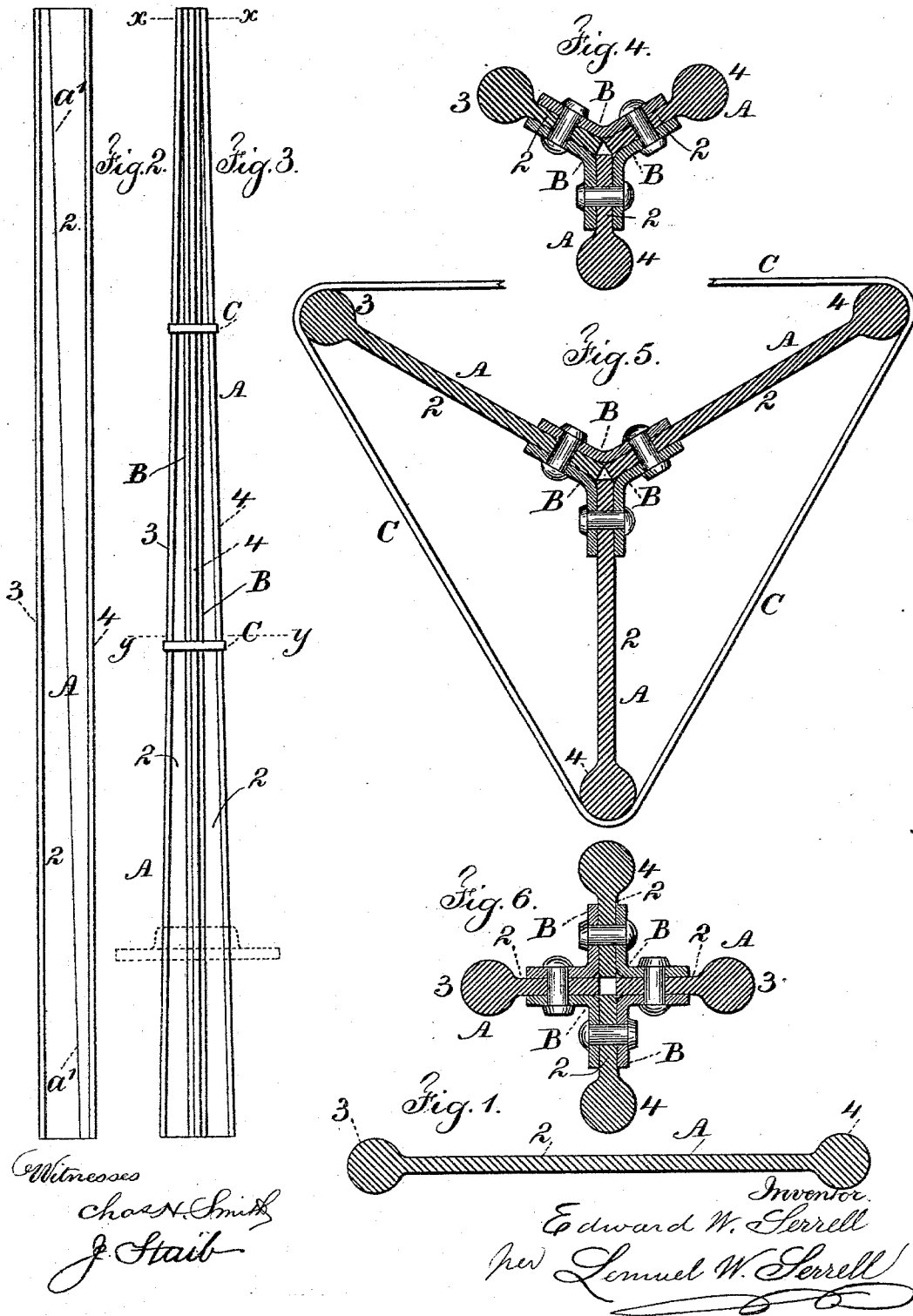


(No Model.)

E. W. SERRELL.
POLE FOR ELECTRIC RAILWAYS.

No. 514,665.

Patented Feb. 13, 1894.



UNITED STATES PATENT OFFICE.

EDWARD W. SERRELL, OF NEW YORK, N. Y.

POLE FOR ELECTRIC RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 514,665, dated February 13, 1894.

Application filed January 9, 1893. Serial No. 457,718. (No model.)

To all whom it may concern:

Be it known that I, EDWARD W. SERRELL, a citizen of the United States, residing in the city and State of New York, have invented an Improvement in Poles for Electric Railways or Similar Structures, of which the following is a specification.

In the equipment of electric railways it is usual to support the trolley wire by span wires tightly strained between poles at opposite sides of the street. The tension of the span wire throws considerable strain upon the poles and there is also a lateral strain upon the poles due to the tension of the trolley wire and the expansion and contraction of the same, and it is difficult to obtain metal poles that are well adapted to withstand these strains and at the same time to be sufficiently light and cheap to be adapted to general use; and in addition to this, such poles are subject to deterioration by oxidation, especially in the inner portions where moisture is liable to lodge and which are not easy of access for painting.

My present invention is made for obtaining a light and strong pole adapted to the span wires in electric railways and other structures, and the surface of which pole is easy of access for painting so as to protect it from the action of rust. I make use of iron bars having comparatively thin bodies that are wider at one end than at the other and provided with heads or ribs along one edge. These bars are placed together and united by angle irons at the inner edges, so that the pole itself is composed of three or more members united together at their inner edges, and with T heads or ribs at the outer edges, the pole being much larger in diameter at the base than it is at the upper end.

In the drawings, Figure 1 is a cross section of the iron bar, preferably made use of in the construction of this pole. Fig. 2 is an elevation of the bar in smaller size. Fig. 3 is a side elevation of the pole. Figs. 4 and 5 are sections at the lines $x x$ and $y y$ of the pole in larger size, and Fig. 6 is a section of a modification of the pole.

The bar A is rolled with a body 2 and heads 3 and 4, the body 2 being in the form of a plate of the desired thickness and width to obtain the proper strength, and the heads 3

and 4 are of a size to obtain the necessary resistance to end thrust or to tension. This bar A is preferably separated longitudinally and slightly diagonally on the line a' , Fig. 2, so that the body 2 of each piece is considerably wider at one end than the other, and by making this line of separation uniform, two similar tapering bars are obtained, and in putting these bars together to form a pole three bars are preferably used, as seen in Figs. 4 and 5, but four or more bars might be employed, as shown in Fig. 6.

The narrower ends of the bars are brought together for the top of the pole and the wider ends for the bottom, and these bars are firmly united throughout their length by the angle irons B, which angle irons are riveted together through the respective bars near the diagonal edges of such bars, hence the pole thus constructed tapers from one end to the other and the edges of the bars are brought so close together that there is substantially no opening in the middle of the pole, and the entire surface is exposed and can be kept in proper condition and free from rust or otherwise, and the metal employed is so disposed in the pole that all parts are adapted to the strain to which such pole is exposed under the tension of the guy wires, span wires and trolley wires, hence this pole is especially adapted to electric railways, although I do not limit myself to the use of the same on any particular occasion.

It will be apparent that very little labor is required in the construction of this improved pole, because the punching and riveting can easily be done by machinery, and in putting the pole in position it is only necessary to supply the proper amount of concrete in the hole around the base of the pole, so as not only to protect the same from rust, but at the same time support the same against lateral strain.

The base of the pole instead of being set into cement may be received into a case, iron block or plate, as indicated by dotted lines Fig. 3, the same being bolted to masonry. I combine with the aforesaid pole the bands C introduced around the pole at suitable distances to hold the edges of the bars in their proper relative positions.

I claim as my invention—

1. A metallic pole, composed of three or more members having flat or plate bodies wider at one end than the other, and angle irons uniting the edges of the plates through- 10
out their length at the center of the pole, and the tie bands around the pole at intervals, substantially as set forth.
- 5 2. A metallic pole, composed of three or more members having flat or plate bodies wider at one end than the other, and angle

Signed by me this 4th day of January, 1893.

EDWARD W. SERRELL.

Witnesses:

GEO. T. PINCKNEY,

A. M. OLIVER.