(No Model.)

J. N. BROWNLEE.

POLE FOR OVERHEAD SYSTEMS OF ELECTRIC RAILWAYS.

No. 449,753. Patented Apr. 7, 1891.

Fig. 1

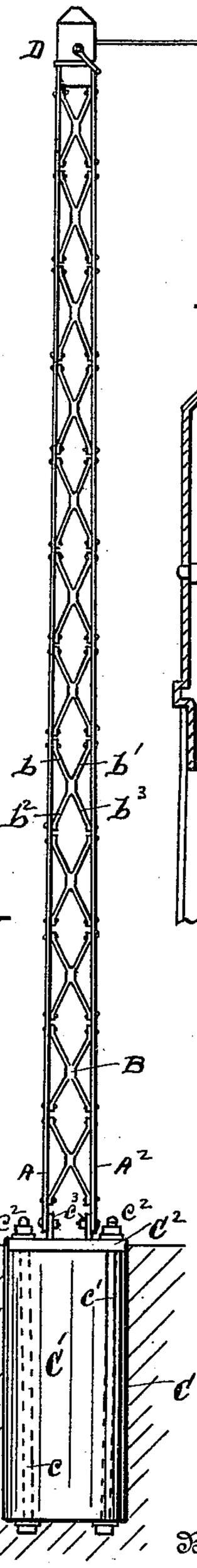


Fig. 2

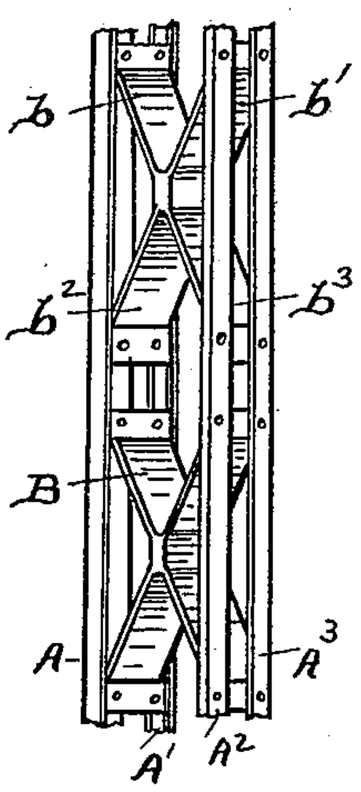


Fig. 3

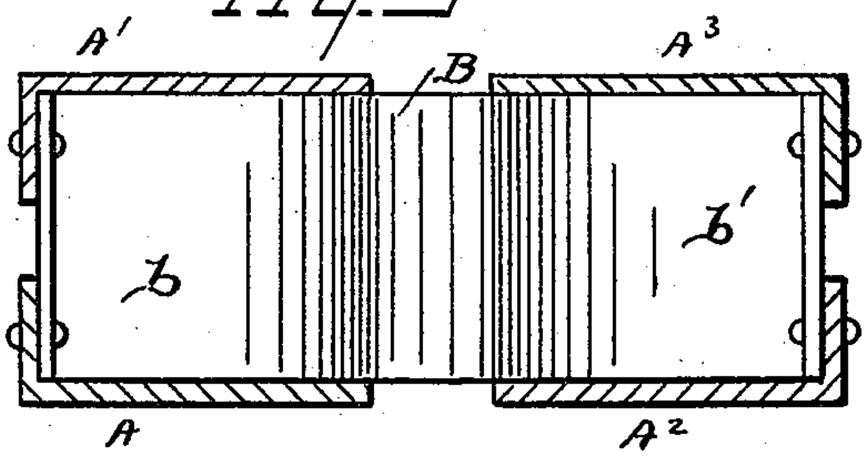


Fig. 4

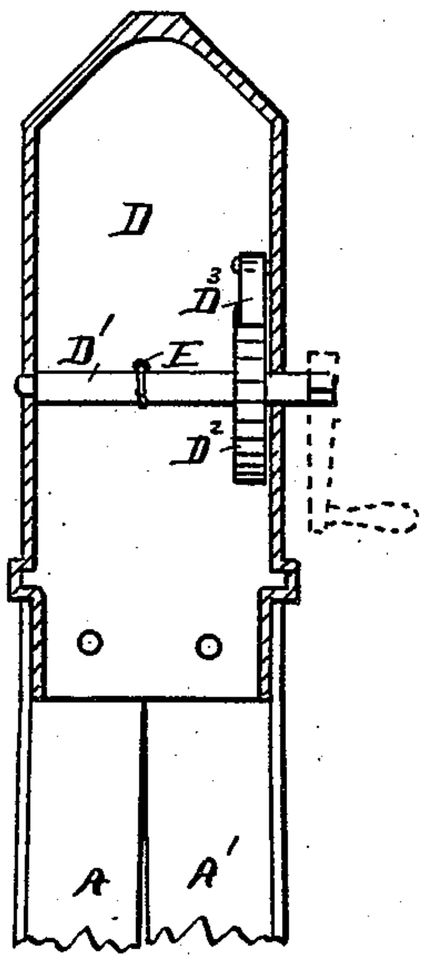
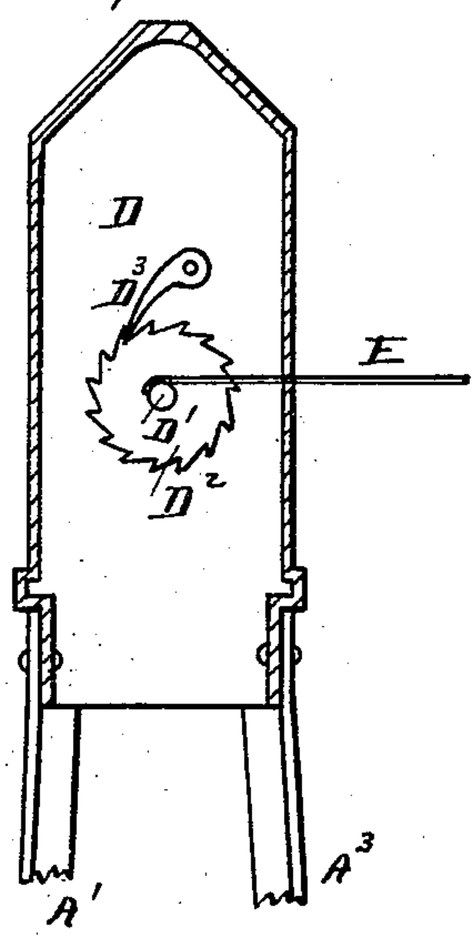


Fig. 5



Witnesses
John Schuman.
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UNITED STATES PATENT OFFICE.

JOHN N. BROWNLEE, OF DETROIT, MICHIGAN.

POLE FOR OVERHEAD SYSTEMS OF ELECTRIC RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 449,753, dated April 7, 1891.

Application filed November 28, 1890. Serial No. 372,904. (No model.)

To all whom it may concern:

Be it known that I, JOHN N. BROWNLEE, a citizen of the United States, residing at Detroit, county of Wayne, and State of Michigan, have invented a certain new and useful Improvement in Poles for Overhead Systems of Electric Railways; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to certain new and useful improvements in poles, said poles being more particularly designed for use in overhead systems of electric street-railways, the object being to provide poles of ornamental form and construction which shall also be simple, economical, and efficient.

To these ends my invention consists of the devices and appliances, their combinations and arrangements, as hereinafter described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is an elevation of a pole embodying my invention. Fig. 2 is an enlarged view showing details of construction in perspective. Fig. 3 is a horizontal section. Fig. 4 is an enlarged view showing the cap in section. Fig. 5 is a similar view, the section being taken at right angles to Fig. 4.

I carry out my invention as follows: The main body of the pole is constructed of upright bars of metal A A′ A^2 A^3, preferably angle-bars of suitable form. These bars are united by a series of braces B, preferably consisting of an integral malleable casting, provided with arms b b' b^2 b^3, said arms united in each casting at the center of the casting. The bars A A′ A^2 A^3 form the sides of the pole, and may be made of iron, steel, or other desired metal, rolled, preferably, to proper form. I do not, however, limit myself to the precise form of bars here shown. The arms of the individual braces of the series are riveted to the side bars. The castings of which said braces are constructed are preferably so formed as to permit the tapering of the pole toward the top, the upper braces being formed of smaller castings than those toward the base of the pole.

C denotes the base or foundation of the pole, which I design to make separable from the upright bars above described and united thereto. As shown, the base may consist of a suitable piece of timber C′, provided with a metal cover-plate C^2, united to the timber by bolts or rods c c'. (Shown in dotted lines.) The bolts may be run through from the bottom of said timbers and engaged by nuts c^2, forced down upon the top of the plates. To unite the upright bars to said plate, the latter is constructed with shoulders c^3, upon which said uprights may be riveted.

At the top of the pole I locate a cap D, riveted at its base upon the tops of the side bars. This cap is ornamental and at the same time affords means for carrying a wire-tightening device within and shielded from the weather. Accordingly the cap is provided with a shaft D′, journaled therein, the shaft carrying a ratchet-wheel D^2.

D^3 is a pawl hung suitably upon the inner wall of the cap.

The wire E enters the cap at right angles to the shaft D′ and is engaged thereto. The shaft, projecting outside the cap, may be easily engaged by a wrench or crank to tighten the wire. The method of attaching the body of the pole to the base C affords rigidity thereto.

It will be observed that the wire-tightening devices, being housed within the cap, do not in the least detract from the appearance of the pole. I prefer that the bolts c c' should extend in a slanting direction through the timber, as shown, to add to the firmness of the structure. The interior braces are preferably narrowed, as well as shortened, as they approach the top, so as to allow the pole to taper on all sides. The side bars may be separated at the base on each side, but be brought together at the top. The base, instead of being made of timber, may be made of metal or any other material desired. For the attachment of the brace-arms to said bars they are each preferably constructed with a bent end to lie adjacent to the side bars and receive the rivets. Braces so constructed and united are much neater in appearance than the outside braces in common use, and make a firmer structure.

What I claim as my invention is—

1. A pole comprising the following ele-

ments, viz: vertical angle-bars, cross-shaped braces riveted to said bars to connect them, a base C, a base-plate C^2, to which the pole is secured, and bolts or rods extending through said base and base-plate and provided with tightening-nuts.

2. In a pole, the combination, with four upright bars arranged in pairs, constituting opposite sides of the pole, of a series of cross-braces B, each constructed with arms $b\ b'\ b^2\ b^3$, integrally united at the center, each brace located between the four upright bars and uniting all four said bars in the manner described, substantially as set forth.

3. The combination, with a skeleton pole, of a base C, a base-plate C^2, to which the pole is secured, and bolts or rods extending through said base and base-plate and provided with tightening-nuts.

4. The combination, with a pole, of a base C, a base-plate C^2, provided with uprising lugs to which the pole is secured, and bolts or rods extending diagonally through the base and provided with tightening-nuts.

In testimony whereof I sign this specification in the presence of two witnesses.

JOHN N. BROWNLEE.

Witnesses:
N. S. WRIGHT,
JOHN F. MILLER.