(No Model.)

L. R. GREENE.

POLE FOR ELECTRIC WIRES.

No. 425,071. Patented Apr. 8, 1890.

Fig. 1.

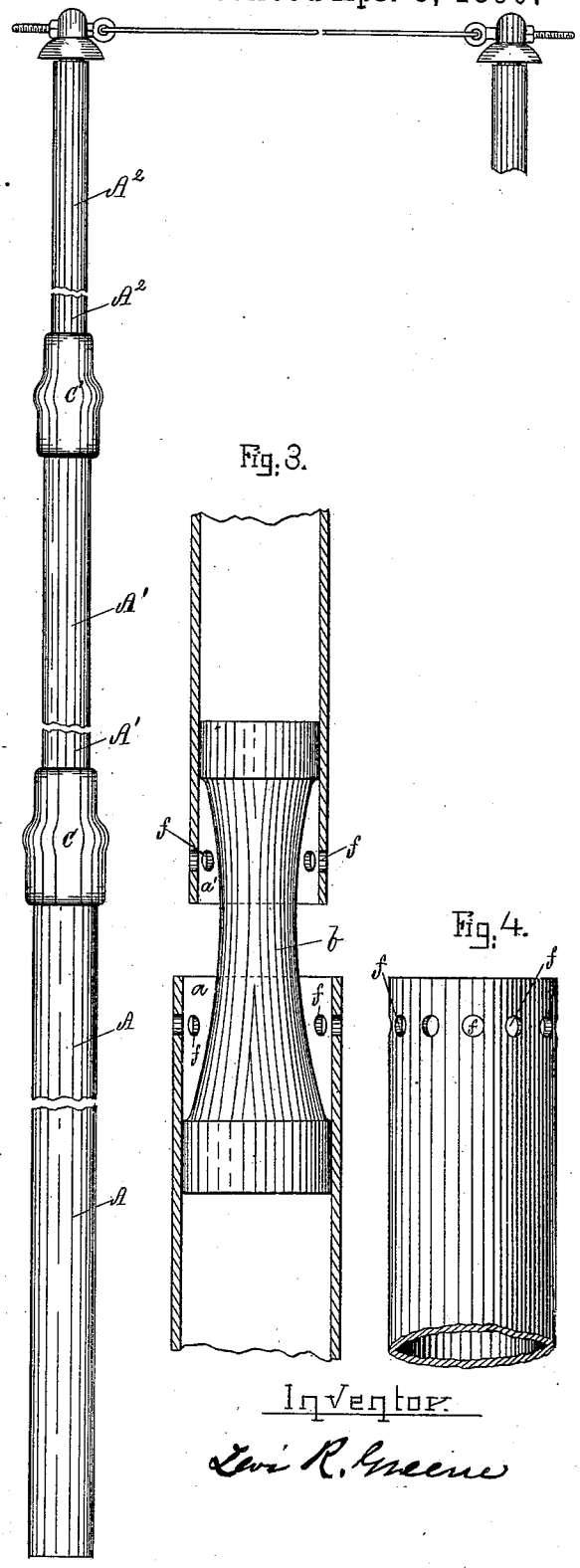

Fig. 2.

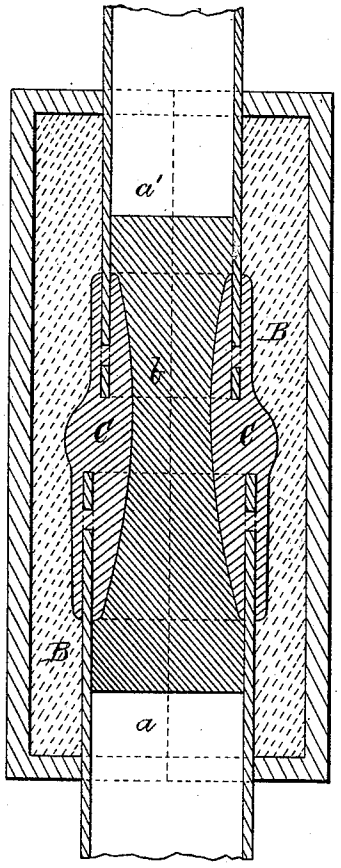

Fig. 3.

Fig. 4.

Witnesses.
J. L. Mayna[illegible]
Lauritz W. Möller

Inventor.
Levi R. Greene

UNITED STATES PATENT OFFICE.

LEVI R. GREENE, OF BOSTON, MASSACHUSETTS.

POLE FOR ELECTRIC WIRES.

SPECIFICATION forming part of Letters Patent No. 425,071, dated April 8, 1890.

Application filed November 25, 1889. Serial No. 331,477. (No model.)

To all whom it may concern:

Be it known that I, LEVI RAWSON GREENE, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Pole for Electric Wires, of which the following is a specification, reference being had to the accompanying drawings, forming a part hereof, in which—

Figure 1 is an elevation of one of my poles. Fig. 2 is a section through a flask, showing the ends of two sections of the pole in the flask with the coupling cast about them. Fig. 3 shows the ends of two sections of the pole in section with a side elevation of the core. Fig. 4 is a side elevation of the end of one section of the pole.

My invention is a pole formed of hollow sections connected by cast-iron, which interlocks with each section and forms a cast-iron socket for receiving the contiguous ends of the sections and fitting them both inside and outside with that closeness resulting from pouring the fluid iron about the ends of the sections when in a mold, as more fully described hereinafter.

In making the pole shown in the drawings the sections A A′ A^2 are arranged end to end, care being taken to align them as desired in the finished pole, and the adjacent ends *a a′* occupy a flask or mold B, the mold being of the desired shape for the outer surface of the coupling C. The shape of the inner surface of the coupling is given by the core *b*, and the ends *a a′* themselves give shape to these surfaces of the coupling C, with which they are in contact, for after the adjacent ends *a a′* are properly arranged and secured in the mold B molten iron is poured into the mold, filling the space between the ends *a a′* and the core and between these ends and the inner surface of the mold, and also filling the perforations *f* in the ends *a a′*. The sections are thus united in a manner adapted to resist not only the deflecting strains to which these poles are subjected, but also the torsional strains to which they are also subject in use. The interlocking of the cast-iron coupling and the wrought-metal sections will also adapt the pole to resist tensile strain; but this is of minor consequence, as the poles when in use are subjected to severe deflecting and torsional strains and in some slight degree only to compression strain.

A proper proportioning of the cast-iron in the couplings C C′ will make the pole as strong at the couplings as at any other part of its length, and these cast couplings may also be formed with sockets or brackets to receive arms for carrying the insulators.

I prefer to make the sections A A′ A^2 of wrought-iron pipe; but it is obvious that other sections sufficiently strong and capable of enduring the heat of the molten cast-iron formed about their ends when in the mold will answer. Thus when it is desired that each section shall taper I prefer to make it of a strip of stout sheet metal, bent into the form of a tapering tube with its side edges simply opposed or lapped, or they may of course be secured together, if desired.

While the perforations *f* are the simplest means for causing the interlocking of the coupling with the sections, it will be clear that other means will answer well, the essential thing being to so interlock the coupling with the sections that one cannot turn or move in relation to the other.

The construction of the molds and cores for use in connection with the ends of the adjacent sections will be well understood by all skilled in the art of the founder, for although I am the first, so far as I know, to make a pole whose sections are united by couplings cast in place, fitting and interlocking with its sections, as above described, yet I have found that skilled founders needed no particular instructions as to details after they fully understood my new product—that is, my pole—consisting of sections united by couplings of cast-iron, each coupling being interlocked with the adjacent ends of its sections and fitting them as closely as results from introducing the ends into a mold, pouring the molten iron about them, and letting the whole cool together, the mold giving shape to the coupling except where the shape is given by the adjacent ends of the sections.

The advantages of my new pole are not only its cheapness of construction, but also that, by reason of the intimate and close fit between the couplings and sections and the interlocking of the coupling with the sections, a

pole is produced admirably adapted to resist the strains to which it is subjected in use.

I am aware that poles made by uniting sections by means of couplings of cast metal have long been made; but the couplings were not cast in place on the sections and hence were not interlocked with them, as mine are, nor was the fit between the coupling and its sections at all comparable to that in my poles. Moreover, in all poles in which the couplings are applied to the sections after the couplings are formed there is necessarily a weakening of either the sections or the coupling, (by the formation of screw threads or holes for connecting-bolts,) so that my pole is much stronger than any other pole of the same weight.

What I claim as my invention is—

The improved pole above described, composed of hollow sections united by a coupling cast in place, the coupling interlocked with each section and fitting both the interior and exterior surfaces of each section in the manner described, all substantially as and for the purpose specified.

LEVI R. GREENE.

Witnesses:
J. E. MAYNADIER,
JOHN R. SNOW.