

(No Model.)

D. DORWARD.
TUBULAR METALLIC POLE.

No. 484,144.

Patented Oct. 11, 1892.

Fig. 1.

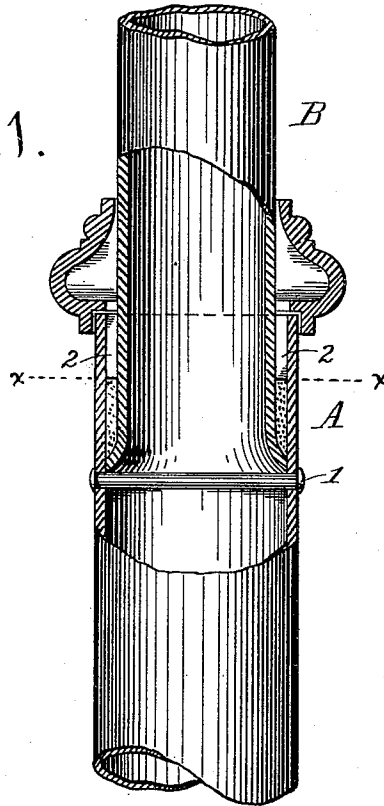
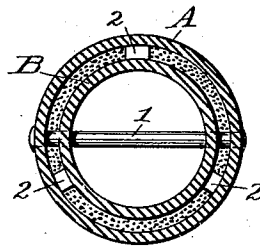


Fig. 2.



Witnesses.

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UNITED STATES PATENT OFFICE

DAVID DORWARD, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO THE
RISDON IRON AND LOCOMOTIVE WORKS, OF SAME PLACE.

TUBULAR METALLIC POLE.

SPECIFICATION forming part of Letters Patent No. 484,144, dated October 11, 1892.

Application filed April 25, 1892. Serial No. 430,488. (No model.)

To all whom it may concern:

Be it known that I, DAVID DORWARD, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Tubular Metallic Poles; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to the construction of metallic poles intended especially to support elevated electrical conductors, such as telegraph, telephone, and electric-light wires.

The invention relates more particularly to improvements upon a construction described and shown in Letters Patent granted to me March 1, 1892, No. 470,153. In that patent I described and showed a pole composed of metallic tubular sections supported within one another so as to leave an annular space between them, which space was filled with a composition which rigidly united the sections when the pole was set up. At the bottom of the inner section the annular space was closed by a ring secured, preferably, to the base of the inner section, and thus enabling the composition to be inserted into the space between the tubes. The object of the invention thus described was, as set forth in the patent named, to provide a sectional pole which would be exceedingly cheap to manufacture and which would have the additional advantage of being capable of transportation in sections, while when set up it would form practically a continuous pole of as great strength and durability as a pole composed of a single section.

My present invention differs from that just described in certain details of construction intended to still further reduce the cost of manufacture without in any way impairing the strength or effectiveness of the device.

My invention is illustrated in the accompanying drawings, in which—

Figure 1 is a vertical section of a part of my pole, taken at one of the joints. Fig. 2 is a cross-section on the line $x x$.

My improved pole, like that described in my patent referred to, is composed of any desired number of metallic tubular sections.

Referring to Fig. 1, which illustrates the union of any two of these tubular parts, A

represents one section of tubing, and B an adjoining section above. The two tubes may be supposed to be, respectively, six inches and five inches in diameter, so that an annular space is left between them. It will be understood, however, that neither the diameters of the tubes nor the thickness of the metal of which they are composed are essential points, as they may be varied to suit different conditions. The tube B preferably rests upon a transverse rivet or pin 1, driven through the larger tube and forming a stop. Any other form of stop sufficient to support the inner tube may be used instead, or the pin may, if preferred, be placed higher up and driven through both tubes. As stated before, in my former patent the annular space was closed at the bottom by a ring secured to one of the tubes. In the present case this ring is dispensed with and the space is closed by spreading the lower edge of the inner tube until it is of the inner diameter of the tube surrounding it, and will therefore come into contact with the latter when inserted. The space between the two tubes is filled with a composition, preferably that mentioned in my patent referred to, which forms what is known as a "rust-joint," and is usually composed of iron filings, sal-ammoniac, and water. Other substances or compositions may, however, be used instead, such as melted sulphur or lead, and, indeed, a short sleeve or tube may be inserted into the annular space, which will be the equivalent of the hardened filling. In the latter case it will not be necessary to use the keys or wedges 2, described in my former patent, since such a sleeve will keep the sections concentric; but when the composition filling is employed I prefer to use such keys or wedges as shown in the drawings.

By dispensing with the ring shown in my former patent for closing the bottom of the annular space I am able to manufacture my sectional pole at less expense, as I dispense with the two operations of making the ring and of shrinking it or otherwise securing it upon one of the tubes. Compared with those operations it is exceedingly simple to heat the lower part of the inner tube and spread it upon a mandrel of proper size and shape.

What I claim is—

The combination of an outer tube, an inner tube of smaller diameter inserted therein and having its lower edge spread so as to close the annular space between the two tubes, and a
5 filling in said annular space, substantially as set forth.

In testimony whereof I have affixed my sig-

nature, in presence of two witnesses, this 9th day of April, 1892.

DAVID DORWARD.

Witnesses:

L. W. SEELY,
W. E. CARROLL.