

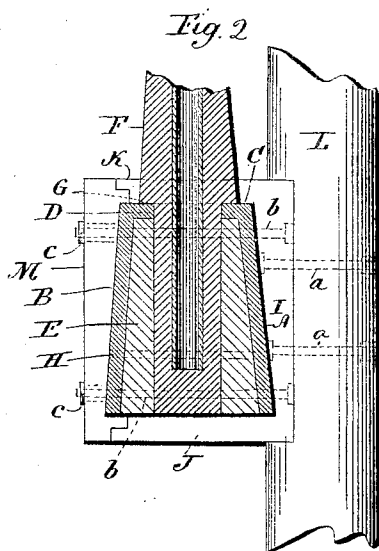
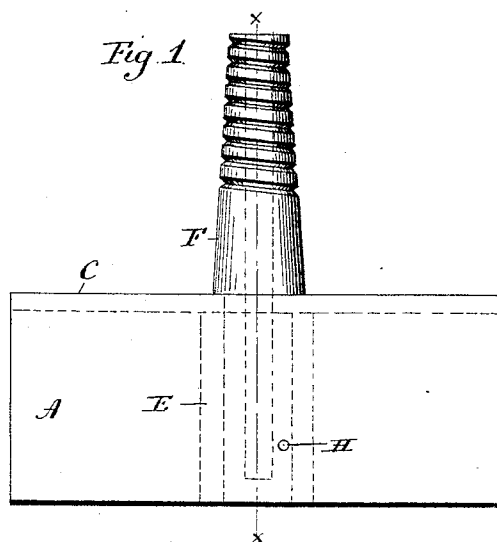
(No Model.)

E. J. BULLOCK.

CROSS ARM FOR SUPPORT OF ELECTRIC WIRES.

No. 532,260.

Patented Jan. 8, 1895.



Witnesses.
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UNITED STATES PATENT OFFICE.

EDWARD J. BULLOCK, OF WALLINGFORD, CONNECTICUT.

CROSS-ARM FOR SUPPORT OF ELECTRIC WIRES.

SPECIFICATION forming part of Letters Patent No. 532,260, dated January 8, 1895.

Application filed November 19, 1894. Serial No. 529,254. (No model.)

To all whom it may concern:

Be it known that I, EDWARD J. BULLOCK, of Wallingford, in the county of New Haven and State of Connecticut, have invented a new Improvement in Cross-Arms for the Support of Electric Wires; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a front view of a portion of a cross-arm embodying my invention; Fig. 2, a vertical section on line $x-x$ of Fig. 1.

This invention relates to an improvement in cross-arms for electric wires. Usually these arms are formed from wood, and owing to the fact that a large amount of wood must be removed for the insertion of the insulator-pins, the arms must be quite large in cross section, in order to give sufficient strength.

The object of this invention is to form these arms from metal, in such a manner that they shall not be heavier than the wooden cross-arms usually applied, yet occupy very much less space, and the invention consists in the construction as hereinafter described, and pointed out in the claims.

The cross-arm consists of a front A, back B, and top C, preferably formed from a single piece of metal, said arm being of substantially inverted U-shape in cross section. Preferably the front and back A B, taper downward from the top C. Through the top at the desired points, openings D are formed to receive the insulating pins. Between the front and back of the arms, and beneath the openings D, a plug E, of wood or other material is placed, said block corresponding in form to the internal dimensions of the arm, and vertically through said block is an opening, corresponding to the openings D in the arm. Through the opening D, and block E, the insulator-pins F are placed, said pins being of usual construction, and having a flange G, which rests upon the top of the arm, and completely incloses the opening D. Transversely through said arm and block, and through the shanks G of the insulator pins a pin H is inserted, and so as to firmly unite the

insulator-pins and blocks to the cross-arm. Preferably the insulating-pins will be formed as shown in my Patent No. 527,318, in which case the pin H, will extend through the arms and block, and one side of the insulator-pins, so as to avoid the metallic core. These arms may be secured to the poles by bolts passing through the front and back of the arms into the pole, in the usual manner of securing wooden arms, but I prefer to secure them to the poles by means of a bracket, which consists of a back I, base J, and top K, preferably formed from a single piece of metal, the face of the back I being tapered corresponding to the taper of the back B of the arm. This bracket may be secured to the pole by bolts $a a$ passing through the back I and the pole L. The cross-arm is placed in the bracket, and so as to rest upon the base J, and the front of the bracket is then closed by a cap M, the inner face of which corresponds to the inclination of the front A of the arm, and so that the arm is inclosed on four sides. The cap is held in position by bolts $b b$, which extend through the back I, through the arms and through the cap, the outer ends of which receive nuts $c c$, so that the cap may be readily removed as occasion may require.

It will be understood that the distance between the base and top of the bracket corresponds to the thickness of the arm, and preferably the joints between the cap and top and base of the bracket, will be mortise joints, which aid in holding the cap M in position.

By securing the arms to the pole by means of the brackets, as above described, the arm may be readily removed, as occasion may require, as for instance, in substituting a longer or shorter arm, and if the bolt-openings are gaged the parts will be readily interchangeable for the above purpose. By rounding the top C of the arm, it will shed water, and the accumulation of snow and ice will be avoided.

Arms and brackets constructed from metal will not decay, and the danger of breaking is very slight. Saturating the block E and the pin with a water-proofing compound, will prevent decay of those parts. Consequently arms made in this way will be very durable.

I claim—

1. A cross-arm for the support of electric

wires, formed from sheet-metal, of inverted U-shape, and constructed with holes through its top portion for the insertion of insulator-pins, substantially as described.

5 2. A cross-arm for the support of electric wires, formed from sheet-metal, of inverted U-shape, and a block located within the said arm, and adapted to have insulator pins inserted into it, substantially as described.

10 3. The herein described support for electric wires, consisting of a cross-arm formed from sheet-metal and of inverted U-shape, a metallic bracket constructed to receive the said arm, and inclose the same on four sides, and
15 adapted to be secured to a pole, substantially as described.

4. The herein described support for electric wires, consisting of a cross-arm formed from sheet-metal, of substantially inverted U-

shape, the sides of said arm tapering down- 20
ward from its top portion which is formed with openings for the insulator-pins, blocks located in the said arm, and formed with openings corresponding to the said openings in its top 25
portion, and a bracket for the support of the said arm, consisting of an open box corresponding in internal dimensions to the external dimensions of the arm, the front of said box being detachably secured in position by bolts extending through the said box and arm, 30
substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

EDWARD J. BULLOCK.

Witnesses:

OSWIN H. D. FOWLER,
MARTIN P. O'CONNELL.