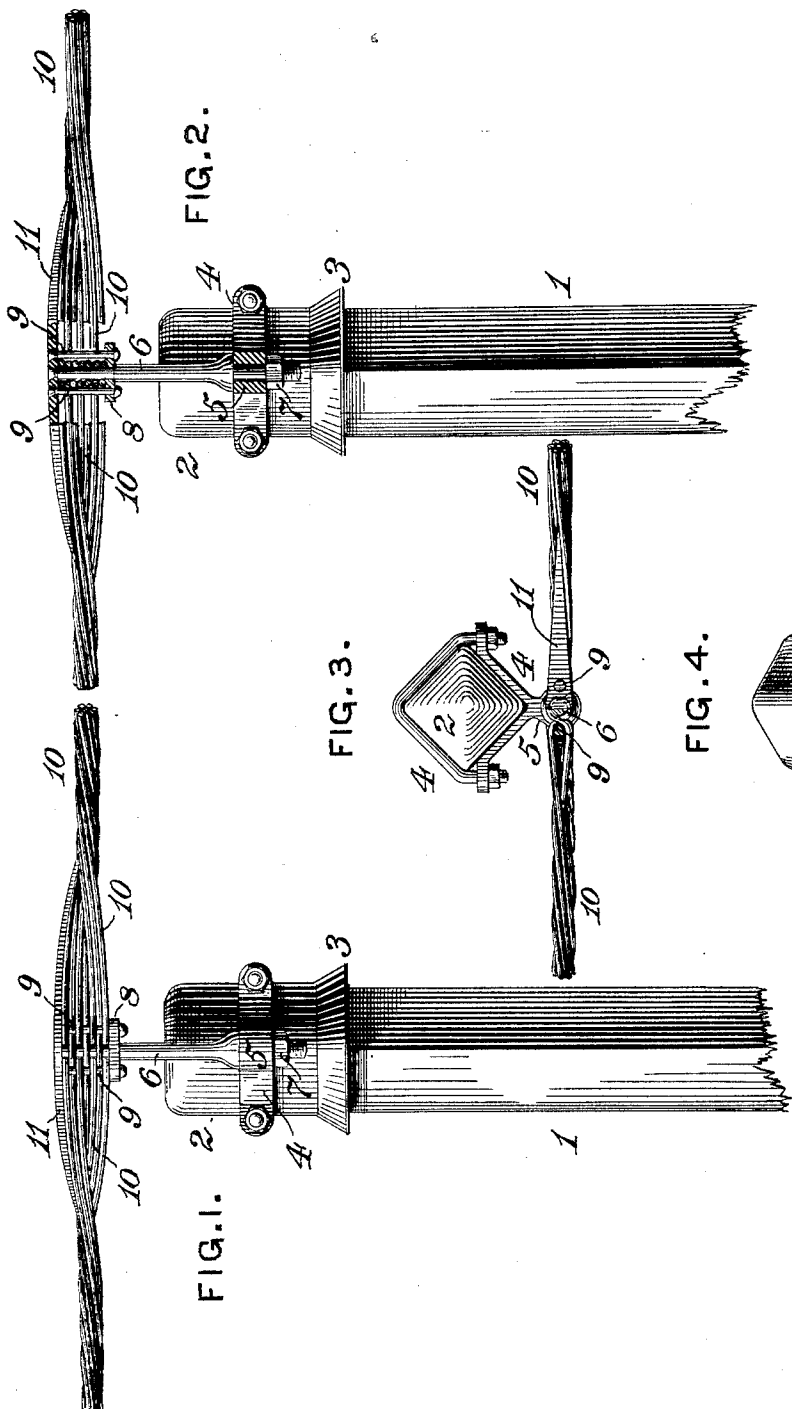


(No Model.)

C. N. DUTTON.
ELECTRICAL CONDUCTOR.

No. 586,811.

Patented July 20, 1897.



WITNESSES:

T. J. Hogan,
J. C. Maithin

INVENTOR:

Chauncey H. Dutton,
by J. Snowden Bell
att'y.

UNITED STATES PATENT OFFICE.

CHAUNCEY N. DUTTON, OF NEW YORK, N. Y.

ELECTRICAL CONDUCTOR.

SPECIFICATION forming part of Letters Patent No. 586,811, dated July 20, 1897.

Application filed July 27, 1896. Serial No. 600,650. (No model.)

To all whom it may concern:

Be it known that I, CHAUNCEY N. DUTTON, of the city, county, and State of New York, have invented a certain new and useful Improvement in Electrical Conductors, of which improvement the following is a specification.

The object of my invention is to provide an electrical conductor the cost of which will be comparatively low by reason of the facility afforded for the employment of steel or wrought-iron instead of copper, which may be readily erected and supported, and which shall be desirably adapted for use in connection with the electrical propulsion of vessels upon canals, as well as for other purposes.

The improvement claimed is hereinafter fully set forth.

In the accompanying drawings, Figure 1 is a side view in elevation of a portion of an electrical conductor and its support, illustrating an application of my invention; Fig. 2, a similar view, partly in section; Fig. 3, a plan view, partly in section; and Fig. 4, a view in perspective of an insulator detached.

In the practice of my invention I provide supports 1 for the conductor, which are usually and preferably, as indicated, ordinary timber posts set in the ground, and place upon the top of each support an insulator or insulating-cap 2, having a flaring or outwardly-projecting rim 3 around its lower end for the purpose of maintaining perfect insulation by deflecting water and preventing its entrance between the cap and post.

The insulating-caps, which are entirely closed except at their lower ends, may be formed of felt, tough paper, asbestos, or other fibrous material, saturated with a solution of petroleum-pitch in bisulfid of carbon or other suitable material.

In order to sustain and hold the conductor in desired position, a sectional clip 4 is employed, the clip being for convenience of attachment and detachment made in two parts, which are clamped closely together upon the insulating-cap by means of screw-threads formed upon the ends of one part, which pass through openings in the other, and nuts engaging said screw-threads. An eye or socket 5 is formed in one of the sections of the clip 4 to receive a standard 6, which is held in position in the socket by a shoulder abutting

against the upper end thereof and a nut 7, engaging a screw-thread on the lower end of the standard 6 and bearing on the lower end of the socket. The standard 6 is reduced slightly in diameter at and adjoining its upper end or equivalently provided with a projecting shoulder to sustain a supporting-plate 8, which is slipped over the standard and to which is fixed a pin or pins 9 9 on one or both sides of the standard. A pin 9 is shown in the drawings on each side of the standard, thus providing three bearings for the reception of the several strands of the conductor, as presently to be described. Two bearings on each post would, however, be sufficient, and therefore only one side pin may be employed, if preferred.

The conductor proper is composed of a plurality of wires 10, which are preferably of wrought-iron or soft steel, and are twisted loosely together sufficiently to prevent them from separating one from another.

The conductor is connected to the supports by independently weaving or twisting each of its wires around the standards 6 and side pins 9, which are fixed transversely to the conductor above the supporting-plates 8, as clearly indicated in Figs. 1 and 2, and it is held securely in position by cover-plates 11, each of which is secured to one of the standards 6 and its side pins 9.

In order that the cover-plates may not interfere with trolleys running on the conductor, they are drawn down to narrow or pointed ends, which are inserted between the strands of the conductor, so that no obstruction is presented to the free traverse of the trolley over the conductor.

While the conductor has been shown as supported above posts which would ordinarily be the supporting means adopted in practice, it will be obvious that it may be suspended, if desired, below fixed points of support or laterally relatively thereto without departure from the principle or essential features of my invention.

My improvement is of special advantage in effecting a material reduction of the cost of conductors by admitting of the employment of wrought iron or steel instead of copper. Inasmuch as the conductivity of iron is much less than that of copper, the total section of

the former metal required is too great to be conveniently erected in a single wire, and therefore copper at a higher price has been heretofore employed. As my invention makes
5 a cheaper metal readily available, a corresponding economy is attained.

I claim as my invention and desire to secure by Letters Patent—

1. A multiple-wired electrical conductor,
10 having its wires woven around a forked support.

2. The combination of an electrical conductor, formed of a plurality of wires, twisted together sufficiently to prevent separation,
15 and fixed members transverse to the conductor, around which each of said wires is independently twisted or woven at intervals in the length of the conductor.

3. The combination of an electrical conductor, formed of a plurality of wires twisted together sufficiently to prevent separation, and members fixed transverse to the conductor, in groups of two or more, at intervals in its length, each of the wires of the conductor
25 being independently twisted or woven around said fixed members.

4. The combination of an electrical conductor, formed of a plurality of wires twisted together sufficiently to prevent separation,
30 fixed members transverse to the conductor around which each of said wires is independently twisted or woven at intervals in the length of the conductor, and cover-plates connected to the fixed members for preventing the displacement of the conductor therefrom.
35

5. The combination of an electrical conductor, formed of a plurality of wires twisted together sufficiently to prevent separation,
40 fixed members transverse to the conductor, around which each of said wires is independently twisted or woven at intervals in the length of the conductor, and cover-plates

connected to the fixed members and drawn down to narrow ends which are inserted between the strands of the conductor. 45

6. The combination of a supporting-post, an insulating-cap covering the upper end portion thereof, a standard or support clamped to the post and separated therefrom by the insulating-cap, and an electrical conductor
50 connected to the standard.

7. The combination of a supporting-post, an insulating-cap covering the upper end portion thereof, and having a flaring or outwardly-projecting rim around its lower end, a standard or support clamped to the post and separated therefrom by the insulating-cap, and an electrical conductor connected to the standard. 60

8. The combination of a supporting-post, an insulating-cap covering the upper end portion thereof, a standard or support clamped to the post and separated therefrom by the insulating-cap, a lateral pin fixed to the standard, and an electrical conductor formed of a plurality of wires twisted together, and having each of its wires independently twisted or woven around the standard and lateral pin or pins. 70

9. The combination of a supporting-post, an insulating-cap covering the upper end portion thereof, a standard or support clamped to the post and separated therefrom by the insulating-cap, a lateral pin fixed to the standard, an electrical conductor formed of a plurality of wires twisted together, and having each of its wires independently twisted or woven around the standard and lateral pin or pins, and a cover-plate fixed to the standard above the conductor, and having its ends inserted between the strands thereof. 80

CHAUNCEY N. DUTTON.

Witnesses:

LEON S. MOIRSEIFF,
FREDERICK AURGANSSEN.