A. FAUCAUT.

SUBMARINE TELEGRAPH CABLE.

No. 90,089. Patented May 18, 1869

Fig. 1.

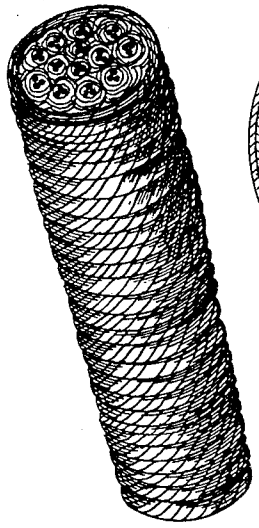
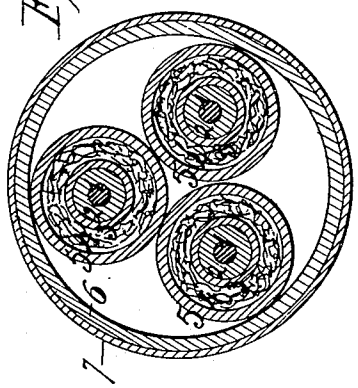


Fig. 2.



Witnesses:
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Inventor:
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United States Patent Office.

ALFRED FOUCAUT, OF ORLEANS, FRANCE.

Letters Patent No. 90,089, *dated May* 18. 1869.

IMPROVEMENT IN SUBMARINE-TELEGRAPH CABLES.

The Schedule referred to in these Letters Patent and makin part of the same.

To all whom it may concern:

Be it known that I, ALFRED FOUCAUT, of the city of Orleans, in the Empire of France, have invented a new and useful Improvement in Telegraphic Cables; and I do hereby declare the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the figures of reference marked thereon

To enable others skilled in the art to make and use my said invention, I will proceed to describe the same.

In making a cable of one or more conductors, I use, as conductors, single copper or other metallic wires, or I twist several smaller wires together, forming one conductor of the proper size.

I cover each conductor with a coating of gutta-percha, or, instead of the gutta-percha, I form a composition of ceruse, or carbonate of lead, finely powdered, and mixed with litharged oil and sawdust to the proper consistency. I then cover the gutta-percha, or composition already described, with a metallic conducting-coating.

I use preferably a coating of plumbago, applied by friction, or a coating of tin-foil, or I wrap a small copper wire, or other metallic wire, in a long spiral around the gutta-percha or composition.

Any conductor, properly applied, will answer the same purpose.

This metallic surface or wire is connected with the ground at each end of the cable, or at any other point or points that may be required to carry off, or properly employ and control all induced currents of electricity.

Over this I wrap a cotton thread, completely covering the gutta-percha, or composition, and the outside conducting-surface, formed as above described.

I then saturate a linen band with a mastic, composed of ceruse, or carbonate of lead, finely powdered, and mixed with litharged oil to a proper consistency, and I wrap the linen band so prepared around each conductor already covered, as above described, each turn of the band lapping over the previous turn.

The different conductors are then brought together and wrapped with the same band, and over all is wrapped a tarred rope, of the thickness desired, which is covered with a coating of coal-tar.

Cables for submarine use may be afterward armored, as usual, with iron wires, of a size suitable to the locality and the work which they have to perform.

Figure 1 is a longitudinal section of my invention.

Figure 2 is a vertical section of the same, showing a group of wires contained within the cable, each one of which may be constructed separately and used for telegraphic purposes.

The small figures in said drawing denote the various portions and materials used in the construction of the cable, to wit:

Figure 1 is the wire conductor.

Figure 2 represents gutta-percha, or a composition of ceruse, or carbonate of lead.

Figure 3, a metallic conducting-surface on the outside of the gutta-percha, or composition, or tin-foil, or copper wire.

Figure 4, cottot thread.

Figure 5, linen band, saturated with carbonate of lead, or ceruse.

Figure 6, tarred rope.

Figure 7, coating of coal-tar.

The different colors are intended to represent the different materials used, as above.

I am aware that a metallic coating, consisting of a metallic strip, wound around the insulating-material, is not new, but said metallic strip has been used as a conductor of the main current.

This differs from my invention in that my metallic coating acts as a conductor for the induced current alone, and is intended to be used when several conductors are grouped together, as shown in the drawings, which is not the case in the invention above referred to.

It is also an important feature of my invention that the conductors should be placed in connection with the earth.

My method of applying the metallic coating is believed to totally destroy the effects of induction, and is of great efficiency in increasing the transmitting-power of submarine cables.

I am also aware of the patent granted to A. I. B. De Morat, January 20, 1867, and disclaim the mode of construction of cables as by him described in said patent.

What I claim as new, and desire to secure by Letters Patent, is—

1. The construction of a telegraphic cable, in the manner and for the purpose herein described.

2. A conducting-surface for induction-currents, when applied to the outside of the insulating-coating of each group of conductors, in the manner and for the purpose herein described.

3. A band, composed of linen, or analogous material, saturated with a compound of carbonate of lead, and litharged, or other oil, when arranged in a telegraphic cable, in the manner and for the purpose herein described.

4. In a telegraphic cable, the construction of the coatings, formed of gutta-percha, or composition, the metallic conducting-surface, the cotton thread, the band saturated with mastic, and the tarred rope, arranged in the manner and for the purpose described.

5. As an insulating-material, used in the construction of telegraphic cables, the composition, composed of carbonate of lead, or other similar substance, litharged, or other oil, sawdust, or other analogous fibrous substance, in the manner and for the purpose herein described.

In witness whereof, I have hereunto set my hand, this 26th day of December, 1868.

DR. FOUCAUT

Witnesses:

W. HAUFF,

S L. MAGOUN.