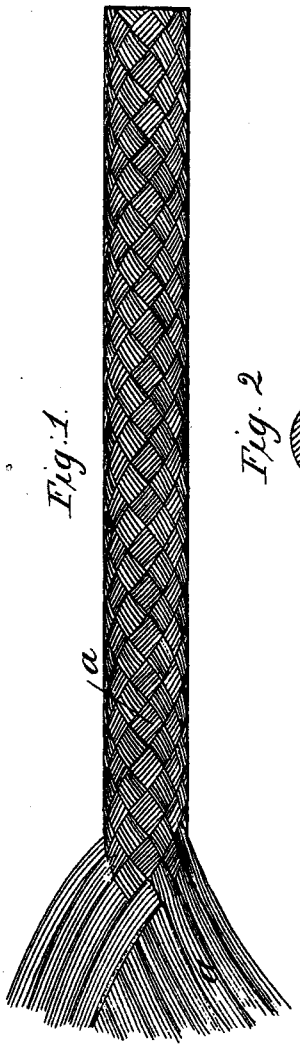
F. J. Bridges.

Submarine Telegraph.

No. 23,290. Patented Mar. 22, 1859.



Witnesses

W. W. Bogardus

Saml C. Bishop

Inventor

Francis J. Bridges

UNITED STATES PATENT OFFICE.

FRANCIS J. BRIDGES, OF NEW YORK, N. Y.

IMPROVED SUBMARINE-TELEGRAPH CABLE.

Specification forming part of Letters Patent No. **23,290**, dated March 22, 1859.

To all whom it may concern:

Be it known that I, FRANCIS J. BRIDGES, of New York, in the county of New York and State of New York, have invented an Improvement in Conductors, Cords, or Cables for Electric Telegraphs; and I do hereby declare that the following is a full, clear, and exact description of the principle or character which distinguishes it from all other things before known, and of the usual manner of making, modifying, and using the same, reference being had to the drawings making a part of this specification, of which—

Figure 1 is a plan of the braided covering, and Fig. 2 a cross-section through the whole.

My invention consists in an improvement in cords, cables, or conductors for electric telegraphs, set forth as follows:

The conductor is covered with a suitable electric, gutta-percha being preferred for this purpose, and this is overlaid with a braided or plaited coat of hemp, flax, cotton, or wire, if necessary, after the manner of a whip or curtain cord. The conductor, which may be of one or more strands of wire, is indicated by *n* in the drawings, the electric coat by *e*, and the braided or plaited coat by *a*.

Prior to my improvement it has been usual to wrap insulated conductors with material laid on helically; but this has proved to be objectionable from the tendency of such conductors to kink and twist, and by using a braided wrapping I not only obviate the tendency to kink and twist, but I obtain a conductor which is stronger and more flexible than one which has a tendency to twist.

For ordinary purposes a hempen braid saturated with water-proof varnish is preferable; but where the conductor may be exposed to abrasion from any cause its exterior coat may be wire-braided.

My invention is chiefly intended for to be laid under water, and I do not confine myself to the use of any particular metal or size or number of strands of wires for the core of the conductor, or for its conducting elements, nor to any particular insulator or electric, nor to any special material or quality or thickness or number of layers of braid, my improvement consisting in the use of braided coat or coats for the purposes above specified. Therefore

What I claim as my invention and improvement is—

The braided or plaited coat, covering, or layer for conductors, cords, or cables for electric telegraphic purposes, as hereinabove set forth.

FRANCIS J. BRIDGES.

Witnesses:

W. W. BOGARDUS,

SAML. C. BISHOP.