(No Model.)

H. W. LIBBEY.

COMPOUND ELECTRIC CABLE.

No. 342,523. Patented May 25, 1886.

FIG. 1.

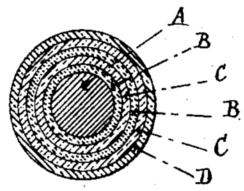
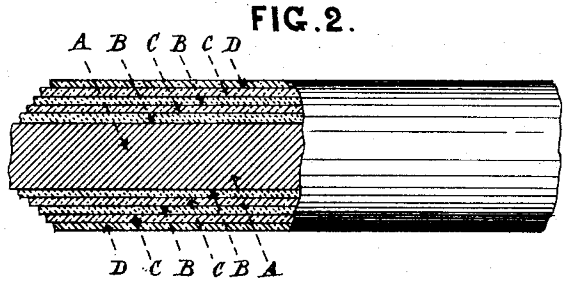


FIG. 2.



Witnesses.

E. Planta

J. F. Capen

Inventor.

H. W. Libbey

by J. H. Adams

Attorney.

UNITED STATES PATENT OFFICE.

HOSEA W. LIBBEY, OF BOSTON, MASSACHUSETTS.

COMPOUND ELECTRIC CABLE.

SPECIFICATION forming part of Letters Patent No. 342,523, dated May 25, 1886.

Application filed June 22, 1885. Serial No. 169,337. (No model.)

To all whom it may concern:

Be it known that I, HOSEA W. LIBBEY, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Compound Electric Cables, of which the following is a specification.

The object of my invention is to utilize any number of electric currents passing simultaneously through a wire for telegraphic and telephonic purposes.

The invention consists of a wire constructed as follows: A central iron core coated or covered with any suitable non-conducting material, which latter is surrounded with a coating or covering of copper, over or around which is a layer of any suitable non-conducting material. The above is to be surrounded or covered by any desired number of alternate coatings or coverings of copper and non-conducting material, and over the outermost is placed a coating or covering of zinc.

In the accompanying drawings, Figure 1 is a transverse section of a wire embodying my invention. Fig. 2 is a partial longitudinal section and outside view of the same.

A is a central iron core, surrounding which is a covering or casing of some suitable non-conducting material, B. Surrounding the latter is a covering or coating of copper, C, and around this another covering of non-conducting material, B. Surrounding all these are alternate coverings of copper and non-conducting material, as many as may be desired. Over the outermost covering or casing is an outside covering of zinc, D.

By means of the above-described combination I am enabled to transmit an independent current through the iron core and through each separate metallic casing or covering, thus producing or transmitting a multiplicity of currents through one wire.

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

An iron core surrounded by a non-conducting material, and then a coating of copper, and then a non-conducting material, and so on to any desired number of alternate copper coatings and non-conducting materials, the whole covered with a coating of zinc to resist elementary action and act as an assistant in retaining the electric current.

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

HOSEA W. LIBBEY.

Witnesses:
J. H. ADAMS,
E. PLANTA.