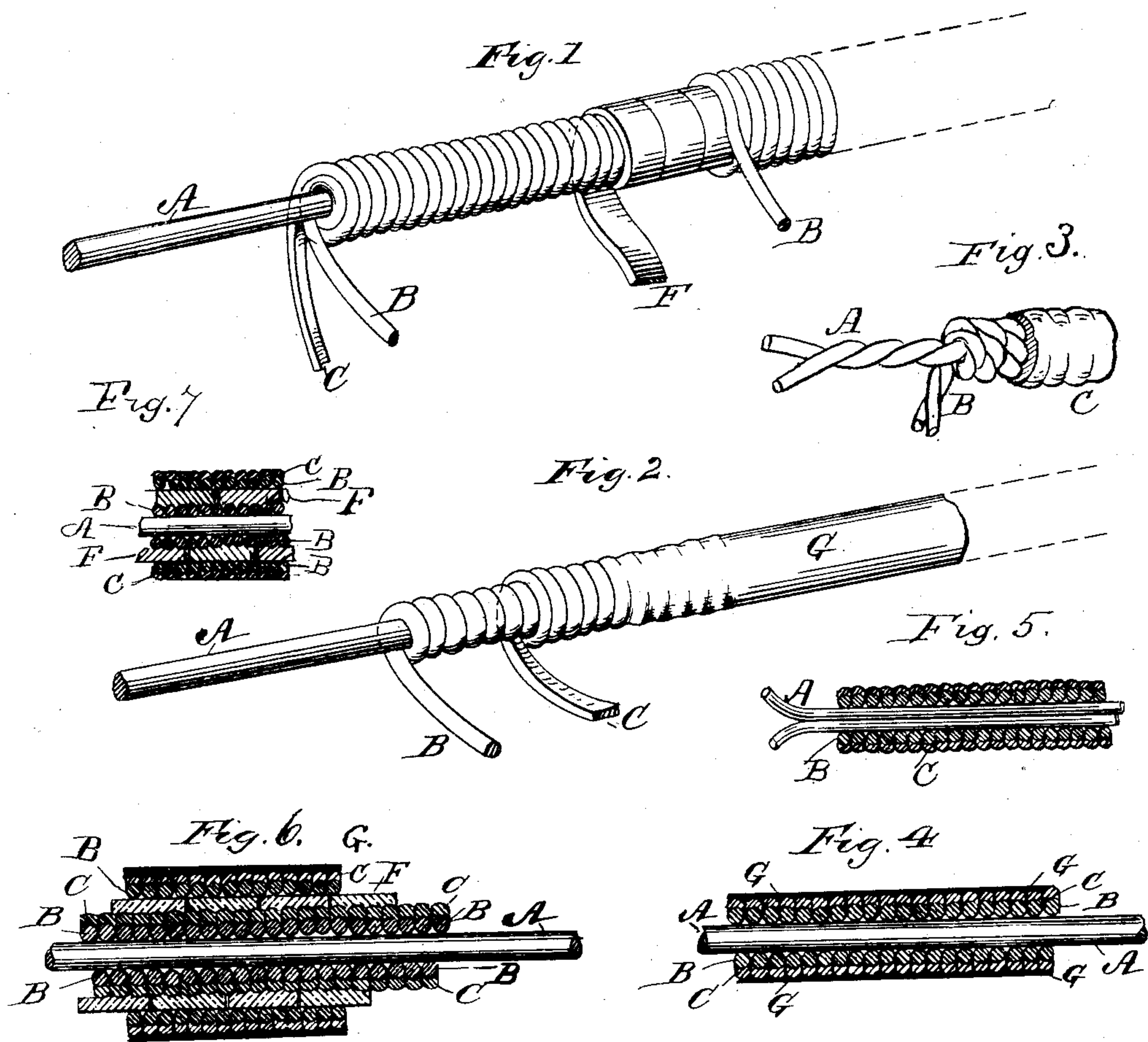


(No Model.)

W. B. HOLLINGSHEAD.
COMPOUND ELECTRIC CONDUCTOR.

No. 284,423.

Patented Sept. 4, 1883.



Witnesses:

Wm H. Bates
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Inventor:

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UNITED STATES PATENT OFFICE.

WILLIAM B. HOLLINGSHEAD, OF NEW YORK, N. Y.

COMPOUND ELECTRIC CONDUCTOR.

SPECIFICATION forming part of Letters Patent No. 284,423, dated September 4, 1883.

Application filed July 23, 1883. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM B. HOLLINGSHEAD, of New York city, New York, have invented certain new and useful Improvements relating to Compound Electric Conductors, set forth in this specification.

The invention consists of improvements relating to the covering of the core of the conductor, forming a compound electric conductor for telegraphic, telephonic, and other purposes.

Figures 1, 2, and 3 are perspective views of forms of the improvements. Figs. 4, 5, 6, and 7 are sectional views thereof.

In the form of construction shown a core-wire, A, preferably of steel, to secure strength and elasticity, is covered by a covering-wire, B, preferably of copper, on account of its great conductivity. The covering-wire is wound upon the core-wire, and is coated with a coating, C, of like metal, by the electroplating process or otherwise, and a casing, G, of tin or other suitable substance, is applied over the coating. The coating C and casing G cement the covering-wire B and strengthen the conductivity.

The improved compound conductor is especially adapted for operation for telegraphic, telephonic, and like purposes.

In coiling the covering-wire over the core-wire the coils should be close together, so that the successive coils touch and leave no spaces between them and form one continuous mass.

The core-wire may be of one wire or more, of iron, steel, galvanized or tinned iron or steel, or other suitable wire, and the covering-wire may be of one wire or more, of copper or other good conducting material.

The capacity of the compound wire may be increased by incasing the core-wire and first coiled covering-wire and coating by some insulating-casing F, as rubber, and then covering this casing by another coil of conducting-wire and coating. In like manner a third coiled covering may be applied, and so on as far as practical, and then applying a suitable casing over the last coating.

In consequence of the coiled covering-wire, the continuity of the covering-wire is not liable

to become broken in making joint and splicing, and thereby cause leaks, and the expansion and contraction of the core-wire would simply tend to separate the coils and not break the covering-wire or interrupt its conductivity, and no serious results follow the breaking of the deposited coating.

The details of construction and operation may be varied within the scope of the improvements. For example, the first coiled covering-wire may not have a coating of deposited metal, which may only be applied to the outer coiled covering-wire.

I claim as my invention—

1. The combination, in a compound electric conductor, of core-wire A, spiral covering-wire B, deposited coating C, and casing G, substantially as set forth.

2. The combination, in a compound electric conductor, of a core-wire wound with a covering-wire, a deposited coating over the coiled covering-wire, an insulating medium over the deposited coating, and a coiled covering-wire and deposited coating over the insulating medium, and a tin or other suitable casing over the outer deposited covering, forming two conducting mediums, substantially as set forth.

3. The combination, in an electric conductor, of a core-wire wound with a covering-wire coated with deposited metal, and incased with a protecting substance, substantially as set forth.

4. The combination, in an electric conductor, of a strengthening-core wound with a conductor and coated with a deposited metal, substantially as set forth.

5. The combination of a core-wire wound with a covering-wire incased in an insulating-covering wound with another covering-wire coated with deposited metal, forming two conducting mediums, substantially as set forth.

In testimony whereof I hereunto subscribe my signature and affix my seal, in the presence of two witnesses, in the city, county, and State of New York.

WM. B. HOLLINGSHEAD. [L. s.]

Witnesses:

M. PARPART,
J. B. MOREY.