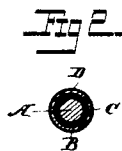
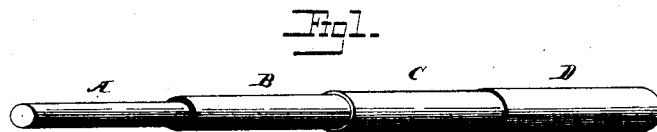


(No Model.)

E. G. ACHESON.
CONDUCTOR OF ELECTRICITY.

No. 342,892.

Patented June 1, 1886.



Attests:

John G. Mitchell
Wm A. Harris

E. G. Acheson
Inventor: *By*
Foster J. Freeman
attys.

UNITED STATES PATENT OFFICE.

EDWARD G. ACHESON, OF NEW YORK, N. Y.

CONDUCTOR OF ELECTRICITY.

SPECIFICATION forming part of Letters Patent No. 342,892, dated June 1, 1886.

Application filed January 26, 1886. Serial No. 189,840. (No model.)

To all whom it may concern:

Be it known that I, EDWARD G. ACHESON, a citizen of the United States, and a resident of the city, county, and State of New York, have invented certain new and useful Improvements in Conductors of Electricity, of which the following is a specification.

My invention relates to electrical conductors and more particularly to that class of conductors which are provided with metallic shields or coverings for the purpose of intercepting the inductive action of neighboring electric currents.

The object of my invention is to produce a cheap, effective, and durable conductor; and it consists in such a conductor constructed substantially as hereinafter set forth.

Referring to the accompanying drawings, forming part of my specification, Figure 1 is a longitudinal view of a portion of the conductor, partially in section; and Fig. 2 is a transverse section.

The primary conductor A is of any suitable material and size to suit the requirements of the case and is enveloped in an insulating material, B, preferably composed of fibrous material and some hydrocarbon of a rather high melting-point, as asphaltum. Over this insulating material is a metal tube or sheath, C, and this is so formed that it is thin and flexible and of good conducting material, as copper deposited by electrolytic process. Upon this sheath or tube, especially if formed by electrolysis, I apply a layer or coating, D, of metal in the form of a fusible alloy that serves to prevent the sheath from scaling off. Instead of the alloy, the coating may be made of some organic or inorganic substances, as fibrous materials and coal-tar or asphaltum and earths. The object of this coating is primarily to serve as a mechanical coat-

ing and protector of the insulated conductor, so that the material to be used is unimportant. In some instances it may be desirable to use both the metal coating and the fibrous envelope. If the inclosing metallic sheath is continuous it may be used as one limb of the complete metallic circuit—that is, it may form the return-circuit, or it may be connected to the earth at its extremities or at intervals along the line. If the sheath is not continuous it will still serve to protect the main or inner conductor from the disturbing influences of induction from neighboring wires, as it will act as a true magnetic shield to the main conductor, and thereby prevent the disturbing effects of the neighboring wire without conducting the induced currents to ground.

I do not herein make any claim to the method of manufacturing the conductor described, as that is claimed in my application Serial No. 189,839, filed simultaneously herewith.

Having thus described my improvement, what I claim is—

1. An electric conductor consisting of a line-wire, an insulating covering for the same, a continuous homogeneous metallic shield of thin and flexible material, and a protective covering, substantially as described.

2. An electric conductor consisting of a line-wire, an insulating covering of fibrous material and asphaltum, a thin flexible shield of electrolytically-deposited copper, a coating of a metallic alloy, and a protecting-coating, substantially as described.

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

EDWARD G. ACHESON.

Witnesses:

GEO. J. MERRILL,
B. T. BURNHAM.