

74

(No Model.)

S. HEIMANN.
INSULATED WIRE.

403,267

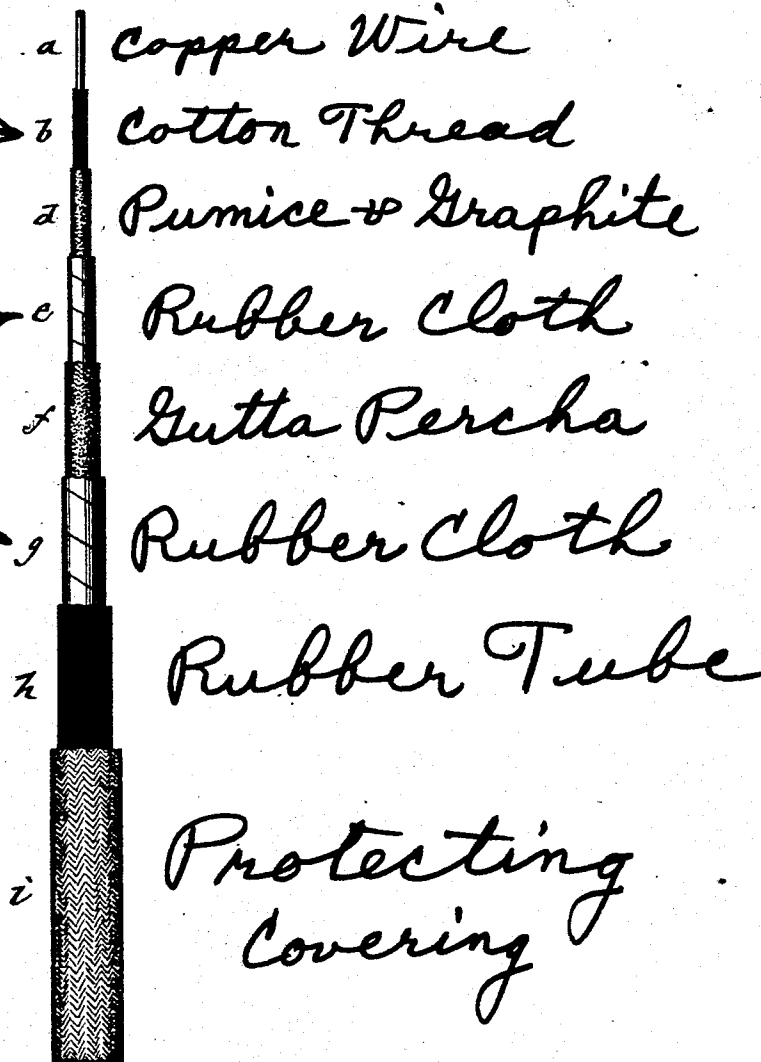
No. 403,267.

Patented May 14, 1889.

177-118

Coated with
Soluble Glass
& Glycerine

Spirally Wound



WITNESSES:

F. W. Rosenbaum.
E. C. Karp

INVENTOR.

Salomon Heimann
BY
E. C. Karp
ATTORNEYS.

SPECIFICATION forming part of Letters Patent No. 403,267, dated May 1st, 1889.

Application filed March 27, 1889. Serial No. 304,996. (No model.)

To all whom it may concern:

Be it known that I, SALOMON HEIMANN, of the city of New York, in the county and State of New York, a citizen of Germany, have invented certain new and useful improvements in Insulated Wires, of which the following is a specification.

This invention relates to an improved insulated wire for electric purposes, which wire is covered with fire and water proof covering that forms at the same time a superior insulator; and the invention consists of an insulated electric wire, which is first covered with cotton thread and with a mixture of soluble glass and glycerine and next with a mixture of pulverized plumbago and pumice-stone, which layer is then covered by a protective covering formed of a layer of rubber cloth, a rubber pipe, and a suitable hose, so as to form a cable.

The accompanying drawing represents a side elevation of my improved insulated electric wire, showing the different successive layers of the same.

In carrying out my invention an electric wire, *a*, of copper or other suitable metal, is first covered in the usual manner with a layer of cotton thread, *b*, which is then coated with a solution of one hundred parts of soluble glass and five to ten parts of glycerine, the glycerine serving to impart the required degree of flexibility to the soluble glass. A layer, *d*, formed of a mixture of one hundred parts of pulverized pumice-stone with from ten to fifteen parts of pulverized plumbago, is either sprinkled over the moist coating of soluble glass or formed by the addition of water into a paste and applied over the dry coating of soluble glass, after which another layer of soluble glass and another layer of

paste may be applied, according to the thickness that is to be given to the insulated covering of the electric wire.

This insulated electric wire can be used for any purpose in which electric conducting-wires have been used heretofore. In case a number of these wires are to be collected in a cable a layer, *e*, of rubber cloth, is wound spirally around the wires, said layer being then coated with a solution, *f*, of gutta-percha in bisulphide of carbon, over which again a spiral layer, *g*, of rubber cloth is applied, then a rubber tube, *h*, and finally an outer protecting-covering, *i*, of suitable hose.

By covering the wire in the manner described a good fire and water proof covering is given to the same, which forms also a very effective insulating material for the same, so that no loss of current or danger from fire by the heating of the wire can take place.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. An insulated wire composed of an electric wire, a layer of cotton thread on the same, a coating of soluble glass and glycerine, and a layer formed of pulverized pumice-stone and plumbago, substantially as set forth.

2. An insulating-covering for electric wires, composed of soluble glass and glycerine and a coating of pulverized pumice-stone and plumbago, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

SALOMON HEIMANN.

Witnesses:

M. GOLDSTEIN,
CARL KARP.

Correction in Letters Patent No. 403,267.

It is hereby certified that Letters Patent No. 403,267, granted May 14, 1889, upon the application of Salomon Heimann, of New York, N. Y., for an improvement in "Insulated Wires," were erroneously issued to said Heimann and Frank L. Pommer as owners of the entire interest in said invention; that said Letters Patent should have been issued to said *Heimann and said Pommer, William Meyer and Henry Osborne, of New York, N. Y., and Johann Steneck, of Hoboken, New Jersey*, said Meyer, Osborne, and Steneck being assignees of one-twentieth each of said invention as shown by assignments of record in this office; and that said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 4th day of June, A. D. 1889.

[SEAL.]

CYRUS BUSSEY,

Assistant Secretary of the Interior.

Countersigned:

C. E. MITCHELL,

Commissioner of Patents.

INSULATED WIRE.

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[SEAL.]

CYRUS BUSSEY,
Assistant Secretary of the Interior.

Countersigned:

C. E. MITCHELL,
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