UNITED STATES PATENT OFFICE.

HENRY C. SPALDING, OF BOSTON, MASSACHUSETTS.

INSULATING COMPOUND FOR ELECTRICAL CABLES, &c.

SPECIFICATION forming part of Letters Patent No. 327,462, dated September 29, 1885.

Application filed March 17, 1885. (No specimens.)

To all whom it may concern:

Be it known that I, HENRY C. SPALDING, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Insulating Compounds for Electrical Cables, &c., of which the following is a specification.

My object is to obtain an insulating compound suitable for use in the manufacture of electrical cables or conductors surrounded by one or more layers or coatings of an absorptive fibrous insulating material.

In applications filed by me I have shown and described various forms of such cables, and to these my invention is more particularly applicable, although the same is advantageously applied to any form of conductor or cable in which similar conditions obtain.

In most cases the insulating compounds used have either become hard and brittle in course of use, or else have been of a permanently sticky or semi-fluid character, whereby the requisite adherence and stability of the various parts of the cable are impaired. In the cases of fluid or semi-fluid insulating compounds, too, the insulating qualities are only obtained by the use of very expensive materials.

My chief aims in this invention are to produce a cheap compound, that may be applied as a varnish or taken up by the absorptive qualities of any of the ordinary fibrous materials such as are used in the manufacture of cables, which shall possess a very high specific insulation, and which will not harden or become brittle, but remain plastic or viscous only to a degree sufficient to render the cable or insulated conductor pliant and easy to manage.

I have discovered a compound which possesses these qualities in a marked degree. The said compound consists of boiled linseed-oil and crude turpentine. I heat and mix these ingredients in such proportions as to form a viscous fluid, the degree of viscosity needed for particular cases being determined by the proportionate amounts of the two ingredients.

Although I prefer turpentine in its natural or crude state, I may use it in reduced condition, or even resin; but in the case of the latter care should be taken to use a sufficient amount of the linseed-oil to maintain the compound in a slightly viscous condition. My invention therefore is not limited to any precise proportions of the ingredients, as the relative amount of linseed-oil is to be increased as the resinous matter is more solid.

This compound may be applied hot to any fibrous coating as a varnish, or the cable may be drawn through it while in a fluid state. It adheres readily to fibrous material, and is absorbed thereby. It never entirely loses its plasticity or viscosity, and possesses a very high specific insulation. These qualities render it very useful as an insulating material.

I am aware that resinous substances, and also crude and boiled linseed-oil, have been largely used in the manufacture of insulating compounds; but so far as I am aware the compounds into which these substances have entered have been distinct in character from that described by me, and designed for different purposes.

What I claim is—

The permanently viscous or plastic insulating compound herein described, consisting of boiled linseed-oil and crude turpentine or its described equivalent.

In testimony whereof I have hereunto set my hand this 13th day of March, 1885.

HENRY C. SPALDING.

Witnesses:

ALONZO B. WENTWORTH,

J. J. GOODWIN.