

UNITED STATES PATENT OFFICE.

MOSES G. FARMER, OF SALEM, MASSACHUSETTS.

IMPROVEMENT IN COMPOUNDS FOR INSULATING TELEGRAPH-WIRES, &c.

Specification forming part of Letters Patent No. 124,201, dated March 5, 1872.

SPECIFICATION.

To all whom it may concern:

Be it known that I, MOSES G. FARMER, of Salem, in the county of Essex and State of Massachusetts, have invented and discovered a Method of and Compound for Treating Telegraph-Wire Insulators; and I do hereby declare the following to be a full and correct description of the same.

This invention relates to an improved method of highly insulating telegraph-wire insulators which have poor insulating properties, and to a compound or mixture for that purpose, it consisting in saturating or immersing insulators made of porous and plastic earthen or other ware, or of vulcanite, such as described in my application for Letters Patent, bearing date with this, for improvements in insulators for telegraph-wires, with or in a mixture or compound of rosin, bees-wax, spermaceti, and oil, made in about the proportions hereinafter named, and heated to a high heat, and then immersing them in heated oil for the purpose of removing any of the mixture remaining on the surface.

To form my compound or mixture, I take the following substances, in about the proportions named below: Of fine rosin, say, twenty-four parts; of good bees-wax, sixteen parts; of best spermaceti, eight parts; of best oil, one part.

These are to be melted together, and more or less of the oil added, as the insulators are to be used in cold or warm countries, as the heat will tend to injure the insulating powers of the device if too much oil is used in warm countries; and the cold will injure likewise if too little is used in cold countries.

The insulators, being prepared as described in my accompanying applications, having been placed in this mixture, it is raised to a temperature of from 250° to 350° Fahrenheit for the purpose of expelling the bubbles of air and moisture, care being taken not to injure the

mixture by too rapid evaporation. They are left in this a few hours, and removed to a vessel containing heated petroleum, "Merrill's Deodorized Oil" being found the best, both for this purpose and for compounding in the mixture. The oil removes any deposit of the mixture that may remain on the insulators, and leaves them, when removed from the oil, in an even unctuous condition, ready for the market.

I sometimes omit the treatment in oil, especially when the material of which the insulator is made is but slightly porous, as then it becomes quite desirable to leave some of the insulating compound on the surface; and it is also desirable to have the compound in so soft a condition as to partially melt and flow when exposed to the sun in hot weather, as by this the accretions of dirt and dust upon the surface are broken up, and the insulating power is partially restored.

As before said, more oil is used when the insulators are to be exposed to cold, and less or none when exposed to heat; and, if used in the torrid zone, less of the spermaceti is employed, and, instead of spermaceti, paraffine, naphthaline, or anthracene may be used.

Of course, the proportions may be varied; but I always prefer to have more rosin than bees-wax, and more bees-wax than spermaceti or its equivalent.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

A compound, formed of the ingredients and in the manner specified, for application to telegraphic insulators for the purpose of increasing their insulating power, as set forth.

The above specification of said invention signed and witnessed at Boston this 18th day of August, A. D. 1871.

MOSES G. FARMER.

Witnesses:

CHARLES STOWELL,
GEO. A. STOWELL.