

UNITED STATES PATENT OFFICE.

JOSIAH LATIMER CLARK, OF 6 WESTMINSTER CHAMBERS, COUNTY OF MIDDLESEX, ENGLAND.

MANUFACTURE AND PREPARATION OF MATERIALS TO BE EMPLOYED FOR INSULATING.

SPECIFICATION forming part of Letters Patent No. 318,233, dated May 19, 1885.

Application filed December 9, 1884. (No specimens.) Patented in England December 22, 1883, No. 5,845, and in France June 21, 1884, No. 162,821.

To all whom it may concern:

Be it known that I, JOSIAH LATIMER CLARK civil engineer, and a director of Latimer Clark, Muirhead and Company, (Limited,) of 23 Regency Street, Westminster, in the county of Middlesex, England, a subject of the Queen of Great Britain and Ireland, and residing at 6 Westminster Chambers, Westminster aforesaid, have invented certain Improvements in the Manufacture and Preparation of Materials to be Employed for Insulating Purposes, (for which I have obtained patents in Great Britain, No. 5,845, dated December 22, 1883, and France, No. 162,881, dated June 21, 1884,) of which the following is a specification.

This invention relates to the manufacture, preparation, and treatment of materials to be used for coating and insulating wires to be employed for electrical purposes.

In carrying my invention into effect I employ the material or materials usually known in commerce as "oxidized oil;" and I prefer that kind which has been prepared by mixing linseed-oil, castor-oil, or other vegetable oils with a mixture of bisulphide of carbon and chloride of sulphur, this combination producing a spongy elastic compound well suited for the purpose of my invention. I sometimes prefer to mix with the oxidized oil, prepared as above described, an equal proportion of another description of oil, which is also commercially known as "oxidized oil," but which is prepared by oxidizing the oil by the action of the atmosphere without the use of the before-mentioned chemicals. I then combine or mix the oxidized oil with asphalt, pitch, or bitumen, and with a small quantity of hydrocarbon oil or hydrocarbon spirit—such as paraffine-oil, paraffine-spirit, kerosene, benzine, or naphtha—to assist the mixture of the ingredients. The compound thus produced may be employed for covering or insulating telegraph-wires in the usual way. I sometimes, however, prefer to mix the above compound with india-rubber or gutta-percha, adding also, when preferred, a proportion of

black wax, (which is a waste material obtained in the purification of crude paraffine,) ozocerite or earth-wax, paraffine-wax, resin, pitch, and the like to cheapen the mixture, and the said mixture may be further cheapened by adding earthy or mineral powders, such as kaolin or French chalk.

In preparing the oxidized oil by the chemical process, I sometimes prefer to mix a portion of paraffine-oil or other hydrocarbon oil or spirit with the vegetable oil before subjecting it to the action of the chemicals.

After the before-mentioned materials have been thoroughly mixed and incorporated the compound may be then put upon the wire to be covered, and this may be effected by the ordinary wire-covering machine—such as is used for covering wires with gutta-percha—and if during this process the materials be kept at a high temperature they will become partially vulcanized, especially if the nozzle of the machine in which the covering-dies are placed be specially superheated. The wire so covered may then be passed along the water-trough to be cooled in the same manner as now practiced in covering wire with gutta-percha.

The proportions of about one part, by weight, of oxidized oil to about from one to one and a half part, by weight, of asphalt, or one or more of the hereinbefore-named materials, will give good results; but I do not confine myself to such proportions.

Having now described and particularly ascertained the nature of the said invention and the manner in which the same is or may be used or carried into effect, I would observe, in conclusion, that what I consider to be novel and original, and therefore claim as my invention, is—

1. The hereinbefore-described compound, consisting of oxidized oil and asphalt, pitch, or bitumen.

2. The compound herein described, consisting of oxidized oil, asphalt, pitch, or bitumen, and hydrocarbon oil or spirit, mixed

substantially in the manner and proportions specified.

3. The compound herein described, consisting of oxidized oil, asphalt, pitch, or bitumen, and india-rubber or gutta-percha, either
5 with or without hydrocarbon oil, wax, or spirit, as specified.

In testimony whereof I have signed my name

to this specification in the presence of two subscribing witnesses.

JOSIAH LATIMER CLARK.

Witnesses:

J. WM. THOS. MARSHALL,

G. S. PURRY,

Both of 2 Pope's Head Alley, Cornhill, London, Gentr.