

UNITED STATES PATENT OFFICE.

CHESTER H. POND, OF CLEVELAND, OHIO.

IMPROVEMENT IN INSULATING-COMPOUNDS FOR TELEGRAPHS, &c.

Specification forming part of Letters Patent No. 122,962, dated January 23, 1872.

To all whom it may concern:

Be it known that I, CHESTER H. POND, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a new and Improved Insulating-Compound for Telegraphing Purposes, of which the following is a specification:

The nature of my invention relates to a certain composition of materials for the purpose of insulating, to be used in telegraphing, by means of which a more perfect insulation of conductors is obtained than by the ordinary mode; and at the same time the compound is cheap and durable, not being easily affected by the action of the elements or weather to which it may be exposed.

SPECIFICATION.

This compound is composed of one part coal-tar, or its equivalent, and two parts charcoal or saw-dust, tan-bark, or any other organic body having a fiber or struction, and a poor conductor, which may be ground or cut up to mix with the tar.

The coal-tar is brought to a boiling temperature when the charcoal is introduced and thoroughly combined with it by agitating the the entire mass by any mechanical force. The proportions may be varied without changing the nature of the invention.

In place of the charcoal saw-dust may be employed, or wood chips or shavings may be rendered suitable for this purpose in combination with coal-tar or its equivalent. In case woody fiber is used I should prefer that it be reduced to the condition or size of ordinary fine saw-dust, though this, in all cases, is not absolutely necessary, as fine shavings or turned wood chips may not need any further reduction.

The particles of wood or other fibrous material suitable for this purpose, when combined with the hot tar, becomes completely saturated; thus each particle of the material becomes as much insulated as the tar itself, while the organic material gives strength, and body, and

character to the compound, which it would not have, individually, suitable for this purpose.

To render the woody or organic element of the compound as poor a conductor of electricity as possible the material may be baked to eliminate the watery or gaseous properties therefrom before mixing with the tar or its equivalents, as it is well known that wood, when baked or thoroughly kiln-dried, becomes a poor conductor of electricity, and when combined with the tar in this condition each woody fiber or particle becomes charged with the hot tar, which prevents the absorption of moisture and is perfectly insulated.

When this compound is thus combined it may be cast into molds of suitable forms for the purpose designed, or the article, such as telegraph wire-holders or supporters of wood, and coated over with this said compound, and the article then placed in an oven, when it passes through a process of baking, rendering the compound hard but elastic, and not easily disturbed by the action of the weather or elements to which it is exposed, thus making a durable insulated holder for telegraph-wires.

It is not necessary that all the materials enumerated should be at the same time combined with the tar, as either one of them will subserve the object desired; hence I do not confine myself, in making this insulating compound, to use all the articles specified at the same time, but either one of them in combination with coal-tar or its equivalent; hence this improved compound consists in combining with coal-tar or its equivalent, charcoal, saw-dust, tan-bark, or any organic vegetable material capable of being rendered suitable as a part of the said compound, for the purpose set forth.

What I claim as my improvement, and desire to secure by Letters Patent, is—

The insulating-compound, consisting of the ingredients and in about the proportions substantially as herein set forth.

Witnesses: CHESTER H. POND.

J. H. BURRIDGE,
A. L. CHAMPION.