

United States Patent Office.

ALFRED H. CASTLE, OF ANN ARBOR, MICHIGAN.

Letters Patent No. 97,045, dated November 23, 1869.

IMPROVED COMPOUND FOR INSULATING.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, ALFRED H. CASTLE, of Ann Arbor, in the county of Washtenaw, and State of Michigan, have invented certain new and useful Improvements in an Insulating-Compound; and I do hereby declare that the following is a full and complete description of the same.

The nature of my invention relates to the compounding of certain ingredients, whereby a composition is obtained, which is strongly adhesive, and a non-conductor of electric galvanic currents, to be used in the construction of insulators for telegraphic purposes, &c.

In this compound, I use, by preference, liquid bitumen, finely-pulverized shale, or other argillaceous earths, and caustic or quick-lime, the two latter ingredients in about equal proportions, and in a dry state, and intimately incorporated with each other.

The bituminous matter consists of a hydrocarbon, which, as is well known to chemists, contains about ten per cent. of oxygen, and, consequently, has an acid reaction. This is gently warmed, and the pul-

verulent argillaceous and caustic compound stirred in until it assumes the desired consistency.

A chemical union is formed between the alkaline base and the bitumen, which is capable of resisting not only the action of water, but also affords a compound that is a poor, commonly-called a non-conductor of electricity, and which can be used with advantage for that purpose, the quantity of the base being increased, to give the compound the desired body, when used as an insulator.

Claim.

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

An insulating-compound, composed of bitumen, argillaceous earths, and quick-lime, when the ingredients named are compounded and used for the purpose herein described.

ALFRED H. CASTLE.

Witnesses:

W. H. BURRIDGE,
J. HOLMES.