

# UNITED STATES PATENT OFFICE.

J. BURROWS HYDE, OF NEW YORK, N. Y.

## INSULATING COMPOUND FOR ELECTRIC CONDUCTORS.

SPECIFICATION forming part of Letters Patent No. 290,057, dated December 11, 1883.

Application filed November 3, 1883. (No specimens.)

*To all whom it may concern:*

Be it known that I, J. BURROWS HYDE, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Insulating Compounds for Electric Conductors, of which the following is a specification.

My invention relates to a combination of matters that form a plastic compound suitable for insulating wires for electric conduction; and my improvements consist in the combination of mineral bitumen and coal-tar pitch, used separately or mixed, and combined, under heat, with mineral oil, by a process and apparatus similar to that patented by me July 24, 1883, No. 281,999, wherein I employed the resinous distillate of petroleum with crude petroleum.

In a proper vessel over a furnace or fire I melt the bituminous matter, and when it is fluid I ladle it into the mixing-kettle, also over a fire, but into which I first place a gallon or more of crude petroleum-oil. This kettle, I prefer, should be similar to the one described in my patent aforesaid; but I prefer to employ in this case a sealed vessel, similar to an ordinary floating gas-receiver, into which I prefer to convey the vapors passing off from the mixing apparatus, and thence into the furnace, instead of direct, as therein described. When the materials are thoroughly incorporated and of proper consistency, so as to be impressed by but not adhere to the fingers, when cold, in the temperature of the atmosphere when made, it may then be dipped into the molding apparatus. (See, also, Patent No. 281,999.) The wires should be closely wound with two or more layers of cotton thread, and wound upon reels of proper size to fit the molding or insulating apparatus, attached to or convenient to which a trough or vessel containing a hydrocarbon fluid—as petroleum—is

placed, and through which the covered wire is passed and saturated; and if this fluid be warmed it will accelerate the process of absorption. Thence the wire is passed into the heated composition, where the fluid is evaporated, the composition taking its place, saturating and coating the cotton covering in its travel through the apparatus to the storing-reel described, as aforesaid.

I do not confine myself to the molding or coating apparatus described in the patent named, as other methods would suffice therefor; nor do I claim any connection of said patent with the process and compound herein set forth; but

What I do claim is—

1. In insulating compounds for electric uses, mineral and coal-tar bitumens melted and combined with petroleum or mineral oil, substantially as described.

2. An insulating compound for covering electric wires, composed of mineral oil combined, under heat, with natural or artificial bituminous matters, substantially as described.

3. The method of coating thread-covered electric wires with an insulating medium, which consists in saturating said covering with a volatile fluid—as crude petroleum—before the wire enters the heated insulating composition, substantially as described.

4. In combining bituminous matters with mineral oil by heat, the method herein described of utilizing the waste vapors evolved, which consists in storing them in a sealed and floating holder, from which they are conveyed and used for heating the furnace.

In testimony whereof I affix my signature in presence of two witnesses.

J. BURROWS HYDE.

Witnesses:

GERARD C. GREEN,  
EDWARD E. ELLIS.