

UNITED STATES PATENT OFFICE.

JOHN W. KIDWELL, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR
TO THE VIRGINIA PHOSPHATE AND PAINT COMPANY, OF SAME PLACE.

INSULATING MATERIAL.

SPECIFICATION forming part of Letters Patent No. 538,614, dated April 30, 1895.

Application filed September 8, 1894. Serial No. 522,493. (No specimens.)

To all whom it may concern:

Be it known that I, JOHN W. KIDWELL, of Washington, District of Columbia, have invented certain new and useful Improvements in Insulating Material; and I do hereby declare the following to be a full, clear, and exact description of the same.

In Letters Patent No. 503,425, granted to me August 15, 1893, I have described and claimed a composition of matter consisting of titanic mineral and a hydro-carbon, such as asphaltum. This composition is only a fair insulator of electricity, but I find that by adding to it even a small percentage of a silicious material, such as rice hulls or other organic material rich in silicic acid, it becomes a most excellent insulator capable of resisting successfully electric currents of very high tension.

The titanic minerals which I prefer to employ are found in a phosphate ore of Nelson county, Virginia, and constitute about seventy per cent. of the same. They are known as menaccanite, rutile, anatase and brookite, the first mentioned being present in the largest proportion. Either of these minerals may be used exclusively, but as they are all usually found together in the ore referred to they are conveniently so used.

Any suitable hydro-carbon may be employed, such as asphaltum, pitch or coal tar, but I prefer to use asphaltum.

The silicious materials that may be employed are numerous. Most any material rich in silicic acid may answer, but I prefer to use

rice hulls, both on account of their containing a large proportion of silicic acid and because of their cheapness—no use for them having been heretofore discovered.

In forming my improved insulating compound, I preferably in producing a hundred pounds, use from seventy-five to eighty-five pounds of the titanic mineral, from ten to twenty pounds of asphaltum and about five pounds of rice hulls.

The mineral, I preferably grind to a fine powder and mix it intimately with the asphaltum by heat and stirring, adding the rice hulls either during or after the mixing of the other ingredients.

The insulating properties of this composition are remarkable, small masses of it, not greater than an eighth of an inch in thickness having been found capable of resisting a current of twenty-four thousand volts.

I claim as my invention—

1. An insulating compound composed of titanic mineral, such as described, a hydro-carbon material, such as asphaltum, and a silicious material, in substantially the proportions set forth.

2. An insulating compound composed of titanic mineral, a hydro-carbon material, such as asphaltum and rice hulls, in about the proportions set forth.

JOHN W. KIDWELL.

Witnesses:

MELVILLE CHURCH,
ALEX. S. STEUART.