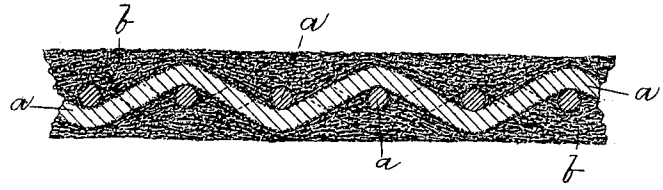
(No Model.)

C. T. LEE & C. N. WAITE.

ELECTRICAL NON-CONDUCTOR.

No. 386,925. Patented July 31, 1888.



Witnesses.

M. A. Thompson.

W. J. Henderson.

Inventors.

Charles Tennant Lee,
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their atty

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

CHARLES TENNANT LEE, OF BOSTON, AND CHARLES N. WAITE, OF MEDFORD, ASSIGNORS OF ONE-HALF TO THE GOULD & WATSON COMPANY, OF BOSTON, MASSACHUSETTS.

ELECTRICAL NON-CONDUCTOR.

SPECIFICATION forming part of Letters Patent No. 386,925, dated July 31, 1888.

Application filed August 24, 1887. Serial No. 247,726. (No model.)

To all whom it may concern:

Be it known that we, CHARLES TENNANT LEE, of Boston, county of Suffolk, and CHARLES N. WAITE, of Medford, county of Middlesex, State of Massachusetts, have invented certain new and useful Improvements in Electrical Non Conductors, of which the following is a specification, reference being had to the drawing accompanying and forming a part hereof, in which is shown a sectional view of a piece of our non-conductor enlarged.

Non-conductors for electrical purposes which can be produced in thin flexible sheets of large size are, so far as known to us, expensive and difficult to obtain.

The chief object of our invention is the production at slight cost of a non-conductor having a high degree of resistance, and which, when desired, may be produced in thin flexible sheets of any required size; and it consists in a sheet composed of a layer or layers of fabric coated or "filled" with an insulating material—such as mica in a comminuted state—which is attached thereto by an adhesive substance, such as glue, British gum, or the like.

In the drawing, *a a* represent the threads of the fabric, and *b* the mass of insulating material, the whole being very much enlarged for the purposes of illustration. We prefer to use a coarsely-woven cotton cloth of fine thread, known as "cheese cloth," when thin sheets of the non-conductor are desired; but, as will be obvious, when thinness of the sheet is not essential, a thicker and more closely-woven fabric may be used.

The mica may be applied in various ways to the fabric; but we prefer to apply it by saturating the fabric in glue size, then running the sized fabric through the comminuted mica, so as to thoroughly cover it with the same, and then passing the fabric through a pair of rolls such as are commonly in use in a friction starch-mangle, and thus forcing the mica scales into and through the sized fabric. When the fabric is dried, a sheet of material is obtained having the non-conducting qualities of a continuous unbroken layer or sheet of mica.

As will be obvious, if a non-conductor is desired which shall be impervious to moisture, this result may be obtained by coating the sheets with shellac or other resinous varnish.

What we claim is—

A non-conductor consisting of a sheet or layer of textile fabric saturated or filled and covered with a compound composed of comminuted mica and an adhesive material, as glue, substantially as set forth.

CHARLES TENNANT LEE.
CHARLES N. WAITE.

Witnesses:
WM. A. MACLEOD,
M. A. THOMPSON.