No. 764,812. PATENTED JULY 12, 1904.

C. W. JEFFERSON.

ELECTRICAL INSULATOR.

APPLICATION FILED DEC. 18, 1902.

NO MODEL.

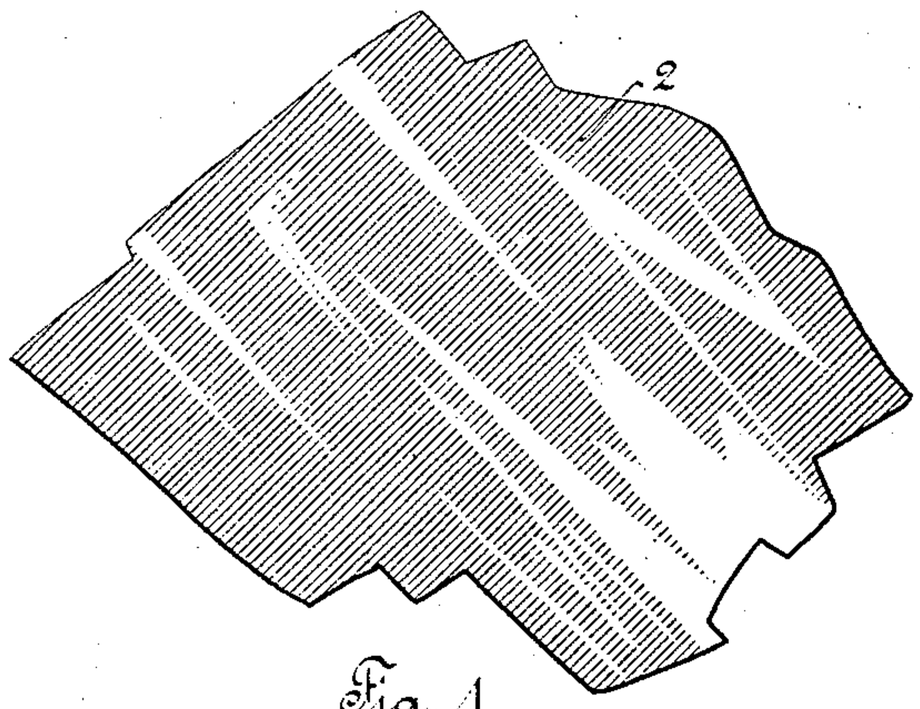

Fig. 1.

Fig. 2.

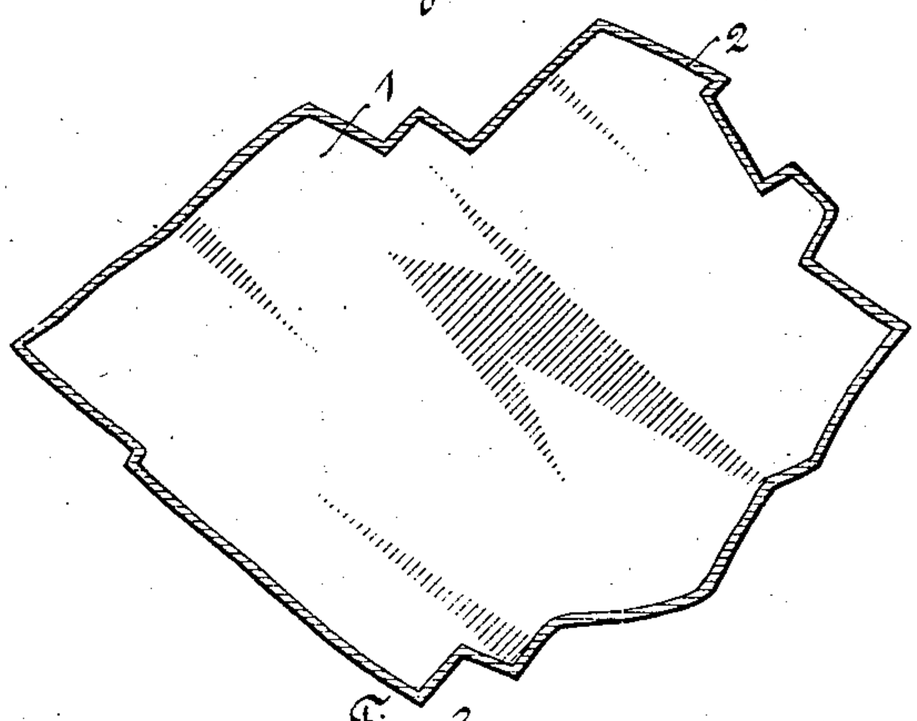

Fig. 3.

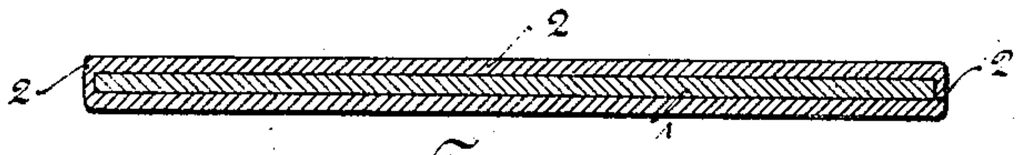

Fig. 4.

WITNESSES:

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No. 764,812. Patented July 12, 1904.

UNITED STATES PATENT OFFICE.

CHARLES WILKIN JEFFERSON, OF SCHENECTADY, NEW YORK, ASSIGNOR TO MICA INSULATOR COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

ELECTRICAL INSULATOR.

SPECIFICATION forming part of Letters Patent No. 764,812, dated July 12, 1904.

Original application filed August 8, 1902, Serial No. 118,899. Divided and this application filed December 18, 1902. Serial No. 135,805. (No model.)

To all whom it may concern:

Be it known that I, CHARLES WILKIN JEFFERSON, a subject of the King of Great Britain, and a resident of Schenectady, county of Schenectady, and State of New York, have invented new and useful Improvements in Electrical Insulators, of which the following is a specification.

My invention relates to electrical insulators, and this application is a division of my application Serial No. 118,899, filed August 8, 1902.

The principal objects of this invention are to provide small thin pieces or scales of insulating material that may be readily united together or to other insulators without the addition of any other material or substance and also that will be of sufficient strength and durability to prevent them from being injured or broken when packed promiscuously together in boxes, barrels, or other receptacles.

Electrical insulators have been made from comminuted or pulverized mica or from mica-scales and a cement of insulating material. Insulators have also been made by building up layers of mica scales or pieces with interposed layers of cement. In both of said methods, however, and in all methods of making electrical insulators from two or more substances, one of which is an adhesive or cement, the adhesive, so far as I am aware, has been applied to a number of pieces of said substance or substances during the process of uniting them into an integral whole.

Heretofore, so far as I am aware, small thin scales or pieces of insulation have never been made or used that could be united together or to other insulators without the addition of any other material or substance.

My invention consists of the insulation herein described.

In the accompanying drawings, Figure 1 illustrates a top plan of one embodiment of my invention. Fig. 2 is a cross-section of the scale or piece, showing the coating on one of its sides. Fig. 3 is a bottom plan of the scale or piece, showing the coating on its edges. Fig. 4 is a cross-section of the scale or piece, showing it entirely covered.

Similar numbers represent like parts in all the figures.

1 is a small delicately-thin piece or scale of insulating material, preferably mica, and such scale is preferably an "elementary" scale or one that is divided to its ultimate extent or as thin as possible by cleavage. Said piece or scale 1 is coated, as at 2, with a dried adhesive compound, preferably of insulating material. Shellac has been found to be a very suitable substance for the coating, for it is not only an insulating material, but is also tough and durable, and being such protects the scale which it covers from splitting or breaking. The adhesive may be applied to the scale 1 in any manner, and I have found a very desirable way is to spray or shower the scale 1 with the adhesive in a finely-divided state, either in a liquid form or as a dry powder. If the adhesive is applied in the form of a liquid, the product is not complete until the adhesive has dried on the scale, and if the adhesive be applied in the form of a powder it will have to be dissolved or melted to cause it to adhere to the scale and then dried.

The adhesive 2 may be applied to one side only of the scale or piece 1, as shown in Fig. 2, or the adhesive 2 may obviously be applied also to the edges of the scale or piece, as shown in Fig. 3, or entirely cover the scale or piece 1, as shown in Fig. 4. It is obvious also that the adhesive may be applied to the scale or piece not only in the manner described, but in any manner whatsoever.

When the pieces of insulation, as above described and as shown in the drawings, are to be united together or to other pieces of insulation, the adhesive coating is partially melted or dissolved, so that it is in a sticky condition, when the pieces or scales will be caused to adhere to each other or to the other insulation. Although I prefer that the product when made from mica shall be from ele-

mentary scales, this is not absolutely essential so long as the scale is delicately thin, so that the scales can be united to form a compact and practical insulator; but if the coated scales are elementary ones there will be no danger of their further splitting into uncoated scales, which would be likely to become broken up into fine particles.

From the above it will be seen that the separate pieces composed of the thin scales with the dried adhesive coating constitute strong and durable insulators that may be readily and quickly united to each other to form an insulator of any size or thickness desired or that may be as readily or quickly united to another insulator or other product, each of such coated scales constituting a unit in the built-up insulator.

My invention in its broader aspects is not limited to the precise product herein described, as changes in the same other than those suggested may be made without departing from the main principles of my invention or sacrificing its chief advantages.

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

1. As a new article of manufacture, a delicately-thin scale of insulating material toughened by a coating of a dried adhesive insulating substance capable of being softened, and said scale adapted to be used as a unit in building up an insulator.

2. As a new article of manufacture, a separate scale of mica toughened by a coating of a dried adhesive insulating substance capable of being softened, and said scale adapted to be used as a unit in building up an insulator.

3. As a new article of manufacture, a delicately-thin scale of insulating material toughened by a coating of dried shellac, and said scale adapted to be used as a unit in building up an insulator.

4. As a new article of manufacture, a separate scale of mica toughened by a coating of dried shellac, and said scale adapted to be used as a unit in building up an insulator.

5. As a new article of manufacture, a separate elementary scale of mica toughened by a coating of dried shellac, and said scale adapted to be used as a unit in building up an insulator.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES WILKIN JEFFERSON.

Witnesses:

PENNINGTON HALSTED,

EDWIN SEGER.