

UNITED STATES PATENT OFFICE.

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INSULATING COMPOSITION.

SPECIFICATION forming part of Letters Patent No. 522,745, dated July 10, 1894.

Application filed July 27, 1893. Serial No. 481,608. (No specimens.)

To all whom it may concern:

Be it known that I, JAMES L. TRUSLOW, JR., a citizen of the United States, residing in Summit, county of Union, and State of New Jersey, have invented certain new and useful Improvements in Insulating Compositions, of which the following is a specification.

This invention has for its object the production of a new insulating composition, which is mainly composed of ground cork and which is intended for use as a non-conductor for refrigerators and refrigerating buildings, and also as an insulating material for electrical and other purposes.

My improved insulating material has the advantage of being water-proof, a perfect insulator against heat and cold, and a good non-conductor of electricity, while it also serves as a good deadening device for the walls and ceilings of buildings.

Heretofore similar non-conducting bodies have been made of sawdust, wood-pulp, paper-pulp, hair-felt and other fibrous materials. These compositions lack, in most instances, the quality of being water-proof, some of them even absorbing moisture readily, especially those in which sawdust forms the principal constituent. Insulating material has also been attempted to be made of cork, in which the resinous matter contained in the cork is made use of for cementing the cork-particles together after subjecting them to heat and pressure. This material is defective, as it is neither fire nor water-proof, and mainly because the resin contained in the cork is not present in sufficient quantity to act as a reliable binder, so that the product obtained does not possess the required cohesion.

In preparing my improved insulating composition, waste pieces of cork are ground up into small pieces when it is intended to be used as a filling for refrigerating buildings, cars, &c., or for insulating boards or planks, but when the composition is to be used as an insulator for electrical purposes, then the cork is to be ground as fine as possible. Ninety parts of ground cork are then placed in a suitable vessel and mixed with a small quantity of resin, say about five parts, and with infusorial earth, also five parts. The mass is heated while the mixing takes place, so that all the parts are intimately united. While

the mass is still hot, it is removed from the heating vessel, run into a suitable mold, and pressed into any suitable shape. On being pressed into proper shape, the mass is then permitted to cool slowly. The volatile products of the rosin are permitted to escape during the heating of the mass, care being taken that the material contains a sufficient quantity of rosin, so that the required strength of compactness and cohesion is imparted to the material. The addition of rosin not only facilitates the cementing of the cork-particles, but it has the further advantage that it surrounds and penetrates them, whereby a perfectly water-proof body is obtained. The addition of rosin also improves the insulating qualities for use for electrical purposes, as rosin, as is well known, is one of the best insulators known to electrical science.

Electrical insulating devices made as described have the further advantage of being very light and of being adapted for use both inside and outside of buildings.

The addition of infusorial earth to the composition makes the product stronger, permits the application of a higher degree of heat during the process of mixing the ingredients without charring the cork, and imparts a certain resistance against fire to the mass.

When using the material as an insulating material for the walls of refrigerating buildings or cars, the material can be pressed into any desired shape or size, such as boards or blocks, so as to fill up entirely the space between the walls. This is preferable to the filling of the spaces between the walls by tamping the loose cork into it, as it does not permit the passage of either heat or cold, even if one of the outside walls should be injured.

I claim—

A composite mass for insulating and non-conducting purposes, the same consisting of ground cork and infusorial earth, in or about the proportions specified, and a binder of rosin, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

JAMES L. TRUSLOW, JR.

Witnesses:

PAUL GOEPFEL,
CHARLES SCHROEDER.