

# UNITED STATES PATENT OFFICE.

JULIUS DE LONG, OF BROOKLYN, NEW YORK.

## INSULATING MATERIAL.

SPECIFICATION forming part of Letters Patent No. 687,131, dated November 19, 1901.

Application filed May 9, 1900. Renewed July 31, 1901. Serial No. 70,311. (No specimens.)

*To all whom it may concern:*

Be it known that I, JULIUS DE LONG, a resident of the borough of Brooklyn, in the city of New York and State of New York, have  
5 invented a new and useful Improvement in Insulating Material; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to insulating material, and has special reference to mixtures or compositions of material employed for insulating against heat and cold and for deadening sound, and has for its object to provide  
10 a simple, cheap, and effective insulator of this character.

My invention consists, generally stated, in the use of cattle-hair in combination with cellulose, such as ground cornstalk-pith, mixed in accordance with the special use to  
20 which the insulating material is to be put, the mixture being used in bulk or held between walls of paper or equivalent material, as hereinafter more specifically set forth and described, and particularly pointed out in the  
25 claims.

The manufacture of my improved insulating material consists, essentially, in the use of cattle-hair in combination with cellulose, such as the pith from cornstalks, which is  
30 ground and mixed with the cattle-hair and the mixture used in bulk or held between walls of flexible paper or other equivalent flexible material. Such paper may be made fireproof or waterproof, or both fire and water proof, and may be quilted or stitched, or  
35 the paper may be coated upon its inner surface with adhesive material in order to keep

the inclosed mixture in place. It will thus be seen that my improved insulating material is cheap and simple to produce, is very  
40 effective in use, and may be employed for a great variety of purposes—such as in the walls of railway and refrigerator cars, ice-houses, refrigerators, or similar locations, as an insulator against heat and cold in walls  
45 and partitions, and as a deadener of sound, &c., in its use as a carpet-lining, &c.

Having now fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A heat-insulating material, consisting of a mixture of cattle-hair and cellulose in a dry state and without any binding material, substantially as set forth and described. 50

2. A heat-insulating material, consisting of a mixture of cattle-hair and cornstalk-pith, substantially as set forth and described. 55

3. A heat-insulating material, consisting of a mixture of cattle-hair and ground cornstalk-pith, substantially as set forth and described. 60

4. A lining for heat-insulating purposes consisting of a filling material composed of cattle-hair and cellulose secured between flexible inclosing sheets.

5. A lining for heat-insulating purposes consisting of cattle-hair and cornstalk-pith secured between flexible inclosing sheets. 65

In testimony whereof I, the said JULIUS DE LONG, have hereunto set my hand.

JULIUS DE LONG.

Witnesses:

WM. KORFF,  
GEO. WAGNER.