

UNITED STATES PATENT OFFICE.

GEORGE F. AVERILL, OF ARVERNE, NEW YORK, ASSIGNOR TO WILLIAM C. LYNNE AND JOSEPH A. FRAUENHEIM, OF PITTSBURG, PENNSYLVANIA.

COMPOSITION.

SPECIFICATION forming part of Letters Patent No. 723,124, dated March 17, 1903.

Application filed November 25, 1902. Serial No. 132,796. (No specimens.)

To all whom it may concern:

Be it known that I, GEORGE F. AVERILL, a citizen of the United States, residing at Arverne, in the county of Queens and State of New York, have invented or discovered a certain new and useful Improvement in Compositions, of which improvement the following is a specification.

The invention described herein has for its object the production of a composition which shall be an effective substitute for wood, iron, and allied materials in the manufacture of articles such as have heretofore been made by shaping wood, iron, or allied materials, but which will be much lighter than articles made from such materials and will be fire and water proof and a good non-conductor of heat and electricity. The invention is hereinafter more fully described and claimed.

In the practice of my invention I mix together paper finely and uniformly comminuted—i. e., reduced to dust—oxid of magnesium, and chlorid of magnesium. In forming the composition I thoroughly mix together the paper and oxid of magnesium and add thereto the chlorid of magnesium. These materials are mingled together in suitable proportions, dependent upon the character of the article to be made and the uses to which it is to be put. I have found that the most generally useful mixture consists in mixing together two portions, by weight, of the paper-dust and one part of oxid of magnesium. These two materials are thoroughly mixed together and one part, by weight, of chlorid of magnesium is added thereto, thereby forming a paste which can be molded into any desired shape by manipulation or by being placed in a suitable matrix. The

composition may be allowed merely to set in the matrix, or, if desired, pressure may be applied thereto, so as to render the same more dense. The paper-dust is prepared by cutting paper of any form or character to fine dust.

I have found that the finished product can be treated the same as wood or iron—that is, it can be sawed, bored, planed, polished, and subjected to any other manipulation the same as ordinary wood, iron, &c., and without injury to the tools.

The material is entirely fireproof, resisting heat, as I have found, far better than metal and is not warped or twisted by such heat. For certain uses linseed-oil may be added in about the proportion of two to fifteen per cent. of the entire mass, thereby increasing the effectiveness of the material as regards insulation and non-absorption of water, so that the material becomes valuable for electrical insulation.

I claim herein as my invention—

1. An artificial lumber consisting of paper-dust, magnesium oxid, and magnesium chlorid, substantially as set forth.

2. An artificial lumber consisting of two parts of paper-dust, one part of magnesium oxid and one part of magnesium chlorid, substantially as set forth.

3. An artificial lumber consisting of paper-dust, magnesium oxid, magnesium chlorid and raw linseed-oil, substantially as set forth.

In testimony whereof I have hereunto set my hand.

GEORGE F. AVERILL.

Witnesses:

F. E. GAITHER,
DARWIN S. WOLCOTT.