UNITED STATES PATENT OFFICE.

WILL BUSH SHOBER, OF CUMBERLAND, MARYLAND, AND HARRY MAAS ULLMANN, OF SPRINGFIELD, MISSOURI.

COMPOUND FOR GREASE-PROOFING ARTICLES.

SPECIFICATION forming part of Letters Patent No. 570,965, dated November 10, 1896.

Application filed February 21, 1895. Serial No. 539,226. (No specimens.)

To all whom it may concern:

Be it known that we, WILL BUSH SHOBER, residing at Cumberland, in the county of Allegany and State of Maryland, and HARRY MAAS ULLMANN, residing at Springfield, in the county of Greene and State of Missouri, citizens of the United States, have invented certain new and useful Improvements in Compounds for Grease-Proofing Articles, of which the following is a specification.

Our invention relates to a new and improved compound which is applied to articles of wood, paper, or other suitable pulp to render them impervious to fats, grease, and oils of all kinds, whether the same be hot or cold.

The object of the invention primarily is to provide a compound in which the ordinary wooden or wood-pulp butter-plates and pie-plates in common use at this time may be dipped to render them grease-proof.

The invention consists in the compound hereinafter described, and referred to in the appended claims.

In carrying out our invention we have found the best results are attained when the compound is made as follows: We dissolve one part of glue in from eight to twelve parts of water, and one part of alum in about ten parts of water. These independent solutions are mixed together in equal proportions, forming a compound which, when an article of wood, paper, or fibrous pulp of any kind is dipped therein, renders them impervious to fats, both cold and at very high temperatures.

While we have mentioned alum as the sulfate which we have found most practical in connection with the glue for accomplishing the desired object, it will be understood that good results may be afforded by the use of other sulfates which have in greater or less extent qualities similar to alum.

We are aware that in the manufacture of paper and all waterproofing fabrics it has been proposed to use glue and alum with other essential ingredients as a sizing in the ordinary manner and also as a waterproofing compound, but, so far as we are aware, we are the first to render articles impervious to fats, grease, lard, &c., by applying to them a solution of equal parts of dissolved glue and alum mixed in substantially the proportions specified. We have found by a long series of experiments that a solution of glue and water, when combined with a simple sulfate solution, forms two compounds, one of which is more soluble than the other. The predominance of any particular compound varies with the proportions used. The more soluble compound is the one which renders the article grease-proof, while the less soluble one renders it waterproof.

In all waterproofing compounds using glue and alum which have heretofore been tried in the arts the parts have been mixed in such proportions that the less soluble compound, and therefore the one which is waterproof, predominates; but we have found that by making a solution of glue and water in substantially the specified proportions and a solution of alum and water in substantially the specified proportions and then combining the two in equal parts we get a compound soluble in water, but very strongly grease-proof. It is this compound which we have discovered and herein claim.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. The herein-described compound for rendering articles grease-proof consisting of a solution of glue and water, a solution of aluminium sulfate or its equivalent and water, the two solutions being mixed in equal proportions; substantially as described.

2. The herein-described compound composed of a solution of one part of glue and eight to twelve parts of water, and one part of alum to ten parts of water, the two solutions being mixed in equal proportions; substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

WILL BUSH SHOBER.
HARRY MAAS ULLMANN.

Witnesses:
ALFRED ESHBACH,
A. L. COPE.