UNITED STATES PATENT OFFICE.

WILLIAM HOSKINS, OF LA GRANGE, ILLINOIS.

ART OF MAKING WATER-RESISTANT PAPER.

1,370,650. Specification of Letters Patent. Patented Mar. 8, 1921.

No Drawing. Application filed April 9, 1920. Serial No. 372,432.

To all whom it may concern:

Be it known that I, WILLIAM HOSKINS, a citizen of the United States, residing at La Grange, in the county of Cook and State of Illinois, have invented a new and useful Improvement in the Art of Making Water-Resistant Paper, of which the following is a specification.

A water-resistant and repellent paper or board may be made in accordance with the present invention by directly incorporating in the interstices of the paper a relatively small proportion of an insoluble soap of a fatty acid, such as the oleate, stearate or palmitate of calcium or aluminum or mixture of these in any proportion. This incorporation is effected by placing the desired proportion of the insoluble soap, such as calcium oleate, say 0.1 to 1.5% of the weight of dry paper stock, as such and preferably in previously dispersed form in the beater and thoroughly mixing it therein with the paper stock, sizing being incorporated or applied in the usual manner. The preliminary dispersion of the soap may be suitably effected by admixing it with alcohol (say 10 to 20%) or other like wetting or solvent agent and gradually adding to the mixture a quantity of water sufficient to form a creamy suspension.

The paper or board produced in accordance with the present invention may be utilized for wrappings, cartons, packages, etc.

I claim:

1. The process of preparing water-resistant paper or board which comprises adding a relatively small proportion of an insoluble fatty acid soap as such in dispersed form to the stock and thoroughly mixing it therewith before forming the stock.

2. In the process of preparing water-resistant paper or board, the addition of a relatively small quantity of insoluble fatty acid soap to the stock in the beating engine.

3. The process of preparing water-resistant paper or board which consists in adding to the stock during beating, a suspension of an insoluble soap, the quantity of soap being 0.1 to 1.5% of the fiber in the stock, and subsequently forming the paper or board therefrom.

WILLIAM HOSKINS.