UNITED STATES PATENT OFFICE.

WILLIAM JONES MENZIES, OF ST. HELEN'S, COUNTY OF LANCASTER, ENGLAND.

MANUFACTURE OF SOAP BY THE COLD PROCESS.

SPECIFICATION forming part of Letters Patent No. 345,715, dated July 20, 1886.

Application filed May 22, 1886. Serial No. 203,020. (No specimens.)

To all whom it may concern:

Be it known that I, WILLIAM JONES MENZIES, a British subject, residing at St. Helen's, county of Lancaster, England, have invented a new and useful Improvement in the Manufacture of Soap by the Cold Process, of which the following is a specification.

Soap has been heretofore made in considerable quantities by what is known as the "cold process," especially by housekeepers in making their own soap, by the use of caustic soda, which is put up in small convenient-sized packages adapted for use, and is sold in the market under the name of "Concentrated Lye." The ingredients usually employed in the manufacture of this soap are concentrated lye, tallow, waste grease, and kitchen fat. A serious defect for washing purposes in soap thus made arises from the fact that very little lather is formed, owing to its being only to a very slight extent soluble in water, thus making a very poor lather, and as the fat or grease is likely to have become rancid or discolored by standing, the soap produced is apt to be discolored and dark and not to present at all a sightly appearance.

The object of my invention is to overcome all the difficulties and defects, as well as any danger which might arise to the skin by the use of impure fat, grease, or tallow in the manufacture of said soap, and to provide a soap-making compound that, when dissolved in the proper quantity of water and combined with the right amount and weight of tallow, grease, oil, or waste kitchen fat, will produce a soap by the cold process which is not only a white soap, much more soluble than any hitherto made, and one which will produce a full and soft lather, rendering the soap very valuable for washing and toilet purposes, but one which also possesses a good degree of bleaching and deoxidizing or disinfecting properties, thus making it especially useful for laundries, hospitals, and other large or public institutions where large quantities of promiscuous clothing have to be washed in bulk. I obtain these results by making a mixture or compound of high-test powdered caustic soda, refined hydrated carbonate of potash, or with the muriate or sulphate of potash, strong chloride of lime or bleaching-powder in proportions of about seventy to eighty parts of high-test caustic soda, fifteen to twenty-five hydrated carbonate of potash, and five parts of chloride of lime or bleaching-powder. These proportions are not absolute, but are, as I have found, productive of the best results.

To make the soap I have found it best to dissolve the compound thus formed in about three times its weight of cold water, as this immediately precipitates the lime by converting the chloride of lime into chloride of potash or chloride of soda. The clear liquor can be drained off, leaving the lime-sediment, or it may be allowed to stay in the lye, as it does not interfere with the soap-making properties. I then take sufficient tallow or grease to combine completely with the caustic-soda in the mixture, which in the compound, as above stated, is about five parts of tallow to one of the mixture. I then convert the same into soap by the cold process before referred to, in the usual manner. The carbonate of potash remains mixed through the soap, causing it to be quite soluble, and therefore to lather freely and greatly to improve the washing qualities of the soap. Part of the chloride of potash or chloride of soda is first consumed, thoroughly bleaching and purifying the lather or grease, and the excess remaining in the soap is an oxidizing or purifying agent.

I claim—

1. A compound consisting of a mixture of caustic soda, carbonate of potash, and chloride of lime for soap-making purposes, as above described.

2. A bleaching and disinfecting soap made by the mixing of the compound of caustic soda, carbonate of potash, and chloride of lime, herein described, with the grease in the manufacture of soap, substantially as set forth.

3. A compound consisting of a mixture of sulphate of potash and caustic soda for soap-making purposes, as hereinbefore described.

4. A compound consisting of a mixture of caustic soda and carbonate of potash for soap-making purposes, as hereinbefore described.

In witness whereof I have hereunto set my hand.

WILLIAM JONES MENZIES.

Witnesses:

O. B. MORRIS,

W. P. PREBLE, Jr.