

UNITED STATES PATENT OFFICE.

SAMUEL COBURN, OF STAMFORD, CONNECTICUT.

IMPROVED DETERGENT.

Specification forming part of Letters Patent No. **43,393**, dated July 5, 1864; antedated June 23, 1864.

To all whom it may concern:

Be it known that I, SAMUEL COBURN, of the town of Stamford, county of Fairfield, and State of Connecticut, have discovered and made a new and useful Improvement in the Composition of Detergents; and I do hereby declare the following is a full and exact description thereof.

The nature of my discovery and improvement consists in combining with soda (now principally used in the manufacture of soaps) a small proportion of ammonia and chlorine, whereby I not only greatly enhance the detergent power or effect of the soda, but impart to the compound a bleaching property.

In the preparation of said improved detergent I proceed as follows: I take of oxide of calcium or caustic lime about six parts, carbonate of soda about twelve parts, muriate of ammonia about half a part, and carbonate of ammonia about half a part. These ingredients may be advantageously ground into powder or otherwise intimately mixed, though this is not essential. To make a detergent fluid I take of this compound nineteen pounds, and of water ninety-six pounds, or in about that proportion, and dissolve the former in the latter. I suffer the water thus charged to stand until the sediment has subsided, usually about twelve hours. I then decant the natant fluid, and to economize so much of the same as shall remain with the sediment I add about one-fourth of the said quantity of water, and after the sediment has again subsided I decant and use the fluid in subsequent operations, making a proper allowance therefor.

In place of the aforesaid salts of ammonia, equivalents in quality and quantity of ammoniacal liquors, and in place of the carbonate of soda a like equivalent of oxide of sodium or caustic soda, may be substituted, and in place of the foregoing compound its ingredients may be introduced successively into the water and substantially the same results obtained.

The fluid thus composed can be used with profit and advantage, as follows:

First. For toilet purposes, as shaving, washing hands, face, &c., and removing grease-spots from clothing.

Second. In ordinary family washing, either

with or without soap, it economizes time or labor, and in a great degree supercedes attrition, whether mechanical or otherwise, now so generally used. The clothes, when properly handled, come out of the operation both clean and white, with little or no deterioration of their texture, the fluid producing at one and the same time a strong detergent and an obvious bleaching effect. I declare it to be my unqualified belief, resulting from eighteen months experience in my own family, that by the use of this fluid at least one-half of the expense of washing clothes by the ordinary methods can be saved.

Third. Also in manufacturing soaps; but care must be taken not to use the muriate of ammonia in excess, as the chlorine of the muriatic acid is unfavorable to saponification; but I have ascertained by many experiments that the small per cent. of the muriate of ammonia above indicated is not incompatible with that result, but, on the contrary, the use of this fluid greatly expedites and promotes it and improves the quality of the product.

I do not deem it proper in this place to enter into a scientific discussion of the subject, but content myself with remarking that the operation of these ingredients on each other, when combined as aforesaid, is alike complex and extensive, producing several decompositions and compositions of matter, and resulting in giving to this compound fluid in a marked degree the properties aforesaid.

It is hardly necessary for me to remark that I do not claim to have made any improvement in the detergent power of either ammonia or soda used separately, nor in the bleaching property of chlorine as commonly employed; but

What I do claim as my discovery and improvement is—

A combination, for the purpose aforesaid, of soda with ammonia and chlorine by the means and in the manner substantially above stated.

Dated at Stamford on this 15th day of December, A. D. 1863.

SAMUEL COBURN.

In presence of—

BENJN. S. MILLER,

EDWIN SCOFIELD, Jr.