

UNITED STATES PATENT OFFICE.

HENRY HAYWARD, OF NEW YORK, N. Y., ASSIGNOR TO FRANK J. MATHER,
OF MORRISTOWN, NEW JERSEY.

SOAP-POWDER.

SPECIFICATION forming part of Letters Patent No. 423,927, dated March 25, 1890.

Application filed May 6, 1889. Serial No. 309,805. (Specimens.)

To all whom it may concern:

Be it known that I, HENRY HAYWARD, a citizen of the United States, and a resident of the city, county, and State of New York, have
5 invented a certain new and useful Improvement in Soap-Powders and in the compounding thereof, of which the following is a specification.

The purpose of my invention is to obtain a
10 washing agent which shall effectively employ the detergent properties of ammonia by deferring the liberation of ammonia contained therein until dissolved in actual use, and the consequent application of substantially the entire
15 washing-power of the ammonia employed to the fibers of the material being washed before loss by volatilization takes place.

My invention is composed of the following substances, mixed in the proportions indicated, and in the manner hereinafter shown:
20 eight and one-half ($8\frac{1}{2}$) parts of soap, preferably white, one (1) part sal-ammonia, two (2) parts carbonate of soda, one-half ($\frac{1}{2}$) part borax. I dry the soap and grind it into a powder, and
25 all the other materials are converted into powder before mixing. The materials are then ground or mixed together in any usual manner.

To attempt to employ ammonia in soap by compounding or mixing with ordinary soap
30 and borax the carbonate of ammonia by the usual method of melting the soap, and while melting crutching in the other materials, including the carbonate of ammonia, would result so that by the time the soap was thus
35 made the ammonia, which is extremely volatile, aided by the moisture and heat, would be substantially all volatilized, and no substantial efficacy thereof would reach the consumer or the materials washed.

My invention, however, is entirely different
40 in principle, and is not a soap, but a powder in which soap is simply an ingredient. By the use of sal-ammoniac, which is not volatile, and carbonate of soda, and by mixing the
45 various materials together in the form of powder, (which the use of sal-ammoniac permits,) and always in a dry and cold state, each material remaining in its original condition unchanged, the mixture or soap-powder holds
50 the ammonia contained therein until dissolved in actual use. When this takes place, the ammonia is set free by double decomposition with the carbonate of soda; but the ammonia is now in actual contact with the fibers
55 of the material being washed, which obtain the full effect of its action. What I claim, therefore, as my invention, and desire to secure by Letters Patent, is not a soap formed by the mixing of carbonate of ammonia with
60 borax and ordinary soap, nor do I claim a soap of any sort; but

What I do claim is—

A compound commercially called "soap-powder," which is a mixture in a powdered
65 state of sal-ammoniac, borax, carbonate of soda, and soap not melted, but ground together in a cold and dry state, substantially as described.

In witness whereof I have signed my name to this specification this 25th day of April,
70 1889.

HY. HAYWARD.

In presence of—

F. J. MATHER,
EVERETT MASTER.