

UNITED STATES PATENT OFFICE.

AUGUST PAUL HORN, OF HAMBURG, GERMANY.

PROCESS OF MAKING NEUTRAL SOAP.

SPECIFICATION forming part of Letters Patent No. 786,496, dated April 4, 1905.

Application filed September 8, 1904. Serial No. 223,740.

To all whom it may concern:

Be it known that I, AUGUST PAUL HORN, a subject of the Emperor of Germany, residing at 26 Tappelallee, in the city of Hamburg, Germany, have invented new and useful Improvements in Processes for the Preparation of Soaps, of which the following is a specification.

The present invention relates to a process for the preparation of soaps which are not only themselves neutral, but remain neutral on hydrolysis.

The object of my invention is to neutralize any free alkali which may still be present in the soap before use, and more especially to bind the alkali which is ordinarily set free from all soaps when they are hydrolyzed, and thus to annul the injurious solvent action which ordinary soaps, owing to the presence of free alkali, exert on the skin.

According to the process forming the subject of the present invention certain decomposition products of albuminous substances are added to the primary components of the soap.

The following is the method of effecting the incorporation: Ordinary albuminous substances are first purified and freed from the adherent salts by dialysis. The product thus obtained is then decomposed by exposing it while under pressure to the action of heat by treatment with acids or alkalies or by some other suitable process. The albumoses obtained by this decomposition have the same structure and give the same color reactions as the native albuminous substances. Nevertheless they differ widely from the latter in many properties, viz: First, the albumoses are not coagulable; second, their behavior toward the salts which are to be precipitated from them differs from that of the native albuminous substances; third, the albumose-acid salts formed with alkalies are much more stable when hydrolyzed than are alkali albuminates,

and, fourth, the albumoses have a stronger acid reaction than native egg-white or albumen. In view of their above-recited properties the albumose preparations are eminently adapted for the production of soaps which remain neutral when hydrolyzed. The albumose preparations obtained by the above-specified decomposition process are added to the soap ingredients either during the saponification process or else subsequently during the pilling operation. The soap thus produced is perfectly neutral and remains so on hydrolysis, for the alkali which is thereby set free becomes fixed while *in statu nascendi* as albumose-acid alkali. Hence the water used in washing remains perfectly neutral—an effect which is not obtained with any other soap.

Through the formation of the albumose-acid salts of the alkali the latter is deprived of its detergent properties, so that by means of the above-described process a soap is produced which is itself neutral and which remains so on hydrolysis.

The proportion of albumose preparation to be added to the raw materials will depend on the percentage of alkali contained in the latter.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

The herein-described process for the preparation of neutral soap consisting in adding albumoses to the raw soap material and then making soap from said material.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

AUGUST PAUL HORN.

Witnesses:

ALFRED JOSEPH,
E. H. L. MUMMENHOFF.