

ABSTRACTS

Soaps

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IMPROVEMENTS IN SOAP PRODUCTS. *Perfumery and Essential Oil Record*, 30, 303 (1939). A process consisting in incorporating alkali polyphosphates with sodium soaps and producing the products in a form in which they will rapidly dissolve in water, the soaps being derived from polyethylenic fatty acids, such as linoleic acid, or from mixtures of such fatty acids with oleic acid or other monoethylenic fatty acid, and the ratio of polyphosphates (calculated as anhydrous salts) to fatty acids being from 1:4 to 1:2.

TETRASODIUM PYROPHOSPHATE. Joseph M. Vallance. *Soap Perfumery and Cosmetics* 12, 749 (1939). This substance is prepared commercially in two forms, of which the anhydrous salt, $\text{Na}_4\text{P}_2\text{O}_7$, is by far the more important. This is a white powder, obtainable in a very pure state, with traces only of the ortho- and meta- phosphates and sodium carbonate. Pyrophosphate has the power of dissolving insoluble soaps, by taking the metal into a soluble complex. They have excellent emulsifying and dispersing power.

It is practicable to use tetrasodium pyrophosphate as a lime-soap dispersing agent in soap powders for the domestic market. In addition to the dispersing properties, the emulsifying power against oils and greases is appreciable and is an additional feature in the use of pyrophosphate in detergents. Soap powders for the domestic market may be improved in their performance if they contain about 10 per cent tetrasodium pyrophosphate, owing to the enhanced emulsifying and dispersing power. This results not only in better washing results in the home laundry but also (particularly when the powders are used in dish-washing) in freedom from scum on the side of the basin. An improved lathering of the soap has been observed. Further, the alkalinity of the pyrophosphate is such that the powders will not cause damage to the skin or to delicate fibres, such as wool and silk.

Tetrasodium pyrophosphate is itself a useful detergent, aiding in mixed detergents in conjunction with sulphated alcohols, it is very effective. In the domestic laundry, pyrophosphate soap powders will naturally be useful, but in the commercial laundry there is also an outlet for pyrophosphate as a breakdown alkali, where it will give assistance in preventing the setting of iron stains.

PATENTS

ALCOHOLS FROM FATTY ACIDS. Wilhelm Rittmeister to Deutsche Hydrierwerke A.-G. *Ger.* 670,832. Satd. or unsatd. fatty acids of natural or synthetic origin are converted into the corresponding alcs. by catalytic treatment with H at high partial pressure and high temp. The starting material is mixed with an alc. of b.p. not more than 50° below that of the fatty acid in amt. at least sufficient to form a neutral ester, before treatment with H. Thus, lauric acid and lauryl alc. are mixed and treated with H in the presence of a Zn-Cu catalyst to give lauryl alc.

MORTAR. Christian Fleisch. *Ger.* 671,879. Fatty acids, ammonia, water glass and CaO are mixed and the CaO is "quenched" by water, forming a luting mortar.

SCOURING TEXTILES. Ernst Flammer and Christian Kelber. *Ger.* 673,969. Textiles are washed by a bath

contg. CaO, or MgO, fatty acid soap, a protective colloid and a small amt. of a water sol. orthophosphate and, optionally a persalt.

SUPERFATTED TOILET SOAP. Walther Schrauth to Unichem Chemikalien Handels A. G. *U. S.* 2,157,022. Soap is prepd. having incorporated in it a super-fating agent consisting of an ether of glycerol and an alc. of the kind obtained from the natural fats and waxes and having at least 8 C atoms in the mol., such as dicetyl polyglycerol ether or propionate of polyglycerol cyclohexyl ether or the like.

ARTIFICIAL SILK. Hans Karplus to North American Rayon Corporation. *U. S.* 2,166,740. An artificial silk filament having a luster resembling that of natural silk and containing finely divided, dispersed undissolved particles of a material of the class consisting of an alkaline earth soaps and calcium naphthenate, said filaments having void spaces therein.

CARPET CLEANING DEVICE. Clair W. Studer and Roy G. Roshong and Marie Miller to the Hoover Company. *U. S.* 2,166,586. A carpet cleaning compn. contains: buckwheat flour 100 pounds, a light petroleum cleaning oil — 24 lbs., a water-in-soluble soap having a stearic acid base — 21 lbs., salicylic acid — 2 pounds and water — 60 lbs.

SOLIDIFYING GLYCERINE. Simon Jacobowitz to Gustav Snosk. *U. S.* 2,166,857. A solid composition of matter comprising a substance selected from the group consisting of glycerine, glycols, and aqueous sugar solutions, in combination with a neutralization product of a sulphuric acid ester of a fatty alcohol having at least 8 C atoms in admixture with myristyl alcohol, said mixture being in an amount sufficient to solidify said substance.

SULPHONATED PRODUCTS. *Brit.* 501,729. Products stated to have foaming, emulsifying softening and detergent properties are obtained by condensing high molecular aliphatic carboxylic acids containing more than 12 carbon atoms or their esters with amino alcohols and esterifying the resulting amides obtained as intermediate products with aromatic di- or polysulphonic acids. In a modification, the amides are mixed with hydrocarbon oils before the treatment with aromatic sulphonic acids is effected. Further sulpho groups may be introduced by treating the products with sulphonating agents, advantageously in stages, sulphuric acid used of increasing strength with decreasing temperature. The products may be used in the textile, drying leather, fur, paper, cosmetic and pharmaceutical industries. In examples: (1) butanolamine is reacted in the presence of chloral hydrate as catalyst with a mixture of palm oil, stearin and arachis oil and the resulting intermediate product treated with naphthalene polysulphonic acid; the product is neutralized and may be dried by dispersing its solution in vacuo; (2) monoethanolamine is reacted with a mixture of arachis oil, soybean oil, palm oil and colophony and the product further treated as in example 1; (3) monoethanolamine is reacted with a mixture of olive, coconut, and spermatic oils and the intermediate product treated with a product obtained by sulphonating a mixture of cresol and naphthalene.