

moles of the dibasic acid for each mole of the glycol.

METHOD OF STABILIZING CARBONYL CONTAINING MOTOR FUELS. R. T. Bell (Pure Oil Co.). *U. S. 2,365,377*. A motor fuel comprises a major portion of hydrocarbons boiling within the gasoline boiling range, a minor but sufficient amt. of a metal carbonyl compd. to raise the antiknock rating of the motor fuel and a phosphatide in an amt. of at least approx. equal in wt. to the metal present as carbonyl compd.

NITRIC ACID OXIDATION OF FATTY MATERIALS. D. Price and R. Griffith (National Oil Products Co.). *U. S. 2,365,290*. Process for oxidizing fatty substances contg. unsatd. fatty residues to lower mono- and dibasic acids comprises treating said substances with nitric acid in the presence of Mn oxides and salts of Mn-contg. acid radicles.

LUBRICANTS. J. D. Morgan (Cities Service Oil Co.). *U. S. 2,362,767*. A lubricating grease comprises approx. 6% of a Li soap, approx. 1% of an Al soap, the remainder of the grease consisting essentially of dialkyl phthalate.

STABLE LUBRICATING COMPOSITION. A. J. Morway and J. C. Zimmer (Standard Oil Development Co.). *U. S. 2,363,013*. An improved stable grease compn. consists of a low viscosity, low pour mineral lubricating oil, 15.5% of a mixt. of Li and Al soaps, a slight excess of free higher fatty acid and as an oxi-

dation inhibitor, 0.5% phenyl α -naphthylamine and 0.5% Zn naphthenate.

WAX EMULSIONS. J. O. Handy (Duzzel Corp.). *U. S. 2,364,632*. A coating compn. for fresh fruits and vegetables has approx. the following compn. alkali neutralized candelilla wax from 15% to 20%; paraffin from 1% to 3%; stearic and oleic soap from 2.5% to 7%.

COATED FLATTING AGENT AND PROCESS FOR MAKING THE SAME. L. Auer (Interchemical Corp.). *U. S. 2,364,611*. A new compn. of matter useful as a flattening agent which is substantially transparent in conventional lacquer and varnish films comprises pigment size particles of a soap of a metal of the class consisting of Al, Zn, Mg, and alk. earth metals and rosin which has been modified by chem. reaction to increase its m.p. while leaving its carboxyl group free to form soaps coated with a film deposited from an aq. soln. of casein.

EMULSION PAINT AND METHOD OF PRODUCING THE SAME. L. J. Howlett. *U. S. 2,362,635*. A paint compn. comprises an emulsion of a vegetable oil and water and contg. $MgCO_3$ dissolved therein in the ratio of about 1 part $MgCO_3$ to 35 parts water and a pigment, the amt. of water in the emulsion not exceeding the volumetric amt. of oil and in which the $MgCO_3$ acts as an emulsifying medium.

Abstracts

Soaps

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THE SPRAY DRYING OF SOAP POWDERS. Brian N. Reavell. *Soap, Perfumery & Cosmetics* 17, 816-8 (1944). Early methods of producing soap powders included casting hot mixture into frames and, after cooling, slabbing, cutting, and drying, they were ground or milled into powder. Powders of soap with a high fatty acid content could not be made in this manner. The new method consists of passing the molten soap mixture into an atomizer where the soap is atomized by centrifugal force into multitudinous small particles. These particles are projected into a stream of air which is blown into a drying chamber. Powders made in this way are characterized by their uniformity of particle size, absence of "fines" or dust, and rapid solubility. The powders may be in the form of hollow spherical particles which are very light in weight, and this method is equally applicable to soaps or synthetic detergents.

IMPROVED TOILET SOAP PRODUCTION. E. T. Webb. *Soap, Perfumery & Cosmetics* 17, 830-2 (1944). This article discusses the importance of temperature control in the manufacture of toilet soaps. The general appearance of soap, its bright and lustrous surface clearly marked can be improved or impaired by the temperature. The lasting properties of the bar, its resistance to a pappy consistency may be controlled by temperature conditions during the milling and plodding operations. The formation of "grit" which prevents a soap bar from having a smooth and velvety surface is caused by over-drying due to improper control of heat. Soap cracking, whether external or internal, may also be due to temperature influences during milling and plodding. The temperature of the

machines, the room in which they work, and of the cooling water used on the mills and plodders; all these, separately and together, have a tremendous effect on both quality and output of toilet soaps.

SOAP FIGHTS INDUSTRIAL DERMATITIS. Georgia Lefingwell. *Am. Perfumer & Essential Oil Rev.* 46, No. 12, 67-9 (1944). Soap has several important roles in dermatitis prevention, but its most essential part is in helping to maintain extreme and basic cleanliness for all persons subject to irritation resulting from their work. Soap is also used in many protective creams used on the skin. Formulas are given. 25 references.

ANALYTICAL DISPERSION METHODS FOR THE PARTICLE-SIZE DETERMINATION OF MINERAL FILLERS. R. Schmucker. *Fette u. Seifen* 50, 265-73. Methods of detg. particle-size distribution in mineral fillers for soap by optical means, filtration, elutriation, sedimentation and settling are discussed. The Andreasen pipet method (settling) appears to be most satisfactory. App. and procedure are described in detail. (*Chem. Abs.*)

PRODUCTION OF RIF-STANDARD SOAP. B. Kinzl. *Seifensieder-Ztg.* 70, 69-71 (1943). Since soaps made from synthetic fatty acids are salted out only with difficulty, it is recommended that sapon. be carried out by the half-heat method and about 1% salt be added at the start to prevent clot formation and rising. Such soap is mixed in a second kettle with other soap. When only one kettle and open steam are used, special precautions must be taken. Other steps in soap manuf. are described. (*Chem. Abs.*)

CURD SOAP PRODUCTION. Widaly. *Seifensieder-Ztg.* 70, 35-6 (1943). Synthetic fatty acids, which today do not have the objectionable odor previously possessed by such acids and which have a paler color, are good substitutes for coconut- and palm-oil fat acids. The Na soaps are solid, but not hard and brittle. The synthetic fat acids have 230-240 sapon., no., 225-235 acid no., 12-13 I no. and 30-34° m.p. Foaming is bad compared with soaps from glue fat. Soaps from synthetic fat acids are rather unaffected by salt. Three times the salt is necessary for salting out as with glue soaps. After sapon. of the ordinary fat comes bleaching and salting out, then addn. of synthetic fat acids and a second salting out for purification of the soap and fat acids. Then the soap and fat acid mixt. is completely sapond. and the product readily takes up fillers. Water glass may be added with no sepn. of silicic acid provided the proper alkali concn. is used. (*Chem. Abs.*)

A PROPOSED METHOD FOR THE EVALUATION OF DETERGENTS. V. B. Holland and Alice Petrea. *Am. Dye-stuff Repr.* 32, 534-7 (1943). Weighed samples of cotton sheeting were treated with a standard soil in a launderometer, removed, dried, brushed, and weighed. The reflectivity was detd. with a photometer. The samples were then immersed in solns. of detergents and run 45 min. at 160°F., removed and dried. The percentage of soil removed was calcd. and the reflectivity was detd. The percentage of matter extd. by Et₂O was also detd. The results of many detns. are tabulated. (*Chem. Abs.*)

PATENTS

SOAP-FREE DETERGENTS IN BAR FORM. Richard C. Wood (Procter & Gamble Co.). *U. S.* 2,356,903. A new soap-free detergent in bar form for toilet and bath use with a reduced tendency to become soft and smeary when left in water is described. This product consists of a water-soluble salt of an alkyl sulfate derived from coconut oil, a polyhydric alcohol partially esterified with an unsaturated fatty acid having at least twelve carbon atoms in the molecule, and a large percentage of sodium chloride.

CHEMICAL PROCESSES AND PRODUCTS THEREOF. Robert Bangs Colgate and John Ross (Colgate-Palmolive-Peet Co.). *U. S.* 2,359,404. The process which comprises catalytically dehydrogenating-hydrogenating an unsaturated fatty acid soap by treating a molten polymerizable soap of unsaturated fatty acids containing mono- and polyunsaturated fatty acids with an element of the group consisting of selenium, sulphur and tellurium at an elevated temperature between about 200° and 400° C. and under non-oxidizing conditions to form a dehydrogenated cyclicized polymer of the unsaturated fatty acid soap and a hydrogenated fatty acid soap.

PREPARATION OF DETERGENTS. Bradshaw and Meuly (E. E. du Pont de Nemours & Co.). *U. S.* 2,360,844. A continuous process is described in which soap is produced from the glycerides of higher open chain aliphatic carboxylic acids by mixture with an alkanol, maintenance of alkalinity to Clayton yellow, separating of the glycerine from the glycerides, and the spray-drying of the resulting soap to form small sponge-like particles.

SOAP. Walter R. Trent (Colgate-Palmolive-Peet Co.). *Can.* 421,806. A fatty acid ester of a monohydric alc. contg. 1-6 C atoms is treated under reduced

pressure with an aq. soln. of a saponifying agent, and the alc. produced is removed by evapn. (*Chem. Abs.*)

SOAP. Walter R. Trent (Colgate-Palmolive-Peet Co.). *Can.* 421,807. A fatty acid ester of a lower monohydric alc. is treated with an aq. soln. of a saponifying agent, and the alc. formed is evapd. by decreasing the pressure. Several examples are described. (*Chem. Abs.*)

PROCESS FOR OBTAINING DETERGING, WETTING, FOAMING, METALLIC SALT DISPERSING, AND EMULSIFYING AGENTS. Jean Paul Amedee Vallernaud (Alien Property Custodian). *U. S.* 2,350,000. Powdered detergent produced by the condensation of the fatty acids of murumuru butter with an amine such as dodecyl-ethanolamine and then treating the condensation product with an acid such as chloro-sulphonic acid or sulphuric acid.

DETERGENT COMPOSITION. Ernst Schubert and Heinz Piere (Alien Property Custodian). *U. S.* 2,352,021. A washing agent and detergent capable of operating in hard water without forming insoluble lime soaps, made from equal parts of water-soluble alkali lignin and soap.

SOAP PRODUCTS. Lever Brothers & Unilever, Ltd. *Brit.* 553,753. Granulated soaps liable to disintegration are treated by applying to the surface of the soap granules a small amt. of a coating agent capable of strengthening the granules so as to prevent the formation of soap dust. The coating agent is selected from one of the following: ahydroscopic polyhydric alc., a normally liquid phosphate of the general formula R₃PO₄ in which R is an alkyl, hydroxyaliphatic or phenolic radical, or a water-dispersible sulfonated oil. (*Chem. Abs.*)

SULFONATION OF OILS, FATS AND THE LIKE. Fraser Frase, Ltd. and Karl J. A. Partisch. *Brit.* 553,598. Aliphatic and aromatic compds. are sulfonated by spraying one of the reagents into a thin film of the other flowing over the surface of a wall while this is kept within required temp. limits. (*Chem. Abs.*)

FOAM-SUPPRESSING DETERGENT COMPOSITION FOR BEVERAGE CONTAINERS. E. F. Hill (Wyandotte Chemicals Corp.). *U. S.* 2,359,913.

PROCESS FOR SOAP COATING OF METALS. R. W. Shoemaker. *U. S.* 2,359,799. The method of treating metal to prevent corrosion consists in cleaning the surfaces of the metal, then coating the clean surfaces of the metal with a film of a soln. consisting of ordinary soap a pptg. agent consisting of a mixt. of Al₂(SO₄)₃, Na₂SO₃ and NaHCO₃ and an inorg. agent and Na salt of sulphated alc. obtained from coconut oil and then removing the metal from the soln. and drying it to form a protective film upon the surface of the metal.

DETERGENT COMPOSITION AND METHOD. H. H. Hull and L. Shere (Diversey Corp.). *U. S.* 2,360,135. An anti-foaming and anti-gelling detergent soln. for use in automatic washing equipment for bottles, pans and the like comprises water from 0.25% to 10% by wt. of the soln. of NaOH and from 0.05% to approx. 1% by wt. of a water sol. Na salt of an octyl ester of H₃PO₄ as a foaming and gelling inhibitor.

SOAP AND PROCESS FOR ITS MANUFACTURE. Robert Brown (Brownmil Laboratories, Inc.). *U. S.* 2,353,686. A soap is made containing solid coffee bean material ground to substantially colloidal fineness and including the at least partially saponified oils of the beans, together with the protein, sugar, fiber and tannin content thereof.