about 0.2% and 5% of deoiled spice residue and then heating the paper and paperboard to at least 220° F. to cause a reaction between the deoiled spiced residue and the paper and paperboard.

VITAMIN PREPARATION. K. C. D. Hickman (Distillation Products, Inc.). *U. S. 2,326,644.* The process comprises dissolving a fish oil stearin which contains a fat sol. vitamin in a vegetable oil having a low m.p., cooling this mixt. until the stearin-like solids separate, sepg. the liquid portion from the solids and subjecting this liquid to high vacuum, unobstructed path distn. to sep. the vitamin content thereof in concd. form.

DRAWING (WIRE) COMPOSITION AND METHOD OF MAKING THE SAME. E. A. Nill (H. A. Montgomery Co.). *U. S. 2,326,387.* A drawing compn. base comprises sulfonated talloil in major proportion and plasticizing amts. of sulfonated sperm oil.

TALLOEL ESTERS OF SULFONIC AMINO ALCOHOLS. D. W. Jayne, Jr. and H. M. Day (American Cyanamid Company). *U. S. 2,322,202.*

Abstracts

Soaps

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APPLICATION OF THE PHASE RULE TO SOAP BOILING. James W. McBain and Will Win Lee. *Ind. Eng. Chem. 35,* 917-21 (1943). A series of vapor pressure measurements shows that an important phase, kettle wax, occupies a dominant position in the system soap-water- electrolyte. Kettle wax, and not fibrous curd, is grained out in soap boiling, except where very high concentrations of salt are employed. Vapor phase diagrams and ternary system diagrams are given.

COLD-, WARM- AND HOT-WATER SOAPS AND THEIR "ACTION." Josef Hetzer. *Fette u. Seifen 49,* 47-9 (1942). The cleansing action of a soap depends on the onset of action of the fats used in the various temp. ranges (thus the washing action of K soaps begins at a much lower temp. than that of Na soaps). H. gives "onset points" for a large no. of salves and grain soaps. Transparent and yellow soft soaps are cold-water soaps; warm-water soaps are the so-called cold-stirred coconut soaps; grain soaps are the hot-water soaps. *(Chem. Abs.)*

GRANULATED SOAPS: PREVENTION OF DUST. *Perfumery & Essential Oil Record, 34,* 203-4 (1943). A process is described for applying to the surface of soap granules a small amount of a coating agent capable of strengthening the particles so as to prevent the formulation of soap dust. The agent should be hygroscopic in nature to withdraw moisture from the air and to bind dust particles to each other or to the larger granules. Substances which are suitable are: polyhydric alcohols, organic and inorganic phosphates, alkyl phosphates, water-soluble sulphonated oils, and materials of starch compositions.

POTASSIUM OR SODIUM SOAP. Kurt Lindner. *Waschereï-Ber. 9,* 197-200 (1941). The K soaps, soft soaps, have better sudsing and cold washing capacity and are easier to rinse off than Na soaps. The inconvenience of portioning these soaps in the household is a disadvantage. The K soaps solns. do not gel. Since K soaps are superior to Na soaps at low temps., K soaps are especially suitable for washing colored and fine fabrics. *(Chem. Abs.)*

THE ACTION OF ZINC SOAPS IN PAINTS. A Foulon. *Farbe u. Lacke 1942,* 171. The white Zn pigment reacts with the fat acids in paint ingredients forming Zn soaps. These produce a smooth, water-repellent surface and retard the absorption of water and the swelling of the paint film, but tend to render the paint coat brittle and hard. This last effect can be alleviated by the use of softening agents. *(Chem. Abs.)*

COLD PROCESS SOAPS: LOCAL MANUFACTURING METHODS OF CEYLON. Reginald Child. *Soap, Perfumery & Cosmetics 16,* 457-8 (1943). A review of the cold process of soap making, giving formulae, tables, and working methods.

STANDARD SOAP. Karl Braun. *Deut. Parfum-Ztg. 27,* 271 (1941). B. discusses pretreatment of fat for manuf. of standard soap, the action of added kaolin and the detn. of the fat acid and the clay content of the finished soap. *(Chem. Abs.)*

COMBATING RANCIDITY IN SOAPS. Paul I. Smith. *Seifensieder-Ztg. 68,* 408-9, 418-19 (1941). Induction period, the influence of carotene, oxidation inhibitors, the use of additives and salts as preservatives and the modified Kreis test are discussed. *(Chem. Abs.)*

SPECIFIC OILS USED IN THE MANUFACTURE OF ROSIN SOAPS. Henri Blin. *Bull. Inst. pin. 1939,* 108-9. The Marseilles soap industry uses 3-6% of pale colophony in the prepn. of pure soap and coconut oil (up to 50%) and peanut oil are the principal raw materials for extra-pure white Marseilles soap. Coconut oil, palm-kernel oil, bleached palm oil and tallow are recommended for use in rosin soaps. Specifications and standards for the rosin soaps, fats and fatty oils are included. *(Chem. Abs.)*

EVALUATION OF ROSINS IN SOAPS. Soap 19, No. 8, 57-8 (1943). Refined wood rosin is superior to gum rosin or hydrogenated rosin in maintaining and improving sudsing action. They are about the same in detergent action under ordinary conditions, but vary according to hardness of water. Tables give the results of detergent action in built soaps.

SULPHONATED OIL PRODUCTS: USES IN TEXTILE PROCESSING. *Textile Colorist 65,* 283-7, 330 (1943). The main types of sulphonated oils used in the textile industry are castor and olive oils, palm oil, cottonseed oil, rape-seed oil, coconut oil and tallow. Possible applications include: Wetting-out agents, emulsifying agents, softening and finishing agents for all types of fibers, detergents in conjunction with other scouring and bleaching agents, dyeing assistants with solvent, dispersing, penetrating and levelling actions, textile printing, printing assistants, stain removal, crepeing and dulling, rayon treatment, and dull finishes for rayons.

SOAP AND DERMATITIS. *Soap 19,* No. 4, 37-8 (1943). Reports of experiments are given showing that although alkalinity has long been regarded as the chief cause of soap irritation on skin, this is true only if

that alkalinity is made available beneath the horny layer of the skin.

CHANGE IN COLOR OF SOAP INDICATES PRESENCE OF HG. *Drug Trade News 18,* No. 18, 30 (1943). An orange colored soap that changes to a deep purple in the presence of traces of mercury salts has been developed to help reduce the incidence of mercury fulminate dermatitis. Formula: diphenylthiocarbazone 1.18 gm.; triethanolamine (technical) 250 cc.; liquid soap 750 cc.; hydroquinone 0.015 gm.

FOAM AS AN INDICATION OF EXTREME WASHING ABILITY. Edmund Walter. *Fette u. Seifen. 48,* 622-624 (1941). Soap, fatty alc. sulfonate and "Mersol" were compared. It was concluded that the amt. of foam in itself is not a criterion for washing power. However with correctly compounded washing agents it is an indicator for proper washing techniques. *(Chem. Abs.)*

SOFT SOAP IN DISINFECTANTS. *Soap, Perfumery & Cosmetics 16,* 76 (1943). Potassium castor oil soap and sodium potassium linseed oil soap are used as cheap emulsifying agents for manufacture of soluble phenolic disinfectants.

SOAPS WHICH PROTECT AGAINST LEAD. L. Storz. *Fette u. Seifen 48,* 554 (1941). Report of unsuccessful attempts to prep, from liver of sulfur a soap which protects against lead. In such a soap alkali sulfides should remain undecompd. and should show the presence of Pb or Pb salts with certainty. *(Chem. Abs.)*

DETERGENTS FROM PETROLEUM. *Soap 19,* No. 8, 59 (1943). Brief history of the development of synthetic detergents, and a comparison of their properties and uses with those of soaps is given. The petroleum products described mainly were those of the "Nacconol" type.

STUDIES ON SYNTHETIC DETERGENTS. Jay C. Harris. *Soap 19,* No. 8, 21-24 (1943). A review of experiments conducted on synthetic detergents containing essentially dodecylbenzene sodium sulfonate, to discover their effectiveness in hard and sea waters.

UTILIZING "NON-SOAPY" DETERGENTS. *Perfumery & Essential Oil Record 34,* 78-80 (1943). "Non-soapy" detergents are materials having a cleaning action which are derivatives of higher molecular fatty compounds other than the usual soaps, such as fatty acid esters of hydroxy-ethane sulphonic acid, and derivatives of sulpho-carboxylic acid esters of alcohol amine. Examples of soap formulas are given along with specific details concerning temperature regulation.

LABORATORY DETERGENT. *Chem. & Eng. News 21,* 1119 (1943). A new detergent, alcohol, has been introduced by the Standard Scientific Supply Corp., 34 West 4th St., N. Y. City, as a cleanser that relies on physical action for its detergent value by lowering the surface tension of foreign matter adhering to the surface of materials to be cleaned. Tests in hospital, industrial commercial, and photographic laboratories are said to show that all types of utensils are easily cleaned with alcohol.

PATENTS

PROCESS OF MAKING SOAP. B. Clayton (Refining, Inc.). *U. S. 2,327,502.* The process of purifying soap stock contg. excess alkali from the alkali refining of oils and making soap therefrom comprises adding saponifiable material to said soap stock to react with said excess alkali, heating the resulting mixt. to a temp. sufficiently high to break down odoriferous substances contained therein and removing vaporizable materials from said soap stock in vapor form to produce an improved soap from said soap stock

IMPROVEMENTS IN THE MANUFACTURE OF TOILETTE PREPARATIONS. C. L. Walsh and A. A. Newman. *Brit. 551,369.* The method of improving soaps, cosmetics and like prepns. consists in incorporating in the prepn. up to 10% by wt. of the gelatinous material of a salt or in its "free acid" form.

SOAP MIXTURES SUITABLE FOR USE WITH HARD WATERS. Richard Thomas and Henry B. Oakley (Lever Bros. Co.). *U. S. 2,310,475.* A soap mixt. is prepd. which contains a water-sol. soap of a mixt. of soap forming fatty acids; and an alkali metal phosphate selected from the group consisting of alk.-reacting orthophosphates, pyrophosphates, polyphosphates and metaphosphates, the amt. of the orthophosphates and pyrophosphates calcd. as an anhyd. salt being 1 part to 4 to 10 parts by wt. of the fatty acids in the soap, the amt. of the polyphosphates and metaphosphates calcd. as an anhyd. salt being 1 part by wt. to 2 to 4 parts of the fatty acids in the soap, the soap product being in a solid finely divided form to insure rapid soln. in water, so that the soap product may be dissolved in hard water without substantial pptn. of insol. soaps.

STABILIZING SOAP AGAINST DETERIORATION AND RANCIDITY. Wm. P. Ter Horst (United States Rubber Co.). *U. S. 2,305,043.* A small proportion (suitably about 0.1%) of a product obtainable by the reaction of an aliphatic ketone such as methyl ethyl ketone or acetone with NH_4CNS is added as an antioxidant.

DETERGENT FROM RESINS. A. L. Rummelsbur (Hercules Powder Co.). *U. S. 2,308,029.* A sulfonated resin product, suitable for dispersing and detergent purposes is formed from resinous residue remaining after separation of the rosin from the total resinous extract of pine wood. The residue used is insoluble in petroleum hydrocarbons.

WOOL GREASE SOAP. Howard W. Smith and Sydney G. Campbell. *Brit. 553,322.* Decsribes the extraction of unsaponifiable matters from dry-saponified wool grease soap. The method uses a mixture of acetone and dichlorethane as a solvent.

HARD WATER SOAP. M. A. Lise and J. F. Vitcha (The Solvay Process Co.). *Can. 413,391.* Consists of a water-soluble soap and a salt which may be an alkaline metal, ammonium or organic amine salt of an ester of an alpha sulfonic-acid derivative of a saturated fatty acid containing 12-22 carbon atoms. The alcohol used for esterification contains not more than 3 carbon atoms and not more than 2 hydroxyl groups. The soap and salt may be combined in ratios varying from 98 parts of soap to 2 of salt, to 50 parts by weight of each.

SUPPRESSING HYDROLYSIS. Carl Stiepel. *Ger. 708,437.* Liquids, unsaturated fatty acids are converted to chloro or chlorohydroxy derivatives with an iodine number of 5 or less, to give soap with suppressed hydrolysis. The product is then saponified until total or partial splitting of the chlorine occurs.