Abstracts

Oils and Fats

Edited by
M. M. PISKUR

LUBE OIL ADDITION AGENTS. R. Rosen (Standard Oil Development Co.). *U. S. 2,199,187.* Reaction products of fatty alcs. and cyclic carboxylic acids are used to depress the pour pt. of waxy lubricating oils.

METHOD OF MAKING SULPHURIZED CUTTING OILS. A. Pollak and R. Hastings (West Va. Pulp and Paper Co.). *U. S. 2,198,562.* Cutting oil is prepd. by agitating an oil at 300-400°F, with 30% by wt. of S for 2-4 hrs.

RESIN AND METHOD OF MAKING SAME. C. Ellis (Ellis-Foster Co.). *U. S. 2,197,855.* The resins are reaction products of glycerol phthalic acid, fat acid, and boric acid.

Abstracts

Soaps

Edited by M. L. SHEELY

SIGNIFICANCE OF SUSPENDING POWER IN DETERGENT PROCESSES. J. Powney and R. W. Noad, *J. Textile Inst. 30, T* 157-71 (1939). The influence of various alkalies and long chain detergents on the degree of deposition of suspended ilmenite particles on to cotton fabric was studied under various conditions. Simple alkalies such as sodium carbonate and sodium hydroxide cause an increase of deposition which can be attributed to a sodium ion effect rather than to a pH effect. In contrast, certain sodium silicates and phosphates exhibit a very considerable protective action, which is attributed to selective adsorption of the anion. With sodium hexametaphosphate and sodium pyrophosphate the protective action was still appreciable at concentrations as low as 5-10 pts./mil. With sodium laurate, sodium stearate and sodium oleate, the optimum protective action is reached at concentrations which decrease rapidly with increasing chain length. The effect of added alkalies on the behavior of soap solutions was considered. Detergents of the long-chain alkyl sulfate type possess relatively low protective action. (*Chem. Abs.*)

SOAP. F. W. Gibbs, *Ann. Sci. 4,* 169-90 (1939). A history of the manufacture of soap.

SOAP SOLUTIONS. Kurt Hess. *Fette u. Seifen 46,* 572-5 (1939). In further developing ideas as to the structure of soap micelles, it is postulated that the micelles are built up of sheets of oriented soap mols. with —COONa groups forming one surface of the sheet and the terminal CN_3— groups of the parallel alkyl groups forming the other surface. In the micelles, the sheets are so arranged that pairs of —COONa surfaces face each other as do also pairs of CN_3-surfaces. On increasing the C chain length of the soap from C_4 to C_{10}, the amount of water held between the —COONa surfaces of the adjacent sheets increases from 1 to 6 mols. per mol of soap.

When clear dispersions of benzene are produced by addition of limited amounts to a soap solution containing micelles, changes in the x-ray diagram showed that the benzene is taken up between the CH_3— surfaces of the sheets of soap mols. (*Chem. Abs.*)

CONTROL OF SOAP RANCIDITY. Paul I. Smith. *Am. Perfumer 40,* No. 3, 59-61 (1940). A review.

MAKING POWDERED SOAP WITH GAS. Victor Alexieff. *Gas 16,* No. 3, 17 (1940). A light, fluffy, powdered soap is made by spray-drying in a current of air mixed with products of combustion of gas at 255°F. Soap made in the usual way, but without additions other than preservatives to prevent rancidity, is conditioned at the desired temperature by the use of steam coils. It is then passed through a low-pressure pump, and then a high-pressure hydraulic pump to give a spraying pressure of 1000 to 3000 lb. per sq. in., then through a "saponifying valve" and finally through the spray nozzle having a 0.036" opening. The spray chamber is shaped very much like a centrifugal collector of cyclone type. The liquid soap is dried almost instantly, and is sucked by a fan into cooling and storing collectors. About 1.5 cu. ft. of natural gas was required per lb. of finished soap. (*Chem. Abs.*)

PATENTS

METHOD OF FORMING FLOATING MILLED SOAP. Thomas Eagen (Procter and Gamble Co.). *U. S. 2,195,399.* The process of forming a bar of milled toilet soap having floating properties which comprises forcibly inserting displacing means only part way through a blank, unperforated bar of soap and simultaneously stamping same, thereby giving the soap bar substantially its final form with a cavity extending inward from only one face of the bar, withdrawing the displacing means and with stamping dies in stamping position to prevent deformation of the bar, stamping the face of the bar contg. the opening of said cavity thereby closing said opening and forming within the bar a hollow space of sufficient size to reduce the apparent specific gravity of the bar to less than that of water.

LIQUID ANTISEPTIC SOAP. Louis Figg (Eastman Kodak Co.). *U. S. 2,196,763.* A liquid antiseptic toilet soap comprising soap, water, from 0.5% to 33% by volume of hardwood oil whose boiling range is between 180°C. and 240°C. and a blending agent for the soap and the hardwood oil.

DETERGENT. Emil Dreger and John Boss (Colgate-Palmolive-Peet Co.). *U. S. 2,195,512.* A process for preparing a material suitable for use as a detergent that comprises reacting a material of the class consisting of fatty oils and fatty acids with a polyhydric alcohol, a sulphonating agent, and an aromatic compound of the class consisting of compounds of the benzene, naphthalene series, and thereafter neutralizing the reaction product by bringing the concentrated reaction product into confluence with a relatively concentrated solution of a neutralizing agent in the presence of a considerable quantity of already substantially neutralized material.

DETERGENT. Colgate-Palmolive-Peet Co.). *Canadian 387,238.* A detergent obtained by reacting a fatty material such as fatty oils or fatty acids, with an isobutylene derivative of the class consisting of beta-methyl glycerine and beta-methyl glycidol *which has been subsequently reacted with sulfuric acid.*