

## RECENT PATENTS

THE interesting process for the production of glycerol from sugar is described as follows in Canadian Pat. No. 285,399: Glycerol is produced from sugar by fermentation in an alkaline solution, by distilling off volatile fermentation products of the fermented mash and re-fermenting the residual mash by the addition of further quantities of sugar, small quantities of sodium sulfite and yeast. For example, 2 kilograms of molasses is dissolved with 10 grams of sodium phosphate and 750 grams of crystallized sodium sulfite in 8.5 liters of water, and a solution of 10 grams of magnesium sulfate, 10 grams of nickel sulfate and 100 grams of yeast in 2.5 liters of water is added. This mash is allowed to ferment at 30-35°C. After about two days the sugar will have fermented. The yeast is then filtered off, the alcohol and aldehyde are boiled away and 2 kilograms of molasses and 100 grams of sulfite, 5 grams magnesium sulfate, the filtered off yeast and 50 grams of fresh yeast are added, the whole being made up to 11 liters. After two days at 30-35°C. the sugar will have disappeared. This operation is repeated, 1 liter of water being added each time. If, for instance 8 kilograms of molasses has been fermented in this manner and the glycerol has been isolated, about 2 kilograms of raw glycerol will be obtained, equivalent to 960 grams of pure glycerol.

Materials containing unsaturated compounds, such as mineral or *fatty oils*, resins, asphalts, tar distillation residues, rubber and rubberlike products or styrene are treated to modify their properties by use of a solution or colloidal solution of electrolytes in an organic solvent. A sulfurizing treatment with sulfur or sulfur chloride may be effected at the same time or subsequently to the electrolyte treatment and accelerators may be added. China wood oil and ether are treated with a mixture of stannic tetraphenyl and alcohol, the solvent is distilled off and the product is emulsified with water with the addition of the reaction product of a fatty oil and sodium cresylate. The emulsion thus prepared is suitable for use with rubber latex for various purposes. Br. Pat. No. 289,415.

A body of fatty oil, such as linseed oil, is agitated with an aqueous caustic alkali solution in about the quantity corresponding to the free fatty acids present, the mixture is allowed to stand quiescent for a time less than required to effect settling but sufficient to permit agglomeration of the solid soaps formed by the agitating action; the temperature is then raised to a point slightly below 100°C. and hot water is passed through the mixture in finely divided form until the oil is rendered neutral and the aqueous solution of soap is separated. U. S. Pat. No. 1,692,226.

Fatty acids, such as stearic or palmitic acid, are mixed with hydrocarbons such as benzol or toluene or xylene and the mixture is treated with fuming sulfuric acid. The resulting sulfonated fatty-acids may be used for *hydrolyzing fats*, producing emulsions, solid soaps, or soap powders and for washing fabrics in the textile industries. Br. Pat. No. 289,934.

In purifying fats and oils by the use of alcohol or other suitable solvent which is miscible with water and which dissolves fatty acids, resins and bitter and mucilaginous substances, but does not readily dissolve neutral fats, with the addition of water and ammonia as described in Br. Pat. No. 226,767, there may be added also a fat solvent such as benzol, ethylene dichloride, or trichlorethylene; and sodium sulfate. Br. Pat. No. 289,801.

Substantially neutral vegetable oils such as cottonseed oil may be decolorized and clarified by treatment with sufficient alkali solution to render the oil slightly alkaline and then, before removal of the alkali and its reaction products, treatment of the oil with an adsorbent earth. U. S. Pat. No. 1,696.

White oil paints made from lithopone may be prevented from thickening by adjusting the free fatty acid content of the linseed oil used to the zinc oxide content of the lithopone (suitably by the addition of free fatty acids derived from linseed oil, wood oil or wool fat, and preferably as colloid material). Br. Pat. No. 289,153.