

RESOURCES

Glycerin for Explosives Will Come From Salvaged Drippings

Other Breakdown Products Are Fatty Acids, of Use Principally in the Soap Industry; May Be Spoiled

SCRAP FATS, that are to be detoured from the nation's garbage cans into our war industries, will aid materially and directly in cooking Hitler's goose. These greasy drippings have immediate military value, for they will yield vast quantities of glycerin, and glycerin treated with nitric and sulfuric acids becomes nitroglycerin.

Nitroglycerin as such is not used in warfare, but as dynamite and other blasting preparations it is one of the principal tools of the Engineer Corps. The "shovel-soldiers" use it in clearing roads for troops and tanks and guns and trucks hustling up to the front. They use it also in demolitions, to prevent an advancing enemy from taking advantage of bridges, docks, warehouses and other installations.

Too violent to trust in a gun, nitroglycerin is mixed with some types of smokeless powder "dough" to pep up the final product.

Back of the firing line, nitroglycerin blasting preparations are needed now in unprecedented quantities for getting out ores and coal for the war industries, for quarrying limestone to feed into blast furnaces, for clearing new airfields, factory sites, etc.

It won't matter if the fats saved from kitchens and hamburger joints get old and smelly before they are turned in. That merely means that the natural process of breaking down into glycerin and their other constituents, the fatty acids, has been going on. And fats have to be

thus chemically split apart before they are industrially useful.

The other breakdown products of fats, the fatty acids, are of use principally in the soap industry. As glycerin plus acids becomes explosive nitroglycerin, fatty acids plus alkalis become cleansing soap. No matter how strong and rank a soap-vat may seem at the beginning of the job, such is the nature of the soap-making process, and such the skill of soap-makers, that the end-product has a wholesome, nose-appealing odor. Add a little perfume, a French name, and a little advertising, and nobody ever asks about the wrong-side-of-the-tracks antecedents of this offspring of chemically divorced-and-remarried fat.

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Glass That Floats Breaks Life Preserver Bottle-Neck

BREAKING a bottle-neck caused by the shortage of cork, a new kind of glass that floats on water is about to be used in life preservers, life rafts and life boats of America's war effort.

It is a black, non-transparent material that does not at all look like ordinary glass. Weighing only 10 pounds per cubic foot, Foamglas, as it has been named, is being produced in a large factory in western Pennsylvania by the Pittsburgh Corning Corporation.

The new floating glass has a cellular structure but each tiny cell is airtight. For that reason the material is permanently buoyant in water and has high insulating value. It is rigid rather than resilient, and can be sawed or drilled with ordinary tools.

It is expected to serve in place of such scarce imported materials as balsa wood, cellular rubber and kapok as well as cork. Foamglas has the added advantages of being odorless, fireproof and vermin-proof.

The light-weight glass is made by

However, by no means all the soap that is made gets into the domestic bathroom and laundry. Whole shiploads of soaps, of various special types, are tailor-made for industrial use. Fabrics, leather, glassware, a thousand other things, all get their sudsy baths before they appear on the market.

The scrap-fat drive, just announced, is intended to get replacements for the glycerin and soap-acid sources cut off by the war. We used to depend on coconut oil imports from the Philippines and other Pacific islands for most of our glycerin and -soap requirements. Added to this, in smaller but still impressive quantities, were such oils as olive oil from the Mediterranean region, soybean oil from eastern Asia and linseed oil from Russia and Argentina. Enemy conquest has robbed us of some of these sources, shortage of shipping reduced supplies from others. We are greatly increasing our domestic production of plant oils, especially soybean, peanut, flax, corn and cotton. But we need still more raw materials for explosives and soap, hence the newly announced fat-saving drive.

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a process that resembles the way in which yeast or baking powder raises bread. Ordinary glass is mixed with a small quantity of pure carbon. When the glass is heated to a certain point it softens and the carbon combines to form a gas that puffs up the molten mass to one-fifteenth the weight of ordinary glass. Exact time and temperature control is necessary to obtain rigid vitreous slabs with cells uniformly small and sealed one from another.

Since 1938 this new product has been under development in the research laboratories of Pittsburgh Corning Corporation, jointly owned by Pittsburgh Plate Glass Corporation and Corning Glass Works.

In addition to going to sea as the buoyant element in life-saving apparatus, the new glass is to be marketed as insulation in the cold rooms of meat-packing plants, breweries, dairies and ice cream plants. It will also be used in floats that support pontoon bridges.

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