

## CHEMISTRY

# Post-War Research

Chemical research laboratories are expected to operate for the benefit of small and middle-sized businesses as well as for the large ones in the post-war era.

► CHEMICAL research laboratories, often thought of as a luxury that only big businesses can afford, will operate for the benefit of small and middle-sized businesses as well, in the post-war era. One section of the American Chemical Society meeting was devoted to a symposium on this subject, in which the speakers told how the needs for research will be met by privately managed consulting laboratories and by government research workers as well as by laboratories owned and operated by the corporations themselves.

Small businessmen were promised a share in the rapidly developing field of industries based on farm products, in the address of Dr. O. E. May, research coordinator of the U. S. Agricultural Research Administration.

"These include," he said, "the dry and wet milling of cereal grains, processing of fruits and vegetables, production and processing of vegetable oils, meat packing, dairy products, feeds, fertilizers, insecticides and fungicides, pharmaceuticals, naval stores, fermentation products, rubber, leather, fibers and textiles."

On all of these materials, and many besides, the U. S. Department of Agriculture was conducting very active research in its four great regional laboratories when the war interrupted all programs. The laboratories are concentrating on war problems now, but as soon as victory has been won they will return to their normal activities. Conversion, Dr. May stated, will not be a difficult or lengthy process for most parts of the program.

Small businesses will of course not be dependent entirely on what government scientists do for them. Charles H. Egan, of the Dewey and Almy Chemical Company, outlined some of the other research resources of the manager of a small business. Even a modestly financed plant can often afford to hire two or three research men, he pointed out, and it can also obtain more information by small research grants to be used in college and university laboratories.

The resources and scope of activity of a professional consulting firm with

a large laboratory were described by Raymond Stevens and Earl P. Stevenson of Arthur D. Little, Inc. They pointed out that research is sometimes needed in the most surprising spots: for instance, anthropologists had to be called in when transport planes for paratroopers were being designed, to make sure the seats would fit the anatomies destined to sit in them.

## Oversupply of Chemists?

► MANPOWER problems are as acute in chemistry now as they are in industry and agriculture, and chemists have been doing some intensive thinking over them. At one section of the meeting a number of speakers offered ideas from various angles, and lively discussion followed presentation of their papers.

Sidney D. Kirkpatrick, editor of *Chemical and Metallurgical Engineering* and consultant to the War Manpower Commission, suggested that the post-war period would bring an opposite worry: what to do with all the chemists being demobilized from war industries and the armed services. Young men who went directly from college into war chemistry, and boys who were drafted before they could even finish their courses, will probably present the most serious problems.

About the latter especially, whom he characterized as "over-accelerated, and therefore undertrained," the speaker remarked, "The logical place for both the non-graduates and 'ninety-day wonders' is back on the campus. But can they be so persuaded?"

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## New Vinyl-Type Plastic Better Rubber Substitute

► A NEW vinyl-type plastic made from coal, air, salt and water to replace rubber for such uses as inner tubes, surgical gloves and molded goods was announced by the Glenn L. Martin Company.

Clayton F. Ruebensaal and Earl H. Sorg, who developed the new compound in the company's plastics research laboratory, claim to have overcome rather poor stability which has been an obstacle to wider use of similar vinyl "rubbers" now on the market. By adding a sealed-in plasticizer they obtained a product that retains its elasticity, resiliency and flexibility when exposed to air, water, sunlight, acid and alkaline solutions, and temperatures up to 250 degrees Fahrenheit.

Popularity of vinyl "rubbers," developed heretofore, has been hampered by their high cost which has been about three times that of natural rubber. But due to war shortages they have seen wider use, especially in molded products. Most of the big rubber companies and many chemical and plastic manufacturers have entered the field.

Although none of these products have become popular as inner tubes, the new vinyl material, dubbed Marvinol, "promises to outmode rubber in automobile inner tubes," Glenn L. Martin, company president, declared. The inner tubes can be fabricated more easily than from rubber, it is claimed, and seepage of air through sidewalls of the tube is entirely eliminated. Another advantage is that worn-out Marvinol products would be 100% reclaimable due to the thermoplastic nature of the vinyls and because they require no vulcanization.

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**PLASTIC TIRE** — An inner tube made from Marvinol being inspected by Clayton F. Ruebensaal, of the Glenn L. Martin Plastics Research Laboratory, who, with Earl H. Sorg, developed this new elasto-plastic.