

which milder methods had failed to disclose. The light from the burning diamond was analyzed by a powerful spectrograph, an instrument which sorts out the light of the burning diamond according to its various wave lengths, and tells what elements are present in the stone as impurities.

These impurities were found to be the cause of the various types of fluorescence. The blue-glowing diamond was

found to contain chromium and titanium as the principal impurities, the yellow-glowing gem contained aluminum, and the non-fluorescing stones were almost pure carbon.

The investigators were James M. Orr, spectroscopist, and Jack DeMent, chemist, both of Portland, Oregon, who report full details of the investigation in the current issue of *The Mineralogist*.

Science News Letter, March 14, 1942

PUBLIC HEALTH

Sugar Rationing Called a "Godsend" to National Health

Without Sugar, People Will Substitute Other Foods Containing Vitamins Lacking in Refined Sugar

MOST Americans have too sharp a sweet tooth, and a little sugar rationing will do them more good than harm, according to dentists and diet authorities.

Psychologists unofficially hint that millions of citizens who "have always intended to cut out sweets, some day," will now find the push from Uncle Sam most helpful.

M. L. Wilson, assistant director of nutrition, of the health and welfare defense program, declares:

"Sugar rationing certainly will harm

no one. People will meet the restriction on sugar by adding calories from other sources—sources which contain vitamins and minerals lacking in our refined sugar."

Dr. L. H. Newburgh, University of Michigan authority on diet, advises:

"Don't complain about sugar rationing; it will be good for you. As a matter of fact, it would be a Godsend if there were no sugar at all.

"For, if there weren't, we would be forced to eat more grains, meats, milk, green vegetables and other foods which

give us everything that sugar does plus much-needed B vitamins and minerals."

Dr. Newburgh points out that sugar's only importance to our diets is its fuel value, and this may be readily replaced by a host of other foods which provide more than mere fuel.

Milk is the best fuel substitute for sugar, he continues, since it also provides proteins, vitamins, salts and fats. One glass of milk, he says, is equal in fuel content to four teaspoonsful of sugar.

Whole cereals are a much more wholesome food than sugar, since they provide, in addition to fuel, vitamins of the important B group and 10% of protein. An ordinary portion of oatmeal, for example, is equal in fuel value to four teaspoonsful of sugar.

Dr. Russell Bunting and associates of the University of Michigan School of Dentistry state in a recent report that sugar is a very important causative factor in tooth decay.

"A remarkably low degree of (decay) was observed in children on a low-sugar diet deficient in calcium, phosphorus and vitamin D. Active caries (decay) was induced in children by increasing the sugar intake while they were receiving a diet that nutritionally was adequate." Low-sugar diets, they add, as a rule help keep children free of tooth decay.

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ENGINEERING

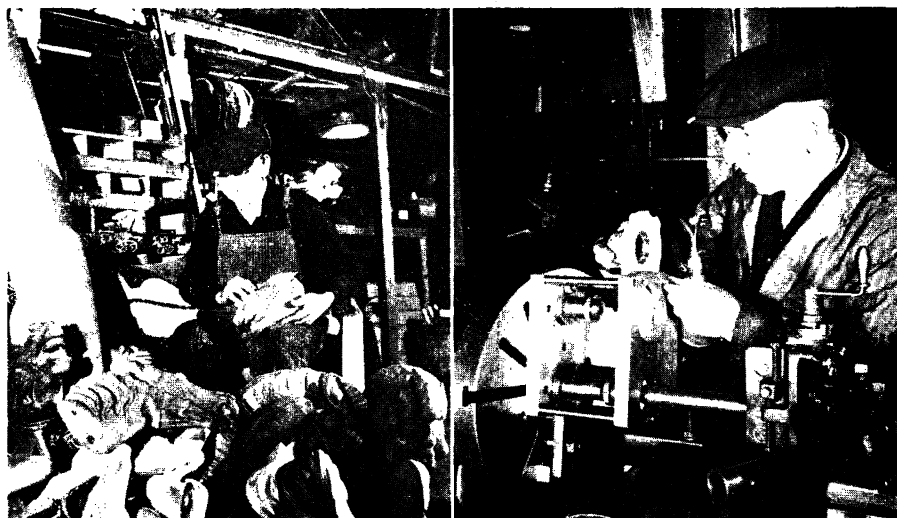
Merry-Go-Round Maker Converts Plant for War

WORKMEN who once made merry-go-rounds, chute-the-chutes and other thrill rides loved by every American from Coney Island to Los Angeles' Ocean Park, now are turning out implements of war, says the new War Production Board.

According to the WPB, one of the world's largest amusement park equipment makers has abandoned its peacetime business completely for war orders.

Craftsmen who for a quarter of a century carved wooden horses' heads for youngsters to clasp on the carousel, now are at work on a lathe. Artists who painted modernistic designs for "silverstream" rides, learned to make die castings.

Machines which shaped the tracks for roller-coasters, "whips," caterpillar rides, now bend hooks for airplane packing cases, while workers once used to building ferris-wheel towers, now build towers used by repairmen to reach the noses of giant bombers.



BEFORE

AFTER

The same skilled hands that carved the gay horses for merry-go-rounds are now applying their dexterity to making the implements of war. The conversion from peace to war is shown graphically in these official photographs of the Office for Emergency Management.