NUTRITION

Imbalance of B Vitamins Declared Possible Danger

Conclusions Might Affect Food Fortification Program To Improve National Health; Based on Animal Studies

WARNING of possible danger in the food fortification program, planned to improve national health by adding two B vitamins to staple foods, is sounded by Dr. Agnes Fay Morgan, University of California, in a report in *Science*. (March 14)

Health may become worse, instead of better, if the balance of the B vitamins in the diet is upset by adding extra amounts of only two of them, Dr. Morgan believes.

Scientists working in the same field will be shaking their heads when they read this report. It comes just at the moment when their years of effort to have the results of their research applied to improvement of health has culminated in the nation-wide program to add vitamin B_1 and nicotinic acid to bread and flour, to make up for the present deficiency of these vitamins in the national diet.

Dr. Morgan's conclusions are based on diet studies with dogs and are apparently the first, she says, in which dogs have been reared exclusively on crystalline vitamins.

Young dogs which got none of the filtrate fraction of vitamin B, that is, no nicotinic acid, no pantothenic acid, nor any of the so-far unidentified B vitamins, survived, grew moderately well but gradually turned gray and were sedate and elderly in behavior. Giving either nicotinic acid or pantothenic acid to dogs on such deficient vitamin rations resulted in "their gradual loss of neuro-muscular control and sometimes sudden death."

"Attention should be given," Dr. Morgan concludes from these experiments, "to the possible danger of the administration of large amounts of certain vitamins such as nicotinic acid to persons subsisting on diets having multiple deficiencies. Fortification of foods with those vitamins such as thiamin or nicotinic acid which are available in large quantities may precipitate conditions worse than the subacute deficiency state produced by the usual diet balanced in its inadequacies. Improvement in all directions equally is essential."

Fellow scientists will agree with Dr. Morgan that improvement of diets in all directions is desirable, but will point out that the results of the dog studies should be confirmed by different laboratories before they are applied to human diets.

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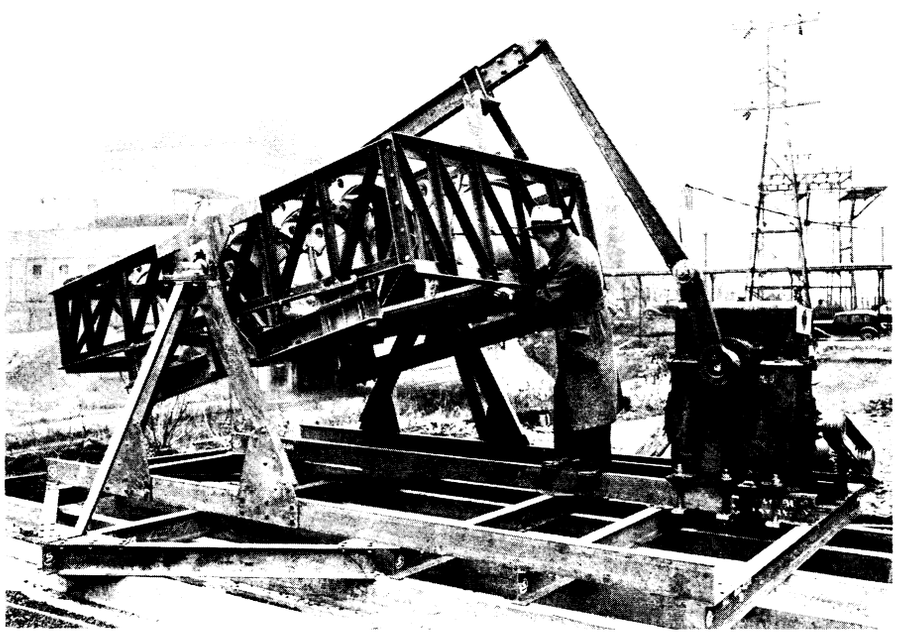

SLOSH TESTER

This huge rocker simulates some of the stresses and strains imposed on an airplane's fuel tank by the force of sloshing fuel. Here a B. F. Goodrich Company engineer is shown examining a 425-gallon capacity self-sealing tank following a 25-hour test.

MILITARY SCIENCE

Sedgley Submachine Gun Lighter Than German One

ANOTHER new submachine gun, the invention of R. F. Sedgley of Philadelphia, has been added to the growing list of fast-firing short-range weapons made popular by the success of Germany's "blitz" campaign last spring.

Like the weapon used by the Nazi motorcycle troops, the Sedgley is bored for 9-millimeter (.354 caliber) pistol cartridges, fed in box clips of 20. It surpasses the German submachine gun, however, in weighing only 7.5 pounds as against the German weapon's 9.35 pounds, although the barrel on the American military model is three inches longer.

The Sedgley also is very simple in construction, having but four moving parts. It can be fired one shot at a time, or in bursts of full automatic fire.

Commenting editorially on the adoption of a lighter caliber than the .45 popularized by the "Tommy gun," prototype of all present-day submachine guns, *Army Ordnance,* (March-April), decidedly favors the retention of the heavier caliber bullet, because of its greater remaining energy at moderate ranges, and especially because of its high shocking power at any range within which its fire is effective

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The 10-passenger *monoplane* used by Admiral Richard E. Byrd in surveying 100,000 square miles of Antarctic ice in 1939, has been given anonymously to the University of California for use in training engineering students.