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THE MINERAL SUPPLIES OF THE WORLD

THAT equal access to the world's minerals for all peaceful nations lies at the heart of the problem of world peace has recently been pointed out by Dr. Charles K. Leith, professor of geology at the University of Wisconsin and government consultant. He stated that wise administration must be devised to withhold the minerals so necessary to war-making from nations that threaten the peace of the world.

He pointed out that "Minerals are irreplaceable assets which are being depleted at an alarming rate. No nation has enough of all commercial minerals. The United States is better supplied than any other nation, but during the war it has had to import about seventy varieties of minerals. Interdependence of nations as to minerals is a physical fact, not a theory.

"Since the first World War, as nations have realized the overwhelming importance of mineral supplies both for their future industry and for their security, there has been a world-wide scramble to control them, resulting in growing international friction. The degree of success in acquiring mineral supplies measures war-making power in these days of mechanized war. There now looms before us the problem of equal access to the world's minerals."

Dr. Leith emphasized the fact that an adequate answer to world mineral control will require not only international cooperation based on goodwill, but a very high order of scientific fact-finding and analysis. He pointed out that "The United States and the British Empire have been leaders in the development of the world's minerals," and that "Between them they control politically and commercially nearly three fourths of the world's known mineral reserves. Whatever their attitude may be it is obviously a critical factor in finding an answer."

Dr. Leith spoke during the intermission of the New York Philharmonic Symphony broadcast over CBS sponsored by the U. S. Rubber Company.

ITEMS

A HUNDRED and fifty scientists from 17 foreign countries have joined nearly a thousand Soviet scientists in attending special sessions celebrating the two hundred and twentieth anniversary of the foundation of the Academy of Sciences of the U.S.S.R. Foreign countries represented are the United States, Great Britain, France, Canada, China, India, Australia, Poland, Czechoslovakia, Yugoslavia, Bulgaria, Rumania, Mongolian People's Republic, Iran, Hungary, Sweden and Finland. As an evidence of the esteem in which scientists are held in the Soviet Union, the Soviet government conferred the title of hero of socialist labor on thirteen members of the academy and decorations on a large number of scientific workers.

OVER forty standard specifications for electronic equipment have now been approved and adopted by the Joint Army-Navy Electronics Standards agency, which passes on specifications for both branches of the service, with the result that electronic equipment suitable for use in all parts of the world is available to the armed forces. The former urgent need for standard specifications, and the work of the Army-Navy Standards agency, was presented recently at a meeting of the American Institute of Electrical Engineers by Captain J. B. Dow, U.S.N. The agency was established in December, 1943. After preliminary drafting, the specifications prepared by it, he explained, are processed independently by the Army Signal Corps and the Navy Bureau of Ships. The final draft is based on the reports from these two, after the industry and the War Production Board has had an opportunity to make recommendations.

VERY thin films of stainless steel, which have a degree of transparency, placed in front of the wide-angle lenses used in aerial photography, furnish the solution to a former difficult problem. Heretofore in using wide-angle lenses a "hot spot" in the center of the field of vision resulted in pictures bright in the middle but dark at the edges. The Bausch and Lomb Optical Company has developed a vignetting filter consisting of a disk of optical glass on which a film of stainless steel was deposited by a special electro-vacuum precipitation process. Placed in front of the lens, the film is thickest and transmits least light at the center of the disk, becoming gradually thinner and more transparent toward the edge. By complementing the characteristics of the photographic lens with which it is used, the filter permits photographs of ordinary density distribution.

LIGNIN, a by-product of pulp and paper mills that has long been regarded as "the largest waste in industry," is now found useful with fertilizers to add humus and organic matter to deleted soils, according to Robert S. Aries, research associate at Yale University. This new use of lignin, he says, is an "extremely important discovery, because of the tonnage involved." Lignin is an organic substance which, with cellulose, forms the chief part of woody tissue. In addition to 2,000,000 tons of lignin now discharged annually by mills into streams and rivers, he asserted, sawmills and other woodworking plants throughout the country "can readily make available another 10,000,000 tons of wood waste which can readily be incorporated into fertilizers." "As a result of present-day experiments, lignin may assume an important part in this nation's soil-building and conservation program. It will be a 'wealth from waste' movement, since lignin at present pollutes the nation's rivers; as fertilizer, it will definitely aid in providing higher land values and richer soils." The part played in soil improvement by using lignin with fertilizers is largely to supply organic matter. "If lignin is used on presently fertilized soils which need humus and organic matter, it is estimated that the efficiency of these soils would be raised about 20%," he said.