signed for performances in schools and halls, will go to the smaller cities in the west.

The Parade of Progress will travel in a caravan of twenty-two streamlined, silver-red "Futurliner" transports and tractor semi-trailer units. It includes a tent that will seat 1,500 persons, all with unobstructed views of the "science circus" stage. Colored fluorescent tubes will illuminate the interior; the exterior will be flood-lighted in color. It will include a small sample section of the General Motors Futurama, exhibited at the New York World's Fair; a diorama dramatizing improvements wrought in an American community by steadily bettered roads and vehicles; an exhibit contrasting past and future American home interiors; a series of dioramas picturing the small beginnings of great American industries; an outdoor stage demonstration of paradoxes of friction and of the elasticity of materials; a display of aviation progress; exhibits portraying progress in glass-making, coachcraft, gasoline and scientific automotive service. Some of these exhibits will be completely automatic in motion and sound; others will be in charge of demonstrator-commentators.

Light and power for the entire exposition will be supplied by a specially designed and constructed Diesel-electric plant, said by Mr. Kettering to be "one of the most complete mobile power plants in existence."

THE FORTIETH ANNIVERSARY OF THE RESEARCH LABORATORY OF THE GENERAL ELECTRIC COMPANY[1]

FORTY years ago E. Wilbur Rice, Jr., at that time vice-president of General Electric Company in charge of engineering and manufacturing, received a visit from two men, one an engineer and the other an attorney. They suggested the company should have a laboratory. There had been a problem in Mr. Rice's mind since Edison's famous lamp patent expired six years previously that something should be done to improve the lamp; but how to go about it had not been decided.

Perhaps here was the answer. So Mr. Rice listened as Albert G. Davis, then head of the patent department, and Dr. Charles P. Steinmetz explained their idea of a laboratory where scientific investigations might go forward on the incandescent lamp and other problems. "But these things can't go on without research," Mr. Davis declared.

Research! It was what Mr. Rice himself had been thinking of. Yet hardly another executive in the country in those days had considered such a step. In the discussion that followed all three men agreed that the laboratory should be entirely separate from the factory and sales branch of the company.

"The company spends thousands of dollars and its best brains in trying to add one half of one per cent. to the efficiency of the generator and transformer, yet this current so carefully generated, transformed and transmitted is sent into the lamp with an efficiency of something like five per cent. or less," Mr. Davis told Mr. Rice.

The ultimate result was that Mr. Rice's recommendation to the board of directors was approved without comment other than that Mr. Rice should exercise care in getting the right man to direct the laboratory. Dr. Willis R. Whitney, at that time a professor at Massachusetts Institute of Technology, was engaged. That was forty years ago, and on Tuesday, December 17, this notable anniversary was celebrated by General Electric, with a program beginning in the afternoon and culminating in the evening with a dinner at the Mohawk Golf Club. The speakers were Dr. Karl T. Compton, president of the Massachusetts Institute of Technology; Charles E. Wilson, president of General Electric, and Samuel Ferguson, president of the Hartford Electric Light Company, who was the first engineer of the General Electric laboratory, and Dr. Coolidge, vice-president of the company and director of the laboratory.

The laboratory had its beginning in Dr. Steinmetz's barn in the rear of his home in Schenectady. The house still stands, but the barn was burned soon after its use as a laboratory. Dr. Whitney came over three days a week to carry on experiments with Steinmetz and the "staff," which at that time consisted of one man, J. T. H. Dempster. After the fire, the laboratory was moved to a one-story frame building in the plant of the company which had been built two or three years earlier for a standardizing laboratory, but which had been discarded when this work was moved into a newer building. The structure was used until the spring floods in 1901 when the research laboratory was moved again, occupying the front part of the new standardizing laboratory. In 1904 it moved to a building of its own, adjoining, and later into its present home, two massive brick buildings.

From Dr. Steinmetz's barn to its present two large buildings in forty years—that is the story of the growth of research in General Electric Company.

THE NATIONAL DEFENSE RESEARCH COMMITTEE

ONE of the guiding principles of the National Defense Research Committee is to distribute the burden of research on problems of national defense in such a way as to cause the least possible interference with research already under way for the military services. With that in mind the committee has endeavored to arrange for research to be done wherever practical in institutions which had not already been engaged in research efforts connected with national defense. Obviously in the application of this principle care must

[1] A statement from The General Electric Company.

be taken that progress is not delayed. Where one organization is outstandingly qualified to conduct a particular piece of research, the problem is turned over to that organization even though it may have other defense research work under way. On the other hand, as between two or more organizations approximately equally well qualified to engage in a particular piece of research, preference is given to that organization which does not have other defense research activities under way.

Thus far, the National Defense Research Committee has authorized 126 separate contracts with a total of 51 different academic and industrial establishments. Of this total, 80 contracts are with 32 different academic institutions and 46 with 19 different industrial concerns.

The order establishing the National Defense Research Committee states that its purpose shall be to correlate and support scientific research on mechanisms and devices of warfare except those relating to problems of flight included in the field of activities of the National Advisory Committee for Aeronautics. It may conduct research for the creation and improvement of instrumentalities, methods and materials of warfare. The committee has recently adopted the following resolution as a general indication of the limits of its activity:

> The National Defense Research Committee, by reason of the order of the Council of National Defense which established it, is concerned with scientific research on and development of new instrumentalities or materials of war, or of new materials or methods to be used primarily in the manufacture of instruments of war; and of the improvement of existing instrumentalities or materials of war, or of existing material or methods to be used primarily in the manufacture of instruments of war. Where a material or method is widely used or useful in industry, in addition to its use in the manufacture of instruments of war, as for example in the case of substitute materials of wide utility, the research and development involved do not lie within the province of the National Defense Research Committee, but rather within the province of many existing industrial and scientific research agencies, and in particular, when appropriate requests for investigation or research in such fields are made by government agencies, within the province of the National Academy of Sciences and the National Research Council.

COMMITTEE ON FOOD AND NUTRITION OF THE NATIONAL RESEARCH COUNCIL

AT the request of Miss Harriet Elliott, head of the consumer division of the Advisory Commission to the Council of National Defense, the National Research Council of the National Academy of Sciences has organized a committee to promote the development and application of nutritional science. A national program for improving nutrition is in the planning stage under the immediate direction of Director M. L. Wilson, of the Extension Service of the Department of Agriculture, and in this program the Committee on Food and Nutrition of the National Research Council is expected to play an important part. The membership of the committee includes physicians, biochemists and representatives of home economics, dietetics, agriculture and industry. A group of consultants and representatives from governmental services with nutritional responsibilities are associated. It is anticipated that the work of the committee will have a bearing upon the national welfare not only for the time of the present emergency, but in later years as a continuing agency. The committee is organized under the Division of Biology and Agriculture, the Division of Medical Sciences and the Division of Anthropology and Psychology.

The membership of the committee is as follows:

Executive Committee: Russell M. Wilder, *Chairman;* Helen S. Mitchell, *Secretary;* George R. Cowgill; Icie Macy Hoobler.

Members: John N. Black, Henry Borsook, F. G. Boudreau, Joseph S. Davis, C. A. Elvehjem, Philip C. Jeans, Norman Jolliffe, C. G. King, James McLester, S. C. Prescott, Lydia J. Roberts, W. C. Rose, Cullen Thomas, R. R. Williams, John B. Youmans.

Government Representatives: Grace Bulman, William DeKleine, Martha M. Eliot, J. K. Fuller, Colonel Paul E. Howe, E. M. Nelson, W. H. Sebrell, Louise Stanley, Commander Charles S. Stevenson.

Consultants: E. V. McCollum, John R. Murlin, Mary Swartz Rose, H. G. Sherman.

Ex Officio: Robert F. Griggs, *Chairman,* Division of Biology and Agriculture; Lewis H. Weed, *Chairman,* Division of Medical Sciences; Carl E. Guthe, *Chairman,* Division of Anthropology and Psychology; M. L. Wilson, National Defense Nutrition Program.

SCIENTIFIC NOTES AND NEWS

DR. HARRY N. HOLMES, head of the department of chemistry at Oberlin College, Ohio, has been elected president of the American Chemical Society for 1942. Dr. Holmes will take office as president-elect on January 1 at which time Professor William Lloyd Evans, head of the department of chemistry at the Ohio State University, becomes president of the society, succeeding Dean Samuel Colville Lind, of the University of Minnesota.

AT a meeting in New York on December 20 of the fellows of the American Geographical Society, the