

lowing a series of tests conducted at the Pittsburgh Experiment Station of the U. S. Bureau of Mines.

Public interest in atmospheric pollution by automobile exhaust gas and in the ventilation of vehicular tunnels makes it desirable to ascertain whether the use of modern automobile fuels is tending to change the amount and combustion of the products of combustion. The U. S. Bureau of Mines, in cooperation with the Ethyl Gasoline Corporation, has completed a series of tests to determine whether any significant difference exists in the carbon monoxide content of the exhaust gas produced by an internal-combustion engine when its fuel is changed from straight gasoline to the same gasoline containing ethyl fluid whose active ingredient is tetraethyl lead.

In the tests data were sought relative to the composition and amount of the gas produced by ordinary comparatively low-compression motors as well as by higher-compression motors in which distinct detonation occurred with straight gasoline, but which operated without detonation when using the same gasoline containing tetraethyl lead.

The gasoline used for these tests was all taken from the same refinery run to insure similar composition and characteristics. One portion was used as received from the refinery; to a second portion, ethyl fluid in the proportion of  $2\frac{1}{4}$  cc of tetraethyl lead per gallon was added (this represented the antiknock value of standard ethyl gasoline as marketed); to a third portion was added ethyl fluid in the proportion of 3 cc of tetraethyl lead per gallon.

Tests were made with the engine operating at full load and at three quarter load with various carbureter adjustments.

When the engine was operated at a fixed adjustment no significant change was found in the carbon monoxide content, nor in the content of any other constituent of the exhaust gas, upon changing the fuel supply of the engine from straight gasoline to gasoline containing tetraethyl lead (ethyl gasoline). This was true of both the tests in which a detonation was evident and those in which no detonation was audible. Also, no significant difference in the amount of carbon monoxide per horsepower hour was noted.

However, if the spark was retarded to alleviate detonation during operation on straight gasoline the amount of carbon monoxide per horsepower hour was approximately 5 to 7 per cent. less for ethyl gasoline than for straight gasoline.

As to the effect of ethyl gasoline on health and safety the amounts of carbon monoxide produced by the engine, under any comparable operating condition, were the same for ethyl gasoline and straight gasoline.

Further details are given in Serial 2908, "Carbon Monoxide from Automobiles Using Ethyl Gasoline," by W. P. Yant and L. B. Berger, copies of which may be obtained from the U. S. Bureau of Mines, Department of Commerce, Washington, D. C.

#### THE FIFTY-THIRD ANNIVERSARY OF THE FOUNDING OF THE JOHNS HOPKINS UNIVERSITY

COMPLETION of one \$3,000,000 medical project and a \$3,000,000 gift for the beginning of another were announced by Dr. Frank J. Goodnow, president of the Johns Hopkins University, at the fifty-third anniversary of the founding of that institution on February 22.

Funds of \$125,000 from the Wilmer Foundation of New York City, of which Herbert L. Satterlee is president, have, according to the report in the *New York Times*, made possible a completion of the William Holland Wilmer Ophthalmological Institute. There was also made public an anonymous gift of \$3,000,000, to provide endowment for a large number of additional ward beds in new medical and surgical clinics.

The new clinics are to be the center of the Johns Hopkins medical institutions, Dr. Goodnow said. They will together contain 350 beds and will replace the old medical and surgical wards which were built before the hospital opened in 1889. The buildings will be erected with \$1,300,000 from funds given by the General Education Board.

Dr. Goodnow also announced two other gifts. One was a fund of \$60,000 from Francis P. Garvan, president of the Chemical Foundation, for cancer research in connection with the work of Dr. Joseph C. Bloodgood. The other was a gift of \$10,000 from Dr. Emanuel Libman, of New York City, to establish a lectureship in the department of the history of medicine as a memorial to Hideyo Noguchi, of the Rockefeller Institute for Medical Research, who lost his life while engaged in yellow fever researches in Africa.

One outstanding student from every state in the nation to engage in advanced studies and research in chemistry at the university is the ideal of a fellowship plan that was announced. Dr. Goodnow said that state committees of prominent chemists would be formed to aid in selecting students who showed marked aptitude for developing as leaders in chemistry.

Nine state fellowships have already been established toward this national plan, as follows:

By the Eli Lilly Company, of Indianapolis; the J. T. Baker Chemical Company, of Phillipsburg, N. J.; the Firestone Tire and Rubber Company, of

Akron; Dr. H. A. B. Dunning, of Baltimore; the Bill Raskob Foundation, of Wilmington, Delaware; the Kewaunee Manufacturing Company, of Wisconsin; Francis P. Garvan, of New York City; the Brown Company, of Portland, Me., and the Brown Company, of Berlin, N. H.

Each fellowship will provide \$1,000 annually over a four-year period.

### NATIONAL RESEARCH FELLOWSHIPS IN THE BIOLOGICAL SCIENCES

THE Board of National Research Fellowships in the Biological Sciences announces that additional appropriations have been received for the support of fellowships in the fields of agriculture and forestry, and that additional members have been appointed to the board to consider applications in these fields. The next meeting of the board will be held April 25 and 26 and arrangements are being made to receive and consider applications at this meeting. April 1 is the limiting date for the receipt of applications. These fellowships are not intended for the support of work in the more specifically applied phases of agriculture and of forestry, but are intended to provide opportunity for the development of men planning to work in the fundamental aspects of these sciences.

Information and application forms may be obtained from the secretary of the Board of National Research Fellowships in the Biological Sciences, National Research Council, Washington, D. C.

The following fellowship appointments and reappointments for the year 1929-30 were made at a meeting of the board on February 8 and 9:

#### *Reappointments*

Carpenter, F. M.—Zoology  
Clements, F. E.—Anthropology  
Erlanson, Eileen W.—Botany  
Huff, Clay G.—Zoology  
Johansen, D. A.—Botany  
Nelson, D. H.—Botany  
Pincus, G. G.—Zoology  
Rizzolo, Attilio—Psychology  
Sonnenborn, M. T.—Zoology

#### *New Appointments*

Anderson, Edgar—Botany  
Bernheim, Frederick—Biochemistry  
Brown, Junius F.—Psychology  
Burk, Norval—Biochemistry  
Clark, Leonard B.—Zoology  
Fraps, Richard M.—Zoology  
Freeman, G. LaVerne—Psychology  
Greenberg, David M.—Biochemistry  
Kellogg, W. N.—Psychology

Kribs, David A.—Botany  
McCoy, Elizabeth F.—Botany  
Stier, T. J. B.—Zoology  
Turner, William D.—Psychology  
Twitty, V. C.—Zoology  
Weier, Thomas E.—Botany  
Whitaker, Douglas M.—Zoology  
White, Philip R.—Botany

FRANK R. LILLIE, *Chairman*

*Board of National Research Fellowships in the Biological Sciences*

### MEMORIAL TO CHARLES W. HARGITT

THE former students of Charles W. Hargitt recently gave expression to their appreciation of his work and their acknowledgment of his influence in their lives by the presentation of a bronze tablet to Syracuse University and its erection in the Natural History Building. In outlining their plans it was stated:

When a man gives himself worthily to a Great Cause, there is reason for taking note of him. When he gives his whole life there is reason for remembering him. When he gives both his life and services of high order, there is reason for honoring him. Charles W. Hargitt became associated with Syracuse University in 1891, he died just before the Commencement of 1927. Thirty-six years of continuous service! Active and earnest until the last! He deserves to be honored by those of us who were students with him and came to know him. We were influenced by him. In the spirit of a teacher he gave freely to us.

As a result of this plan there was made a bronze tablet of simple and dignified design suitably inscribed; this was presented and dedicated on November 17, 1928. In the entrance lobby of the Natural History Building, the plans of which he supervised, and in which he worked for so many years, gathered many old students, colleagues from the faculties, representatives of the trustees and of the citizens of Syracuse; on the wall of the lobby was the memorial. With brief and simple words this was presented and accepted. Chancellor Flint in accepting said:

On behalf of the trustees of Syracuse University I accept from the former students of Charles W. Hargitt this simple and dignified and therefore fitting memorial to a great and inspiring teacher. The world knows no higher title than this and experiences no higher service. His spiritual immortality is even more vivid for us, paralleled as it is by the way he lives on in the lives and activities of those who, while his pupils, were also his colleagues.

The tablet is inscribed as follows: