Hugh Ferriss' rendition of the Smithsonian Institution's new Museum of History and Technology as seen from Constitution Avenue. Building was designed by the architectural firm of McKim, Mead, and White (see "Imaginary tour," page 1057).

run the institute. The University of Chicago was the first university to make a positive response to the project.

The University Committee for Atmospheric Research was organized in February 1958 as a result of recommendations made in January by the National Academy of Sciences Committee on Meteorology. In mid-July, an agreement was drafted at a meeting at Pennsylvania State University. The announcement that 12 universities have joined the compact was made on 9 October in New York City at the Gold Medal Award dinner of the New York Board of Trade.

Royalties for Atomic Work

A claim for royalties on the gaseous diffusion method for separating uranium-235 from uranium-238 is currently under consideration by the Atomic Energy Commission and is expected to be settled within a few months. The claim was put before the commission's Patent Compensation Board by the Basic Science Foundation, an organization founded by the four scientists, John R. Dunning, Eugene T. Booth, Alfred O. C. Nier, and Aristid V. Grosse, whose work led to the development of the separation process. The claim, if it is granted, is expected to involve large amounts of money, as the award would be based on the value of the uranium-235 produced since the development of the process.

Two other major awards have been made under the patent provisions of the Atomic Energy Act of 1946, one of $300,000 to Enrico Fermi and his associates and one of $400,000 to Glenn Seaborg and three of his colleagues.

Balloon-Borne Laboratory

The Office of Naval Research is currently engaged in a program which is ultimately aimed toward making available to academic, industrial, and governmental scientists a manned balloon-borne laboratory, 20 to 30 miles above the earth, for the purposes of research, environmental testing, and systems experimentation. Three ONR stratospheric flights, made with two-man crews within a sealed gondola and reaching altitudes up to 86,000 feet, have demonstrated the technical and economic feasibility of the "strato-lab" concept.

Prior to initiating the construction of a fully instrumented research vehicle, however, ONR has decided to sponsor a study divided into the following phases: (i) to determine comprehensively what research objectives a manned, stratosphere laboratory 20 to 30 miles aloft might serve, and roughly what the relative significance of those objectives might be; (ii) to state the requirements for the strato-lab stemming from each of the research objectives considered; (iii) to state the specifications for a strato-lab cabin system, optimizing its characteristics to best meet the complex combination of requirements resulting from the functions desired.

A preliminary classification of the possible fields where a strato-platform might be useful is as follows:

1) Physical science—astronomy, astrophysics, geophysics, meteorology, (static, dynamic), physics of the upper atmosphere, geodesy, propagation (ionospheric, tropospheric).

2) Medical, biological, and psychological sciences, including: (i) the effects of the environment on animals, (ii) exploration of the distribution of spores, and so on, in the stratosphere.

3) Testing of military and commercial equipment and techniques; use of environment for test purposes; testing of parachute and escape procedures.

4) As a laboratory tool in systems research: as a laboratory for developing systems which may involve tethered, unmanned balloons, such as a balloon-borne antenna for radar or relay purposes, or military reconnaissance. Here the usefulness of the strato-lab lies not in comprising an element of the proposed system, but rather in its employment as a laboratory for the study and development of such balloon-borne elements.

It is the opinion of ONR that the areas of phase i are so broad and diversified that no single organization can fully explore them; rather, the scientific community as a whole must be asked to assist in planning a program of research for the strato-lab. Accordingly, ONR has asked the Vitro Laboratories, Silver Spring, Md., to put these questions before the scientific community: Would a manned balloon-borne stratospheric laboratory assist or further your research and development activities? How? What functional requirements, that is, stability, weight, etc., would these activities impose on the Strato-Lab?

Correspondence should be addressed to: Vitro Laboratories, Silver Spring Laboratory, 14000 Georgia Ave., Silver Spring, Md.

Business and Education

A study conducted by the Council for Financial Aid to Education has shown that American business in 1956 directed 34 percent of its philanthropic giving to education. A total amount of $28.5 million was donated to educational institutions by the 275 business concerns which were examined in the council's study. The survey showed that the company groups with the highest average gifts to education were electrical machinery, mining, chemicals and petroleum, and coal. The lowest average contributions were made by banking, insurance, utility, and telecommunication groups.

Of the companies in the survey, 20 percent had given more than $100,000 to education. More of the money was in the form of unrestricted gifts than ever before, and there was less endowment giving. The council estimated that in 1956 all business concerns in the nation had contributed $110 million to education.

Russian Medical Literature

A 90-page source book on Russian medical literature has been published by the National Library of Medicine, Public Health Service. Entitled *Guide to Russian Medical Literature,* the book lists 137 important Russian medical journals, reviews 20 Russian journals in the medical and biological fields which are available in complete English translation, and describes sources from which Russian journal literature may be ob-

tained. It also contains a detailed description of available bibliographical sources—in English, Russian, and other languages—on Russian materials in special subject areas.

Translations from articles in Russian and Bulgarian giving information about medical libraries, medical publications, and medical bibliography in the Soviet Union are included. Annotations indicate the Russian bibliographies that are available in the National Library of Medicine.

The book was edited by Scott Adams, librarian of the National Institutes of Health, and Frank B. Rogers, director of the National Library of Medicine. Copies of the publication (Public Health Service Publication No. 602) are available from the Superintendent of Documents, Government Printing Office, Washington, D.C., at 40 cents each.

News Briefs

The Howard E. Tatel radio telescope, the first instrument to be installed at the National Radio Astronomy Observatory that is being constructed at Green Bank, W. Va., by Associated Universities, Inc., was dedicated on 16 October. The new radio telescope is an 85-foot parabolic reflector built by the Blaw-Knox Company of Pittsburgh, Pa. The instrument was named to honor the memory of the late Howard E. Tatel, who at the time of his death in 1957 was chairman of the earth physics section of the Department of Terrestrial Magnetism, Carnegie Institution of Washington.

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The unveiling of the new electronic warfare simulator at the Naval War College, Newport, R.I., originally scheduled for 1 November, has been postponed until 7 November.

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The National Science Foundation has announced completion of its move to new quarters. All offices are now centralized in one building located at 1951 Constitution Ave., NW, Washington 25, D.C.

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British scientists have produced what is believed to be the first effective vaccine against worm disease, one of the greatest cattle breeding problems throughout the world. The vaccine is the result of work carried out over the past few years by W. Mulligan and a number of his colleagues in the Veterinary School at Glasgow University. The new vaccine is based on the treatment of lung worm larvae with x-rays. The larvae are not killed by this irradiation, but they are so altered that when given to a calf they do not live long enough to produce true disease. They do, however, stimulate the antibody-producing machinery of the calf so that it shows increased resistance to infection by lung worm larvae when it comes across them on pasture.

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The Hunter Radiation Therapy Center for research and treatment has been opened at the Yale–New Haven Medical Center. The facility, which cost more than $1,200,000, is equipped with a 2 million electron-volt Van de Graaff deep-therapy radiation machine, in addition to three other radiation devices for treating many kinds of tumors and related diseases. The center is housed in a four-story building which has a special concrete sub-structure to shield the Van de Graaff generator.

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Dartmouth College will become the base for two major Army Engineer polar research agencies. The move may lead to the establishment of the college as the western world's chief center for polar studies. The agencies involved are the Snow, Ice, and Permafrost Research Establishent and the Arctic Construction and Frost Effects Laboratory. A meeting at Hanover, N.H., in December will decide whether a polar research center should be established at the college under the auspices of the National Academy of Sciences.

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An Institute of Space Sciences has been established at the University of Cincinnati to provide advanced training and research in the new field of astrodynamics. Paul Herget will be the director. He is director of the Cincinnati Observatory and scientist in charge of the Vanguard computing center, Washington, D.C. Beginning in September 1959, the institute proposes to give a 3-year curriculum leading first to a master of science and then to the doctor of philosophy degree in dynamical astronomy. In the past 14 years, only two doctorates in this field have been awarded in the United States.

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The Navy has announced selection of the Stratobowl, near Rapid City, S.D., as the launching site for a manned, high-altitude balloon flight in early November to study Mars. John Strong, director of the Laboratory of Astrophysics and Physical Meteorology, Johns Hopkins University, under contract with the Office of Naval Research, will make the ascent to determine the water vapor content in the Martian atmosphere. Cdr. Malcolm D. Ross, USNR, Navy balloonist and Office of Naval Research physicist, will pilot the balloon.

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Columbia University's Oceanographic research vessel *Vema* has embarked on a 10-month cruise that will take the ship from New York, through the Panama Canal, down the west coast of South America, through the Straits of Magellan, across the South Atlantic to the western coast of Africa, and back to New York via the Caribbean area late next August. This fifteenth cruise by the *Vema* is expected to provide a major contribution to the knowledge of the biology, geology, and oceanography of the South American area and of the South Atlantic Ocean.

Scientists in the News

SVERRE PETTERSSEN, professor of meteorology at the University of Chicago and director of the university's Weather Forecasting Research Center, has received the New York Board of Trade's annual Gold Award. He is the first scientist named to the honor in the 12 years the award has been given. Previous winners have included President Eisenhower, former President Herbert Hoover, and Winston Churchill.

Surgeon General Leroy E. Burney has announced the appointment of H. VAN ZILE HYDE as assistant to the surgeon general for international health. Hyde, chief of the Public Health Service's Division of International Health for 5 years, is succeeded in that post by HORACE DELIEN, who has directed the health program of the International Cooperation Administration in the Philippines for the past 7 years.

The Helen Hay Whitney Foundation has announced that LUIS F. LELOIR, director of the Instituto de Investigaciones Bioquimicas, Fundacion Campomar, Buenos Aires, Argentina, has been selected as the first recipient of the T. Duckett Jones Memorial Award. This $6500 award, which will be an annual presentation, is being given to Leloir in recognition of his work on the isolation of uridine by diphosphoglucose from plant and animal tissues. On 11 October, during the first Helen Hay Whitney Foundation Connective Tissue Conference, a reception and dinner were held at the Princeton Inn, Princeton, N.J., to honor Leloir.

The following mathematicians have reported new appointments for the academic year 1958–59.

R. C. BUCK, professor at the University of Wisconsin, has received a Guggenheim fellowship and will be at Stanford University.

H. G. COHEN, professor at Rensselaer Polytechnic Institute, will be a senior research scholar under the Fulbright program at the Technische Hogeschool, Delft, Netherlands.

JOHN DYER-BENNET, associate professor at Stanford University, has been awarded a National Science Foun-