and incised bricks were taken back to the museum. This material has shown a good deal about the 400 years of Comalcalco's history and has provided information about changing styles in architecture and pottery.

## Poland Resumes WHO Participation

The Government of the People's Republic of Poland resumed active membership in the World Health Organization on 1 Jan. Poland discontinued active participation in August 1950. Albania and Bulgaria have also recently resumed active participation in the work of the organization.

Member states that still remain inactive are Czechoslovakia, Hungary, Rumania, U.S.S.R., Ukrainian S.S.R., and Byelorussian S.S.R. In order to facilitate the return of inactive members, the World Health Assembly last year passed a resolution providing that contributions should be paid in full for the years during which countries participated actively in the work of the organization, and that for the inactive years a token payment of 5 percent of the amounts assessed should be required.

## Cryotron

Dudley A. Buck, a graduate student and instructor in the Electrical Engineering Department at Massachusetts Institute of Technology, will receive the 1947 Browder J. Thompson memorial prize of the Institute of Radio Engineers for his development of the cryotron, a tiny device to replace transistors and tubes.

The cryotron is perhaps the first practical use of superconductivity—the ability of some metals to conduct current with no resistance at temperatures near absolute zero. In its simplest form, the cryotron consists of a straight piece of wire, around which another fine wire has been wound. A current in the straight wire can be controlled by a current in the winding, because the superconductivity of the straight wire is destroyed by the magnetic field associated with the current in the winding.

The first data-processing equipment in which the cryotron will be used is now being built at Arthur D. Little, Inc., with the cooperation of M.I.T. engineers. The instrument will use 215,000 cryotrons. A conventional computer to do the same job might require more than 50,000 vacuum tubes. Buck has pointed out that present experimental circuits suggest "that a large-scale digital computer can be made to occupy one cubic foot." This estimate, of course, does not include refrigeration and terminal equipment. Cryotrons will be kept at the necessary low temperatures by liquid helium, the boiling point of which is 4.2°F above absolute zero.

The simplicity of cryotrons makes possible their rapid manufacture by automatic factories. In operation, the consumption of electric power by cryotrons is very low. Though a cryotron can switch from one condition to another as rapidly as a transistor or vacuum tube, one disadvantage at present is the relatively slow speed with which the cryotron circuits switch electric currents among their many paths. Cryotrons today use wires of two rare metals, tantalum and niobium.

## Research in Sex Problems

The Division of Medical Sciences of the National Academy of Sciences–National Research Council is accepting applications for grants-in-aid of research for consideration by the Committee for Research in Problems of Sex. This committee is concerned primarily with encouraging research on the mechanisms that control sexual behavior in animals and man. Proposals involving endocrinological, neurological, psychological, anthropological, phylogenetic, and genetic studies directed toward this objective are therefore invited. Requests will also be considered that deal with the physiology of reproduction or with related biological and biochemical fields.

Preliminary inquiries should be addressed to Room 309, Division of Medical Sciences, National Academy of Sciences–National Research Council, 2101 Constitution Ave., NW, Washington 25, D.C. Completed applications for 1957–58 should be postmarked *on or before 1 Apr.*

## Gravity Awards

The Gravity Research Foundation has announced its 1957 program of awards for essays on gravity. Five awards will be made on 1 June for the best 1500-word essays on the possibilities of discovering: (i) some partial insulator, reflector, or absorber of gravity; (ii) some alloy or other substance, the atoms of which can be agitated or rearranged by gravity to throw off heat; or (iii) some other reasonable method of harnessing, controlling, or neutralizing gravity. The awards will be, in order, $1000, $300, $200, $150, and $100.

Essays must be received at the Gravity Research Foundation, New Boston, N.H., *before 15 Apr.* They will be accepted from anyone who is seriously interested in the application of gravity to practical uses for the benefit of humanity.

All essays must be typewritten in English on paper 11 by 8.5 inches, with two carbon copies. A title covering the area of thought expressed in the essay and a summary paragraph of 100 words or less should be submitted with the manuscript on a separate sheet. A short biographical sketch should also be enclosed.

## World Health Day

The United States is joining with other nations in the observance of World Health Day on 7 Apr. Federal agencies this year will observe the theme "Food and health" in programs dealing with nutrition, food production and distribution, and food protection and sanitation. The theme will also be used to recruit young Americans for careers in nutritional and other food and health programs. Agencies participating include the Department of Health, Education, and Welfare, the Department of Agriculture, and the Department of State.

In cooperation with the National Citizens Committee for the World Health Organization, the government committee for World Health Day will also meet requests for material from industries and voluntary groups that plan to observe the day. Special kits of material will be prepared for this purpose. H. van Zile Hyde, chief of the Public Health Service's Division of International Health, is chairman of the interagency committee.

## Cancer Society Fellowships

The American Cancer Society has announced that a limited number of fellowships in radiation therapy are offered in 1958–59 to graduates in medicine who have already received thorough basic training in the principles and practice of radiation therapy and who desire to spend additional periods of training in that specialty at certain clinics in the United Kingdom, the Scandinavian countries, and France. Fellowships may begin at any time mutually agreeable to the institution and the fellow. The deadline for receipt of applications is *15 Apr.*

The Cancer Society has also announced that its program of clinical fellowships will continue through the institutional year 1958–59, with fellowships commencing 1 July 1958. These awards are offered to institutions whose postgraduate training programs are approved by the Council on Medical Education and Hospitals of the American Medical Association. The grants offer graduates in medicine opportunities for postgraduate training, emphasizing diagnosis and treatment of cancer.

Applications from institutions must be

submitted by deans, executive officers, or department heads *before 15 Apr.* Note change in deadline from previous years.

Further information about both programs may be obtained from the Director of Professional Education, American Cancer Society, Inc., 521 W. 57 St., New York 19, N.Y.

## Harvard-Guggenheim Aviation Center

The Harvard-Guggenheim Center for Aviation Health and Safety has been established at Harvard University's School of Public Health in Boston, Mass. The center, made possible by a grant of $250,000 from the Daniel and Florence Guggenheim Foundation that is to be allocated over a 5-year period, will begin operation with the start of the 1957–58 academic year under Ross A. McFarland, associate professor in the department of industrial hygiene. Two Daniel and Florence Guggenheim fellowships of $5000 each will be awarded annually for graduate study at the center. Applications for these fellowships are now being received and considered.

The Harvard-Guggenheim Center will have three basic purposes: to unify basic research into the sharply increasing human problems to the jet era; to give advanced training to physicians, biological scientists, and aeronautical engineers; and to serve as a clearinghouse for technical information on aviation health and safety. It will apply the interdisciplinary or team approach, coordinating the work of such diverse specialists as engineers, physicians, psychologists, physiologists, and anthropologists in solving problems of health and safety in flight.

## Nuclear-Powered Merchant Ships

The Atomic Energy Commission and the Maritime Administration have announced a joint long-range program aimed at developing reactor systems for commercially competitive power for merchant ships. This program is in addition to the work now in progress on the first nuclear-powered merchant ship, announced by the President last October.

## Museum Butterfly Book

American institutions and publishers of scientific books have fallen far behind the rest of the world in the publication of high-quality color illustrations. This deficiency has prompted the American Museum of Natural History to sponsor publication of *Butterflies of the American Tropics, the Genus Anaea,* by William Phillips Comstock.

The tremendous cost of reproducing the 30 color plates that are planned makes it necessary that the museum, a nonprofit institution, obtain in advance an indication of the demand for such a book. The museum does not expect to recover the full cost of publication. If the response is sufficient to show that a reasonable amount of the expense will be subscribed, the book will be published; should the response be insufficient, the museum reserves the right to return all money received through advance appeal.

All those who want this book and who wish at the same time to aid the museum in this advancement in scientific publication, are urged to send in orders soon. The prepublication price of the book is $20 (after publication, $25). For further information, write to the American Museum of Natural History, Central Park West at 79 St., New York 24, N.Y.

## Fermi Professorship

Plans to endow an Enrico Fermi distinguished service professorship at the University of Chicago in memory of the renowned nuclear physicist have been announced by M. J. Kelly, president of Bell Telephone Laboratories, who is chairman of a national committee to establish the professorship.

The new chair, which will be in the university's Institute of Nuclear Studies, is designed to perpetuate and memorialize Fermi's scientific contributions. He was both teaching and conducting research at the institute at the time of his death in 1954.

Serving with Kelly are Walker L. Cisler, president of Detroit Edison Company; Crawford H. Greenewalt, president of E. I. du Pont de Nemours and Company; and Lewis Strauss, chairman of the U.S. Atomic Energy Commission. Questions should be addressed to W. V. Morganstern of the University of Chicago, or W. Fuller, Bell Telephone Laboratories, 463 West St., New York, N.Y.

## Behavioral Science Research

The Air Force Office of Scientific Research, Behavioral Sciences Division, has contracted with the University of New Mexico for the establishment of a behavioral science research program. This program is visualized as both immediate and long-range in its objectives. The immediate objective is to bring together for preliminary conference, people of demonstrated interdisciplinary research ability for the purpose of considering research problems and designs in behavioral science problem areas of special importance to the Air Force.

Selected participants will be invited to assemble at the University of New Mexico for an 8-week period from 17 June to 10 Aug. 1957. As a result of this conference, it is hoped that continuous and extensions of the more promising exploratory work will be pursued.

## Student Engineers

A program to help alleviate the shortage of trained engineers has been inaugurated by Fairchild Engine Division of Deer Park, Long Island, in cooperation with the University of Cincinnati; University of Detroit; Antioch College, Yellow Springs, Ohio; Georgia Institute of Technology, Atlanta, Ga.; Drexel Institute of Technology, Philadelphia, and Northeastern University in Boston.

The objective is to combine, in 5 years, 4 years of college education and 2 years of actual experience in aircraft power plant design and development. The plan calls for alternating periods of employment at the engine division plant as a regular employee in any one of the engineering groups, with classroom work at one of the participating engineering schools. The student must be employed in a field related to his academic courses.

## Beckman Berkeley Division Expands

A $1-million expansion program that will triple production capacity and increase plant personnel by nearly 1000 has been announced by the Berkeley Division of Beckman Instruments, Inc. Ground-breaking for the first unit of the project is scheduled within 2 months on a recently acquired 6-acre site adjacent to Berkeley's present factory in Richmond, Calif.

## Zoological Nomenclature

The International Commission on Zoological Nomenclature gives notice that beginning 25 July it will start voting on the following cases involving the possible use of its plenary powers for the purposes specified. Full details were published on 25 Jan. 1957 in the *Bulletin of Zoological Nomenclature* (Vol. 13, Pt. 1): (i) *bullata* Müller (O.F.), 1776 (*Akera*), validation (Cl. Gastropoda); (ii) *bengalensis* Daudin, [1802] *Tupinambis*) and *salvator* Laurenti, 1768 (*Stellio*), validation (Cl. Reptilia); (iii) *Bithys* and *Chrysophanus* Hübner, 1818 (Neotropical Theclids), suppression (Cl. Insecta, Order Lepidoptera); (iv) *Cephalomutilla* André, (1908), designation of type species (Cl. Insecta, Order Hymenoptera); (v) *Aurelia* Lamarck, 1816, validation (Cl. Scyphozoa); (vi) *Indiana* Matthew, 1902, designation of type