

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