engineers, led by Harvey Slocum of Alhambra, Calif., have been employed by the Indian Government as advisers. Some 30 to 40 Americans have assisted in the preliminary construction and planning during the past 3 years.

Slocum, who has been construction chief at such United States dams as Shasta and Grand Coulee, describes Bhakra as probably the most difficult dam ever undertaken. He says that this is because of the remoteness of the site, the geologic formations in the gorge, and the lack of sufficient trained personnel to supervise the work force of more than 70,000.

Preparation of the site has taken years. The gorge was scraped, diversion dams and tunnels were built to route the Sutlej around the dam site, railroads were constructed to carry the concrete from the mixing plants, conveyor belts were installed, and floodlights were set up for 24-hour operation.

■ Successful clinical trial of an experimental vaccine against one type of common respiratory illness has been announced jointly by the U.S. Public Health Service and the Johns Hopkins Medical Institutions. Experiments indicate that the vaccine provides substantial protection for human beings against one of the nine viruses in the APC (adenoidal, pharyngeal, conjunctival) group, a family of respiratory viruses discovered several years ago.

The research, conducted with human volunteers, dealt with type 3 APC virus, which causes a 5-day illness marked by fever, sore throat, and conjunctivitis. The illness can be sporadic or occur in sharp outbreaks or epidemics.

Diseases of the upper respiratory tract are so widespread that the average American experiences an estimated six attacks each year. Studies have shown that 40 to 50 percent of the persons who are absent from their jobs because of illness are incapacitated by common respiratory diseases. APC infections represent only one part of this problem.

The research team emphasized that its work is still in the preliminary stage and that the vaccine is purely experimental. There is no plan to produce the vaccine for public use in the near future.

Results of the studies, indicating substantial protection by the vaccine against induced infection, are reported in the 5 Nov. issue of the *Journal of the American Medical Association.* The authors are R. J. Huebner, J. A. Bell, W. P. Rowe, T. G. Ward, R. G. Suskind, R. S. Paffenbarger, and J. W. Hartley. All are Public Health Service investigators with the exception of Ward, who is associate professor of microbiology at Johns Hopkins University School of Hygiene and Public Health.

Serving as volunteer subjects for the vaccine tests were 83 inmates of the Federal Reformatory at Chillicothe, Ohio, and the Maryland State Reformatory for Males at Breathedsville. The two institutions have been cooperating with research workers for the past 2 years in respiratory virus studies that laid the groundwork for the vaccine trial.

■ With the publication of the November 1955 issue of the *American Annals of the Deaf,* the 100th volume of this journal was completed. The journal was founded in 1847 at the American School for the Deaf in Hartford, Conn., but publication was suspended during the Civil War and was not resumed until 1868, when the editorial office was located at Gallaudet College, the national college for the deaf in Washington, D.C., where it has since remained.

American Annals of the Deaf is the official organ of the Convention of American Instructors of the Deaf, founded in 1850, and of the Conference of Executives of American Schools for the Deaf, founded in 1868. According to the Library of Congress, the *Annals* is probably the oldest educational journal in the United States, and is the oldest publication in the world on the education of the deaf.

The entire scope of educational work for the deaf in the United States and Canada has expanded greatly since the close of World War II. The plight of the war-deafened veterans, the increased use of electronic amplification in hearing aids, the growth of the preschool movement in schools and classes for the deaf, and the rapid development of services for parents of deaf and hard-of-hearing children during the past 10 years awakened great interest in the education of the deaf. Because of this increased interest, with the accompanying expansion in the publication of textbooks, newspaper articles, magazine articles, and radio and television programs, Powrie V. Doctor, editor of the *American Annals of the Deaf,* has felt it advisable to call attention to the resources that are obtainable through the journal's office.

Scientists in the News

MAX F. DAY of the Division of Entomology, Commonwealth Scientific and Industrial Research Organisation of Australia, has been appointed for 2 years to the Australian Scientific Liaison Office, Washington, D.C. Day, who obtained his doctorate at Harvard University, was in the Liaison Office during World War II.

LEO KANNER, professor of psychiatry and pediatrics at Johns Hopkins University and director of the children's psychiatric service at the Johns Hopkins Hospital, will serve as Knapp visiting professor at the University of Wisconsin in the second semester of the current academic year. During his stay at Wisconsin he will teach in the medical school, deliver several public lectures, and lead discussions on child behavior. Kanner is the author of a large number of both technical and popular works on child psychiatry, among them *A Miniature Textbook of Child Psychiatry,* and articles dealing with psychiatry, psychology, education, medical history, and folklore.

LEWIS H. WRIGHT, an anesthesiologist and a member of the staff at E. R. Squibb and Sons for more than 25 years, has been named to receive the 1955 Distinguished Service award of the American Society of Anesthesiologists. The announcement was made at the recent annual meeting of the society in Boston, Mass., a meeting that marked the organization's 50th anniversary.

WILLIAM E. RANZ, associate professor in engineering research at Pennsylvania State University, received the 1955 Junior Award in chemical engineering from the American Institute of Chemical Engineers during its annual banquet on 29 Nov. He was honored for his paper "Friction and transfer coefficients for single particles and packed beds," which was published in *Chemical Engineering Progress* in 1952.

ELVIN C. STAKMAN, emeritus professor of plant pathology at the University of Minnesota and a former president of the AAAS, has been serving as Hitchcock professor at the University of California, Berkeley. The six public Hitchcock lectures have been concerned with various aspects of plant disease, the world's food supply, international cooperation in scientific research, and scholarship in the academic world today.

K. H. GUSTAVSON, head of the Swedish Tanning Research Institute, Stockholm, has received the IVA grand gold medal, the highest award of the Royal Swedish Academy of Technical Sciences (IVA). He was honored for his pioneering contributions to the chemistry and reactivity of collagen and for his investigations of the mechanism of tannage, particularly his research on the reaction of chromium compounds with hide protein in chrome tanning.

Gustavson is president of the International Union of Leather Chemists' Societies. He has been a member of the American Chemical Society for 35 years and worked in this country as a leather chemist for many years.

HENRY RINDERKNECHT, formerly of Crooks Laboratories, England, has joined the staff of the California Foundation for Biochemical Research, Los Angeles, as director of the organic research division.

BRUNO VASSEL, former supervisor of organic and biochemical research for the International Minerals and Chemical Corporation at Skokie, Ill., has been named director of research for Johnson and Johnson Do Brasil in São Paulo, an affiliate of Johnson and Johnson, New Brunswick, N. J. Vassel has been particularly active in the fields of protein isolations; monosodium glutamate processes; amino acid analyses and syntheses; pharmaceuticals; polarograph; flotation reagents; detergents; and starch derivatives.

VICTOR CONQUEST, vice president of Armour and Company, who has directed the company's research activities in Chicago since 1931, has been named recipient of the Industrial Research Institute medal for 1956. The medal has been awarded annually since 1945 to honor "outstanding accomplishment in leadership in or management of industrial research which contributes broadly to the development of industry or the public welfare." Formal presentation of the medal will be made next April at the institute's annual meeting in White Sulphur Springs, W. Va.

Conquest's original department consisted of 15 persons; the Armour technical staff now has more than 400 members. They have developed hormone and enzyme products including ACTH, from meat animals, chemicals made from fats, and many other products.

RICHARD M. HERMES, formerly with International Business Machines, has joined the staff of Stanford Research Institute as a senior research engineer in the control systems laboratory. He will work on the design of electromechanical controls for paper-handling and electronic data-processing systems.

OLLE RIMER, a Swedish industrial engineer, has been assigned by the United Nations Educational, Scientific and Cultural Organization to teach engineering at the Indian Institute of Technology in Kharagpur. Rimer is on leave from his post as assistant professor of industrial engineering at the Royal Institute of Technology and the Chalmers Institute of Technology, Stockholm. The third Swedish national to be sent to India by UNESCO on a technical assistance mission, Rimer will join an international team of scientists that has been working with the Indian Institute of Technology since 1951.

DEAN W. ROBERTS of Baltimore, Md., medical administrator, physician, and leader in the field of public health, has been appointed executive director of the National Society for Crippled Children and Adults, Chicago, Ill. Roberts, since 1952 director of the National Commission on Chronic Illness, will succeed LAWRENCE J. LINCK, who has been executive director of the National Society since 1945.

F. REINHARD, former director of the department of pharmacology for Mead Johnson Research Laboratories, has been appointed director of pharmacologic research at Baxter Laboratories, Inc., Morton Grove, Ill.

DONALD V. SARBACH has been appointed to the newly created position of research director of Hewitt-Robins, Inc., Stamford, Conn. He will be a member of the company's executive staff in Stamford and will serve in an advisory capacity to technical and research departments at manufacturing plants in Buffalo, N.Y.; Passaic, N.J.; Fremont, Ohio; and Chicago, Ill. Sarbach was previously associated with the B. F. Goodrich Company, Akron, Ohio, where he was technical manager for development of new industrial products.

RALPH A. ALPHER, since 1944 a physicist at the Applied Physics Laboratory, Johns Hopkins University, has joined the chemistry research department at the General Electric Research Laboratory, Schenectady, N.Y.

EDWARD MACK, since 1941 chairman of the department of chemistry at Ohio State University, has asked to be relieved of the chairmanship in order to devote himself to teaching and research. HARVEY V. MOYER will serve as acting chairman until a permanent appointment has been made.

The following appointments to assistant professor have been announced. Southern Illinois University: EDNA DUDGEON, zoology (genetics); HOWARD J. STAINS, zoology (mammalogy). Massachusetts Institute of Technology: MELVILLE CLARK, JR., chemical engineering.

Necrology

THEODORE BELZNER, Brooklyn, N.Y.; 76; retired civil engineer; 18 Nov.

E. STEUART DAVIS, Southampton, N.Y.; 73; early developer of lighter-than-air craft; 17 Nov.

CHARLES W. EDWARDS, Durham, N.C.; 81; retired professor of physics, Duke University; 17 Nov.

EDWIN KIRK, Washington, D.C.; 70; paleontologist and geologist who served with the U.S. Geological Survey from 1909 until his retirement in January 1955; 16 Nov.

JOSEPH LILIENTHAL, Baltimore, Md.; 44; head of the environmental medicine department at Johns Hopkins School of Hygiene and Public Health; 19 Nov.

ROBERT K. PHELAN, Germantown, N.Y.; 46; bacteriologist and chemist; president of Taconic Farms, Inc.; 17 Nov.

OSCAR RAGINS, Chicago, Ill.; 62; clinical associate professor of medicine at the University of Illinois Medical School; 19 Nov.

GERHARD ROLLEFSON, Berkeley, Calif.; 55; professor of chemistry at the University of California; 15 Nov.

GERALD WILLARD, Fanwood, N.J.; 54; retired physicist of the technical staff of Bell Telephone Laboratories, Murray Hill, N.J.; 18 Nov.

Education

■ Seventeen of Britain's largest firms have established a fund of more than $4 million to stimulate scientific education in secondary schools. With the rapid growth of the electronics and nuclear industries, it is felt that the country must be assured an adequate flow of scientists and technologists for the future.

Aid will take the form of capital grants for the building, expansion, modernization, and equipment of science buildings in independent schools and other schools that lack public funds. The fund will assist the teaching of pure and applied science and mathematics in secondary schools of this type.

Among the firms contributing are Rolls Royce, English Electric, I.C.I., Courtaulds, and Shell Oil. Among them, these companies have contributed approximately $4.2 million, but it is expected that this sum will grow as more firms join the fund. A statement from the fund members says "it is believed that many other companies that depend on adequate supplies of pure and applied scientists and technologists will wish to add their support, in their own as well as the national interest. . . ."

■ Last month the University of Chicago organized a special tour that represented a contribution of the university toward overcoming the country's shortage of scientists. In 13 major laboratories of the Institutes for Basic Research, faculty members demonstrated their current investigations to more than 400 science students, teachers, and principals from high schools in the Chicago area.

"It is a matter of critical importance, perhaps of survival, that the United States develops more highly trained scientists," Warren Johnson, dean of the di-