such names as Lyell, Darwin, Kirchhoff, Mendel, Mendeléeff, Hertz, Maxwell, Planck, DeVries, and Bateson appear.

The Directory part of the book, about 1,500 pages, contains approximately 40,000 names, alphabetically arranged. The name of each member is followed by the year of his birth, his address, the university from which he received his highest degree, his field of specialization or chief scientific interest, his professional position, the year he became a member of the Association, the year he became a fellow, and the section or sections of the Association with which he is affiliated.

The volume closes with an unusual and valuable section, a Geographical Index of the names and sectional affiliations of all members of the Association as of December 31, 1947. That is, the names of all members who are residents of the United States are grouped, first by states in alphabetical order, then by cities and towns within the respective states, also in alphabetical order, and, finally, the names of members in each city or town are arranged in alphabetical order. The names of members who are residents of foreign countries are similarly arranged alphabetically in sequence by continents, countries, cities, and individuals. The Association has members in 76 foreign countries.

It frequently happens that a librarian or scientist wishes to obtain the names of chemists, zoologists, or specialists in some other field of science who are residents of a particular city, such, for example, as Urbana, Illinois. With the new Directory before him he will turn to Illinois in the Geographical Index and then to Urbana. Probably to his surprise he will find that 77 members of the Association are residents of Urbana. To the right of each name is a letter indicating the sectional affiliation of the member, C for chemistry and F for zoology. By counting the Cs and Fs he will learn that, of the 77 members of the Association who are residents of Urbana, 33 are chemists and 29 are zoologists. If he should desire information about any chemist or zoologist in the list he would turn back to the General Directory. (F. R. MOULTON.)

NEWS and Notes

William J. Youden, for many years a member of the staff of the Boyce Thompson Institute for Plant Research, where he developed a type of experimental design known as Youden Squares, has been appointed to the staff of the National Bureau of Standards. Dr. Youden, in addition to being assistant chief of the Statistical Engineering Section, will serve in an active liaison and advisory capacity to the various test boards of the Army Field Forces.

C. D. Lowry, Jr., an organic chemist and a member of the staff of the Universal Oil Products Company, has been named executive director of the Research and Development Board's Panel on Petroleum. This Panel assists in carrying out the functions of the Board in the petroleum field, coordinating service research with reference to petroleum products, their utilization, containers, and handling equipment.

Howard H. Kendler, at present an assistant professor of psychology at the University of Colorado, has been appointed associate professor at University Heights College of Arts and Pure Science, New York University, beginning with the 1948–49 academic year.

William V. Cruess, professor of food technology at the University of California College of Agriculture, has retired as head of that division and will be replaced by **E. M. Mrak,** one of his former students. Dr. Cruess will continue his research. Since 1911 he has been a member of the staff, and in 1935 he was named first chairman of the Food Products Division, later renamed Food Technology, a post he has held ever since.

G. E. MacGinitie, director of the Kerckhoff Marine Laboratory of the California Institute of Technology at Corona Del Mar, will go to the Arctic Research Laboratory at Point Barrow, Alaska, the first week in July. He will be accompanied by his wife and another assistant, David J. McNett. Prof. and Mrs. MacGinitie will return to Corona Del Mar the last of October, and Mr. McNett will return the following summer.

Daniel D. Cubicciotti, Jr., who has been research assistant at the University of California Radiation Laboratory, has been appointed research assistant professor at Illinois Institute of Technology, effective September 1.

George J. Miller, professor of geography and chairman of the Division of Social Studies, State Teachers College, Mankato, Minnesota, has been appointed visiting professor of geography at Indiana University. The editorial offices of *The Journal of Geography,* which are headed by Dr. Miller, will be moved July 1 to Indiana University.

J. J. Runner and **Allen C. Tester,** both professors of geology at the State University of Iowa, will represent that university at the 18th International Geological Congress in London, August 25–September 1. Dr. Tester will present two papers entitled "Marine Terraces of the South Pacific Area" and "Laterites in New Caledonia." He will fly to England early in August to join a pre-Congress trip covering much of England and Wales. Following the Congress Dr. Tester plans to travel in north Scotland, where he will study the geomorphology of that region. Dr. Runner,

who is planning to travel to Glasgow in late July, will make independent studies of lava rock outcrops in the region. He is tracing some of the outlines of an immense lava flow which is thought to have once covered an area from Scotland and the Hebrides to Iceland.

Ralph Mozingo, head of the Hydrogenation Laboratory of the Organic and Biochemical Research Department, Merck & Co., Inc., will join the staff of the University of Minnesota as associate professor of organic chemistry for 1948–49, serving in place of **Richard T. Arnold,** who will be on sabbatical leave. In announcing the appointment, Prof. Lee I. Smith, of the University of Minnesota, pointed out that, while many industries have aided universities through grants and scholarships, the loan of Dr. Mozingo by his firm for this extended period of time constitutes a unique example of cooperation between industry and an educational institution.

Theodore W. Torrey has been appointed chairman of the Department of Zoology at Indiana University. Dr. Torrey replaces **Fernandus Payne,** who is retiring from departmental administrative duties.

Frank F. Grout, professor of geology and mineralogy, University of Minnesota, will retire July 1. As a retirement gift, his students, colleagues, and friends have presented him with a cash purse to defray his expenses to the forthcoming International Geological Congress.

Grants and Awards

New York University has just received from the Office of Naval Research a grant of $15,000 for the support of research on the fundamental mechanism of muscular contraction. This research will be carried on in the Department of Biology, Washington Square College of Arts and Sciences, under the direction of Alexander Sandow.

Sidney W. Benson, professor of chemistry, University of Southern California, has just received an award in the form of a fellowship from the Research Corporation for work on the surface areas and structures of proteins. The fellowship will be held during 1948–49 by David A. Ellis, graduate student in physical chemistry who is working for his Ph.D.

Wendell M. Latimer, dean of the School of Chemistry, University of California, has been awarded a distinguished service citation by the Alumni Association of the University of Kansas, from which he was graduated in 1915.

The Society for American Archaeology, at its annual dinner held in Milwaukee, Wisconsin, on May 14, presented the Viking Fund Medal and Award to John Otis Brew for his outstanding contribution on the archaeology of Alkali Ridge, Utah. Dr. Brew is the new director of the Peabody Museum, Harvard University.

John Collier, professor of sociology at the College of the City of New York and president of the Institute of Ethnic Affairs, Inc., has just received a $1,000 Anisfield-Wolf Award for his book, *The Indians of the Americas,* published by W. W. Norton and Company in 1947. This book and Worth Tuttle Hedden's *The other room,* which also received a prize, were adjudged the best works on race relations published during the preceding year.

The Worcester Foundation for Experimental Biology has had available for its use during the fiscal year, just closed, approximately $207,000 in gifts and grants. Of this sum $19,162 has been contributed by friends of the Foundation in the form of membership fees.

The Foundation has been the recipient during the year of approximately $160,500 as grants for researches in mental disease, problems of human aging, cancer, animal reproduction, use of radioisotopes, and organic and biological chemistry. These grants have been made by the U. S. Public Health Service, the Office of Naval Research, the Williams-Waterman Fund of the Research Corporation, the Foundation of Applied Research, the National Research Council, the National Academy of Sciences, the Schering Corporation, the G. D. Searle Company, Ayerst, McKenna and Harrison, Ltd., the American Cancer Society, the Donner Foundation, the L. Farber Company, the American Academy of Arts and Sciences, and the American Medical Association.

At the Trustees' meeting on June 5, Thomas B. Slick was elected a member of the Board, and Harlow Shapley and Roy G. Hoskins were re-elected president and secretary of the Board, respectively. Mr. Slick is president of the Slick Oil Company and technical adviser of three institutions founded under his guidance at San Antonio, Texas—the Foundation of Applied Research, the Southwest Research Institute, and the Institute of Inventive Research.

At a reception at the laboratories on June 5 H. J. Muller, Trustee of the Foundation and 1946 Nobel Laureate in Physiology and Medicine, gave an address entitled "Effects of Radiation on the Hereditary Material."

The Foundation is operated under the co-direction of Hudson Hoagland and Gregory Pincus.

Colleges and Universities

The University of Illinois College of Medicine is to have the world's first installation of a betatron for cancer treatment and research. Although the cancer-fighting possibilities of the betatron were pointed out early by its inventor, Donald W. Kerst, of the University's Physics Department, such work was delayed during the war. Research with the 20,000,000-volt instrument, which will be delivered in about 5 months, will be in charge of Roger A. Harvey, head of the College's Department of Radiology. X-rays now in use for treating deep cancers have energies ranging from 200,000 to 2,000,000 volts. Prof. Kerst's first instrument in 1940 produced 3,500,000-volt X-rays. At present he is building a 300,000,000-volt betatron for physics research. Prof. Kerst has found that the 20,000,000-volt X-rays have their greatest effect approximately 1½″ inside the surface of the body and that after passing through 8″ (approximate thickness of the human body) their energy is only about half that at the maximum point. This means that maximum concentration of the rays will be on the deep internal organs. Other advantages of the betatron include precise control of the energy

produced and a narrow, sharply-defined ray beam. Henry Quastler, of the University's physics staff, who has been testing the betatron, is now working on a diaphragm for the beam to control the small amount of scattering of X-rays and electrons—one of the problems which requires solution before the betatron can be used for the treatment of patients. By a change of vacuum tubes, a beam of electrons may be produced by this industrial-type machine, but considerable intensive study by medical scientists will be required before these may be used safely on human subjects.

The Department of Physics, Tufts College, Medford, Massachusetts, has recently announced the appointment of Charles R. Mingins as director and Carl A. Stevens as assistant director of the Research Laboratory of Piezoelectricity. This laboratory is organized as a part of the Department of Physics, of which Stanley S. Ballard is chairman, to carry on undergraduate and graduate instruction and thesis work as well as staff research in piezoelectricity, physical electronics, and related fields. The director and assistant director also serve as associate professor and assistant professor of physics, respectively, on the instructional staff. The laboratory is currently conducting quartz crystal investigations under a contract with the U. S. Signal Corps.

Summer Programs

The U. S. Public Health Service Communicable Disease Center, Atlanta, Georgia, has announced its first four-week refresher course, "Laboratory Diagnosis of Mycotic Diseases," to be given August 30–September 24. The course will be concerned with the identification of common saprophytes and the identification and culture of the dermatophytes, subcutaneous fungi, and systemic fungi. Stress will be placed on laboratory procedures useful for establishing a diagnosis of mycotic infection. The training is open to all grades of employed laboratory personnel. Although first consideration will be given to applicants from laboratories of state and local public health departments, applicants from hospitals and private laboratories will be considered when vacancies occur. While there is no laboratory or tuition fee, travel and living expenses must be borne by the applicant or his employer.

Applications should be sent as soon as possible to Seward E. Miller, Chief, Laboratory Division, Communicable Disease Center, 291 Peachtree Street, Atlanta, Georgia. Notification of acceptance will be made sufficiently in advance to allow the students to obtain living accommodations.

A series of 7 lectures entitled "The Role of Science Today" will be offered by Roosevelt College, Chicago, in a special summer institute to be held July 12 through August 2. Morris Goran, chairman of the Physical Science Courses and associate professor of chemistry at Roosevelt, will direct the sessions. The series will include a survey of science from Galileo to nuclear energy and radar, an analysis of the scientific attitude, the scientific method, and the meaning of science to the individual and the community. Further information may be obtained from Morris Goran, Chairman of Physical Science Courses, 430 South Michigan Avenue, Chicago 5, Illinois.

NRC News

A preliminary report on the Survey of University Patent Policies has just been released by the National Research Council. This report on the survey which the Council has been conducting for the past two years is presented for the information and guidance of research scientists, university administrators, patent attorneys, industrialists, and others concerned with the conduct, administration, and support of scientific research and the handling of patentable discoveries and inventions growing out of research on the university campus.

For more than 30 years the Council has been interested in the patent problem. In 1917 the U. S. Commissioner of Patents, with the approval of the Secretary of the Interior, requested the Council to appoint a committee to investigate the Patent Office and the patent system, with a view to increasing their effectiveness, and to consider what might be done to make the Patent Office more of a national institution and more vitally useful to the industrial life of the country. The report of the Patent Committee, appointed by the Council in compliance with that request, was issued in 1919 as the first publication in the Council's Reprint and Circular Series.

The Council's present Committee on Patent Policy, under whose sponsorship this survey of university patent policies has been conducted, was created in 1933. Through the years this Committee has given continuing consideration to the various aspects of the patent problem and has held several conferences on the general subject and on specific patent questions.

The present survey has been conducted under the direction of Archie M. Palmer, who has been a member of the Council's Committee on Patent Policy since its inception. With thoroughness and acuity, resulting from deep personal interest and extended experience with the problem as university administrator and research worker, he has analyzed the prevailing practices of the universities and has prepared this preliminary report on his findings.

The report is organized in a series of analytical chapters on personal research, institutionally supported research, sponsored research, medical patents, patent management procedures, and patent revenue, with a general background discussion of patents and university research, an over-all analysis of the present situation, and an appendix containing verbatim statements of 37 definitive university patent policies.

The report is available at $1.50 per copy from the Patent Policy Survey, National Research Council, 2101 Constitution Avenue, Washington 25, D. C.; checks should be made payable to National Academy of Sciences.

The Committee on Patent Policy is composed of George B. Pegram (chairman), Bruce K. Brown, Conway P. Coe, Gano Dunn, Edward S. Mason, Archie M. Palmer, Lewis H. Weed, and Detlev W. Bronk, chairman of the Council, *ex officio*.

Through its Committee on Patent Policy and the director of the survey, the Council gratefully acknowledges its indebtedness to the college and

university officials, scientists, and others who liberally contributed information and data concerning existing policies and practices, and to the Research Corporation, which made the survey possible through a generous grant to the Council without placing any restrictions on the conduct of the survey or assuming any responsibility for the findings.

Deaths

Jan Blaton, 42, professor of physics at the Jagellonian University, Krakow, Poland, was killed May 17 in a fall while on a holiday in the Polish Tatra Mountains. Dr. Blaton was the leading younger theoretical physicist in Poland.

Frances Grace Smith, 76, emeritus professor of botany at Smith College, died May 25 in Northampton, Massachusetts, following a heart attack.

Otto Marburg, 74, clinical professor of neurology at Columbia University and international authority on nervous diseases, died June 13 in New York City.

The British Commonwealth of Nations Scientific Liaison Offices (London) have been opened on the third floor of Africa House, Kingsway, W.C.2, in order to bring together several of the Commonwealth countries' scientific liaison offices and also those about to be organized. Each of the offices will continue to operate with complete independence of action, but the convenience of occupying adjacent premises will facilitate closer cooperation between them on matters of common interest. The offices taking part in the scheme are the Scientific Liaison Offices of Australia, Canada, Central African Council, India, New Zealand, South Africa, and the United Kingdom. Pakistan and the Commonwealth Agricultural Bureaux will be represented, and the Overseas Liaison Division of the U. K. Department of Scientific and Industrial Research will be located there.

The Loyal Order of Moose, with the cooperation of the University of Chicago, is sponsoring the Second International Symposium on Feelings and Emotions on October 28–30. The Mooseheart Symposium, under the general chairmanship of Martin L. Reymert, director of the Mooseheart Laboratory for Child Research, is held on the occasion of the 20th anniversary of the publication, "The Wittenberg Symposium on Feelings and Emotions." Anton J. Carlson, professor emeritus of physiology at the University of Chicago, is honorary chairman. Among the contributors will be: John E. Anderson, University of Minnesota; Magda Arnold, Wellesley College; Samuel J. Beck, Michael Reese Hospital, Chicago; B. P. Bapkin, McGill University; Dorwin Cartwright, Massachusetts Institute of Technology; Chester Darrow, Illinois Institute of Juvenile Research; John Elmgren, University of Gothenburg, Sweden; Franklin Fearing, University of California; C. B. Frisby, National Institute of Industrial Psychology, London; Arnold Gesell, Yale University; R. L. Jenkins, University of Illinois; Harold Jones, University of California; David Katz, University of Stockholm; Herbert Langfeld, Princeton University; George Lawton, New York City; H. S. Liddell, Cornell University; Rensis Likert, University of Michigan; Donald B. Lindsley, Northwestern University; Jules Masserman, Northwestern University; Margaret Mead, American Museum of Natural History; Albert E. Michotte, University of Louvain; James G. Miller, University of Chicago; Gardner Murphy, The City College of New York; Henry A. Murray, Harvard University; Ørnulv Ødegaard, University of Oslo; Henri Pieron, University of Sorbonne; Curt Richter, Johns Hopkins Hospital, Baltimore; Anne Roe, New York City; Carl R. Rogers, University of Chicago; Saul Rosenzweig, Western Pennsylvania Psychiatric Institute and Clinic; David Shakow, Illinois Neuropsychiatric Institute and University of Chicago; Nathan W. Shock, U. S. Public Health Service; William Stephenson (formerly of Oxford University), University of Chicago; Roger J. Williams, University of Texas; and Harold G. Wolff, New York Hospital. The full list of contributors will include 40–45 scientists in various disciplines from different parts of the world. The sessions on October 28 will be held at Mooseheart, Illinois, and those on October 29 and 30 at the University of Chicago. In planning the program, Dr. Reymert has been assisted by Anton J. Carlson and James G. Miller, of the University of Chicago, Herbert Langfeld, of Princeton University, and others. All sessions of the conference will be open without tickets to those interested.

There will be Open House for all who wish to visit Mooseheart, the City of Childhood, on Wednesday, October 27, and Sunday, October 31.

Some of the speakers at the Symposium will participate in the University of Chicago Round Table national network radio broadcast on Sunday, October 31.

Information concerning hotel accommodations and other matters may be obtained by writing to Dr. Reymert. A Housing Committee will soon be established in Chicago. Participants will be given gratis transportation between Chicago and Mooseheart through the courtesy of the Moose Fraternity. Further details concerning the Symposium will be announced at a later date.

Make Plans for—

Applied Mathematics Symposium of American Mathematical Society, July 29–31, Massachusetts Institute of Technology, Cambridge.

International Congress on Mental Health, August 11–21, London, England.

International Society of Hematology, biannual meeting, August 23–26, Hotel Statler, Buffalo, New York.

American Institute of Electrical Engineers, August 24–27, Spokane, Washington.

International Geological Congress, 18th Session, August 25–September 1, London, England.

American Chemical Society, August 30–September 4, Washington, D. C.

7th International Congress of Applied Mechanics, September 5–11, Imperial College of Science and Technology, South Kensington, London, England.