Dr. James B. Conant, president of Harvard University, and formerly professor of organic chemistry.

Dr. James Ewing, director of cancer research at Memorial Hospital and professor of oncology at Cornell University Medical School, New York City.

Dr. Francis Carter Wood, director of the Crocker Institute of Cancer Research, Columbia University.

Dr. Clarence Cook Little, director of the Roscoe B. Jackson Memorial Laboratory, Bar Harbor, Me., and managing director of the American Society for Control of Cancer.

Dr. Ludvig Hektoen, head of the department of pathology at the University of Chicago; chairman of the National Research Council.

Dr. Parran, surgeon-general, is *ex-officio* a member of the committee.

The bill authorizing the institute was signed by President Roosevelt in August. It calls for the sum of $750,000 for the erection of a building and an annual appropriation of $700,000 for research and for the purchase of radium. Its primary object is research into the causes and cures of the disease. In addition, grants-in-aid may be made to other organizations and radium will be loaned.

A building for the institute is to be erected at Bethesda, Md., on land given by the late Luke Wilson, of Washington. The director of the institute has not yet been appointed.

SCIENTIFIC NOTES AND NEWS

THE Eldridge Reeves Johnson Foundation Lectures of the University of Pennsylvania will be given during November by Dr. Irving Langmuir. The general subject of the lectures will be: "Monolayers and Multilayers and Their Application to Biological Problems." Previous Johnson Foundation lecturers have been: Dr. A. V. Hill, Foulerton research professor of the Royal Society; Dr. E. D. Adrian, fellow of Trinity College, Cambridge, Foulerton research professor of the Royal Society; Dr. Joseph Erlanger, professor of physiology, Washington University, St. Louis, and Dr. H. S. Gasser, director of the Rockefeller Institute for Medical Research, New York City.

DR. HANS VIRCHOW, professor of anatomy at the University of Berlin, celebrated his eighty-fifth birthday on September 10.

THE Wright Brothers Medal of the Society of Automotive Engineers has been awarded jointly to R. J. Minshall, John K. Ball and Fred P. Laudan, engineers of the Boeing Aircraft Company, for the best paper presented to the society on aerodynamics and related subjects. The medal, which was awarded for a paper on the design and construction of large aircraft, was presented at the meeting of the society held in Los Angeles on October 7, 8 and 9.

DR. JAMES M. MARTIN, of Dallas, Texas, at the recent meeting in Chicago, was elected president of the American College of Radiology.

ON the occasion of the opening assembly of the college, Dr. William E. Wickenden, president of the Case School of Applied Science, Cleveland, unveiled a portrait of Dr. Eckstein Case, cousin of Leonard Case, Jr., founder of the college. Dr. Case retired on July 2 from active duty as treasurer of the institution, completing fifty years of service.

AT the University of Pennsylvania, Professor J. R. Schramm has been made professor of botany and director of the department; Professor Rodney H. True has become professor emeritus, but remains director of the Morris Arboretum; Dr. Conway Zirkle has been promoted to a professorship. Promotions in the department of zoology include Dr. Edwin R. Helwig and Dr. Rudolf G. Schmieder, from the rank of instructor to that of assistant professor.

DR. GEORGE L. PELTIER, plant pathologist in the Nebraska Agricultural Experiment Station since 1920, has been transferred to the chairmanship of the department of bacteriology at the University of Nebraska. Dr. R. W. Goss, of the station, has been appointed plant pathologist, and Dr. J. H. Jensen, of the Puerto Rico Agricultural Experiment Station, will become associate plant pathologist.

INSTRUCTORS in the School of Medicine of the George Washington University have been appointed as follows: Dr. Robert Custis Grubbs, physiology; Dr. Gail Lorenz Miller, biochemistry; Dr. Edgar Deucher Griffin, psychiatry; Dr. Zigmond Meyer Lebensohn, neurology; Dr. Joel Norton Novick, otorhino-laryngology.

DR. G. E. F. LUNDELL, since 1917 associate chemist in the Division of Chemistry of the Bureau of Standards, has been appointed chief of the division to fill the vacancy created by the retirement last July of Percy H. Walker.

DR. D. I. ABRAMSON, formerly instructor in the department of physiology of the Long Island College of Medicine and Sutro fellow in cardiovascular research at Mount Sinai Hospital, New York, has been appointed director of the department of cardiovascular research of the Institute for Medical Research at the Jewish Hospital, Cincinnati.

A RESEARCH fellowship of $4,500 at the Iowa State College, provided by the Charles Pfizer and Company,

Brooklyn, N. Y., has been awarded to Dr. Edward A. Prill, instructor in chemistry and bacteriology at Coe College for a study of fermentation in the ripening of butter.

DR. TIMOTHY LEARY, Boston, medical examiner of Suffolk County, has been given a grant-in-aid by the Committee on Scientific Research of the American Medical Association for further study of atherosclerosis.

DR. H. M. O. LESTER, deputy director of the Sleeping Sickness Service, Nigeria, has been awarded a Carnegie grant for visits to the Congo, Tanganyika, the Southern Sudan and other parts of Africa to study methods of sleeping-sickness control.

DR. ALEXIS CARREL, a member of the Rockefeller Institute for Medical Research, returned to New York City on September 30.

DR. WILLIAM M. SMALLWOOD, chairman of the department of zoology of Syracuse University, has returned to the United States after spending three months in England and Scotland.

DR. RAYMOND PEARL, professor of biology at the School of Hygiene and Public Health of the Johns Hopkins University, who was last April elected Heath Clark lecturer at the University of London for 1937, sailed for Europe on September 30.

DR. WILLIAM M. MANN, director of the Zoological Park at Washington, D. C., has returned from a collecting expedition to the East Indies, bringing with him a large collection of animals for the park.

DR. GEORGE B. CRESSEY, chairman of the department of geology and geography at Syracuse University, left Moscow on September 9 for northern Siberia, where he will continue his studies of Asiatic geography. He is traveling under the auspices of the Northern Sea Route Administration. Earlier in the summer he served as geographic consultant in Moscow for the Soviet World Atlas and participated in the Siberian excursion of the International Geological Congress.

THE London *Times* reports that the German explorer, Herr Wilhelm Filchner, who was awarded the German national prize of $40,000 for art and science, recently crossed the Indian frontier after having been released from captivity by the Tungans (Chinese Moslems) in Chinese Turkestan. He has sent a message to Simla from Leh, Kashmir, stating that he and his companion, Herr Haack, were imprisoned in Khotan for seven months. The object of the expedition was the establishment of a chain of magnetic stations from Lanchow, in Kansu, to Khotan. As a result it will be possible to draw magnetic maps of these areas.

DR. CLIFFORD W. CHAPMAN, of Ottawa, who expected to occupy a position with the Chinese Government as pharmacologist in the National Health Organization at Nanking, has been unable to take up his work there on account of war conditions in China.

THE annual faculty address at the opening session of the School of Medicine of the George Washington University was delivered on September 22 by Professor Francis Randall Hagner, executive officer of the department of urology. Dr. Hagner spoke on "The Early History of the George Washington University School of Medicine." He was presented by Dean Earl B. McKinley, who recently returned from the Orient, where he made a study of tropical diseases.

DR. SELIG HECHT, professor of biophysics at Columbia University, will deliver the first Harvey Society lecture of the current series at the New York Academy of Medicine on October 21. He will speak on "The Nature of the Visual Process."

AT the opening of the hundred and thirteenth annual session of the Jefferson Medical College on September 20, the introductory lecture was delivered by Dr. George Russell Bancroft, professor of physiological chemistry and toxicology, on "Some Goals in Medical Study."

DR. CHEVALIER JACKSON, of Temple University, Philadelphia, lectured on broncho-esophagoscopy at the Fanny Blumenthal Clinic in the Children's Hospital of Paris, during the first ten days of September.

DR. E. C. DODDS, Courtauld professor of biochemistry at the University of London, will give on October 11, 12 and 13 the Harben lectures of the university. He will speak on "The Theoretical and Practical Significance of Endocrinology."

THE Harveian Oration before the Royal College of Physicians of London will be given on October 18 by Sir Arthur F. Hurst. He will speak on "Observation and Experiment and the Physiology of the Stomach."

A SOLVAY Chemical Conference on "Vitamins and Hormones" was held at Brussels from October 4 to 9. The speakers were: P. Karrer, H. von Euler, Ad. Windaus, W. N. Haworth, A. Szent-Györgyi, L. Ruzicka, E. Laqueur and T. Kögl.

THE twenty-seventh annual Clinical Congress of the American College of Surgeons will be held at the Stevens Hotel, Chicago, from October 25 to 29, under the presidency of Dr. Eugene H. Pool, of New York City. The annual college oration on surgery will be delivered by J. P. Lockhart-Mummery, of London, whose subject will be "The Surgeon as a Biologist."

Nature states that the third Prehistoric Congress of the Far East will take place at Singapore from Janu-

ary 24 to 29, 1938. Membership in the Congress is confined to delegates nominated by their respective governments or by scientific societies and institutions. Other anthropologists and prehistorians, however, will be allowed to attend the sessions as visitors and will enjoy the privileges of members, with the exception of the right to vote. The official languages which will be recognized are English, French and German. There is no subscription. Applications for invitation should be addressed to the Director, Raffles Museum, Singapore, Straits Settlements.

THE League of Nations Mixed Committee on the Problem of Nutrition appointed in September, 1935, has issued a detailed report. It urges governments to adopt a conscious nutrition policy by establishing national committees to ascertain food consumption habits and nutritional status in all sections of the population. Detailed evidence of malnutrition even in the most advanced countries is given in the report, which is intended to be used as a basis for a world nutrition policy during the next few years. The committee is made up of representatives of the Technical Commission of the Health Committee of the league, the International Labor Office and the International Institute of Agriculture. The United States was represented by Dr. Elmer V. McCollum, Baltimore; Dr. Edwin G. Nourse, of the Brookings Institution, Washington; Dr. Faith M. Williams, of the Department of Labor, Washington; Professor Warren C. Waite, Minneapolis, and Dr. Harold B. Rowe, of the Brookings Institution, Washington.

THE National Research Council has formed a committee for research in contact catalysis, of which Dr. Robert E. Burk, professor of chemistry in the Graduate School of Western Reserve University, is chairman. Other members are: Professor F. O. Rice, of the Johns Hopkins University; Dr. P. H. Emmett, recently of the Bureau of Chemistry; Dr. L. S. Kassel, expert on chemical mechanisms for the Universal Oil Products Company; Dr. L. F. Marek, recently head of the Department of Industrial Chemistry at the Massachusetts Institute of Technology, now with Arthur D. Little and Company; Dr. W. A. Lazier, in charge of catalytic research for E. I. du Pont de Nemours and Company, and Dr. E. C. Williams, formerly Ramsay professor of chemical engineering at the University of London, now vice-president in charge of research of the Shell Development Company, San Francisco.

THE University of Tennessee College of Medicine has established three fellowships in radiology. Fellows will receive their practical instruction in the department of radiology of the John Gaston Hospital, the municipal hospital of the City of Memphis. The hospital is newly equipped with modern radiological equipment and possesses an adequate supply of radium. Remuneration of fellows will be: for the first year, maintenance and $400; for the second year, maintenance and $600; for the third year, maintenance and $1,200.

A BEQUEST of $211,247, the amount of the residuary estate of the late William Campbell, Howe professor of metallurgy at Columbia University, has been made to the university for the establishment of a fellowship for the encouragement of scientific research.

BY the will of the late Louis Blaustein, of Baltimore, a foundation to be used for charitable, educational or research purposes without regard for religion, creed, race or locality, has been endowed with the sum of $500,000. It will be known as the Louis and Henrietta Blaustein Foundation, and will be established as a corporation which will be organized within ten months from the date of probate of the will and will be managed by a board to be appointed by the widow and three children. The will reads: "The trustees shall thereupon pay over to the corporation the fund referred to, and the corporation shall use and apply the income therefrom and parts of the principal as hereafter set forth, for the furtherance and development of such charitable, benevolent, recreational, hospital, infirmary, educational, scientific, literary, library, research or other similar purposes as the board of directors of the corporation in its absolute discretion from time to time determine, and under such conditions as it may determine. The income from the fund may be used or its principal; it may go for medical or sociological research, education, recreation or any other benevolent purpose; it may be spent in Baltimore or elsewhere."

A GRANT of $50,000 to provide for a three-year program of research on disease has been made to the University of Pittsburgh School of Medicine by the Westinghouse Electric and Manufacturing Company. Under the grant a study will be made at the university of the value of artificial fever as a weapon against rheumatism, arthritis, venereal disease, the common cold, influenza, heart diseases, tuberculosis and brain disorders. The announcement was accompanied by a statement that the Westinghouse Company will not participate in the research, and has agreed to make the results available to all medical authorities as a contribution to public health. The research program will include attempts to find facts relating to humidity and temperature in their effects on the body.

THE American Pharmaceutical Association has announced, according to *Industrial and Engineering Chemistry,* that it will install a new laboratory in the American Institute of Pharmacy in Washington,

with the hope that early in 1938 it will be in operation. The purpose will be to develop improved standards for official drugs and preparations, and there will be included a study of tests for identity and purity as well as the development and improvement of methods of assay. While the laboratory is planned primarily for the study of the problems of the National Formulary, the association hopes that means will be found whereby the Board of Trustees of the U. S. Pharmacopœia will be able to participate in the research program. For the time being, the management of the laboratory will be under the direction of a committee appointed by the council, and later an advisory committee may be established.

DISCUSSION

LOUIS PASTEUR'S PATENTS

THAT Louis Pasteur actually patented several of his discoveries is a fact little known. Attention is directed to these patents in view of the current interest in the question whether research workers should obtain patents for any industrial and commercial utilization of their discoveries.

The results of Pasteur's researches in the manufacture of beer were patented in at least four different countries—France, England, Italy and the United States. In the United States two patents were obtained, No. 135,245 for "improvements in the process of making beer," granted on January 28, 1873, and No. 141,072 for "improvements in the manufacture and preservation of beer and in the treatment of yeast and wort, together with apparatus for the same," granted on July 22, 1873.[1]

The earlier patent recites:

> Previous to my invention in the process of making beer it has been customary to permit the exposure of the "wort" —that is, the boiled extract of malt or other material seasoned with hop or other qualifying ingredient—to the action of atmospheric air. I have discovered that by contact in the usual way with air during the process not only is the quality of the beer produced much impaired, but also that a less quantity is made from a given amount of wort than can be otherwise produced.
>
> Based upon this discovery and the idea of performing the process of brewing without the presence in the wort of atmospheric air, my invention has for its object to produce a better quality and greater quantity of beer from the same quantity and quality of wort, and to afford a beer which shall also embody the quality of greater degree of unalterableness during time and changes of climate, etc., in transportation and use; and to these ends my invention consists in expelling the air from the boiled wort while confined in a closed vessel or closed vessels, and then cooling it by the application of sprays of water to the exterior of such vessel or vessels, as will be hereinafter more fully explained.

The patent describes in detail an apparatus for removing the air and replacing it with carbon dioxide, and the process of carrying out the brewing in this manner.

The second patent is directed to the production of pure yeast, free from "organic germs of disease." The specification describes the manner in which such yeast may be obtained and tested. For testing, a microscopic examination, as well as trial run with a small quantity of beer, is indicated, and in connection with the former the drawing shows the appearance of pure and contaminated yeasts under the microscope. The preservation of the pure yeast is also mentioned. The patent also describes an apparatus and a method for brewing beer with the pure yeast. Four claims are in the patent, claim 1 being for the method of obtaining pure yeast, claim 3 for a vessel for making the control run and claim 4 for the brewing apparatus. The second claim, which reads, "Yeast, free from organic germs of disease, as an article of manufacture," is unique in patents in respect to its subject-matter. A claim of this type would now probably be refused by the examiner, since it may be doubted that the subject-matter is capable of being patented.[2]

The applications for the two patents are signed and sworn to by Louis Pasteur, as required by law. The record in the Patent Office shows that the patents were granted without any difficulty.

The patents were never assigned, and no record of anything having been done with them has been found. In all likelihood no attempts to commercialize the inventions were ever made, in this country at least.

In France three patents were obtained: No. 91,941, June 28, 1871 (Series III, Vol. 1, c. 14, 3, pages 18–19); No. 92505, Aug. 21, 1871 (Series III, Vol. 1, c. 14, 3, page 20); and No. 98,476, Mar. 13, 1873 (Series III, Vol. 6, c. 14, 6, pages 2 to 4). In Italy two patents were obtained, one on April 8, 1872 (Series II, Vol. 3, No. 124, plate 37) and one on July 10, 1873 (Series II, Vol. 4, No. 339, plate 89). Two British patents are numbered 2225, Aug. 24, 1871, and 1106, Mar. 25, 1873. The subject-matter of each of the three groups of patents corresponds generally to the two United States patents.

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[1] Copies of the United States patents can be obtained from the Commissioner of Patents, Washington, D. C., for ten cents each.

[2] See the decision of the United States Supreme Court in American Fruit Growers *v.* Brogdex, 283 U. S. 1, 1931.