cation of highways, forests, rivers, minerals or other data.

This project, sponsored by the California Department of Natural Resources and approved by several government agencies, is now awaiting final authorization from Washington. The first unit of the complete western states map, the California section, is already two thirds completed. Started by the U. S. Forest Service under the direction of H. A. Siedelmeyer, the work is now being carried on by the WPA. Approximately a hundred men are engaged on this section, which has been under construction for the last two years.

If the project is enlarged under federal direction to include the eleven Western States, Mr. Siedelmeyer will be lent by the U. S. Forest Service to take charge of this work.

THE SIXTEENTH EXPOSITION OF CHEMICAL INDUSTRIES

THE sixteenth Exposition of Chemical Industries will be held at the Grand Central Palace, New York City, from December 6 to 11. In addition to the many exhibits of chemicals and chemical products, there will be displays of plant equipment and chemical process machinery of advanced design. Purity and uniformity of product, low cost production and efficiency in the handling of materials will be emphasized and modern methods for meeting the needs of the unit process industries of chemical engineering will be demonstrated.

The exhibits will include general plant equipment and machinery in terms of unit processes of chemical engineering. High vacuum pumps, liquid pumps, compressors and blowers for the chemical industry will be exhibited in the plant equipment section. Bottling equipment will be supplemented by mixing and storage tanks, pumps, filters, mixers, labelers and cappers.

Instruments of precision which safeguard the operation and control of all chemical engineering processes will constitute an important section. Indicating and controlling instruments will include those for temperature, pressure, humidity and the flow of fluids. Other instruments to be displayed are portable and wall-type indicating pyrometers, resistance thermometers, pyrometer controllers, direct reading air velocity meters, industrial thermometers, oil testing instruments, chemical thermometers and hydrometers.

The rôle of metals and alloys in chemical engineering construction and in the processes of industrial chemistry will be represented by comprehensive exhibits of steel and corrosion-resistant alloys, likewise by the non-ferrous metals such as copper, brass and bronze. For those interested in the fabrication of chemical plant equipment there will be an exhibit to demonstrate the weldability of stainless steels. Other items in the metals section will include tubing for a variety of chemical plant installations, woven wire fabrics, wire rope, cable. Tubing, couplings and valves, in brass, aluminum alloy, steel and nickel will be shown in all sizes for process operations over the complete range of pressure and temperature conditions.

Materials handling equipment will demonstrate the labor-saving features and space-saving advantages attainable in modern warehousing. With the latest equipment, which will be on display, unnecessary handling and rehandling, piling and repiling is eliminated.

ROCKEFELLER TRAVELING FELLOWSHIPS

THE British Medical Research Council has awarded Rockefeller fellowships to the following for the academic year 1937–38:

Dermid Lockhart Cameron Bingham, clinical tutor, Surgical Out-patient Department, Royal Infirmary, Edinburgh.

Eric George Lapthorne Bywaters, assistant clinical pathologist, Middlesex Hospital.

Philip Rainsford Evans, registrar, Medical Diseases of Children, King's College Hospital, London.

John George Sclater, tutor in clinical medicine, Royal Infirmary, Edinburgh.

Eric Frank Scowen, assistant director, Medical Professorial Unit, St. Bartholomew's Hospital, London.

Charles Herbert Stuart-Harris, Sir Henry Royce research fellow in influenza, London.

Graham William Hayward, resident medical officer, National Hospital for Diseases of the Heart, London.

All the fellows propose to work at centers in the United States. Dr. Stuart-Harris and Dr. Hayward will hold their fellowships under modified conditions, while receiving emoluments from other sources.

In addition, the Rockefeller Foundation has awarded fellowships, on the recommendation of the Medical Research Council, to the following candidates in the special field of psychiatry, neurology and related subjects:

Edward William Anderson, medical director, Cassel Hospital, Penshurst.

Alexander Kennedy, assistant medical officer, Maudsley Hospital, London.

Alan Sutcliffe Kerr, surgical registrar, Royal Infirmary, Liverpool.

Denis John Williams, resident medical officer, Hospital for Nervous Diseases, Maida Vale, London.

Alexander Francis Rawdon-Smith, senior student, Royal Commissioners for the Exhibition of 1851, working

in the Psychological Laboratory at the University of Cambridge.

Dr. Anderson proposes to work in Germany, the others at centers in the United States. Dr. Rawdon-Smith will hold his fellowship for six months only.

FIRST AWARD OF THE FRANCIS P. GARVAN MEDAL

DR. EMMA P. CARR, head of the department of chemistry at Mt. Holyoke College, was awarded on September 8 the first Francis P. Garvan Gold Medal, established "to honor outstanding women chemists." Of those starred in American Men of Science 4.6 per cent. are women. The award, announced by the American Chemical Society at its ninety-fourth meeting, was given to Dr. Carr in recognition of "her work in physical chemistry, especially on the structure of organic molecules by means of absorption studies in the far ultra-violet portion of the spectrum."

According to the Committee of Award, of which Dean Frank C. Whitmore, of Pennsylvania State College, president-elect of the society, was chairman, Dr. Carr has become an authority in this field of chemistry. She developed at Mt. Holyoke an unusual research technique in which organic chemists, physical chemists and physicists cooperate closely.

Dr. Carr, now in San Francisco, will sail soon for Australia on an educational mission. A paper describing the results of her work and that of her coworkers was read by Professor Mary L. Sherrill, of Mt. Holyoke College, before the Division of Organic Chemistry. The report confirmed the configuration of two different forms of hydrocarbon molecules, the principal constituents of gasoline. By means of absorption spectra, the theory of the structure of the cis and trans 2-butene isomers, or compounds with an identical number of hydrogen and carbon atoms but different arrangement of atoms around the double bond, was borne out. Dr. Carr has also identified for the first time the pure cis and trans isomers of 2-pentene, a third hydrocarbon molecule. This additional data of a purely scientific nature will aid the petroleum chemist. Dr. Carr's reported researches have dealt with the energy relationships of the hydrocarbon molecules, especially of the double bond, involving the olefins.

Dr. Carr was born in Holmesville, Ohio, in 1880. She began the study of chemistry under Professor William McPherson, of the Ohio State University, continuing at Mt. Holyoke College and at the University of Chicago. From the latter institution she received the degrees of bachelor of science and doctor of philosophy, studying under Dr. Julius Stieglitz.

She became head of the department of chemistry at Mt. Holyoke in 1913 after some years of teaching and research and began her spectrographic work in 1919. She has traveled widely, and has carried on research under A. W. Stewart in Belfast, Ireland, and Victor Henri, of the University of Zurich, Switzerland. Last year she was delegate from the National Research Council to the International Chemistry Union meeting in Lucerne.

The work of Dr. Carr and her associates at Mt. Holyoke has been supported by the National Research Council, which provided a vacuum spectrograph and technical assistance, and by the Rockefeller Foundation, which has granted financial aid for absorption spectra research with unsaturated hydrocarbons. The medal will be formally presented to Dr. Carr at the ninety-fifth meeting of the society at Dallas, Texas, on April 18, 1938.

SCIENTIFIC NOTES AND NEWS

DR. SIMON FLEXNER, director-emeritus of the laboratories of the Rockefeller Institute for Medical Research, will sail for England on September 25 to take up his work as Eastman visiting professor at the University of Oxford.

DR. JAMES ROWLAND ANGELL, formerly professor of psychology at the University of Chicago and later president of Yale University, recently appointed educational director of the National Broadcasting Company, will leave for Europe early in October. He will make a study of educational broadcasting in England, Belgium, Holland and the Scandinavian countries.

DR. LOUIS MARTIN, director of the Pasteur Institute, has been elected a member of the French Academy of Sciences to succeed Dr. Jean Charcot, who was drowned when the *Pourquoi Pas?* foundered off the coast of Iceland. Dr. Charcot is succeeded in the French Academy of Medicine by the author Dr. Georges Duhamel.

PRESENTATION of the first German national prizes, established in 1936 as a substitute for the Nobel prizes as part of the protest of the German Government against the award of the Nobel peace prize to Carl von Ossietzky that year, was made on September 7 at a cultural session of the Nazi Party Congress. A prize of $40,000 was awarded to Dr. Alfred Rosenberg, official philosopher of national socialism; one prize was divided between Professor August Bier, for his work with new methods in surgery, and Professor Ferdinand Sauerbruch, for his work in the sur-