mineral springs and volcanoes, and were analyzed for helium by Cady and McFarland's method, for other constituents by Hempel's standard method. The purity of the helium was tested spectroscopically. Carbon dioxide, sulphuretted hydrogen, oxygen, carbon monoxide, methane, ethane, nitrogen and heavy hydrocarbons were among the chief constituents of the gases investigated, and from the analytical results it has been possible to classify the natural gases into three types rich in carbon dioxide, in hydrocarbons and in nitrogen respectively; as in the case of helium in American natural gas, the percentage of this element is highest in nitrogen-bearing gas. The helium content of some mineral spring gases examined reaches 0.2–0.3 per cent., but unfortunately the amount of gas available from this source is strictly limited and insufficient for industrial purposes; very small quantities of helium were found in the gas from the Taiwan and Hokkaido areas, where it is associated with petroleum, the average being 0.005 per cent., again an impracticable amount for commercial purposes. The oil and gas reservoirs of Taiwan and Hokkaido are of Tertiary age, from which the low helium content of the gas from these sources is accordingly explained. The authors find that the percentage of helium in a hot spring gas depends to a certain extent on emanation content, though no direct ratio could be established, this agreeing with McLennan's conclusions with regard to Canadian natural gas. Samples containing no helium generally possess the least radioactivity, and this it is said to some extent supports the theory that the origin of helium in natural gas is to be ascribed to disintegration of radioactive substances; if this is so, then the geological age of a gas reservoir is an important criterion of helium possibilities.

RESEARCH FELLOWS IN MINING AND METALLURGY OF THE CARNEGIE INSTITUTE OF TECHNOLOGY

THIRTEEN graduates of colleges and universities have been appointed research fellows to conduct an extensive program of studies in mining and metallurgy at the Carnegie Institute of Technology during the coming year. The work, as in the past, will be carried on by the department of mining and metallurgical engineering, in cooperation with the Pittsburgh Station of the U. S. Bureau of Mines and under the direction of two advisory boards of engineers and business men representing the mining and metallurgical industries.

Of the thirteen investigators, five will study problems in metallurgy and eight have been assigned to carry on research in problems relating to coal mine engineering. The program of metallurgical studies will be supervised officially by an advisory board of Pittsburgh district steel men and engineers. The coal mining investigations will be made under similar conditions with an advisory board of coal operators and mining engineers.

Four of the studies will be financed by the Carnegie Institute of Technology, while the remainder of the work will be underwritten by the industries. Among the contributors are the American Gas Association, which is interested directly in a study of "warning agents for manufactured gas," The National Coal Association, the New York Edison Company and other industrial enterprises.

Senior investigators to assist the research fellows will be furnished by the Bureau of Mines. Problems have been selected and assigned for the year as follows: "Constitution of Low Temperature Tar," by B. F. Branting, fellow, and R. L. Brown, senior; "Coal Ash Fusibility as Related to Clinkering," by C. L. Corban and E. J. Talbert, fellows, and P. Nichols and A. Selvig, seniors; "Formation and Identification of Inclusion in Steel," by G. R. Fitterer, fellow, and C. H. Herty, senior; "Solubility of Iron Oxide in Iron and its Effect on Physical Properties of Pure Iron," by R. L. Geruso, fellow, and C. H. Herty, senior; "Flammation of Fine Sizes of Coal Dust," by C. H. Gilmour, fellow, and C. M. Bouton, senior; "Electric Power of Storage Batteries *vs.* Trolley Locomotives," by Donald C. Jones, fellow, and L. C. Illsley and C. W. Owings, seniors; "Warning Agents for Manufactured Gas," by E. R. Perry and E. J. Talbert, fellows, and S. H. Katz, senior; "Viscosity of Open Hearth Slag," by M. B. Royer, fellow, and C. H. Herty, senior; "Mine Timber Treatment," by N. A. Tolch, fellow, and L. D. Tracy, senior; "Distribution of Ferrous Oxide between Slag and Metal," by S. P. Watkins, fellow, and C. H. Herty, senior; "Case Carburizing of Steel," by R. E. Wiley, fellow, and C. E. Sims, senior.

MENTAL HYGIENE AT YALE UNIVERSITY

YALE UNIVERSITY has announced plans for the development of mental hygiene work in its academic community. With the aid of an appropriation of $50,000 a year for five years from the Commonwealth Fund the university will establish next fall instruction in mental hygiene and will provide a trained staff with whom students may advise concerning problems in this field.

In the freshman year voluntary conference groups will be arranged in which the point of view of mental hygiene will be presented and through which the students may become acquainted with the staff. The groups will be limited to fifteen or twenty men and will meet a member of the staff at least three times during the year.

It is expected to institute a lecture course open to

sophomores in Yale College and the Sheffield Scientific School which will aim to give the student a broad historic concept of life with emphasis upon the adaptation of the individual to his environment. An advanced course for seniors and juniors is also planned which will cover special problems associated with vocational aptitudes. In addition, general lectures to large numbers on various phases of mental hygiene will be given from time to time.

This program will be initiated next fall with an advisory committee in general control, a staff in residence and the assistance of visiting experts. The advisory committee is made up of Dr. Arthur H. Ruggles, who has been professor of mental hygiene at Yale this year; Dr. Edward A. Strecker and Dr. Frankwood E. Williams, consultants in psychiatry; Dr. Stewart A. Paton, chairman of the resident group in psychiatry and mental hygiene. Of these the new appointees are Dr. Williams, editor of *Mental Hygiene,* and medical director of the National Committee for Mental Hygiene; Dr. Paton, lecturer in neurology at Princeton since 1910; and Dr. Strecker, professor of nervous and mental diseases, Jefferson Medical College, Philadelphia. Dr. Williams and Dr. Strecker will not be in residence, but will be called upon for lectures and consultations.

The resident staff will be composed of Dr. Lloyd Thompson, for the past year clinical instructor in psychiatry and clinical director of the Connecticut Society for Mental Hygiene; Dr. Clement C. Fry, assistant in psychiatry at the Harvard Medical School, and Major Harry N. Kerns, M.D., formerly psychiatrist at the United States Military Academy and this year chief medical officer at the Brooks Aviation Field, Texas.

THE ROCKEFELLER FOUNDATION AND THE LEAGUE OF NATIONS

ACCORDING to the annual report of the International Health Board of the Rockefeller Foundation during the year 1925 the board continued to cooperate with the health section of the League of Nations through contributions toward the international interchange of public health personnel, and the epidemiological and public health intelligence service.

The program for international interchanges was started in 1922, and up to November, 1925, 388 health officials from forty-eight different countries had participated. These interchanges consist of courses of travel studies lasting about seven weeks and include lectures by the technical experts and responsible health officials of the countries visited, and also inspection trips. They are held in widely separated parts of the world and are attended by representatives from many countries.

Within the year, four such general collective interchanges were held in Great Britain, Belgium, Yugoslavia and Japan, and a fifth was arranged for a special group from Latin-America. This last-mentioned group made a tour which included visits to Cuba, the United States, Canada, and certain European countries. In addition to these five courses of travel study there were two specialist interchanges, one for factory sanitary inspectors and the other for port medical officers on the Mediterranean Sea. Individual missions were provided for health officials from thirteen countries.

The board continued its contributions toward the Epidemiological and Public Health Intelligence Service. The service collected and published current epidemiological information from all European countries except Albania and Portugal, from all North America and Australasia, and from practically all countries in Asia and Africa which issue such data. Special epidemiological and statistical investigations by individuals were completed and reports were prepared on the organization and work of the health services of various European countries. Handbooks on statistical services, monographs on health organization and special studies were published. Groups of experts continued to study methods of improving the comparability of international medical statistics and of standardizing statistical classification.

In April an interchange of vital statisticians was held under the auspices of the Epidemiological Intelligence Service. It was the third of these meetings for the study of medical statistics. Representatives from thirteen countries participated. The main subject under consideration was the classification of causes of death. Statistical offices in Denmark, Sweden, Norway, Scotland, England, the Netherlands and Switzerland were visited.

The outstanding event of 1925 in the development of the Epidemiological Intelligence Bureau was the establishment of an office in Singapore, to be known as the Far Eastern Intelligence Bureau. A preliminary conference, held in February in Singapore, was attended by representatives of twelve eastern governments. The bureau came officially into existence on March 1. Reports are telegraphed from the bureau each week. They contain information with regard to health conditions in forty-seven ports of the east. A monthly report also is published.

SCIENTIFIC NOTES AND NEWS

THE autumn meeting of the National Academy of Sciences will be held in Philadelphia, upon the joint invitation of the University of Pennsylvania and the Wistar Institute of Anatomy.