THE fifteenth International Geological Congress will be held in South Africa in 1929, and the date of the inaugural meeting in Pretoria is to be during the fortnight following July 29. The special subjects provisionally proposed for discussion are: (*a*) magmatic differentiation; (*b*) pre-Pleistocene glacial periods; and (*c*) the stratigraphy, paleontology, and world distribution of the Karroo system.

GENERAL UMBERTO NOBILE, designer, constructor and pilot of the airship *Norge,* in which the expedition of Captain Raoul Amundsen, Lincoln Ellsworth and General Nobile voyaged from Spitzbergen to Alaska over the North Pole in 1926, has left for Germany and Russia to make final arrangements with the governments of those countries for the Italian airship expedition with which he proposes to make scientific studies in the polar regions this summer. It is reported that with the exception of mechanics the crew will be composed entirely of scientific men, who will take the observations which are the object of the expedition.

ACCORDING to the Tokio correspondent of *Industrial and Engineering Chemistry,* more than five thousand engineers attended the first general meeting of the Kogakkai (the Engineering Society) on November 3 at the Tokyo Imperial University. The Kogakkai is made up of twelve technical societies, including those relating to mining, iron and steel, civil engineering, ordnance and explosives, shipbuilding, architecture, chemical industry, hygienic industry, electrical engineering, telegraphy and telephony, illuminating engineering and mechanical engineering. M. Okochi, head of the Institute of Physical and Chemical Research, gave an address on the fundamental industries. He selected the precision mechanical and the dye-stuff industries as types. Addresses were given on the recent advances in twelve important industries by the representatives of the related societies. Y. Oshima, president of the Society of Chemical Industry, Japan, told of the recent progress of chemical industry in Japan. On the two following days, sectional meetings of each society were held and about one hundred and sixty papers were read, fourteen being those of the Society of Chemical Industry. Six popular lectures and one radio broadcasting were given. Factories and laboratories were open for inspection by attending members. The International Engineering Congress will be held in Tokyo in October, 1929, under the auspices of the Kogakkai. The congress proposes to discuss various engineering problems for the promotion of international cooperation in the study of the engineering science in all its branches.

ACCORDING to press reports the offer by the General Education Board of the Rockefeller Foundation of $1,250,000 to aid the University of Minnesota in establishing a medical center on condition that the city of Minneapolis build a general hospital adjacent to the university was definitely rejected on January 5, at a joint meeting of the public welfare committee of the city council and the committee of twenty-three representing the board of regents, the public welfare board, and the Hennepin County Medical Society.

THE *Journal* of the American Medical Association states that an allotment of $2,000 has been made by the U. S. Treasury Department of the public health service for the preparation of an exhibit to be used at the International Exhibition at Seville, Spain, that will be held in October, 1928. The U. S. Government is participating in this exposition, and all of the government departments and bureaus will be represented. The exhibit of the public health service that is being prepared includes the subjects of smallpox vaccination, venereal diseases, tularemia, safe water and other miscellaneous items.

IN connection with the seventy-fifth annual meeting of the American Society of Civil Engineers it was announced that Charles E. Fowler, consulting engineer of New York, had given the society a trust fund for the granting of annual awards and prizes for engineering work, the awards to be bestowed in memory of the donor's late mother.

UNIVERSITY AND EDUCATIONAL NOTES

EIGHT fellowships worth from $4,000 to $9,000 a year will be established at the New York Orthopedic Dispensary and Hospital from the income of a gift of more than $1,000,000 from the residuary estate of Mrs. John Innes Kane. Mrs. Kane's will made bequests of approximately $4,000,000, including two $500,000 gifts to Columbia University, and directed the executors to distribute the residuary estate among such groups as she might select during her own lifetime.

A GIFT of $2,500,000 for the study of Oriental art has been made by the estate of the late Charles M. Hall, of Oberlin, who acquired $45,000,000 by a process of refining aluminum, which he devised. An institution in Peking will be endowed under the direction of Harvard University and the University of Peking.

FIRE destroyed the main building of Villanova College, Philadelphia, on January 28, and seriously damaged the monastery, with a loss estimated at $2,000,000. The chemical, physical and biological laboratories were a total loss.

IT is announced that the Cleveland Clinic Foundation will receive the $400,000 estate of the late Frank Billings on the death of his widow.

ST. LUKE'S HOSPITAL and Washington University, St. Louis, are named in the will of Edward Mallinckrodt, chemical manufacturer, as preferred recipients of his estate, estimated at several millions, all of which he left to charity and education.

THE board of regents of the University of Michigan has authorized the establishment at the university of a department of graduate medicine, and has asked Dr. James D. Bruce to undertake its organization.

DR. WILER PENFIELD, assistant professor of surgery at Columbia University and neurological surgeon at the Presbyterian Hospital, has been appointed professor of neurological surgery at McGill University.

DR. JOHN C. FORBES has been appointed clinical chemist for the three hospitals of the Medical College of Virginia. Dr. William B. Porter, professor of medicine, has instituted the new clinical chemistry laboratory with Dr. Sidney S. Negus, professor of chemistry, assisting in the details involved.

DR. JOHN A. MCGEOCH, of Washington University, has been appointed acting professor of psychology for the summer session of 1928 at the University of North Dakota.

DR. A. K. MACBETH, reader in chemistry at the University of Durham, has been appointed to the Angas chair of chemistry in the University of Adelaide.

PROFESSOR JACOB, of the University of Toulouse, has been appointed professor of geology at the University of Paris.

PROFESSOR FOSSE, of Lille, has been appointed to take the place of the late Professor Simon in the department of chemistry at the National Museum of Natural History at Paris.

DISCUSSION AND CORRESPONDENCE

APPLIED GEOPHYSICS

AT the present time that subject which may be termed pure geophysics is making, in some directions, rapid progress owing to the practical applications of geophysics to underground exploration. A financial magnate exclaimed to the writer in two consecutive sentences, "It is impossible to know what is underground," and "Any one who could tell what was underground would be worth millions upon millions." I assured him that neither of these extreme views was true, and reminded him of X-rays, and of radio or wireless and of their successes in revealing the unseen. An electro-magnetic explanation left him cold and weary, for finance, like government, is often in the hands of men extraordinarily ignorant of the world in which they live. They are, however, usually experts in arithmetic and human nature!

The geophysical methods employed are divided naturally into two groups. In the northern mining regions magnetic, electrical and electromagnetic methods prevail, and these regions are often hilly, rocky, mountainous. In the southern or Gulf of Mexico region, which is often flat, the underground irregularities—such as the salt domes on the flanks or tops of which oil is often found—are sought for with seismic, gravitational, magnetic and recently with electrical methods.

For the guidance of those who are looking for further information the following references will be helpful. We are promised at an early date a translation into English of Ambronn's excellent treatise[1] on geophysics. This is to be written up to date by the author, and to include a full bibliography. Most of our readers will already have read, with pleasure and interest, the recent report[2] of Dr. Mason, president of Chicago University, which summarizes his investigations in field and laboratory during the last four years. There is also a large five-volume treatise, four parts of which have appeared, "Lehrbuch der Geophysik," by Professor B. Gutenberg (Gebrüder Borntraeger, Berlin).

The U. S. Bureau of Mines at Washington has recently issued a small bulletin, Technical Paper 420, which gives a brief and concise summary, primarily intended for mining men, of the principles and methods and apparatus available. It may be noted that in fig. 17 a battery appears to be giving an alternating current, owing to the omission from the diagram of a commutator which is, however, clearly mentioned in the text. Further criticism is not given here because the present writer and his colleague, Dr. D. A. Keys, are the authors.

As regards electrical and electromagnetic methods it may now be fairly claimed that these have stood well the preliminary tests, and that next they must face the fiery ordeal of achieving their actual purpose of discovering, in a useful manner, the conductors which are below the earth, and of discerning, as far as possible, their size, shape, depth and nature. This is a searching demand! Some ore bodies, such as zinc blende, do not conduct better than the rocks surrounding them, and thus evade detection. Underground water may conduct sufficiently well to simulate an ore body, thus deceiving an enthusiast who would not

[1] "Methoden der Angewandten Geophysik," Dr. Richard Ambronn, Göttingen. (Theodor Steinkopff, Dresden and Leipzig.)

[2] "Physical Exploration for Ores," Dr. Max Mason. (Physical Exploration Corp., 111 Broadway, N. Y.)