way from that usually outlined in order that a definite test may be made. As the theory is generally understood, analysis seems to indicate great weakness in it.

The hypothesis formulated by Wegener is closely related to the Roots theory. Isostasy is an essential part of it—but not the Pratt isostasy. According to this hypothesis, material of which continents and islands are formed, called *sial,* floats in a highly plastic material called *sima.*

The hypothesis has many strong advocates and as many equally strong opponents. It would take too much space even to outline the views of the two groups.

This much may be said, however: The mechanics of the hypothesis are weak to the point of being impossible. The sial, according to Wegener, was all grouped together in one body in the geologic past; then, under the exceedingly small stress differences caused by the tidal forces of the sun and moon, the mass broke into pieces and formed separate continents and islands. This may or may not have been possible. But when the drifting continents had their forward margins crumpled up into mountain systems by the resistance of the sima in which the masses of sial were moving, under small forces, there seems to be much mystery involved in the process.

The biological necessity for all the land movements postulated by Wegener may be present, and his theory may account adequately for the distribution of plants and animals. His theory would have had fewer opponents if he had left out the mountain-forming part of it.

Perhaps it will be found, upon analysis, that the meteorological conditions near the interior area of the unified mass of sial were not favorable to the growth of plants and animals whose remains, deposited in geological periods prior to the splitting up, have been found in parts of the drifting fragments which were far inland when the masses were together. It would seem that the central area of the combined sial would have been very arid and thus not suitable for much of the plant and animal life existing then.

The changes of density needed in the Pratt theory of isostasy may appear to many to be improbable, but if it is granted the mechanical details involved in uplift and down-warping of the earth's surface seem to be reasonable. Vertically acting forces as the predominant ones, with horizontal movements within the crust near the surface as secondary, seem to the writer to explain surface changes better than the regionally acting forces. But the former requires changes in density of crustal materials to maintain isostatic equilibrium.

WILLIAM BOWIE
U. S. COAST AND GEODETIC SURVEY

IRA OSBORN BAKER[1]

IN noting the death of Ira Osborn Baker, which occurred November 8, 1925, it is fitting that the senate of the University of Illinois place on its records a statement in recognition of the long and distinguished service which Professor Baker rendered to the university.

Starting as assistant in civil engineering and physics immediately upon graduation with the class of 1874 (the third class to be sent out by the university), in 1878 he was made instructor and was also put in temporary charge of civil engineering upon the resignation of the professor of civil engineering. In 1879 he was promoted to assistant professor in charge of civil engineering, and in 1880 to professor of civil engineering. With the establishment of departmental organizations in the university in 1892, Professor Baker became head of the department of civil engineering and continued in charge of the department until 1915 when he relinquished the administrative duties, but continued full teaching work. He again carried the administrative work of the department from 1920 to 1922. He was made professor emeritus in 1922, but continued to give service to the university in various ways until his death. During all these years he labored diligently and effectively in the upbuilding of the university. He exercised an important influence on university affairs in the accrediting of high schools, in the work of committees and in various other ways, especially during the earlier and formative period of the university. His greatest contribution was toward the development of the college of engineering and the department of civil engineering. Here through his teaching ability and his high ideals in instruction and in the aims and meaning of education and his insight into the needs of the profession of engineering, he aided greatly in giving early reputation to the college of engineering and in making its standing far higher than the number of students and the financial resources of the institution warranted. He early developed one of the first college laboratories for investigating the properties of cements, mortars and concretes, and a few years later one for highway materials. The designing, construction and equipment of the astronomical observatory were under his charge. Through his text-books and writings he carried his teaching to many engineering schools, even instructing the practicing engineer of the office and field all over the country. He was a leader in professional engineering activities and educational movements. Forty years ago he formed the Illinois Society of Engineers, an organization that

[1] Minute presented to the president and senate of the University of Illinois by a committee consisting of M. S. Ketchum, A. P. Carman and A. N. Talbot.

has had a considerable influence on engineering in the state. He conceived and organized the division of engineering education of the International Engineering Congress of the World's Columbian Exposition in Chicago in 1893, and is counted as the founder of the Society for the Promotion of Engineering Education, which was organized at the time of this meeting. His acquaintance and influence among engineers was country-wide.

Professor Baker's great work was as a teacher. Holding high ideals of the service that the teacher should render the student and having exalted views on the meaning and purposes of education, he exerted a great influence on a long line of students, his interest and his inspiration to them continuing through the years. His activities and service were given generously to church and community. A man of ability, character and personal charm, a teacher noted for instructional ability and influence on students, Professor Baker's fifty years of distinguished service to the University of Illinois deserve high commendation as contributing in a large degree to the work and usefulness of the institution throughout the first half century of its existence.

The committee recommends that the foregoing note be spread on the records of the senate and that a copy of it be sent to Mrs. I. O. Baker, and to Cecil F. Baker, Ira Webster Baker and Imo Baker Bent, children of the deceased.

SCIENTIFIC EVENTS

ELECTIONS OF THE ROYAL SOCIETY OF EDINBURGH

THE following candidates for fellowship have been recommended by the council for election as fellows of the Royal Society of Edinburgh:—

Braid, K. W., professor of botany, West of Scotland Agricultural College, 6, Blythswood-square, Glasgow; Cameron, A. E., professor of zoology, University of Saskatchewan, Saskatoon, Canada; Gardner, J. D., chief assistant to Messrs. D. and C. Stevenson, civil engineers, Edinburgh, 23, Ivy-terrace, Edinburgh; Harrower, J. G., professor of anatomy, King Edward VII Medical College, Singapore; Harvey, W. F., director, Central Research Institute (Government of India), 11, Learmonth-gardens, Edinburgh; Khastgir, S. R., research worker, University of Edinburgh, 1, Pilrig-place, Edinburgh, and Khastgir Lodge, Giridih, Behar, India; Lorraine, N. S. R., resident medical officer in charge of City Hospital, Hull; McBride, J. A., rector of Queen's Park Secondary School, Glasgow; MacKichan, D., formerly principal of Wilson College, Bombay, 18, Douglas-crescent, Edinburgh; Mekie, D. C. T., headmaster, Bristo Public School, 11, Minto-street, Edinburgh; Morris, J. A., Savoy Croft, Ayr; Patton, D., lecturer in botany, Glasgow Provincial College for the Training of Teachers, 9, Thornwood-gardens, Glasgow; Prashad, B., superintendent, Zoological Survey of India, Indian Museum, Calcutta; Roberts, J. A. F., research assistant on the staff of the Animal Breeding Research Department, University of Edinburgh; Romanis, W. H., surgeon to St. Thomas's Hospital, London, 31, Harley-street, London, W.1; Seton, Col. Sir B. G., Indian Medical Service (retired), 12, Grosvenor-crescent, Edinburgh; Small, J., professor of botany, Queen's University, Belfast, Ardcolm, Knock, Belfast; Stokoe, W. N., chief chemist and works manager, Craigmillar Creamery Company, Ltd., 67, Inchview-terrace, Edinburgh; Thomson, G. H., professor of the theory, history, and practice of education in the University of Edinburgh; Thomson, J., lecturer in plant physiology in the University of Glasgow, 17, Lothian-gardens, Kelvinside, N., Glasgow; Wakeley, C. P. G., lecturer in anatomy, King's College, London, 5, Devonshire-place, London, W.; Williams, S., lecturer in plant morphology in the University of Glasgow, 14, Caird-drive, Partickhill, Glasgow.

WORK OF THE INTERNATIONAL EDUCATION BOARD

THE International Education Board has issued its annual report covering work of the board from June 30, 1924, to July 1, 1925. During this period the board has provided traveling fellowships which enabled forty younger men of demonstrated capacity for fundamental research to spend a year or more abroad working under the master from whom they had most to gain. During the year covered by the present report, ninety-nine additional fellowships of the same character were awarded, and sixteen fellowships previously granted were renewed. The following analysis of fellowships provided between June 30, 1924, and July 1, 1925, indicates the international character of the program: Austria 3, Czecho-Slovakia 2, England 2, France 6, Germany 16, Holland 9, Hungary 10, Italy 2, Norway 3, Poland 8, Russia 8, Scotland 2, Serbia 1, Spain 1, Sweden 2, Switzerland 4, United States 20.

Seventeen countries are represented and, by coincidence, the courses of study undertaken by fellowship holders will be carried out in seventeen different lands, though the two lists vary to some extent.

The average age of fellowship holders is under thirty. Almost invariably, before appointment, they have obtained the higher academic degrees, and they have given evidence of an exceptional ability to pursue fundamental research. The fellowship is intended to provide a richer background of scientific experience than a man can obtain in his own country. It is intended that this experience will inure to the benefit of the fellowship holder, the institution to which he expects to return, the country to which he belongs, the country to which he resorts and the particular science to which he has devoted himself.