

ter retains his position as a member of the Peabody Education Board and chancellor of the University of Nashville.

MAJOR FREDERICK S. RUSSELL, U.S.A., professor of pathology in the Army Medical School and curator of the Army Medical Museum, has been selected to succeed Dr. Joseph J. Kinyoun as professor of pathology and bacteriology in George Washington University.

DR. ROSS ANDERSON has resigned as professor of bacteriology and pathology in the University of Utah, and has been succeeded by Dr. Frank A. McC. Jenkin, of the University of Michigan.

AT Western Reserve University, instructors have been appointed as follows: John A. Black, A.M., in chemistry; A. H. Ford, A.M., in mathematics; Clinton R. Stauffer, in geology; Davidson Black, M.D., in histology and embryology.

IN the medical department of the University of Texas, Dr. Henry Hartman has been appointed demonstrator of pathology and Dr. E. E. Calloway, demonstrator of anatomy.

E. H. HENDERSON, Ph.D. (Columbia), professor of education and psychology at Adelphi College, Brooklyn, has been transferred to the chair of philosophy.

DR. S. E. WOLBACH has been appointed director of the histological laboratory of McGill University.

AT Queen's University, at Kingston, Ont., Dr. W. O. Walker has been appointed associate professor.

DR. GEORGE A. GIBSON, F.R.S., has been appointed professor of mathematics at Glasgow, in succession to Professor Jack, who has resigned.

MR. T. MATHER, F.R.S., has been appointed professor of electrical engineering at the City and Guilds Central Technical College in succession to the late Professor Aryton, F.R.S.

MR. WILLIAM BROWN, B.Sc., lecturer in electro-technology at the Royal College of Science for Ireland, has been appointed, as

from October 1, to the chair of physics in the college, which will become vacant on that date owing to the retirement of Professor W. F. Barrett, F.R.S., under the treasury regulations as to age.

DISCUSSION AND CORRESPONDENCE

PROGRESS OF THE INTERNATIONAL LANGUAGE ESPERANTO

ON account of the importance of an international language to science, American scientists will undoubtedly be interested in the following bits of information concerning the international language Esperanto. This language was endorsed by the Pan-American Scientific Congress, which met in Chili, and it was recommended that Esperanto be taught generally in the schools.

The International Medical Congress, which met this summer at Buda Pesth, received ten reports in Esperanto.

The International Congress of Psychologists, at its recent meeting in Geneva, admitted Esperanto as an official language, placing it on the same basis as German, French, English and Italian. Four addresses were made in Esperanto at the general sessions.

The report of the ninth International Congress of Geography, recently held in Geneva, has been printed (unofficially) in Esperanto.

The eighth International Congress of Hydrology, Climatology and Physiotherapy, which met in the city of Algiers in April, made official use of Esperanto in its sessions.

The Brazilian government recently published in Esperanto a résumé of the industrial development of Brazil. As any one who is familiar with one or two modern languages and knows a little Latin can easily acquire a reading knowledge of Esperanto in a few weeks, it is suggested that any who are interested in the above report might do well to secure a copy of it. Many other minor notes might be given, showing that Esperanto is rapidly assuming the place which was intended for it, namely, as a means of inter-communication between people who speak different languages.

I may add to the above notes that there is a strong international organization of physi-

cians, of which Esperanto is the official language. Their journal for May consisted of 24 pages devoted to important medical subjects. Thus far, physicians have made more use of Esperanto than any other profession. They realize the importance to medical science of an easy means of communication between men of the profession all over the world and are rapidly coming to make use of Esperanto for this purpose.

Some of the large type foundries of Europe are now prepared to furnish the few special letters required in printing Esperanto, in various styles.

Five international congresses for Esperanto have been held, between thirty-five and forty nations being represented either officially or unofficially in the last three. The sixth international congress for Esperanto will be held in Washington, D. C., in August, 1910.

A strong organization exists in Europe, with headquarters at Geneva, for the production of technical vocabularies for Esperanto. The writer has been requested to act as secretary for this organization for the United States. He would be glad to communicate with scientists in all parts of the country who may be interested in this work. It will only be a few years until technical vocabularies will be available, so that all important results of investigations can be printed in Esperanto, and thus become available to the whole world.

The fact that there are eighty-six periodicals published in Esperanto, eight of which are published in the United States, may be taken as an index of the growth of the movement for an international language, a movement which now seems assured. Having taken the trouble to learn the language I wish to assure those who are interested that the amount of labor involved in learning Esperanto is certainly not more than one fiftieth that required to learn German.

W. J. SPILLMAN

U. S. DEPARTMENT OF AGRICULTURE

GEOLOGY AND COSMOGONY

TO THE EDITOR OF SCIENCE: 1. In reply to Professor Barrell's communication in your issue of July 2, 1909, it is sufficient to say that he carefully passes over the legitimate

question under discussion, which is that the mountains are formed by the sea, and not at all by the shrinkage of the earth, as taught in most of the books on geology. Since he has thus evaded the issue, his long-drawn-out discussion requires no further notice.

2. In reply to Moulton's statement in your issue of July 23, let me say that my work on the spiral nebulae and on the formation of the solar system, under the secular action of a resisting medium, was essentially completed July 14, 1908, and my subsequent application for copies of his papers (received here in October, 1908) was simply to enable me to make exact references in some of the arguments refuting his theories. This is well known here, for I was all the while in frequent consultation with members of the astronomical and mathematical faculty at Berkeley, and they were fully informed of the results at which I had arrived. My results were held back for over six months (cf. *A. N.*, 4308), and so new did the conclusions appear to the astronomers of the Pacific coast that when my paper was given to the Astronomical Society of the Pacific, January 30, 1909, several of them stated in public interviews in the San Francisco papers that they were exactly the opposite of previous theories.

3. In the *Astrophysical Journal* for October, 1905, Moulton develops a theory that spiral nebulae are formed by one star passing by another, and causing spiral ejections of prominences under tidal forces. This idea seems to have originated with Chamberlin, as outlined in his paper on the "Function of Disruptive Approach, etc."¹ Here are some of the arguments against these Chamberlin-Moulton theories: If such tidal disruptions were in progress, spiral nebulae would be prevalent in the Milky Way, and above all in globular clusters; such is not the case. Perrine has recently shown, in Lick Observatory Bulletin No. 155, that the globular clusters are quite devoid of nebulosity of any kind. Lastly, if spiral nebulae are due to the disruption of one star by another, then both stars would usually be disrupted in passage, and spiral nebulae should

¹ *Astrophys. Jour.*, 14, 17-40, 1901.