State Medical Boards of the United States, and formerly dean of the Long Island College Hospital; treasurer, Dr. George W. Kosmak, attending surgeon of the Lying-In Hospital, and formerly secretary of the American Association of Obstetricians.

UNIVERSITY AND EDUCATIONAL NEWS

A DORMITORY for foreign students at Columbia University and other schools in New York has been made possible through a gift promised to members of the Cosmopolitan Club, an organization of students in Columbia and New York University. Plans for the dormitory provide for a building of 500 rooms to be erected at a cost approximating $1,000,000, on Riverside Drive opposite Grant's tomb. The newspapers report that the donor is John D. Rockefeller, Jr.

DR. F. S. HARRIS, director and agronomist of the Utah Agricultural Experiment Station and professor of agronomy at the Utah Agricultural College, has resigned to become president of the Brigham Young University, at Provo, Utah, where he succeeds Dr. George H. Brimhall, who has been made president emeritus. Professor Wm. Peterson, station geologist and professor of geology in the college, has been appointed to succeed Dr. Harris as director of the station.

DR. NATHAN FASTEN, who went to the Oregon Agricultural College last September from the University of Washington, has been promoted to the headship of the department of zoology.

DR. JOHN W. M. BUNKER, who has been for several years at the head of the bacteriological department of the Digestive Ferments Company of Detroit, has been elected assistant professor of biochemistry and physiology at the Massachusetts Institute of Technology.

DISCUSSION AND CORRESPONDENCE

CONCERNING RECENT AURORAS, MAY 13 AND MAY 14, 1921

TO THE EDITOR OF SCIENCE: On the evening of May 13, 1921, there occurred a great aurora, not visible here on account of clouds, but again on the evening of May 14 there was another great display visible here in spite of the half moon and a low-lying fog which tended to spoil the visibility. As in other great auroras, the great bundles of streamers appeared to converge toward the zenith from the south as well as from the north, east and west. The sky at times was virtually covered with auroral light. The outburst of May 13 caused great disturbance to telegraph and telephone wire transmission and must have been of unusual magnitude. All the effects noted in the aurora of May 14 a day later conformed to the perspective ideas, pointed out in my paper, "Inferences concerning auroras," read at the Boston meeting of the National Academy of Sciences on November 14, 1916, and published in its *Proceedings*, Vol. 3, pp. 1–7, January, 1917.

It is rarely that one great aurora follows so closely on the heels of another and at an interval so short as a day. In fact I have no record or recollection of such a happening in my time of observation, which now extends over fifty years, more or less. Hence the conditions lead to the inquiry whether any unusual condition existed in this instance.

An examination of the solar surface appears to provide, or at least suggest, a possible explanation, and at the same time throw light on the nature of the relation of the aurora to the solar disturbances.

On May 15 there were to be seen on the solar surface two large spot areas, separated by an interval of about one-fourteenth of the diameter of the sun, the one following the other as the sun revolved. These two spot areas, quite distinct from each other, were nearly round, the first a single spot, the second a compact group with a much disturbed area adjacent. They were located near the center of the solar disc.

As the solar revolution takes place in nearly 26 days, the interval between the spots appears to be approximately one day of the surface movement.

This means that in about one day the sec-

ond spot would replace the first in relation to the earth. If the first spot gave rise to emission of ions, radially, which in its orbital motion the earth reached and in which it became enveloped, the aurora of May 13 was possibly the result. The same relation repeated a day later by the second spot replacing the first would account for the aurora of May 14.

The relation of the two auroras in time, and the sequence of spot positions on the revolving sun are significant to say the least.

In this connection it may be noted that the great aurora of March 22, 1920, had a very long and unusual duration, beginning early in the evening of that day and continuing all night, even being observed just before sunrise on the 23d. It may have continued during part of that day, invisibly of course. At that time an examination of the solar surface disclosed a remarkably elongated spot area or chain of spots, and at each end of the chain or elongated group was a well-marked rounded spot. The group was fairly uniform in width extending in a direction nearly parallel to the solar equator, and its length would amply account for the long continuance of the aurora if emanations were pouring out from the whole group as it revolved with the the sun. Moreover, its advance past the meridian of the sun was apparently much the same before the aurora as with the two spots believed to have caused the auroras of this year on May 13 and 14. Such an advance points to a period (several hours possibly) required for the ionic emanations from the spot area to traverse the radius of the earth's orbit, from the sun.

Another matter of interest may be mentioned. In many auroras, especially during the greater outbursts, there occurs at times the peculiar streaming upward, as if a luminous wave was running up toward the zenith crown; a sort of flaming effect. The motion is fairly rapid, perhaps one half second being required to traverse the length of the streamer. The point I wish to make is that the apparent velocity of this wave-like luminosity upward seems to be constant in all auroras that I have witnessed and in which it was possible to make an estimation. This should be confirmed or denied by measurement, for those streamers which bear the same relation to the observer, as variations in distance away may affect the result.

ELIHU THOMSON

SWAMPSCOTT, MASS.,
May 16, 1921

THE LANDSLIDE NEAR MONT BLANC

THE March *Bulletin* of the Royal Italian Geographical Society contains an account, well illustrated with map and photographs, by Professor U. Valbusa of the landslides near Mt. Blanc which occurred on the 14th and 19th of November last and made much stir in the newspapers, even to the point of exciting fear that the round-topped "monarch of mountains" had lost some of its height (4,807 meters). Such was by no means the case, as the head of the slide was on the eastern side of the subordinate dome known as Mt. Blanc de Courmayeur (4,709 m.), two kilometers east of and nearly 500 meters lower than the main mountain dome. Granite rock masses about half a square kilometer in total slanting area, were dislodged from the oversteepened side of an east-facing spur, the top of the gray slide-scar being a little lower than the terminal point of the spur which has an altitude of 4,381 meters. The detached rock masses first slid down into a second-order cirque of small size between the spur of origin and the Aiguille blanche de Pétéret, near by on the southeast; there they turned a short distance northeastward and descended from the hanging outlet of the small cirque to a level of about 3,200 meters on the Brenva glacier at the western side of the great first-order cirque in which this glacier gathers its névé branches, and from which a narrower glacial tongue cascades southeastward into the over-deepened trough—locally known as the Allée blanche—of the uppermost Dora Baltea. On reaching the main glacier beneath the small cirque, the slide turned to the right, and gathering ice as it rushed along spread over the whole 3-kilometer breadth of