

especial emphasis being laid on the relation of the staple products of the soil to climatic conditions. Argentina is not unlike the region between the Missouri and Mississippi river systems and the watershed of the Rocky mountains. The rainfall decreases towards the interior in both regions, with a corresponding change in vegetation. Argentina essentially duplicates the United States in having in the northeast a rainy forest belt; then a corn belt and a wheat belt; then a wide stretch of semi-arid and arid plain, and at the base of the Andes, agricultural settlements depending upon irrigation supplied by water from the Andean snowfields. In the north, with heavy rainfall, dense tropical forests are found. Cattle extend north even into the district of heavy rainfall in the northeastern territories, while horses do not thrive in a rainfall of more than fifty-five inches in the Argentine, and sheep are found south of the isohyetal line of forty inches. Being able to endure cold and hunger, sheep succeed as far south as the southern shores of Patagonia, and even of Tierra del Fuego. The north, west and south, because of excess or deficiency or unfavorable distribution, of rainfall, are not adapted for wheat, the wheat district being a rough parallelogram in the eastern central part of the country. Corn, owing to its requirement of summer rains and its ability to withstand higher relative humidity, finds favorable conditions in the eastern part of the wheat region, and in the more humid northeast. In the valleys of western Argentina, where water is available for irrigation, crops are grown more independently of rainfall.

KITE-FLYING IN SCOTLAND AND THE CYCLONE THEORY.

UNDER the auspices of the Royal Meteorological Society, for seven weeks during the summer of 1902 kites were flown with great regularity from a tug off the west coast of Scotland. The suggestion of flying kites in this way came originally, it will be remembered, from Mr. A. Lawrence Rotch, of Blue Hill Observatory. Mr. W. H. Dines, in a brief account of the work (*Nature*, June 18), states that, although the evidence from the

summer's work was not sufficient to be conclusive, so far as it went it tended to show that as a cyclone approaches the decrease of temperature with altitude becomes less. Every cyclone that passed while the kite-flying was in progress showed this condition. This 'leads to the conclusion,' says Mr. Dines, 'that the upper air in the neighborhood of a cyclone is relatively warm, and that the cyclones are convectional effects.' And thus we have another contribution to the cyclonic theory discussion, which has of late somewhat flagged.

CARBON DIOXIDE IN LONDON RAILWAY CARRIAGES.

THE examination of the air in the carriages and stations of the Central London Railway, carried out by Drs. Clowes and Andrewes (*Nature*, Vol. 68, p. 591) showed in the carriages a maximum amount of carbon dioxide of 14.7 volumes, and a minimum amount of 9.6 volumes, in 10,000 volumes of air. In an elevator, on one occasion, 15.2 volumes of CO₂ were found in 10,000 volumes of air. Dr. Clowes is of opinion that standard air at any point on the railway should not contain more than eight volumes of CO₂ in 10,000 of air.

R. DEC. WARD.

RADIUM AND CANCER.

WE are permitted to print the following letters:

BADDECK, N. S., July 21, 1903.

DR. Z. T. SOWERS,
1707 Massachusetts Avenue,
Washington, D. C.

Dear Dr. Sowers:

I understand from you that the Roentgen X-Rays, and the rays emitted by radium, have been found to have a marked curative effect upon external cancers, but that the effects upon deep seated cancers have not thus far proved satisfactory.

It has occurred to me that one reason for the unsatisfactory nature of these latter experiments arises from the fact that the rays have been applied externally, thus having to pass through healthy tissues of various depths in order to reach the cancerous matter.

The Crookes tube from which the Roentgen rays are emitted is of course too bulky to be admitted into the middle of a mass of cancer, but there is no reason why a tiny fragment of radium

sealed up in a fine glass tube should not be inserted into the very heart of the cancer, thus acting directly upon the diseased material. Would it not be worth while making experiments along this line?

Yours sincerely,
(Signed) ALEXANDER GRAHAM BELL.

BADDECK, N. S., July 21, 1903.

DR. A. GRAHAM BELL,
Baddeck, N. S.

Dear Dr. Bell:

The suggestion which you make in regard to the application of the radium rays to the substance of deep seated cancer I regard as very valuable. If such experiments should be made, I have no doubt they would prove successful in many cases where we now have failures.

Yours sincerely,
(Signed) Z. T. SOWERS.

THE RHODES SCHOLARSHIPS.

THE trustees of the will of the late C. J. Rhodes have prepared a memorandum for the information of college authorities and intending candidates for scholarships in the United States, which states that the first election of scholars in the United States will be made between February and May, 1904. The elected scholars will commence residence in October, 1904. A qualifying examination will be held within this period in each state and territory, or at centers which can be easily reached. This examination is not competitive, but is intended to give assurance that all candidates are fully qualified to enter on a course of study at Oxford University. It will, therefore, be based on the requirements for responsions—the first public examination exacted by the university from each candidate for a degree. The Rhodes scholars will be selected from candidates who have successfully passed this examination. One scholar will be chosen for each state and territory to which scholarships are assigned.

The committees and the universities making appointments will be furnished with a statement of the qualifications which Mr. Rhodes desired in the holders of his scholarships, and they will be asked in exercising their right of selection to comply as nearly as circumstances will permit with the spirit of the testator's

wishes. They will also be asked to furnish to the trustees as full a statement as possible of the school and college career of each elected scholar, with the special grounds of his appointment, together with suggestions, if desired, as to the course of study for which he is best fitted.

It has been decided that all scholars shall have reached at least the end of their sophomore, or second year work at some recognized degree-granting university or college of the United States. Scholars must be unmarried, must be citizens of the United States, and must be between nineteen and twenty-five years of age. Where several candidates present themselves from a single college or university, the committees of selection will request the faculty of the college to decide between their claims on the basis of Mr. Rhodes's suggestions, and present to the committee the name of the candidate chosen by that college as its representative in the final election.

The president of the state university or college is in each of the following states chairman of the committee of selection for that state:

Alabama, Arizona, Arkansas, California, Colorado, Florida, Georgia, Idaho, Indiana, Iowa, Kansas, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Mexico, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, West Virginia, Wisconsin, Wyoming.

The following chairmen have been named for other states:

Connecticut, President Arthur T. Hadley, LL.D., Yale University.

Illinois, President W. R. Harper, Ph.D., D.D., University of Chicago.

Kentucky, President D. B. Gray, D.D., Georgetown College.

Maryland, President Ira Remsen, LL.D., Johns Hopkins University.

Massachusetts, President Charles W. Eliot, LL.D., Harvard University.

New Jersey, President Woodrow Wilson, LL.D., Princeton University.

New York State, President Nicholas Murray Butler, LL.D., Columbia University.