in carrying out the ideal policy which was arrived at in planning the eleventh edition of the Encyclopædia Britannica, namely a combination of forces between the two great branches of the English speaking world. In the intellectual sphere it stands as a notable achievement of Anglo-American unity with which I am proud to have been associated. I thank the American contributors for their more than kind recognition of my labors towards that end."

A NEW research hospital, in which the committee for the study of special diseases will continue their researches on rheumatoid arthritis and allied diseases, is now in course of erection at Cambridge. The site, which has been presented by Miss Sykes at a cost of £300, has a southeast slope, with gravel soil, and the building has been designed with a view to simplicity and economy. As at present arranged provision is made for eight or nine patients, but should more accommodation be required double that number could be admitted. The funds available for the building now amount to a little over £1,000, and there is a sum of £800 still required in order to open the building free from debt. Dr. R. C. Brown, of Preston, who for the last four years has given a research scholarship of £150 a year, has during the past week signified his intention of continuing the scholarship for a further term of two years. The committee is at present making efforts to raise the remaining £800 required to complete the building and is also asking for subscriptions towards an endowment fund of £8,000. The executive committee are Sir Clifford Allbutt, regius professor of physic, Cambridge; Sir W. Selby Church, late president of the Royal College of Physicians; Sir William Osler, regius professor of physic, Oxford; Mr. T. S. P. Strangeways, Huddersfield lecturer in special pathology, Cambridge, and Professor Woodhead, professor of pathology, Cambridge.

THE first provisional announcement of the new course for public health officers, which is to be given for the first time during the coming year at the University of Wisconsin, has just been made. This course will be open to those who hold a degree in medicine or in medical or sanitary science and desire to fit themselves for public health work. The course extends through one year and leads to a diploma in public health. The work of the course is devoted largely to a study of bacteriology and practical field work in the use of disinfectants, the inspection of slaughter houses, schools, factories and work shops. Additional courses in physiology, zoology, meteorology, hydrology, public health administration and vital statistics, and the microscopic examination of foods and drugs will comprise the remainder of the work. The course in meteorology, or the study of weather conditions, is given for the purpose of determining to what extent the weather affects public health.

UNIVERSITY AND EDUCATIONAL NEWS

WORK is now being carried on to arrange and equip an entomology building at Rutgers College, New Brunswick, N. J. The building will have two stories, will provide for classrooms and laboratory work on the first floor and will furnish offices and space for collections on the second floor as well as accommodations for the assistants in experiment station work.

REAL ESTATE belonging to the Massachusetts Agricultural College to the value of $850,000 has been transferred to the state of Massachusetts in a deed recorded in Northampton. By this transfer the land and buildings of the college heretofore vested in the incorporated board of trustees passes under the direct control of the state.

THE Missouri College of Agriculture and Experiment Station is to have a regularly organized poultry department, the purpose of which is to investigate the various diseases and pests that affect farm fowls, to study the relative utility of different breeds of poultry for various localities of the state, to experiment with the problem of feeding poultry for breeding purposes and for market, besides giving regular courses of instruction in poultry husbandry to students.

OFFICIAL reports of the universities in Switzerland note that for the half year just finished, there were 10,311 students of which

1,322 were at the School of Technology. Of the 6,862 regular students of the seven universities, 1,490 were women. There were 459 in the department of theology, 1,354 in the law, 1,980 in medicine and 3,069 in letters or in sciences. The foreign element furnished 52.5 per cent. of the whole.

ALL the graduate work offered at the Ohio State University has been organized into a single graduate school under the administration of a dean and a graduate council of twelve members. Professor William McPherson, in charge of the department of chemistry, has been elected dean.

AT the Missouri College of Agriculture appointments have been made as follows: J. A. Ferguson, professor of forestry; A. J. Meyer, assistant to the dean and superintendent of short courses in agriculture; H. L. Kempster, assistant professor of poultry husbandry, and P. L. Gainey, instructor in botany.

PROFESSOR WILLIAM HAZEN BOUGHTON, head of the department of civil engineering in the University of West Virginia, has resigned to accept the position of treasurer and general manager of Vassar College.

DR. NICOLAS LEON has been named professor of anthropology at the Museo Nacional, Mexico.

MR. HUGH GUNN, formerly director of education of the Orange Free State, has accepted an invitation from the government of Western Australia to act as adviser and organizer for the university which that state is founding at Perth.

DR. KARL DIEWONSKI, a manufacturing chemist, has been appointed professor of chemistry in the University of Cracow.

DISCUSSION AND CORRESPONDENCE

AIR IN THE DEPTHS OF THE OCEAN

TO THE EDITOR OF SCIENCE: The question has often been asked, how does the air, which is assumed to be necessary for the life of deep-sea fishes, get to those depths. Possibly a satisfactory explanation exists, if not, the following suggested itself to me as a plausible one, and possibly as a new one.

It is well known that the amount of gas which a liquid will hold in clear and stable solution, increases with the pressure. The liquid in a bottle of champagne or in a siphon bottle, for instance, is clear until the pressure is released. It may be assumed that the water on the top surface of the ocean is being continuously saturated with air due to the spraying of the waves. The layer beneath is at a slightly higher pressure, hence will hold more air per unit volume, than the one above it. Under such circumstances it seems that there should be a tendency for the air in the top layer to move down to the less saturated one beneath it, until it too is saturated, and this will require a larger amount of air per unit volume. The same is true of the next lower layer, and so on to the bottom.

It would seem to follow, therefore, that air actually descends into the ocean depths, and if it is being consumed there for oxidation and nitrification purposes, there should be a continuous flow of air downward into the deepest ocean waters. If oxygen dissolves in sea water more freely than nitrogen, the deep-sea fishes should be enjoying richer air and therefore should require less of it, than those living nearer to the surface.

CARL HERING

PHILADELPHIA, PA.,
July 31, 1911

THE LIGHTING OF A JET OF HYDROGEN

TO THE EDITOR OF SCIENCE: I have examined perhaps a dozen laboratory manuals for beginners in chemistry with reference to the experiment in which the student is required to light a jet of hydrogen and in every case the directions are essentially the same: wait till the air is all expelled, as indicated by the failure to get an explosion when a test-tube full of the escaping gas is brought over a flame, securely wrap a towel around the generating flask, and bring a light to the exit. Now these directions will certainly result in occasional explosions of the contents of the flask, especially if the laboratory sections are large, with possible serious consequences. The careful student, having been cautioned as to the danger of the experiment, will often wait an undue length of time and will still be nervous about bringing a flame to