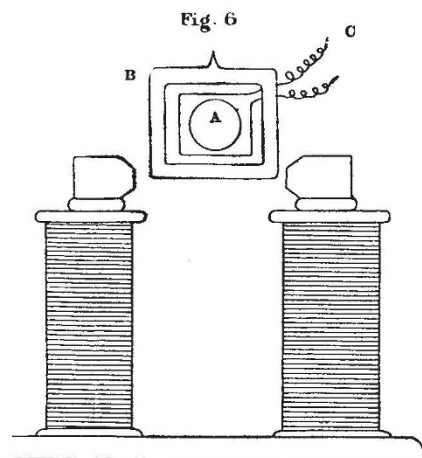


the experiment: you observe that when the mercury is cold, and consequently the pressure in the space between the bulbs very low, a bright discharge passes through the inner bulb, while the space between the bulbs remains quite dark; when we heat the mercury so as to increase the pressure of its vapour, a bright discharge passes through the outer layer, while the inner bulb is quite dark; the outer layer is now a conductor, and by its action screens off from the inner bulb the induction of the coil.

The last experiment I have to show is one on the effect produced by a magnetic field on the discharge. When the discharge has to flow across the lines of magnetic force, the pressure of the magnetic field retards the discharge; when, however,



the discharge flows along the lines of magnetic force, the discharge is helped by the magnetic field. This is shown in the following experiment. A is a bulb; B a square tube, one side of which is placed between the poles of an electromagnet; the coil C, which connects the outside coatings of the jars, can be adjusted so that when the magnet is "off," the discharge passes through the bulb but not round the square tube; when, however, the magnet is "on," the discharge passes in the square tube but not in the bulb. In the square tube the discharge passes along the lines of magnetic force and is helped; in the bulb it passes across them and is retarded.

UNIVERSITY AND EDUCATIONAL INTELLIGENCE.

OXFORD.—In a Convocation held on Tuesday, January 29, the degree of Doctor of Medicine, by decree of the House, was conferred on J. S. Burdon Sanderson, F.R.S., Regius Professor of Medicine. Prof. Sanderson was at the same time empowered to discharge the duties of the Waynflete Professor of Physiology, and to dispose of the income of the department during the vacancy in the Waynflete Professorship.

The amendments to the proposed form of statute on degrees for research will be submitted to Congregation on Tuesday, February 12. There are no less than sixty-three amendments, most of which are consequential. The chief amendments propose that the degree of Bachelor of Arts shall be substituted for the proposed degrees of Bachelor of Letters and Bachelor of Science; that the delegacy for the supervision of candidates shall be chosen from among a limited number of University officials, and that there shall be no such delegacy, but that the supervision shall be entrusted to the Boards of Studies.

The Sibthorpe Professor of Rural Economy will deliver an inaugural lecture on Monday, February 4, at 5.30 p.m., on "The Present Relations of Agricultural Art and Natural Science."

Mr. A. B. Trevor Battye will give a lecture before the Ashmolean Society on Monday, February 4, at 8.30 p.m., on his experiences in Kolguev Island.

The Vice-Chancellor has received for the University a bequest from the late Miss Susan Kidd of a portrait of her father, Dr. John Kidd, of Christ Church, formerly Regius Professor of Medicine.

CAMBRIDGE.—The Special Board for Biology and Geology propose that in future the Walsingham Medal, given by the Lord

High Steward annually for biological research, shall be open to graduates of the University up to the standing of Master of Arts. Of the three Medals offered, two have been awarded—one for a zoological and the other for a botanical essay. It is also proposed that the Medal shall not be awarded twice to the same person.

The funeral of the late Prof. Cayley will take place on Friday, February 1, in Trinity College Chapel, and the Mill Road Cemetery. Members of the University desiring to be present, are requested to assemble in the College Hall at 1.45 p.m.

The Sedgwick Memorial Syndicate have been empowered to reconsider the plans, or prepare new ones, for the Geological Museum. The estimates for Mr. Jackson's plan exceeded the means at the disposal of the University.

Dr. L. E. Shore, St. John's College, has been appointed an additional member of the Medical Board. Dr. A. Ransome, F.R.S., Dr. J. L. Notter, Dr. T. Stevenson, F.R.S., and Dr. R. Thorne Thorne, C.B., F.R.S., have been appointed Examiners in State Medicine for the current year.

At the Matriculation on January 28, seventeen new students were entered. This brings the total for the present academical year up to 894.

THE Executive Committee of the City and Guilds of London Institute have awarded the first Salters' Company Research Fellowship for the encouragement of higher research in chemistry in its relation to manufactures, to Dr. Martin O. Foster. Dr. M. O. Foster is an old student of the City and Guilds Technical College, Finsbury, and Doctor of Philosophy of the University of Würzburg. For several months he has been engaged in investigating some new derivatives of camphor in the Research Laboratory of the City and Guilds Central Technical College and by the aid of the Salters' Company's Research Fellowship, he proposes to pursue this line of work.

THE Organised Science Schools of the Department of Science and Art are schools in which the instruction is carried on methodically according to one or other of the courses laid down by the Department, or which has been specially submitted to and approved by it. It can easily be understood that such schools represent a very important stage in the system of scientific education which Mr. Acland is doing so much to improve. A number of new regulations, relating to these schools, have just been issued, to come into force after the examinations next May. The most important feature of the new scheme is the introduction of payment on inspection instead of payment on results, for by far the larger part of the instruction given in organised science schools. This modification, which applies to 120 science schools in the United Kingdom, has only become possible since the appointment of a staff of Science and Art inspectors. Another noteworthy feature is that reasonable latitude will be allowed to the teacher as to the nature of the course he may pursue provided the instruction is sound, satisfactory in amount, and combined with proper practical work. Even more satisfactory are the instructions that the practical chemistry for the first year's course should include the setting up of apparatus—weighing and other chemical manipulations, the preparation of gases, the estimation of volume, and so on. Analysis will, in future, occupy a secondary position in introductory courses. The mechanical test-tubing, which has hitherto formed the greater part of practical chemistry in Departmental schools, will thus give place to practical work of real educational value. We also observe that provision is made for a certain amount of literary instruction being given whilst the student is pursuing his science curriculum; that a choice of advanced courses is given; and that an alternative programme suitable for women is formulated, and instruction in subjects specially adapted to them is demanded; that practical instruction must be given in the subjects of science simultaneously with the theoretical instruction. Clearly, the new rules will greatly assist the development and better organisation of scientific education.

SCIENTIFIC SERIALS.

American Journal of Science, January.—Late glacial or Champlain subsidence and relevation of the St. Lawrence River basin, by Warren Upham. From the Champlain submergence the Atlantic coast of North America was raised somewhat higher than now; and its latest movement from New Jersey to Greenland has been a moderate depression. As in Scandinavia,