

TABLE IV.

Diffusion of Atmospheric CO<sub>2</sub> through Multiperforate Septa into Tube  
4 c.m. long. Diameter of Holes  $\frac{1}{32}$ 0 m.m.

No. of Holes per sq. cm.	Diameters Apart	CO <sub>2</sub> Diffusing through Septum per hour c.c.	Open Tube Diffusion per hour c.c.	Percentage of Septum Diffusion on Open Tube Diffusion.	Percentage area of Cross-section occupied by Holes.
100	2·63	·361	·346	104·3	11·34
25	5·26	·148	·342	43·2	2·82
11·11	7·8	·131	·352	37·2	1·25
6·25	10·52	·110	·353	31·1	·70
15·7	15·7	·068	·334	20·4	·31

I must now ask you to follow me in a somewhat theoretical excursion in quest of an explanation of these curious facts.

(To be continued.)

### UNIVERSITY AND EDUCATIONAL INTELLIGENCE.

OXFORD.—The following have been elected public examiners:—Mr. R. T. Glazebrook, in physics; Mr. P. Elford, in chemistry; Prof. F. Gotch, in physiology.

The curators of the University Chest have been authorised to spend a sum not exceeding 1400*l.* in certain extensions of the Chemical Department which are necessitated by the loss of the laboratory known as the "Glastonbury Kitchen." The latter is now required as access to the new Radcliffe Library.

A proposal to permit candidates for the degree of Bachelor of Letters or Science to keep more than one term of University residence in the year by residence during the vacation has been rejected.

A proposal to provide access for wheeled traffic to the Departments of Physiology, Human Anatomy and Pathology at the back of the University Museum has also been rejected owing to the opposition of those who regard this as an encroachment upon the University Park.

The Junior Scientific Club held their 226th meeting on May 31. A paper was read by E. Walls, entitled "The Quest of the Philosopher's Stone." Prof. Silvanus Thompson delivered the Boyle Lecture on June 6, on "Magnetism in Growth."

CAMBRIDGE.—In the mathematical tripos, part i., the senior wrangler is Mr. A. Brown, of Caius College, a Ferguson student from Edinburgh. Miss Reynolds, of Newnham, is bracketed 11th wrangler. Three names appear in the first class of part ii.: Mr. J. E. Wright, Trinity (senior wrangler 1890); Mr. T. H. Havelock, St. John's (15th wrangler); and Mr. J. Chadwick, Pembroke (5th wrangler). Miss W. M. Hudson, Newnham, is in the first division of the first class (bracketed 8th wrangler 1890).

The professor of pathology announces ten separate courses of lectures and practical work to be given in the long vacation, beginning July 8.

PROF. R. W. WOOD, of the University of Wisconsin, has been appointed professor of physics in the Johns Hopkins University, in succession to the late Prof. H. A. Rowland.

We learn from *Science* that the Wisconsin Legislature has granted 210,000 dollars to the University of Wisconsin, at Madison, in addition to the regular income previously derived from the State. Of this sum 150,000 dollars is for a new building for the College of Agriculture, which is to house the administration offices of this department and the experiment station as well as the departments of bacteriology and chemistry. This College also receives 10,000 dollars annual increase to its present income. The College of Engineering receives 30,000 dollars for equipment of its new building, which was provided by the last Legislature; also 7500 dollars annual increase in income. The newly organised School of Commerce secures 3500 dollars annual increase.

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DR. H. M. KYLE has been appointed naturalist to the Marine Biological Association and fisheries' instructor for the county of Devon. Dr. Kyle is a distinguished graduate of the University of St. Andrews, having gained the rector's prize for an essay on evolution and having held successively the Fisheries' prize, the Berry scholarship (100*l.*) and, for three years, the Exhibition of 1851 scholarship (150*l.*) for original researches in connection with the fisheries. His studies for seven years have been devoted to marine zoology and the scientific treatment of the problems of the fisheries at the chief marine laboratories of Europe, including Naples, Plymouth, &c., and both the old laboratory and the new (Gatty) laboratory at St. Andrews, where he was trained.

We learn from the *Berliner Klinische Wochenschrift* that the second annual congress of the German Association for School Hygiene, which was founded about two years ago for the purpose of studying and promoting all matters relating to health and hygiene in connection with schools, was held at Wiesbaden on May 31. The municipal authorities of that city placed the "Curhaus" at the disposal of the council of that association, where all the official meetings were held during the congress. The attendance was a large and a representative one, and the programme contained many important and highly instructive subjects, of which the following may particularly be mentioned: (1) the new Prussian school reform in relation to school-hygiene; (2) the hygienic condition of German schools in general, with special reference to that of Wiesbaden; (3) the prevention of infectious diseases regarded from a general point of view, with special reference to the spread of tuberculous affections amongst school children.

THE *Educational News* of Scotland states that the following is the list of candidates for the chair of natural philosophy in Edinburgh University, vacant through the resignation of Prof. Tait:—Prof. J. C. Beattie, South African College, Cape Town; Prof. G. H. Bryan, F.R.S., University College, North Wales; Dr. Charles Chree, F.R.S., National Physical Laboratory, Richmond; Dr. Cargill G. Knott, University of Edinburgh; Prof. J. P. Kuenen, University College, Dundee; Dr. Charles H. Lees, Owens College, Manchester; Mr. David B. Mair, Civil Service Commission, London; Prof. J. A. McClelland, University College, Dublin; Prof. J. G. MacGregor, F.R.S., Dalhousie University, Halifax, U.S.A.; Prof. Karl Pearson, F.R.S., University College, London; Mr. G. F. C. Searle, Cambridge; Mr. George W. Walker, Cambridge; Mr. Gilbert T. Walker, Cambridge; Mr. C. T. R. Wilson, F.R.S., Cambridge.

PROF. RAMSAY expressed the views of a number of teachers and investigators in the annual oration delivered by him at University College, London, last week, on "The Functions of a University." The essential principle of University work should be research. This, said Prof. Ramsay, should be the goal to be clearly kept in view in the philosophical faculties of Universities. He was not one of those who would urge that a young man should not learn a great deal of what had been already discovered before he attempted to soar on his own wings. But there was all the difference in the world between the point of view of the student who read in order to qualify for an examination, or to gain a prize or scholarship, and the student who read because he knew that thus he would acquire knowledge which might be used as a basis of new knowledge. It was that spirit in which our Universities were so lamentably deficient; it was that spirit which had contributed to the success of the Teutonic nations, and which was beginning to influence the United States. A University which did not increase knowledge might be a technical school or a coaching establishment, but it had no claim to the name University. The best way of fitting young men for the manifold requirements of the Empire was to give them the power of advancing knowledge.

### SOCIETIES AND ACADEMIES.

LONDON.

Chemical Society, May 16.—Prof. Emerson Reynolds, president, in the chair.—The following papers were read:—Derivatives of methylfurfural, by H. J. H. Fenton and Miss M. Gostling. A simple method of obtaining pure methylfurfural is described.—Optically active nitrogen compounds and their bearing on the valency of nitrogen; dextro- and levo- $\alpha$ -benzyl-