

great vaccination departments of foreign governments. This is to be undertaken at once without regard to the vaccination legislation promised in the Queen's Speech, and will be completely independent of such a measure. Some delay has arisen in sending out the new lymph, owing to the want of a special laboratory for the cultivation of the matter, but this will not now be long delayed, as soon as the Local Government Medical Board is granted funds to purchase or secure a laboratory.

It is stated in *Industries and Iron* that Herr Wachnitz, a German engineer, has succeeded in plating aluminium with copper by a welding process. It is stated that the plated sheets can easily be soldered, grooved, tinned and nicked. The plating may be of any thickness desired, and even with the thinnest sheets there is no separation when rolled or drawn. Large sample sheets have already been submitted to the inspection of the Imperial Navy Department and other large manufacturing concerns. The obstacles to a still wider use of aluminium, which could be expected in view of its great lightness, have been its poor ability to solder, its weak power of resistance to numerous fluids, and the further fact that paint does not adhere to it very well. All these objections would be removed by this invention.

PROFESSOR NERNST, of Göttingen, has made an important improvement in the efficiency of the incandescent light, the first authentic account of it that we have noticed being contributed to the *Electrical World* by Dr. H. Lux, editor of the *Zeitschrift für Beleuchtungswesen*. Dr. Lux explains that as long as carbon filaments are used in incandescent lights the efficiency of the system will probably not be much increased. Professor Nernst uses the so-called conductors of second class, such as chalk, magnesia and kaolin, materials that, when cold, have an extremely high resistance to the current, so high indeed that they might be called insulators, the resistance falling greatly at high temperatures. These materials are notable for the large proportion of visible light rays in their radiation. The lime light and the Welsbach incandescent gaslight are notable instances of the application of this principle. As Professor

Nernst says in a letter, these materials have a higher emission of light, as they are not in the sense of Kirchhoff absolutely 'black substances.' If these materials are raised to a sufficiently high temperature, no matter by what means, the efficiency of production of light is remarkably high. Professor Nernst applies as the means to bring the bodies to a high temperature the electric current, conducting it by small staffs of magnesia, chalk or other materials, after having prepared them to conduct the current by warming them. It is necessary to work with alternating currents to avoid electrolytic action on the material employed. The importance of this invention, if it can be practically employed—Professor Nernst, a true scientific man, advises us not to be too hopeful—would be very great, as the cost of incandescent lighting would be reduced to about one-third of the present rate.

UNIVERSITY AND EDUCATIONAL NEWS.

THE bill before the Maryland Legislature for an annual appropriation of \$100,000 to the Johns Hopkins University was reported unfavorably on March 16th by the Committee on Ways and Means, and the House, by a vote of 50 to 17, refused to substitute the bill for the unfavorable report. The Senate is, however, more favorably disposed to the bill, and it is possible that a compromise may be effected by which at least part of the appropriation may be made.

THE eighth annual report of President Low, of Columbia University, presented to the Trustees on October 4th, has been published, together with the reports of the Deans of the various schools, of the Librarian and of the Treasurer. President Low takes the removal to the new site as the occasion for comparing the present condition of the University with that of the College when in 1857 it moved to 49th Street, and when in 1889-90 he was installed as President. In 1847 there were 14 members of the Faculty; in 1890 there were 176 officers of instruction, while there were 289 in 1897. The receipts of the University for current expenses were about \$775,000 and the excess of disbursements over receipts was about \$34,000. The average annual increase in the

library during the last five years has been over 19,000 volumes.

THE Teachers' College, Columbia University, has received from an anonymous donor a gift of \$40,000. Three other gifts of \$25,000 each have been received since December 1st.

THE Missouri Supreme Court, in an opinion by Justice Gante, on March 16th, declared the Missouri State University Free Scholarship Law unconstitutional. This law provided for the collection of a special tax on corporations and on patent medicine and a collateral tax of inheritance to establish free scholarships in the State University.

CONVOCATION week at the University of Chicago begins on Friday, April 1st. The President will make the quarterly report and the convocation address will be given by Professor William Knight, of St. Andrews University, his subject being 'Poetry and Science: Their Affinities and Contrasts.'

DR. CHARLES R. BARNES, of the University of Wisconsin, has been appointed professor of plant physiology in the University of Chicago.

PROFESSOR GATES, of Amherst College, has been given a year's leave of absence by the Trustees.

A BERLIN despatch states that a decree has been issued by the government forbidding the future attendance of foreigners in the machinery and engineering department of the Berlin Technical High School.

A UNIVERSITY EXTENSION meeting will be held in London from May 30th to June 11th. The program, which should be of interest to Americans visiting London, includes lectures by Sir John Evans, on 'London before the Saxons'; by Professor Skeat, on 'Chaucer's London'; and by Mr. Gollancz, on 'Shakespeare and the London Theatre.' Mr. Owen Seamen will give three lectures on 'The London Poets,' Mr. Mackinder two on 'The Geography of London,' and Mr. Arnold Mitchell three on 'London Architecture,' followed by a demonstration in the Church of St. Bartholomew, Smithfield. In the Education Section, Sir Joshua Fitch will deal with 'The National Portrait Gallery and its Educational Uses,' Professor Miall with

'The Curiosity of Children,' and Mr. Marriott with 'John Colet, the Founder of St. Paul's School.' A course of three lectures entitled 'Studies on Children' will be delivered by Mr. Earl Barnes, late professor of pedagogy in the Leland Stanford Junior University.

MR. HENRY HANNA, M.A., B.Sc., has been appointed demonstrator of biology, geology, and paleontology in the Royal College of Science, Dublin.

MR. J. G. KERR, a student of zoology, has been elected a fellow in Christ's College, Cambridge.

DISCUSSION AND CORRESPONDENCE.

THE TERMINOLOGY OF THE NEUROCYTE OR NERVE CELL.

THE writer is far from being one that regards the introduction of new terms, even where they seem to shorten a phrase or so, as necessarily an advance in science. But it seems as though some improvements might be made in the terminology of the neurocyte, not only in the use of terms already suggested and more or less employed, but also by suggesting at least two more. The varying senses in which some terms in use are employed and the different terms applied to the same thing are very confusing. Uni-, bi- and multi-polar cells one finds, for instance, according to the author read mean cells with one, two or more processes irrespective of whether they are recipient or discharging processes as regards the neural impulses that traverse them, or one finds that they mean cells with one, two or more discharging processes, axis cylinders or neurites irrespective of there being other processes. One finds the entire nerve cell spoken of as the nerve cell, neuron and as neurocyte; while that process, the main function of which appears to be that of bearing the neural impulse away from the cell body, or cell, when this is not to one side of the most direct course of the neural impulse, as is the case in the cells of the mammalian spinal ganglia and in all cases among the arthropods, is called the axiscylinder, axon, neuron and neurite. The other processes have been known as the protoplasmic processes or the dendrites.