University and Educational Intelligence.

BIRMINGHAM.—At a degree congregation held on Dec. 13, the degree of M.D. was conferred on John William Field for a thesis entitled, "A Study of the Dietary of the Tamil Cooly of the British Malaya, with special reference to the influence of Vitamin A, Starvation of Physique, and Resistance to Disease"; and on Cyril John Polson for a thesis on "Observations upon the Metabolism of Iron in the Animal Body". The degree of D.Sc. has been awarded to Francis Eric Keep for a thesis on "The Geology of the Shabani Mineral Belt, Belingwe District", and other reports of the Southern Rhodesia Geological Survey.

BRISTOL.—On Dec. 13, Mr. Winston Churchill was installed as Chancellor of the University. After the ceremony, the honorary degree of LL.D. was conferred, among others, on Mr. Churchill and on Dr. T. F. Sibly, vice-chancellor of the University of Reading.

CAMBRIDGE.—A meeting of the electors to the Drapers professorship of agriculture will be held on Friday, Jan. 17. It is proposed that the stipend of the professor shall be £1200 a year in addition to £200 as head of the Department. The administrative duties of the professor include co-operation with the Ministry of Agriculture and Fisheries, which gives financial support to the School of Agriculture and maintains a number of agricultural research institutes closely associated with it. Candidates should communicate with the Vice-Chancellor on or before Tuesday, Jan. 7.

The Director of the Solar Physics Observatory has appointed Mr. C. P. Butler to be first senior observer and Mr. W. Moss to be second senior observer.

Mr. W. B. R. King, Magdalene, has been reappointed assistant to the Woodwardian professor of geology.

Mr. L. C. G. Clarke, curator of the Museum of Archæology and Ethnology, has been elected to a non-stipendiary fellowship at Trinity Hall.

GLASGOW.—The chair of geology in the University, recently vacated by Prof. J. W. Gregory, has now been filled by the appointment of Mr. E. B. Bailey, of H.M. Geological Survey. Prof. Bailey is one of the most distinguished of Scottish geologists. He has played an important part in the work of the Geological Survey during recent years and is particularly well known for his studies on Carboniferous igneous rocks and his unravelling of the complicated geological structure of certain parts of the Western Highlands—notably the Island of Mull and the Ben Nevis–Glencoe district. In the period of the War, Prof. Bailey also played his part, and was awarded the Military Cross, the Légion d'Honneur, and the Croix de Guerre with Palm.

ACCORDING to the twelfth report of the Technical Optics Committee of the Imperial College of Science and Technology and the Advisory Council in Technical Optics to the London County Council, for the year ending July 31, 1929, the teaching at the Imperial College and at the Northampton Polytechnic has be co-ordinated by the adoption of the same symbols, and it is proposed to provide at the latter a two-year day course in addition to the one-year course provided hitherto. At the Imperial College ultra-violet microscopy is to be developed for regular users of the microscope and research work on colour vision, resolving powers of objectives, and the ruling of gratings is to be continued. Prof. A. O. Rankine has been appointed Director of the Department. The number of students is about 20, and the annual cost about £5000.

Calendar of Patent Records.

December 22, 1818.—The hobby-horse, the forerunner of the bicycle, was the invention of Baron von Drais, and was introduced into England by Denis Johnson, coachbuilder, of Long Acre, who was granted a patent for it on Dec. 22, 1818, under the title of "a machine for the purpose of diminishing the labour and fatigue of persons in walking and enabling them at the same time to use greater speed, which said machine he intends calling 'the pedestrian curricle'". One of his machines, built for a Duke of Marlborough, is now in the Science Museum.

December 23, 1801.—The jacquard loom takes its name from Joseph Marie Jacquard of Lyons, who was granted a patent in France on Dec. 23, 1801, "pour une machine destinée à suppléer le tireur de lacs dans la fabrication des etoffes brochées et façonnées". The specification states that the inventor first made a machine of the type in 1790 and that at the date of the patent more than four thousand were in use in the neighbourhood of Lyons.

December 23, 1834.—The hansom cab is named after Joseph Hansom, whose first patent was granted on Dec. 23, 1834. The original cab was in the form of a sedan chair slung between large wheels with the driver's seat on the roof in front and a door at the back, the well-known construction being introduced with a second patent two years later granted to Gillett and Chapman, to whom the first had been assigned. A company was formed and started with 50 cabs, but was forced to compete with many imitators, in spite of several favourable verdicts in the courts.

December 24, 1836.—The name of Bennet Woodcroft will always be associated with the great reform of British patent law and practice that was brought about by the Amendment Act of 1852. Upon the passing of the Act, Woodcroft was appointed to the post of superintendent of specifications in the new department, and it was mainly through his enthusiasm and exertions that so many needs of the inventor were quickly met by a liberal interpretation of the new Act. To him is due the printing and indexing of the patent specifications, and he was also primarily responsible for the institution of the Patent Office Library and of the Science Museum. Before his association with the office, Woodcroft was a prolific inventor. One of his patents, dated Dec. 24, 1836, was for a process of printing calico with indigo, in which, to avoid the rapid oxidation which takes place, the operations were carried out in an atmosphere of coal gas.

December 24, 1866.—An early self-excited dynamo was that for which a British patent was applied for by Cornelius and Samuel Varley on Dec. 24, 1866. Two electro-magnets of horse-shoe form and two bobbins mounted on an axis are so arranged that when the bobbins are rotated they act simultaneously between the poles of the two magnets, a commutator serving to join up the whole into one continuous circuit. The residual magnetism is used to start the action. The application was not completed, but a patent was granted for the same invention on a second application made six months later.

December 24, 1877.—Edison's first United States patent for the phonograph was applied for on Dec. 24, 1877. The machine had a metal drum provided throughout its length with a fine spiral thread, over which a sheet of tin-foil was tightly pressed. A needle attached to a mica diaphragm rested on the tin-foil and recorded the sounds thereon. The specification describes the use of a clockwork motor, but the original machine made by Edison, which for some time was on loan to the Science Museum, South Kensington, was operated by hand.