

been driven out of the herd. It is a remarkable fact that the Sperm whales caught in 1911 (when this species was exceptionally numerous) were all very fat, whilst those caught in 1909 and 1912 were very lean, and the Nordcapers caught in 1909 and 1912 showed the same leanness; and yet the diet of the Sperm whale is mainly cuttlefishes, and that of the Nordcaper consists of the smaller planktonic organisms.

University and Educational Intelligence.

CAMBRIDGE.—A bequest of the value of about £250,000 from the late Mr. John Humphrey Plummer, of Southport, is announced. The money is to be governed by trustees and is for the endowment of two chairs for the promotion of modern scientific research. No details are as yet available as to the conditions governing the trust.

LONDON.—The following courses of free public lectures, without tickets, are announced: "Fatigue," by G. P. Crowden, at University College, on Jan. 14, 21, and 28, at 5; "The Physiology of Reproduction," by Dr. A. S. Parkes, at University College, on Jan. 16, 23, 30, and Feb. 6, 13, and 20, at 5; "The Chemistry of Some Natural Drugs," by Dr. H. R. Ing, at University College, on Jan. 17, 24, 31, Feb. 7, 14, and 21, at 5; "Comparative Physiology," by C. F. Pantin, at University College, on Jan. 18, 25, Feb. 1, 8, 15, 22, Mar. 1, 8, 15, and 22, at 5; "Some Applications of Physical Chemistry to Steel Manufacture," by Dr. A. McCance, at the Imperial College of Science—Royal School of Mines, on Jan. 23, 24, 30, and 31, at 5.30; "Cytology in Relation to Physiological Processes," by Dr. R. J. Ludford, at University College, on Jan. 24, 31, Feb. 7, 14, 21, and 28, at 5; "The Current Work of the Biometric and Eugenics Laboratories [University College]," by Prof. Karl Pearson and others, at University College, on Jan. 29, Feb. 5, 12, 19, 26, and Mar. 5, at 5.30.

MORE than a hundred bibliographies of various subjects have now been issued by the National Book Council, 3 Henrietta Street, London, W.C.2. These lists of books do not profess to be exhaustive, but each is prepared under the auspices of a body competent to express an opinion on the subject with which a particular list deals. One of the latest lists (price 2*d.*) contains the titles of recommended books on popular science, or introductory to the various branches of science, and is compiled by Mr. J. B. Clark, late headmaster of George Heriot's School, and approved by the National Home-reading Union. The list is classified by subjects, and publisher, date, and price are given for each volume. It should be a valuable guide to the general reader who wishes to keep in touch with the progress of modern science.

A HARVARD-YENCHENG Institute of Chinese Studies is to be opened under the supervision of nine directors representing Harvard and Yencheng (Peking) Universities and the estate of the late Charles M. Hall of Niagara Falls, New York, who provided an endowment of two million dollars for it. The work of the Institute, which will be carried on at both universities, will include research in Chinese history, art, literature, philosophy, and religion, and special attention will be paid to the study of the Chinese language as a key to understanding the history and civilisation of China. There are already some fourteen hundred Chinese students in the United States, and numerous scholarships tenable in the United States are provided by the Chinese Educational Mission, while large sums are spent in promoting study and research by Americans in China. The new Institute will obviously strengthen the intellectual ties between the two countries.

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Calendar of Patent Records.

January 14, 1822.—The lawyer's wig claims its share of the inventor's attention. On Jan. 14, 1822, there was granted to H. W. Ravenscroft, of Lincoln's Inn, peruke maker, a patent for his "forensic wig, the curls of which are constructed on a principle to supersede the necessity of frizzing, curling, or using hard pomatum; and for forming the curls in a way not to be uncurled; and also for the tails of the wig not to require tying in dressing, and further the impossibility of any person untying them."

January 15, 1820.—During the first hundred years of their existence, pianos, like spinets and harpsichords, were constructed entirely of wood, though the advantages of being able to use thicker and heavier strings had induced many attempts to introduce iron into the frames. William Allen, a tuner, and James Thom, the foreman, at Stodart's, one of the leading piano-makers in London, were the first to devise a satisfactory solution to the problem, and a patent was granted to them for their iron-frame construction on Jan. 15, 1820. The patent rights were at once bought by Stodart's and a great step forward towards the modern piano was made.

January 15, 1910.—The unsplinterable glass known as 'triplex glass,' which consists of two sheets of glass united by sticking between them a sheet of celluloid softened by a solvent such as acetone and subjecting them to considerable pressure, was invented by Édouard Benedictus of Paris. His French patent was applied for in August 1909, and the printed specification describing the invention was published on Jan. 15, 1910. The British patent was applied for a few days later and antedated to the date of the French application.

January 18, 1799.—The continuous papermaking machine was invented by Louis Robert, a mechanic in the employ of Didot St. Leger, paper manufacturer of Essones, France, a French patent being granted to him on Jan. 18, 1799. The French patent rights were assigned to Didot, but the practical application and development of the invention were due to the Fourdriniers of London, who had acquired the English rights from the patentee, John Gamble. Although an Act of Parliament was obtained extending the life of the patent to the year 1822, the patent was hotly contested and was finally set aside by the courts on a technical flaw, and the Fourdriniers lost not only their royalties but also the very considerable sum of money they had spent in perfecting the invention.

January 20, 1818.—The great tunnel enterprises of recent years were made possible by the invention of the tunnel boring-shield by Marc Isambard Brunel, the patent for which is dated Jan. 20, 1818. Brunel's shield—the general principles of which are the same as those of the shields in use to-day—was employed for the first time in 1825 for the construction of the Thames tunnel at Rotherhithe, which after long delays due to financial difficulties was finally completed and opened to the public in 1843. No other shield tunnel was built until 1869.

January 20, 1820.—Labour-saving devices have generally had their origin in the United States, and it was here that the standardisation of parts in gun-making and their manufacture on the interchangeable system was worked out and fully developed. One of the principle inventors in this field was Thomas Blanchard, a descendant from a Huguenot family which settled in Boston in the seventeenth century. The United States patent for his lathe for turning gunstocks was granted on Jan. 20, 1820, and such was its importance that it was twice extended by Act of Congress, first in 1834 and again in 1848.