

of his subject had been such as to secure the unanimous vote that he had passed his trials *summa cum laude*. Prof. Morgan was then "capped" amid enthusiastic applause.

By the will of the late Mr. H. Musgrave, of Belfast, who died on January 2, the sum of about 50,000*l.* has been bequeathed to Queen's University, Belfast, and 2000*l.* to the Royal Academical Institution, Belfast.

THE summer meeting of the Association of Science Teachers will be held at Oxford on Saturday, July 8. A business meeting will be held in the morning, and in the afternoon there will be a lecture by Mr. A. F. Walden, New College, Oxford.

It is announced in the *Chemiker Zeitung* that Dr. Fr. Quincke, director of the Rhenania, Aachen, has been appointed professor of technical chemistry at the Technische Hochschule, Hanover, in place of Prof. Ost, who has retired; and Prof. Adolf Sieverts of Greifswald has become professor of chemistry at the University of Frankfurt-on-Main.

THE new School of Public Health, which will be opened at Harvard University next September, is offering several fellowships of 1200 dollars each for the year 1922-23. Well-qualified students working for doctorates or wishing to do a definite piece of research will be given special consideration. Applications for these fellowships should reach the Secretary of the School of Public Health, 240 Longwood Avenue, Boston 17, Massachusetts, not later than August 1.

A FAR-REACHING scheme for industrial training was recently adopted by the Convocation of the University of London. Put shortly, the proposal is that the University should co-operate with the City Guilds and cognate bodies in the selection of Boards dealing with their respective trades, and that these Boards should seek, among the workers themselves, shrewd men and women of intelligence, skill, and *savoir faire* to deal with apprentices, learners, and improvers, bestowing upon them a kind of parental care and watching over their health, their progress, and their interests generally; that such trainers should find a place in every workshop and in every factory, and should receive recognition at the hands of the Guilds and of the University as a reward for the fostering care extended to their pupils; that the industrial classes are well able to supply such persons, men and women, in numbers sufficient to impress their mark upon the rising generation of workers, and that such might be designated University *teachers*, *trainers*, or *tutors* in their special trades, receiving a diploma to that effect, while, to apt and industrious pupils, the term University *pupil*, *scholar*, or *student* might be accessible with a corresponding diploma or certificate. In the report of the committee which accompanies the scheme, details of the various activities of the University are given under six main headings, and the thought arises, how can the Senate bear the proposed increased burden? Convocation itself seems well fitted to bear it. Its members, collected in suitable centres, would no doubt gladly assist in so meritorious a movement if the University should see fit to delegate the working out of the proposed scheme to a strong central committee (or delegacy), giving it powers to recognise local centres and to entrust them with branch work of benefit to the community. Such a delegacy might have its headquarters at the University centre, and the Clerk of Convocation could be its mouthpiece. It should report annually (at least) to Convocation, and through Convocation to the Senate, which might give it authority to speak in the name of the University on all matters relating to the scheme.

## Calendar of Industrial Pioneers.

**June 17, 1881.** James Starley died.—The son of a Sussex farmer, Starley, in 1846, at the age of 15, became gardener to John Penn, the marine engineer. Afterwards he was employed by a London firm of machinists, and in 1857 he brought out the "European" sewing machine; subsequently he turned his attention to bicycles at Coventry. To his perseverance and energy Coventry owes its position as the centre of the cycle-making industry. A monument was erected to him there in 1884.

**June 18, 1861.** Eaton Hodgkinson died.—Known for his valuable contributions to the study of the strength of materials and for his discovery of the "permanent set" and of the position of the neutral axis in beams, Hodgkinson was born near Northwich in 1789. In Manchester he received lessons from Dalton, and while assisting his mother in business began the researches which led to his co-operation with Robert Stephenson and Fairbairn on their experiments in connection with the Britannia Bridge.

**June 18, 1912.** Floris Osmond died.—A distinguished French metallurgist, Osmond was trained at the École Centrale des Arts et Manufactures, and among other appointments he held was that of chief chemist at Schniieder's works at Creusot. Here he began his researches into the microscopical structures of iron and steel. He left Creusot in 1884, settled in Paris, and devoted himself to research, becoming the founder of the allotropic school in metallography.

**June 19, 1898.** Sir James Nicholas Douglass died.—For thirty years Douglass was engineer-in-chief to Trinity House, in which post he succeeded James Walker. The Wolf lighthouse was built under his supervision during 1862-69 at a cost of 63,000*l.*; he also designed the lighthouses on the Great Basses and Little Basses, strengthened the Bishop's Rock lighthouse, and during 1878-82 constructed the new lighthouse which replaced Smeaton's tower on the Eddystone.

**June 19, 1915.** Benjamin Franklin Isherwood died.—Born in New York City in October 1822, Isherwood was one of the first officers in the Engineer Corps of the United States Navy. He was a pioneer in carrying out scientific trials of steam-engines, and in 1859 published his "Engineering Precedents," a valuable work dealing with the friction losses and power of steam-engines. In 1861 he was raised to the position of engineer-in-chief of the Navy, a post he held till 1869. Recognised as the greatest marine engineer America has produced, he was for many years an honorary member of the American Society of Mechanical Engineers.

**June 21, 1885.** Henri Tresca died.—A student of the École Polytechnique, and for a time an engineer in the public service, Tresca was principal inspector of French exhibits at the Great Exhibition of 1851. Afterwards he became a professor of the Conservatoire des Arts et Métiers and served as president of the Société des Ingénieurs Civils. His labours were of the highest importance to the industrial arts of France, and included researches on the strength of materials, the efficiency of machines, the flow of metals, and the application of motive power.

**June 22, 1876.** Robert Napier died.—Commencing business in Glasgow as an engineer in 1815, with a capital of 50*l.* and a staff of two apprentices, Napier became one of the leading shipbuilders on the Clyde, and ultimately employed 3000 men. Of him Rankine said: "Few, if any, did more to bring marine architecture to the degree of perfection it has reached; and by drawing students of practical engineering from all quarters his building yard became a school of instruction to the world." E. C. S.