

without entailing on the public any expense on this account."

The zeal and energy of the medical officers, and their love of science, however, seem not to have been equal to the occasion, for after vainly endeavouring, until the end of 1855, to carry out the orders they had received, without entailing expense on the public, it was arranged, at the direction of the Honourable Board, that two European soldiers should be told off at each station to undertake the duty of making meteorological observations on an allowance of 25 rupees per month for each observatory. The soldiers were sent to the Bombay Observatory early in 1856 for a preparatory course of training, on the successful completion of which they were furnished with certificates of competency to perform the work. Soon after this time the real work of meteorological registration may be said to have commenced, for, so far as the observers are concerned, the work from this time appears to have been carried on generally in a thorough and satisfactory manner. Under Mr. Chambers's administration the instruments were for the first time regularly compared with standards, and trustworthy data, such as made the Climatological Atlas of India possible, were collected.

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#### DR. CHRISTIAN HESS.

ONE of the directors of the *Farbenfabriken vorm. Friedr. Bayer und Co.*, in Leverkusen, Dr. Christian Hess, died on July 11 in Bonn, after a serious operation. He was born January 14, 1859, at Eisenach, studied chemistry first at Jena and then in Berlin, where he worked for his doctorate under A. W. v. Hofmann in 1881. After having been assistant chemist to Prof. Wichelhaus at the Institute of Chemical Technology, he went in 1883 to the newly founded weaving, dyeing, and finishing school in Crefeld, where he developed very great activity as a teacher and an expert adviser. At that time he invented his process for removing iron from water. The large number of coal-tar dyestuffs of a new character, which were discovered at that time, brought with them the necessity of using new methods for dyeing. This caused a lot of difficulties in the dyeworks, to meet which the dyemakers engaged colourists of good chemical training, able to introduce the new methods. One of the first of these was Dr. Hess, who was engaged by the *Farbenfabriken* in 1894.

Dr. Hess showed remarkable commercial ability, and after some time the whole of the sale of dyestuffs was entrusted to him; he was nominated a director in 1906. His knowledge of men and things enabled him to render many important and lasting services to the industrial side. His firm, his colleagues, his employees and the great number of men he helped with good advice, with sound reasoning and with hearty encouragement, when in difficulties, will much regret his premature death.

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#### PROF. J. VIOLLE.

THE issue of the *Revue scientifique* for September 22 contains a notice of the death of Jules Violle, professor of physics at the *Conservatoire des Arts et Métiers*,

which occurred at Fixin, near Dijon, on September 12. Violle was born in the same district on November 16, 1841. After obtaining his doctorate in 1870, he was in succession professor of physics at Grenoble, at Lyons, and at the *École Normale*. In 1897 he was elected a member of the Paris Academy of Sciences in succession to Fizeau. He was president of the French Physical Society, of the Society of Electricians and of the Committee of Inventions for National Defence. His earliest research was a determination of the mechanical equivalent of heat by means of the Foucault currents in a disc rotating in a magnetic field. His result, about 4 per cent. too high, was published in 1870. His work on the temperature of the sun appeared in 1877, and in 1884 he proposed as a standard of light, that radiated normally by a sq. cm. of molten platinum at its freezing-point. From 1886 to 1905 he published in conjunction with Vautier a number of memoirs on the speed of sound particularly in tubes. His "*Cours de physique*," which began to appear in 1883, was never completed.

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WE regret to record the death, on July 26, of Alexander Ellinger, professor of pharmacology in the University of Frankfurt. Before the foundation of the latter university Ellinger held a similar chair at Königsberg. He was best known for his chemical work. Thus he showed that ornithine and lysine are decarboxylated by bacteria to putrescine and cadaverine respectively. He supplied the final touches to the determination of the constitution of tryptophane, and synthesised this amino-acid. Its transformation to kynurenic acid by the animal organism occupied much of his attention, and a few years ago he was able to elucidate the mechanism of this peculiar change, which apparently takes place via the keto-acid corresponding to tryptophane.

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THE Brooklyn Museum Quarterly of July includes an obituary notice of Prof. William Henry Goodyear, best known by his work entitled "*The Grammar of the Lotus*," who died in February last aged seventy-seven. The theory developed in this book was conceived during his studies of lotiform decorations in Cypriote art, and included a study of the lotus in the decorations on papyrus from early Egyptian times. In his work as an architect his discoveries of architectural refinements will prove most important. His published work is extensive and valuable, and is fully recorded in the sketch of his career by Mr. W. S. Conrow.

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WE regret to announce the following deaths:

Sir Halliday Croom, emeritus professor of midwifery at the University of Edinburgh and lately president of the Royal College of Surgeons, Edinburgh, on September 27, aged seventy-six.

Dr. P. Friedländer, professor of organic chemistry and of organic-chemical technology at the Darmstadt Technical College, aged sixty-six.

Dr. Herbert McLeod, F.R.S., honorary director of the Royal Society Catalogue of Scientific Papers, on October 1, aged eighty-two.