

and his remains were interred at Kirkby Lonsdale, in his native County, where he had acquired great influence, and where his memory will long be cherished.

MR. BENJAMIN LEWIS VULLIAMY, born in London on the 25th of January 1780, was descended from a family of high respectability in Switzerland, whence his grandfather, Mr. Justin Vulliamy, emigrated to this country, and settled in the Metropolis. He became connected with Mr. Benjamin Gray, then living at "Ye sign of ye Sun Dial," in Thatched House Court, St James' Street, married his Daughter, and succeeded him in business ; since that period the appointment of Clockmaker to the Crown, which was held by Mr. Gray in the reign of George II., has continued in the Vulliamy family. In the performance of the duties of his office, Mr. Benjamin Vulliamy, the father of our late Associate, was frequently in attendance upon George III., at the Observatory at Kew, and thus his son, Mr. Benjamin Lewis Vulliamy, was brought at an early period into contact with the younger branches of the Royal Family, and there are in existence letters written to him by some of the Princes when young, exhibiting the esteem in which they held him. Nor did this feeling cease with their early years, but, on all occasions, when their interference could be beneficial to him, he had only to express his wishes to insure immediate attention. He was, however, so fully penetrated with this feeling, and so scrupulous in exercising the influence he possessed, that he submitted to the imputation of indifference, rather than prefer the most simple request, even for the advancement of his own family. Her Majesty, the present Queen, on her accession, was pleased to give special direction for the maintenance, during his lifetime, of the patent office which he held ;—a gracious acknowledgment of his services and those of his father and grandfather, to which he always referred with pardonable pride and gratification.

The notice of the Royal Family naturally induced that of great numbers of the Aristocracy, and there has rarely been an instance of a man engaged in trade being admitted to such intimate communication with so many of the nobility ; his sound common sense, the fearless expression of his opinion, and his general bearing, induced confidence, and more intimate acquaintance confirming the preconceived good opinion, he was admitted to an intimacy with many noblemen and gentlemen, whose talents are as fully appreciated in the scientific world, as their names stand high in the aristocratic circle. Many of them were gathered to their fathers before their friend, but on his decease, his family had the satisfaction of receiving condolences from high quarters, whence such kind consideration could scarcely have been anticipated.

Mr. Vulliamy's early years were devoted to the attentive study of the rudiments of his future business; the best authors on the theory and practice of horology passed through his hands; he became intimate with engineers and mechanicians, and learned the points of excellence of other machines, to be subsequently engrafted upon his own productions. The works of ancient and modern horologists of this and of foreign countries, became familiar to him, and this combination of theoretical knowledge and practical skill enabled him eventually to produce the works for which the name of Vulliamy will long be remembered.

All his productions were remarkable for their sterling excellence, but the branch to which he devoted the chief powers of his mind, and the largest portion of attention and time, was the construction of turret clocks, and upon that subject he wrote several useful papers, which with the example of his works, have tended materially to the improvement of the construction of public clocks in this country. He contributed also to Rees' *Encyclopædia*, the article on the Stogden repeating motion,—the best description hitherto given of that principle; he also wrote some valuable papers on the construction of Graham's Dead-beat scapement, for astronomical clocks. Among the numerous specimens of his mechanical knowledge and artistic skill, may be mentioned the turret clocks at the New Post-Office, St. Martin's-le-Grand, at the Victualling Yard Plymouth, at Windsor Castle, at the Churches of Norwood, Leytonstone, and Stratford, the Cathedrals of Calcutta and Oxford, and at the University Press of the latter city. Into many of these works, he introduced several peculiarities, such as the pendulum to vibrate two seconds; the great length of the pendulum, and the consequent near approximation of its circular arc of vibration to the cycloid, giving obvious advantages, and the weight of the bob, rendering it far less liable to be affected by external causes. The result of these arrangements, combined with the perfect execution of every part of the work, produced a degree of accuracy of performance in his turret clocks which has rarely been equalled in this country, or on the Continent, and has been nowhere surpassed. It is a known fact, that during six months, the clock at Christ Church, Oxford, had never been set, and yet had not varied thirty-five seconds. The knowledge of these circumstances induced Sir Charles Barry to apply to Mr. Vulliamy, for suggestions as to the interior construction and arrangement of the clock-tower in the new Houses of Parliament; and it was by the advice of that eminent Architect, that the Government afterwards had recourse to him for a design for a clock to be placed in that tower. To this design Mr. Vulliamy devoted all his

¹ Vide 'Brande's Journal of Science,' 1823.

energies, and it was for a long time his confident hope, that the greatest monument of his own art might be united with that of his friend's. The circumstances, under which a competition was induced for the construction of that clock, the decision arrived at, and the means by which it was procured, are well known from the Parliamentary papers published on the subject.¹ Those who have had the opportunity of examining the original drawings, now deposited in the collection of the Institution of Civil Engineers, may, however, probably have arrived at other and opposite conclusions. It was considered, by Mr. Vulliamy, that the rate of going of the Christ Church clock was a surer guarantee for greater general accuracy than that demanded, that the first stroke of each hour should be true to a second of time, and that a machine which was to move hands of twelve feet in length, exposed to the action of the wind, which would, through them as levers, affect the movement of the internal parts, was not to be constructed like a drawing-room toy, or as an astronomical regulator. His feelings on the subject were painfully acute; but the mortification he experienced, was greatly alleviated by the kind expressions of sympathy elicited from almost all the eminent clockmakers of Great Britain and of the Continent, by whom he was universally esteemed and respected.

It was not, however, exclusively in the scientific part of his business that his eminence was admitted; his taste was refined by the study of the fine arts; his knowledge of architecture, of paintings, and especially of engravings, was of a character seldom attained by amateurs; his library was rich in works both on construction and ornamental art; nor had his judgment been formed from books alone, but he was well acquainted with many of the best museums and galleries on the Continent, as well as in his own country. The consequence is to be traced in the perfect keeping and correctness of the general design, and the decorative portions of all his own productions.

Being apprenticed to his father, he received the freedom of the Clockmakers' Company in December 1809, became a Liveryman in January 1810, and was admitted a member of the Court in the month of April of the same year. He served every office in the Court of the Guild, and was five times elected Master. His services were duly acknowledged by a presentation of plate in the year 1850; and it is a touching proof of the deep interest which he took in all that concerned the interests of those of his own calling, that the last act of business he performed, was to receive a deputation of the trade, relative to the erection of an Asylum for aged and decayed persons who had been engaged in any branch

¹ *Vide* Parliamentary Papers, relating to the Great Clock for the New Palace at Westminster. 1844 to 1847.

of the art. Even then the hand of death was on him, and in little more than forty-eight hours afterwards he had passed from this world to his rest.

He was a liberal contributor of models and specimens to the collection of the Clockmakers' Company, and co-operated actively in the formation of their valuable library, where should have been deposited the results of the numerous intelligent experiments made by his Grandfather, his Father, and himself; they have, however, apparently not been preserved. He was most anxious for the establishment of a school, to be especially devoted to the study of the science of horology, and where, in addition to the ordinary apprenticeship for acquiring facility of manipulation, the literature of the art could be studied, in order, as he used to express it, "to prevent men from repeating the inventions of their Grandfathers."

His anxiety for the welfare of his workmen was well known and estimated by all who had the good fortune to be in his employment, and there are numerous instances of his having granted weekly stipends to deserving handicraftsmen, who had in their old age fallen into distressed circumstances.

He was a Fellow of the Astronomical, the Geographical, and the Zoological Societies, and he had been, since the year 1838, an Associate of the Institution of Civil Engineers, into which he was introduced by his intimate friend the late Mr. Francis Bramah. He acted as Auditor of Accounts on several occasions, was a very constant attendant at the meetings, contributed some interesting papers to the volumes of the Minutes of Proceedings,¹ took part in the discussions, and was always among the first to contribute, either pecuniarily, or by personal exertions, to the welfare of the Society. He presented two valuable clocks for the Theatre and the Council Room, made several useful additions to the Library, and one of the latest acts of his life was to present to the Institution a valuable collection, of two hundred and seventy volumes of mechanical and horological works, which had been selected with great judgment for his own use, and which form, perhaps, the best collection of books of the class in this country. The intention of making this valuable gift, which has been alluded to in the Annual Report of the Council,² was thus announced to the Author of this sketch, only eleven days before the lamented decease of the generous donor.

"MY DEAR MANBY,

Pall Mall, December 28th, 1853.

"MAN that is born of a woman hath but a short time to live," and that I am persuaded is my case. There is not anything like

¹ *Vide* Minutes of Proceedings, Inst. C. E., vol. iv. 1845, p. 246; vol. v. 1846, p. 360; vol. vi. 1847, p. 63.

² *Vide ante*, page 107.

being plain-spoken in matters of business, I therefore proceed to my business in a straight-forward way. Will the Council of our Society accept legacies, left with conditions attached to them? I am anxious that my horological library should, after my demise, remain intact, and I should like to know whether it would be accepted, upon the condition that it should be kept apart from any other books, without deductions, or additions. In that case, it cannot be otherwise so well disposed of. The Clockmakers' Company possess the next best collection, but to leave it to them would merely be to give them nineteen duplicates of every twenty books in their library. Come and see me about this matter without delay, &c.—

(Signed)

“Yours very sincerely,

“B. L. VULLIAMY.”

This expression of his wishes, although not recorded in his will, received the most scrupulous attention from his sons, Mr. Vulliamy and Mr. George Vulliamy (Assoc. Inst. C. E.), and his Daughter, the wife of the Reverend Stephen Rigaud, D.D. (Assoc. Inst. C. E.), and at the Annual General Meeting, the Members unanimously agreed to mark their sense of the kind feeling which dictated this gift, by directing the acknowledgment of the donation in suitable terms, conveying the thanks of the Institution, and expressing to Mrs. Vulliamy and the family, deep sympathy for the loss they had sustained.

Mr. Vulliamy had, for several successive winters, suffered severely from attacks of bronchitis, the effects of which had been warded off chiefly by the affectionate care and attention of his excellent lady, but even that at length proved ineffectual, and his active and useful life terminated on the 8th of January, 1854, in his seventy-fourth year.

He was a man of accomplished mind, a thorough English gentleman in feeling, appreciating and applauding rectitude of action, and fearless in the expression of his opinion of any deviation from the right path; honourable, cheerful, and affectionate, he will not readily be forgotten by those who knew his worth and now lament his loss.

COLONEL JOHN NEAVE WELLS, C.B., born at Holme-Wood, near Stilton, on the 16th of June, 1790, was the fourth Son of the late Admiral Wells, of Holme, Huntingdonshire, and of Sarah Bridget Freemantle, Sister of the Right Honourable Sir William Freemantle and of Admiral Sir Thomas Freemantle. After receiving his education at the Royal Military Academy, at Woolwich, young Wells was, on the 6th of November 1806, appointed a Second-Lieutenant in the corps of Royal Engineers;