

gentlemen in the formation of "The Devon and Cornwall Society of Architects and Engineers" at Plymouth, of which he was elected the first President.

Mr. Stuart died at his residence, Woodside, Plymouth, on the 11th of January 1854 in his eighty-first year. Strenuous to the last in the performance of his duties, he was at his post, on the Breakwater works, only five days preceding his decease. His remains were followed to their last resting-place, in the Plymouth cemetery, by a large assembly of persons of all ranks, among whom, at their own particular desire, were the workmen of the Breakwater, anxious to testify their respect for one who had lived amongst them so long,—for whom they had ever entertained the highest esteem and in whom they had reposed the utmost confidence.

Mr. Stuart's death having been officially announced to the Admiralty, their Lordships made the following gratifying communication to the family, through Commodore Seymour, the Superintendent of H.M. Dockyard, Devonport :—

"Having reported to the Lords Commissioners of the Admiralty the decease of your much-respected husband, I have to express to you, by direction of their Lordships, their wish to record their sense of the long, faithful, and valuable services of the late Mr. William Stuart; and I have therefore the satisfaction of conveying to you their expression of the estimation in which he was held, and their sympathy with you in your loss, and may I request you will be good enough to communicate these sentiments to such other relatives of Mr. Stuart as may be on the spot."

Mr. Stuart's memory will be long cherished for the strict integrity, the unwavering piety, and the universal benevolence that distinguished his career.

MR. JAMES TRUBSHAW was born at the Mount, Colwich, Staffordshire, on the 13th of February 1777. Owing to the culpable inattention of his Father, he only received the mere elements of education, and he was initiated at a very early age into the practical parts of the building trade, in which he eventually attained considerable celebrity. When he commenced business on his own account as a Builder, at Stone, with very slender resources, he met with good encouragement from those who had watched his early career, and it is recorded of him, that the greatest real anxiety he experienced was to provide regularly for the pay-day engagements, and "neither he nor his estimable wife would ever allow themselves any indulgence, until the workmen's wages and all trade debts were made secure. Many, at that time, were the long and weary walks he undertook, in collecting his own dues

for such purposes; and greatly distressing was it to both, whenever those exertions happened to prove unsuccessful at the moment."

His probity of character and the reputation he obtained for practical skill, gradually raised up for him influential friends. His first special patroness and friend was Mrs. Sneyd, of Ashcomb, to whom he always attributed his start in life, and among others of his patrons must be mentioned, the late Sir Thomas Cotton Sheppard and Sir George Philips, who proved, by many kind acts, the high estimation in which they held him. He eventually became extensively engaged as a building Contractor, and among the numerous specimens of his works may be mentioned, Ilam Hall, near Ashbourne, and Weston Hall, in Warwickshire, which he built from the designs and under the respective superintendence of Mr. John Shaw, and Mr. Edward Blore.

He was sometimes also induced to give designs for, as well as to execute, architectural works, but as far as was possible he avoided that which he considered an interference with the professional Architect. In the case of Wyburnbury Church, in Cheshire, whose lofty tower had deviated more than five feet from the perpendicular, he only undertook the difficult task of its restoration, when others had declined the attempt. The edifice being founded upon a soft sandstone, he adopted the process of cutting a trench abreast of the upper side of the tower, and boring from thence a series of auger-holes, at a given inclination beneath the wall, so as to remove a certain quantity of material from the higher side; the weight of the masonry then caused the mass to subside gradually, and eventually the tower resumed its vertical position, which it has retained to the present time. This successful accomplishment of a bold and original conception deservedly gained for its ingenious projector considerable reputation.

The class of work for which he always exhibited the greatest predilection was the construction of bridges, and among several which he completed two structures must be named, which, for boldness of design, difficulty in construction, and eventual success, stand almost unrivalled in the annals of bridge-building, previous to the introduction of iron for such purposes. The first was the Grosvenor bridge at Chester,¹ the original design for which, by the late Mr. Harrison, Architect, was for a stone arch, crossing the river Dee by a single span of 200 feet, the form being a segment of a circle of 140 feet radius, and the versed sine 42 feet. The boldness and beauty of the design were universally admitted, but

¹ *Vide* Trans. C. E., vol. i. p. 207, and Original Communication, vol. iv., No. 9, and vol. v., No. 16; Minutes of Conversation, vol. vi., 1837, Nos. 8, 9, and 13; and Minutes of Proceedings, vol. i. 1837, p. 35.

there was considerable hesitation in attempting the construction ; meanwhile, advanced age and declining health precluded Mr. Harrison from taking an active part in the undertaking, and “Mr. Jesse Hartley, of Liverpool, was applied to by the Commissioners to undertake the management, which he consented to do, on the condition that no alteration should be made from Mr. Harrison’s external design, but that the interior, and all practical points should be left entirely to him.” Mr. George Rennie had also been instructed by the Corporation of Chester to investigate and report upon the original plans and designs ; he accordingly entered strenuously into the question, equilibrated the arch, considering carefully all the difficulties to be overcome in the execution.

Eventually the contract for the construction was undertaken by Mr. Trubshaw, for £36,000, which, at that period, was considered a formidable sum, and all his powers were devoted to the task he had undertaken. Several unforeseen difficulties occurred during the progress of the work, but the excellence of the general arrangements and precautions taken, insured success ;—the design for the centres has always been considered a model of boldness, simplicity, and solidity of construction, and combined with the ingenuity of the method of slackening them, so as to bring the arch-stones gradually to their respective bearings, has ever excited the admiration of the Profession ; and it is a question whether this Bridge was not the object of more honest pride in the breast of Mr. Trubshaw, than any of his antecedent, or subsequent works. In spite of numerous and disquieting difficulties he pursued his energetic course, and after six years’ labour, under the superintendence of his friend Mr. Jesse Hartley, who introduced some deviations from the original plans, the bridge was completed and formally opened on the 17th of October, 1832, in the presence of Her Majesty, then the Princess Victoria ; but it was not thrown open to the public generally until the 1st of January, 1834.

The design was achieved in full, and the structure remains, a lasting memorial of the enterprise, skill, courage, and honest perseverance of the worthy and ingenious Contractor, who, by the triumphant issue of this venturous and able work, solved an important problem in the construction of arched bridges of large span.

The second instance is chiefly interesting, as being graphically characteristic of the nature of the man, rather than a record of the ingenuity and skill of the constructor. During the erection of the ‘Exeter Bridge’ over the Derwent, at Derby, many disheartening casualties occurred :—“More than one disastrous flood occurred in course of its progress, involving damage obviously fatal to all but the credit of the high-spirited Contractor, then on the shady side of threescore years and ten. And now comes the characteris-

tic evidence just referred to, as shown on the occasion of a public dinner given at Derby, in celebration of the opening of this bridge, in October, 1850. The health of the Builder having been proposed in complimentary and very feeling terms, with an allusion to his ill fortune in the foregoing respect, coupled with good wishes for "all the enjoyment which intelligence and integrity could give to an old man in the last days of his life," Mr. Trubshaw replied in terms worthy of being recorded, as a specimen of what may be sincerely called "unadorned eloquence." "I am much pleased" (he said) "that my conduct has met with your approbation. I have been in the habit of thinking all my life, but not of talking much; and if the bridge which has been opened to-day will carry us all well over, I shall be much gratified. With respect to the cost, it has never given me much trouble. When I was assailed by sudden floods, and by quicksands in the middle of the river, I soon found out where my profits would be. However, I have paid—or shall pay in the course of a few days—all the expenses incurred; and I shall then burn the accounts, and think no more about them. I thank the Mayor, in particular, and the gentlemen present, for the civility and kindness I have received during the progress of the work, and I hope the bridge will do credit to my memory when I am no more."

During the period of his holding the appointment of Engineer to the Trent and Mersey Canal Company, his services were of a varied and valuable nature, and the numerous Reservoirs, Feeders, Railways, and other works executed from his designs and under his superintendence, attest equally his skill and his indefatigable industry.

At length he began to feel that age and comparatively failing health rendered the undertaking of new works unadvisable, and having realized a handsome independence, he gradually retired from active pursuits, to spend the evening of his days amidst an attached family, and with his amiable wife, with whom he had found and shared, during more than half a century, "that mutual society, help, and comfort, which constitute the blessing of the married life, both in prosperity and in adversity;"—a more thoroughly united pair have but rarely been met with.

Although he had retired from active professional engagements, he could not entirely give up speculating upon difficult engineering problems, and among other designs, he seriously contemplated and proposed the erection of a monument to the memory of the late Mr. George Stephenson, to consist of "a monolith several feet higher than Cleopatra's Needle." This was a favourite project, and the profound admiration he entertained for the Father, and the esteem he felt for the Son,—Mr. R. Stephenson, M.P., V.P., would no doubt have induced his attempting the execution of the task, if his life had been spared.

[1854-55. N. s.]

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It has been observed that (allowing for individual diversities) "there were many points of resemblance between that very remarkable man and himself, both in character and career. Both were strictly men of original genius, of great natural talent, and persevering energy; both were of simple, open, manly bearing; both had been subjected to the discipline of actual work, in their younger days; and both were the artificers of their own eventual reputations and positions in life. It may be added, that both were equally esteemed and respected, as men of unblemished integrity. But it is not intended to run parallels where neither comparison nor contrast is needed, and where the celebrity of each rests on its own solid foundation. The points of resemblance have been alluded to only because they were fellow-labourers of the same generation, for the benefit of their country, in a common department; and because in Mr. Trubshaw nearly the last is gone, of the old school of Engineers, whose works will be handed down to posterity, as records of intuitive genius combined with singular practical skill. For Mr. Trubshaw, like his great contemporary, had few advantages of education; but in its stead he seemed to be gifted with an instinctive perception of all great mechanical principles, uniformly guided by excellent common sense."

In person, Mr. Trubshaw was of a commanding figure, tall and athletic, and of a frame capable of undergoing great fatigue; in social life, he was cheerful and friendly; disliking all affectation, or pretence; and ready at all times to impart information from his stores of valuable ideas and sound practical experience. Order was the great feature of his character, and whether as an employer on his own account, or as an agent, he was as scrupulously just towards those who served under him, as to those whom he served. Hence his popularity among the working classes, and the reputation he enjoyed among all his employers.

He was an old Member of the Institution of Civil Engineers, having joined it in the year 1827; he contributed some papers for the meetings,¹ which he attended scrupulously, taking part in the discussions, whenever he visited the Metropolis; presented a model of the centering of the Dee Bridge, and exhibited in every way the vivid interest he took in the progress of the Society.

He died calmly, on the 28th of October, 1854, in his seventy-seventh year, after a short actual illness, and was buried in the churchyard of Colwich, on the 4th of November, dying, as he had lived, a faithful and humble member of the Church of England. His death occasioned deep sorrow, in his own immediate neighbourhood, being felt as a private and personal loss far and wide beyond the circle of his own family.

¹ *Vide* Minutes of Proceedings Inst. C. E., vol. i., 1837, p. 35.