

VIII. — *A Brief Memoir of the late John Kennedy, Esq.*  
*By WILLIAM FAIRBAIRN, Esq.*

---

Read April 3rd, 1860.

---

THE subject of the present memoir was born at Knock-malling, in the Stewartry of Kirkcudbright, N.B., on the 4th of July 1769. He was the third of five sons, and his father (who died at middle age) was a laird, living upon the paternal property which had descended through a long line of Kennedys for upwards of three hundred years. Of the education of his sons little can be said, as in such remote mountain districts no regular school was within reach, and they only received occasional instruction from some young graduate of the kirk, who took up his residence amongst the farmers in the winter months. In this way they were taught to read and write, though unfortunately what was learnt in the winter was in many cases lost in the summer, when all able to work were employed in the field, or in watching the sheep and cattle on the bare mountain pastures. Mr. Kennedy was, however, fortunate in receiving the instructions of Mr. Alexander Robb, who first directed his attention to the elementary principles of mechanics and mechanical movements.

On the death of his father, the whole management of the farm and of the family devolved upon the mother, who appears to have been a woman of strong good sense, who



brought up her children respectably, and laid the foundation of those qualities which distinguished them through life.

Mr. Kennedy was occasionally subject (like his father) to low spirits. He seems in early life to have been an observant, thoughtful child, and he always retained a most vivid recollection of the home life of his native district. He frequently, in later years, when speaking of the improvements which have been effected in the management of land and stock, used to tell how as a boy he felt for the poor cattle in the spring, which, from want of food, had become so weak that when once down they could not get up again, but had to be helped to rise from sheer weakness and want of support.

At the age of fourteen he and his brothers, excepting the eldest, who took to the farm, began to look about them for some employment by which they could earn a living; as it was then the custom in the great majority of Scottish families for the younger branches to emigrate, and make their way as best they could in a foreign land. At that time the great openings for employment were England, the West Indies, and America. The late Adam and George Murray, the founders of the well-known firm of that name in this city, who came from the same locality, and had settled as apprentices with Mr. Cannan, the machine maker at Chowbent, excited a strong desire in Mr. Kennedy to see new places and new things. He became ambitious to do something for himself, and to look beyond the still glens and blue mountains by which he was surrounded. With these feelings Mr. Kennedy was engaged as an apprentice to Messrs. Cannan and Smith, at Chowbent.

Early in February 1784, he started for England, with his mother's blessing. She told him "always to conform to the Presbyterian confession of faith, but (she said) to



remember that the Roman Catholic religion\* and all others were alike, if you were sincere and acted up to their precepts, and they were all equally efficacious to salvation." With this sage advice and a new suit of homespun, he left his home mounted on a pony, full of the events of his future prospects in life. After two days travelling he reached Carlisle, where he was met by his master's partner, Mr. Smith, who was employed in starting a carding-engine and one of Hargreaves' jennies, which were placed in different rooms, as there were no cotton mills at Carlisle at that time. From Carlisle he proceeded, in company with Mr. Smith, through Penrith, Kendal, and Preston, and on the sixth day reached his destination. At Preston he had an opportunity for the first time of hearing a lecture of Mr. Banks on Natural Philosophy, with which he seems to have been much interested, and which laid the foundation of his future tastes and desires in these pursuits. Immediately on his arrival at Chowbent he commenced work as a machine maker, and in a short time became an expert workman. The machinery made at that time was limited to carding machines, Hargreaves' jennies and Arkwright's water frames, including drawing and roving, then very imperfectly constructed.

At the close of his apprenticeship, which lasted seven years, he came to Manchester on the 18th of February 1791. Here he joined in partnership with Benjamin and William Sandford — who were fustian warehousemen — and Mr. James McConnel, under the firm of "Sandford, McConnel and Kennedy," and commenced business with them as machine makers and mule spinners. This was shortly after Crompton's invention of the mule, and the firm was for many years almost the sole makers of

\* It is supposed that Mrs. Kennedy, a descendant of the old chevaliers and Catholic families, had some predilection for that form of worship.



Crompton's machine.\* It will not be necessary here to give an account of the different machines which constituted the mechanism of a cotton factory in those days. I may, however, here observe that Mr. Kennedy rendered great service to the new system of mule spinning by the introduction of a new motion called the double speed, and which gave to the thread any amount of twist that might be required for the number of counts, or the quality of the yarn that had to be spun. This improvement of Mr. Kennedy gave greatly increased facilities to the spinning of fine yarns, and very soon enabled those engaged in that peculiar manufacture to raise their numbers from fifties and forties up to one hundred and fifties and two hundreds; and since that time numbers as high as fifteen hundred and two thousand have been spun. Still greater improvements have been made since that time, but less in the mule than in other machinery, excepting only the introduction of the self-acting mule; the increased fineness in the quality of the yarn of the present day being more attributable to carding, combing, and preparatory machines than to any of the improvements since made in the construction of the mule on which it is spun.

To show in what way Mr. Kennedy effected his improvements of Crompton's mule, he gives the following

\* Crompton completed his mule in 1780, and after contending with many difficulties and annoyances he at last gave it to his competitors for a consideration that they never paid, but left the poor inventor a prey to poverty and the ingratitude of those who had benefited by his discoveries. This is another instance of the robbery—it cannot be designated by a milder term—practised upon the benefactors of the human race by the self-interest alloyed with ingratitude of the possessors of princely fortunes derived not from their own talents but from the higher intellects of those they have utterly forgotten and neglected. Such were the fortunes of Crompton and Cort, whose inventions have, along with those of James Watt, revolutionised the manufactures of iron and cotton, and given to their native country a predominance never yet paralleled in the history of nations.— See an excellent work by Gilbert J. French, Esq., entitled *The Life and Times of Samuel Crompton*.



account in his "Memoir of Crompton:" — "It was not until 1793 that any attempts were made in spinning fine yarns, say from one hundred hanks upwards, by power, when I observed the process very carefully. The rollers, according to the fineness of the thread, would only admit of a certain velocity per minute; for instance, with two hundreds, the rollers could only go ninety at the rate of twenty-five or twenty-six revolutions per minute, and the spindle about twelve hundred. But when the rollers ceased to move, then the spindle was accelerated by the spinner to nearly double its former speed. In what manner the acceleration of the speed of the spindle might be effected by machinery, without the aid of the spinner, had occurred to me, by observing in Mr. Watt's steam engine that one revolution of the beam (if I may use the expression) acting upon the fly-wheel by means of the sun and planet wheels, produced a double velocity. The difficulty, however, of making the necessary apparatus at that time induced me to use the more complicated method of four wheels of unequal sizes for producing the same effect. The description is as follows:— Two of the wheels were less and two larger; upon the rim axis one of the small and one of the large; and the two others were fixed in a frame which carried the axis upon which they were placed, and which had a shank or axis growing to it. This was placed in a vertical position, so that when the carriage was put up an arm projecting from this vertical shank was connected by a wire with a catch, which kept the lying shaft that turned the rollers in gear. In the elongating process the smaller wheel was in contact with the larger wheel upon the rim, but when by the disengagement of the catch the rollers became still or stationary, at that moment the larger wheel, by means of a weight, came in contact with the lesser wheel upon the rim or axis, to which it communicated a double velocity.



The shaft, with its large and small wheels working alternately had a pulley with a catch upon it, and was driven by the mill-work; and was forced into a corresponding catch upon the small shaft when the mule was to be set in motion by the steam power. The power in this instance was Savery's, which was used to raise water upon a water-wheel. There was a worm upon the rim axis, with a wheel upon it, the number of whose teeth determined the revolutions of the rim. The second drawing, which had generally been performed by hand, had also to be performed by the machine itself. This had been done in a few instances before power had been applied. From the simplest of these methods I took the hint, drawing a shaft from the rim by a strap from a small pulley upon the rim axis, and a large one upon the small axis which had the small pinion upon it; so that when the drawing-out wheel and band were disengaged from the front roller, they fell back into the small pinion whose axis was revolving at a very slow speed, and consequently gave a much slower speed to the second stretch or draw, as it is called, the speed of which was more or less, according to the numbers to be spun.

“Messrs. A. and G. Murray at that time, like myself and partners, were machine makers, and to a small extent we were both engaged in fine spinning by hand. They fitted up, upon the principle above described, a few pairs of hand mules, which they had previously made for one of their customers in Derbyshire, who had water power. Mr. Drinkwater, of Manchester, was the most extensive fine spinner at the time of which I speak. He was one of the early water spinners, and in possession of the most perfect system of roving making. His large mill in Piccadilly was filled with mules of one hundred and forty-four spindles each, all of which were worked by mens' hands. Mr. Owen, the philanthropist, was then his manager, and



they came to see the new machine in 1793. They approved of it, and thought it practical. Mr. Humphrey, of Glasgow, a good mechanic and millwright, succeeded Mr. Owen as manager, who also approved of the scheme, and got instructions to apply this steam power to the fine work produced by the mules in Piccadilly mill; and to make its advantages available he coupled two of one hundred and forty-four together, so that he saved one-half of the steam gearing, and obtained a reduction in the price of spinning, the spinner having double the number of spindles to operate upon. Mr. Humphrey made an improvement in the four wheels already described, by keeping them always in gear with a loose clutch between the two wheels on the rim shaft, which was alternately fastening the small driving wheel, and then relieving it and fastening the larger one which accelerated the speed of the rim, and furnished with a loose and fast pulley as already described. This prevailed for some years, when I thought it might be simplified, which was done by adopting three pullies, namely, one on the small wheel, another on the large wheel, and a loose pulley. The driving strap, which was on the loose pulley when the mule was at rest, was removed to the pulley on the smaller wheel when the rollers were to work, and then to the pulley on the larger wheel which accelerated the rim and spindles, until the thread was completed, when the strap being removed to the loose pulley, the whole machine came to rest, and the thread was put up by the spinner in the ordinary way. I was at this time able to construct the sun and planet wheels for the acceleration of the speed of the spindle in the following way:—The sun and planet wheels had only two wheels and one pulley with a clutch that fastened the sun wheel when the accelerated motion was required. But though this and many other modifications were introduced, the four wheels prevailed. Some of these, for convenience,



I constructed by making them bevils, and placing their axis vertically to get motion from an upright shaft, which produced the same effect as the spur wheels.”\*

In addition to his improvements of the mule, Mr. Kennedy was also the pioneer in forwarding the interests of the cotton trade, by improvements of the other machines employed in that manufacture. He was one of the first to suggest and carry out improvements in the roving frame, and the differential motion for winding the roving upon the bobbin owes much of its success to his sagacity and skill. For many years Mr. Kennedy carried on a series of experiments connected with this motion, and although it has been greatly modified in form and construction since his time, it still bears the impress of his mind, and remains the same in principle as when he experimented upon it. This beautiful and ingenious machine is also indebted to the late Mr. Ewart for some useful modifications ; but the perfecting of the differential motion is due to Mr. Henry Houldsworth, of this city, assisted by the late Sir Peter Fairbairn, of Leeds.

As a proof of Mr. Kennedy's sound judgment on questions relating to mechanical improvement, he was consulted on the subject as to whether the Liverpool and Manchester Railway should be worked by locomotive or stationary engines. He was also appointed Umpire in the competition trials at Rainhill in 1830, and to his honour be it stated that this country and all others are indebted to him for advancing the railway system, by his appreciation of the different qualities of the engines, and his correct and just decision in this case.

As a spinner Mr. Kennedy was most successful in all his undertakings, and realised a large fortune. He was a most accurate observer, was endowed with a retentive memory, a clear perception, a sound judgment ; and every

\* This was done for Mr. Kennedy by the writer of this memoir in 1823.



discovery in mechanical science received his cordial support. He was a friend and admirer of Watt, and there were few distinguished men in the scientific world with whom he was not acquainted, and on terms of friendly intercourse. Round his table were at all times to be found men who were noted for intellectual acquirements. With the distinguished men of Manchester and the surrounding districts he lived on terms of the closest intimacy; and although he did not attend regularly at the meetings of this society, in consequence of a dislike to the public expression of his opinions, he nevertheless took a deep interest in its proceedings; and during the whole of a useful life remained the friend of Dalton, Henry, and other men eminent for their discoveries and writings in science.

Mr. Kennedy was a man of sterling honesty in all his transactions. He began life at a time when the cotton trade was in its infancy, and he lived to see it attain its present colossal dimensions. As a man of business he was successful, but it is doubtful whether his tastes and talents would have fitted him for the present system of free trade, and whether he would not have been distanced by more energetic and active competitors. That this would have been the case is more than probable, as he was of a nervous temperament, subject to great depression of spirits, which might have paralysed his exertions, and prostrated him in a contest to which he was unequal. As it was he attained honour and success, and he lived at a time when business matters were easy, and when skill and practical science were much in demand.

Mr. Kennedy never pursued business for the sake of money, but for the love of improvements in his favourite mechanical pursuits. To these he devoted nearly the whole of his time, and there was scarcely any discovery in the arts that he did not make himself acquainted with.



He was fond of mechanical discussion, and never lost an opportunity of conversing with ingenious workmen, or those who were entitled to respect for their skill. Hence he visited all the workshops, and had no greater pleasure than when having a "crack" with an intelligent, well-informed workman. To the young he was always kind and communicative, but according to the custom of the times he expected that young people should never dispute the wisdom of their superiors, but thankfully receive the information afforded to them. This feeling was almost universal amongst the immediate successors of Watt, and many of them would admit of no mechanical improvement unless it originated in the school at Soho. This weakness was not always agreeable to rising merit, and was foreign to the great men for whom this partiality was shown, and it often had an injurious tendency, in so far as it damped the energies of the more modest and deserving aspirants. Mr. Kennedy nevertheless freely extended his patronage and friendship to those who were entitled to his confidence, and when once given it was never withdrawn. He had a high sense of honour in his friendships, and never allowed another to depreciate qualities for which he personally entertained feelings of respect.

In private society Mr. Kennedy had the manners and conversation of a gentleman, acquired, not from his education, but from his subsequent intercourse with the best society. He had great discrimination, and would never associate with any but those of superior attainments, and hence the attraction of his opinions and conversation. He was full of anecdote, old sayings, and sage remarks, and few could tell a story with more zest. The sayings of others and the anecdotes of early life he gave with a dry humour that never failed to produce a pleasing effect.

At the time of his death, which took place on the 30th October 1855, at the advanced age of eighty-six years,



he was the oldest member of the society. He was elected in April 1803, and during a long period of years was a regular attendant at the meetings. His writings were few in number, but he contributed to the society's memoirs four valuable papers, "On the Rise and Progress of the Cotton Trade," read November 2, 1815; "On the Poor Laws," read March 5, 1819, a paper much spoken of at the time, ably reviewed in the *Edinburgh*, and not without results in the improvements which subsequently took place in the amendment of those laws. The next, entitled "Observations on the Influence of Machinery on the Working Classes of the Community," was read February 10, 1826; and a brief "Memoir of Crompton," with a description of his mule, read February 20th 1830, was the last of his literary efforts. In these communications he displayed consummate judgment, and a thorough knowledge of the subjects on which he treated; yet it must be confessed that the views he entertained upon the subject of free trade and national intercourse have since that time been greatly modified, and a totally different system of commercial relations between this country and the rest of the world has been adopted.





Fairbairn, William. 1862. "A Brief Memoir of The Late John Kennedy, Esq." *Memoirs of the Literary and Philosophical Society of Manchester* 1, 147–157.

**View This Item Online:** <https://www.biodiversitylibrary.org/item/107796>

**Permalink:** <https://www.biodiversitylibrary.org/partpdf/305078>

**Holding Institution**

Smithsonian Libraries and Archives

**Sponsored by**

Biodiversity Heritage Library

**Copyright & Reuse**

Copyright Status: Public domain. The BHL considers that this work is no longer under copyright protection.

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.