Life of Mr James Short, Optician.

By the Right Honourable the Earl of Buchan.

MR JAMES SHORT, an eminent optitian and conſtructor of reflecting teleſcopes, was the ſon of William Short, a joiner in Edinburgh, and Margaret Grierſon.

He was born on the 10th of June old ſtile, in the year 1710; a circumſtance which gave occaſion to his being named after the unfortunate Prince, on the anniverſary of whoſe birth he came into the world.

At ten years of age, young Short was entered on the foundation of George Herriot, his father and mother being now dead, and the circumſtances of the family very ſcanty.

His genius for mechanics appeared about that time, in cutting out and joining little cheſts, book-caſes, and ſuch like conveniences for

himſelf, with the tools that came in his way; and by theſe means he diſtinguiſhed himſelf, and rendered himſelf uſeful and popular among his companions. At twelve years old, he was put to the High School of Edinburgh, where he generally kept at the head of his form, and ſhewed a conſiderable taſte for claſſical learning. This prompted his friend to deſtine him for a learned profeſſion; and a pious grandmother, to ſelect him for the church.

After having been four years at the High School, then taught by Mr Arbuthnot, he went, in the year 1726, to the Univerſity of Edinburgh, where he paſſed through a regular courſe of ſtudy with applauſe; took his degree as Maſter of Arts; and, at the earneſt ſolicitations of his good grandmother, attended the Divinity Hall, and paſſed his trials to fit him for a preacher in the church of Scotland, in the year 1731.

Soon after this, the mind of our young artiſt began to revolt againſt the idea of a profeſſion ſo little ſuited to his talents; and having had occaſion to attend a courſe of Mr Maclaurin's mathematical claſs, in the College, he ſoon loſt all reliſh for his eccleſiaſtical proſpects; and made ſo great a figure in the claſs, that the profeſſor took great notice of him, and invited him often to his houſe, where he had an opportunity of knowing more fully the extent of his capacity.

It is much to be wiſhed, that the early and natural ſymptoms of genius in children were more attended to. It is very true, indeed, that they generally imitate what they ſee about them, and that no concluſions can be drawn from the ſcratchings of a child in a painter's houſe, or the cutting of ſticks in a carpenter's; but a genius manifeſted without any ſuch concomitant circumſtances, ſtrongly evinces

ces the bent of the mind, and ſhould be carefully attended to and foſtered by thoſe to whom the care of youth is intruſted.

In the year 1732, Mr Maclaurin kindly permitted Mr Short to uſe his rooms in the College for his apparatus; and there he began to work in his profeſſion under the eye of his eminent maſter and patron, who, in a letter to Dr. Turin, about two years after, takes notice of the proficiency made by Mr Short, in the caſting and poliſhing of the metallic ſpecula of reflecting teleſcopes: "Mr Short," he writes, "who had begun with making glaſs ſpecula, is now employ-"ing himſelf to improve the metallic. By taking care of the figure, "he is enabled to give them larger apertures than others have done, "and, upon the whole, they ſurpaſs in perfection all that I have ſeen "of other workmen."

Mr Maclaurin adds, in the ſame letter, that Mr Short's teleſcopes were of the Gregorian conſtruction, and that he had much improved that excellent invention*. This character of Mr Short did him no more than juſtice; and he was better enabled than moſt of his contemporaries, to render his improvements effectual, from his knowledge of the principles of optics.

The figure which Mr Short gave to his great ſpecula, was parabolical; not, however, by any rule or canon, but by practice and mechanical devices; ſuch as have hitherto been made public by the ingenious Mr Mudge, and for which he received Sir Godfrey Copley's medal, and the thanks of the Royal Society. This parabolical figure, given to the great ſpecula of reflecting teleſcopes, had been

* Smith's Rem. on Art. 489.

been formerly pointed out by the great Sir Iſaac Newton, as the moſt neceſſary attainment for the perfection of thoſe inſtruments.

Mr Short continued from this time to practiſe his art with great ſucceſs; and when, in the year 1736, he was called up to London, at the deſire of Queen Caroline, to give inſtructions in mathematics to William Duke of Cumberland, he had cleared the ſum of L. 500 by the profits of his buſineſs, and depoſited that ſum in the bank of Scotland, where it ſtill remains.

While Mr Short was at London, he was elected a Fellow of the Royal Society, and was much taken notice of and patroniſed by the Earls of Morton and Macclesfield.

Towards the end of the year 1736, he returned again to Edinburgh, and having made ſeveral uſeful improvements in his art during his ſtay in England, he proſecuted it now with freſh vigour and applauſe.

In the year 1739, being then at London, the Earl of Morton, his great patron, took Mr Short with him on his Lordſhip's progreſs to the Orkney iſles, and ſet him to work on the adjuſtment of the geography of that part of Scotland. Walter Macfarlane, Eſq; of Macfarlane, commonly called in Scotland the Laird of Macfarlane, likewiſe accompanied the Earl of Morton, and had occaſion to make uſeful and entertaining remarks on the antiquities of that part of the kingdom, which had formerly been very little attended to.

During this expedition, a ſcuffle happened, by the reſiſtance made by Sir James Stewart of Barra, to the Earl of Morton's infeftment on the iſle of Barra; but Mr Short being engaged in obſerving the heavenly bodies, was luckily out of the way; ſeveral of the

the Earl's ſervants having been hurt, and one of them dangerouſly wounded.

Mr Short returned to London with the Earl, and having now finally eſtabliſhed himſelf there in the line of his profeſſion, his viſits to Scotland became leſs frequent.

In the year 1743, he was employed by Lord Thomas Spencer to make a reflector of twelve feet focus, the greateſt that had, or indeed ever has been conſtructed, except thoſe for the King of Spain, and ſome others of the ſame focal diſtance, with greater improvements and higher magnifiers. The teleſcope for the King of Spain was finiſhed in the year 1752, which, with its whole apparatus, coſt L. 1200.

The inſtrument made for Lord Thomas Spencer, having fewer accompaniments, was purchaſed for 600 guineas. Mr Short came to Scotland in 1760, and in 1766, for the laſt time. And, on the 15th of June 1768, he died of a mortification in his bowels, at Newington Butts, near London, and was buried on the 22d of that month, being the anniverſary of his birth. A few days before his death, he had dined with young Harriſon, ſon of the inventor of the time-piece, at his houſe in Shore Ditch, and had walked from that place in the evening to his own houſe at Newington Butts.

Mr Short left a fortune of about L. 20,000, L. 15,000 of which he left to two Nephews, and the reſt in legacies to his friends. To the Lady Mary Douglaſs, now Counteſs of Aboyne, the daughter of his patron the Earl of Morton, he left L. 1000, and the reverſion of his eſtate after the death of his Nephews, if they ſhould happen to have no iſſue. But this reverſionary and contingent ſucceſſion, the Lady Mary

Mary Douglas, at the desire of her father, very generously relinquished by a deed in favour of Mr Short's brother, Mr Thomas Short, and his children.