or night.—This repetition was the invention of Mr Barlow, and first put in practic by him in larger movements or clocks about the year 1676. The contrivance immediately ſet the other artists to work, who soon contrived divers ways of effecting the same. But its application to pocket-watches was not known before king James the Second’s reign; when the ingenious inventor above-mentioned, having directed Mr Thompson to make a repeating watch, was ſoliciting a patent for the same. The talk of a patent engaged Mr Quare to reſume the thoughts of a like contrivance, which he had had in view ſome years before : he now effected it ; and being pressed to endeavour to prevent Mr Barlow’s patent, a watch of each kind was produced before the king and council ; upon trial of which, **the preference** was given to Mr Quare’s. The difference between them was, that Barlow’s was made to repeat by puſhing in two pieces on each side the watch-box; one of which repeated the hour, and the other the quarter : whereas Quare’s was made to repeat by a pin that stuck out near the pendant, which being thrust in (as now it is done by thrusting in the pendant itself), repeated both the hour and quarter with the same thrust.

*Of the Mechaniſm of a Watch,* properly so called. Watches, as well as clocks, are compoſed of wheels and pi­nions, and a regulator to direct the quickneſs or slowneſs of the wheels, and of a ſpring which communicates motion to

Holland and in France, and naturally came to the knowledge of Mr Hauteſeuille. This perſon was conſcious of a double right to oppoſe this encroachment, having alſo, though perhaps empirically, and without principle, diſcovered that a ſpring, applied to the balance of a watch, produced a ſurprising equability of vibration; and hoped by its means to produce a perfect isochroniſm. By Mr Hauteseuille’s opposition the effect of the French patent was stopped for want of regi­stration. The Dutch patent was however expeded, and trials were made. But their reſult was unfavourable ; many things were wanting besides the true adjuſtment of the regulating power of the balance-ſpring. Scientific mechanics was then in its infancy, Galileo was dead, Newton was but beginning his glorious career ; Huyghens therefore **had few aſsist**ants.

The Royal Society of London was just founded, and Charles II. or his brother the duke of York, ſaw, *like a prince,* how conducive their labours would be to public proſperity, and particularly to the improvement of navigation: The king therefore enjoined them to turn much of their attention to this object : he establiſhed the Royal Obſervatory at Green­wich *for this express purpoſe ;* and the parliament held out encouragement for the diſcovery of the longitude. It was na­tural therefore for Mr Huyghens to look to this quarter for encouragement ; and if any one will take the pains to com­pare the dates of Mr Huyghens’s mathematical labours, after his dissertation on the pendulum, and his correſpondence with the Britiſh literati, till he was elected member of the Royal Society, *his private* correſpondence afterward with Mr Oldenburgh, a German, their ſecretary, and his public correſpondence with him as ſecretary of the Society, he will obſerve the operation of ſomething more than scientific zeal.

This correſpondence, however, did not anſwer Mr Huyghene’s hopes ; for it informed him that the ground had been preoccupied by Mr Hooke, who had long before diſcovered, that a ſpring properly applied to a watch-balance would pro­duce iſochronous vibratious, and had alſo long ago applied for a Royal patent for the monopoly. The history of this application is curious, as a mere matter of anecdote ; and it is instructive, while it is humiliating to human vanity, show­ing us, that even in the greatest characters, genius and talents, and noble and undoubted virtues, may exist along with ſome of our less honourable propensities, and cannot altogether hinder their operation. There never was a time in which it was more proper that every one of us ſhould have a monitor, who ſhould ſometimes call out aloud to us, Remem­ber that thou art a man,” than the perſent, when fanatic vanity, under the falſe and abuſed name of *philoſophy,* is wa­ging war with every thing that is good or true, and threatens to plunge the cultivated portions of the human race into their former barbariſm, with the horrid addition of the habits of ſavage atrocity ; while the voice of religion, which would call us together as the children of one parent, is stifled amidst the yells of brother fiends. We hope for indulgence, then, while we endeavour, in a few words, to make the history of this invention as clear as can be expected in a ſubject. which does not ſo ſensibly interest the public in general, and after ſuch a long interval of time.

Mr Hooke, from his infancy, had a strong predilection for mechanics ; he had alſo a strong propensity to ſyftem- making ; and, from his first years of ſerious occupations, entertained a notion, that every thing might be formed into **a** ſystem, and that nothing could be proſecuted with any well founded proſpect of improvement unleſs it was ſo treated. His amazingly comprehensive genius graſped at every thing which came under his observation ; and he immediately began to form a ſystem about it.—His writings are full of ſcraps of ſuch ſystematic views ; many of them, it must be acknow­ledged, hasty, inaccurate, and futile, but still ſystematical. He called them algebras, and conſidered them as having a sort of inventive power, or rather as means of diſcovering things unknown by a proceſs ſomewhat similar to that art. He valued himſelf highly on account of this view of ſcience, which he thought peculiar to himſelf ; and he frequently ſpeaks of others, even of the most eminent, as childishly contenting themſelves with partial views of the corners of things. He was likewiſe very apt to consider other inventors as encroachers on his ſystems, which he held as a kind of property, be­ing seriouſly determined to proſecute them all in their turn, and never recollecting that any new object immediately called him off, and engaged him for a while in the most eager pursuit. His algebras had already given him many ſignal helps ; and he had no doubt of their carrying him through in every inveftigation. Stimulated by this overfond expectation, when **a** diſcovery was mentioned to him he was too apt to think and to say, that he had long ago invented the same thing ; when the truth probably was, that the courſe of his ſystematic thoughts on the ſubjects with which it was connected had really ſuggested it to him, with ſuch vivacity, or with ſuch notions of its importance, as to make him ſet it down in his register in its own ſystematic place (for this was his constant praftice, worthy of ſuch a genius, and of immenſe ſervice to all inquisitive men). But it was put out of his mind by ſome new object of purſuit. We, at this time, can hardly con­ceive the ardour with which every thing was treated in thoſe youthful days of ſcientific novelty.

His favourite algebra, of which he frequently ſpeaks as an invaluable treaſure, and the ſource of all his reputation, was his Mechanical Algebra or Method of Mechanic Invention. He says, that no question in mechanics could be proposed to him, but he could quickly tell whether it were possible to ſolve it, and could get into the proper **track** for the ſolution.