

CIRCUIT COURT.—His Honor Mr. Justice Dickinson started for Berrima yesterday; his Honor the Chief Justice takes the Maitland Circuit, and Mr. Justice a'Beckett the Bathurst Circuit.

THE SCHOOLMASTER IN DURHAM.—The following grammatical exercise is literally copied from the *Sydney Herald* of Tuesday last:—"To the Constituency of Durham.—Mr. R. Windeyer proposes to be at, and hopes to have the pleasure of meeting the constituency of the county of Durham, at the undermentioned polling places, on the days severally named against each, at eleven o'clock, A.M."

SCULPTURE.—We are glad to be able to state that his Excellency Sir George Gipps, with a view to encourage the progress of the Arts in the colony, has given Mr. Abrahams an order for a bust, which is now in progress.

CHARGE OF SHOOTING.—On Sunday morning last, a man named Cornelius Bourke, resident at Chippendale, was apprehended on a charge of shooting with intent to murder a convict watchman, named Haggerty, attached to Carters' Barracks. When the case was called on, on Monday, Mr. Brennan, who appeared for the defence, stated that since his client had been in custody the prosecutor had been reported as a runaway, and was now no where to be found; the defendant was most anxious that the prosecutor should be in attendance, as Mrs. Bourke had a very serious charge to prefer against him, and which had induced her husband to fire at him. In such circumstances Mr. B. applied to the Bench in order that the defendant might be admitted to bail until the prosecutor was apprehended, for the purpose of proving his charge, and answering such counter-charges as might be preferred against him. The Bench granted the application.

EAST SYDNEY.—This extensive District bounded on the city side by Woolloomooloo Hill, and a line running through the Surry Hills towards Botany Bay, contains several hundred inhabitants, chiefly families of the laboring classes, without a single church, chapel or school. A small body of Presbyterians at Paddington appears by the Estimates to have obtained £25 towards the support of a school in that little village, which is the only sum so appropriated throughout this District. The petition for the general system of education was readily signed by such of these residents as were made acquainted with its nature and objects, and they are now waiting anxiously for some step to be taken on behalf of their children, who have been so long dependent for instructions upon the remote and crowded schools of the city.—*Correspondent.*

ABORIGINAL SHEPHERDS.—It is gratifying to learn that in some of the remote Districts, a shepherd of this class is occasionally seen tending his flock with the patience and watchfulness of an European—a traveller lately from the Yass District found them thus employed, each possessing a written agreement. Years ago, the Aborigines were more generally employed by the settlers than in the present day, indeed few stations were without one of them as a sub-stockman or messenger—while as fishermen along the boat harbours of the coast, they were almost in daily attendance at the wharf as in the streets selling their fish.

THEFT.—Sunday evening last, the residence of Mr. Fanning, in O'Connell-street, was entered, and a quantity of jewellery to the value of £50 stolen from it. About ten o'clock the same evening, two of the Sydney police apprehended an assigned messenger attached to the Council Chamber, with nearly the whole of the stolen property in his possession. The prisoner was taken in the Domain.

MURDER REVEALED.—A very singular and important disclosure has just been brought to light by the police authorities at Oatlands, relative to a murder committed in England about fourteen years back. The victim of this dark deed, which has remained concealed for so long a period, was Sir William Marsden, a gentleman possessed of cotton-mills and other property in Manchester, his place of residence being at a suburban village called Hardwick Green. At the period of the murder, Sir William appears to have been in Manchester on business during the day, in the course of which he visited his bankers and other places, which gave rise to the supposition that he had been receiving a considerable sum of money, and caused his footsteps to be watched until evening, by two men, named Waterhouse and Cotton, who finally followed him until he entered a country lane leading to his own residence, and in this spot, favored by its loneliness, they attacked Sir William, and murdered him by repeated blows on the head, inflicted with a heavy stone tied up in a handkerchief; the murderers then plundered the body of £100 in notes and some silver, and made their escape. Notwithstanding Sir William Marsden was a man whose estimation and importance insured the most active efforts for discovery of the murder, the perpetrators remained undetected. The current suspicion took an erroneous direction. A discharged servant was apprehended and committed for trial, but of course without sufficient proof. The circumstance of his incarceration in gaol, and subsequent trial for the offence popularly imputed to him, however, so weighed upon the man's mind, that he lost his reason, and subsequently died in a madhouse. Of the real culprits one was transported to New South Wales, the other (Waterhouse) to this colony for other offences; but the dreadful deed has, latterly, pressed so heavily on his spirits as to deprive him of rest, and to fill his mind with horrifying visions, to an extent that has, at length, induced him to confess his crime to some of his fellow-prisoners, who, in a praiseworthy manner, have reported his communication to the local magistrate. No doubt appears to exist of the correctness of the revelations of Waterhouse, which it is fully hoped and believed will yet bring to light this long concealed deed of darkness and blood.—*Hobart Town Courier.*

MAITLAND.

From the Maitland Mercury.

DEATH FROM THE BITE OF A SNAKE.—On Saturday afternoon last, about four o'clock, a married woman named Bridget Griffiths, residing at Reedy Camp, went into the bush with a girl to gather Cape gooseberries, and they had approached close to a fallen tea-tree that lay deeply imbedded in high weeds and bushes, when Mrs. Griffiths felt a black

snake suddenly coil round her ankle, and screaming loudly, she struck her foot smartly against the log to strike it off; failing in this, she ran a few rods screaming, when the snake dropped off and glided away. Not having felt a bite, Mrs. G. and her companion continued picking gooseberries for an hour, when they entered a hut, and having mentioned the occurrence, the inmates asked in great surprise if she had not looked to see whether she was bitten. On this Mrs. Griffiths returned home at once, and on examining her ankle, found the snake had bitten her just in front of it. In about ten minutes she began to feel great pain in her head, and found her sight failing, and violent vomiting came on. Her husband tried all the means he could think of to relieve her, sucking the wound, &c., &c., but to no avail, and a dray was sent for to remove her to Maitland, but unfortunately such a time elapsed before one could be procured, that it was nine o'clock before they reached Maitland, when they proceeded at once to Dr. Liddell's, where she remained. The unfortunate woman still laboured under violent pain at the back of the leg, in the groin, up the back, and about the neck, accompanied by violent retching; and general paralysis had taken place. She was however perfectly sensible, and could speak, but had no power over her limbs. Medicines were given by Dr. L. to counteract the poison, but though he could give her temporary relief, and attended her assiduously, the poison had entered too deeply into the system, and soon after two in the morning she went into convulsive fits, which continued till four, when death put a period to her sufferings. To the last she was quite sensible, and had no tendency to sleep.

MUSIC AND ACCOMPLISHMENTS IN DISGRACE.—On Saturday last, Mr. Edward Myers, late teacher of music, drawing, and the languages, in Maitland, was brought up before the Police Court, charged with fraud, and being out of his district without a pass. From the evidence of Mrs. Foard, of Morpeth, and Mr. John Paterson, of West Maitland, it appeared that Myers, who had been lodging with Paterson some time, bought a mare of Mrs. Foard, on the 1st of January last, for which he gave £12, in two bills, one at thirty-six days for £5, and one at sixty-five days for £7. When the first bill became due, Mrs. Foard went to Myers' lodgings to look for payment, but found he had just taken French leave of them, being indebted to his landlord £7 2s. 3d. for lodging. She also learnt that the next day after his leaving, Mr. Paterson, his landlord, received a letter from him, dated at Patrick's Plains, telling him he was going on a trip up the country, and requesting him to forward up his violin and clothes, as he should not return without selling the mare. With this request Mr. Paterson of course declined complying. Mrs. Foard went to the Police Office, and got a warrant sent up for Myers, and he was taken up accordingly at Muswellbrook, and forwarded down at once; the mare, however, having disappeared. The bench recommended his ticket to be cancelled, and himself to be returned to Government; but Myers unfortunately having let it slip out that he only wanted to be sent to Sydney, the bench added that they should recommend the remainder of his sentence to be passed either at Cockatoo Island or Port Macquarie.

VAN DIEMEN'S LAND.

SIR Eardley Wilmot opened the Legislative Council on the 19th ult., with the following address:—

Council Chamber, 19th February, 1845.

GENTLEMEN,

I have summoned you at this early period of the year, in order that I may consult with you as to the course which ought to be adopted to supply, in part at least, the deficiency in the Ways and Means of the Colony occasioned by the falling off of the Ordinary Revenue, but in a still greater measure by the failure of the Land Fund during the last three years.

You are aware that the annual surplus of the proceeds of Sales of Land, remaining after payment had been made for immigration, was directed to be applied in aid of the Ordinary Revenue. The average sum per annum, for the nine years ending in 1841, which was paid over to the colony was about £23,000,—being in 1840 as high as £52,900, and in 1841, £47,200? and this contribution having now entirely ceased, will sufficiently account for the great deficiency of our means.

But it is not only to make up the deficiency arising from this fund having failed—and which up to 1843 was adequate to our wants,—but also to supply the deficiency of our Ordinary Revenue, especially in the Customs, that I now call upon you for your advice and assistance. As our Customs had been raised, perhaps, to an artificial prosperity, by causes unlikely to occur again; so I firmly believe they are now depressed below their natural and permanent level.

I conceive it to be therefore incumbent on me to supply this defalcation, without waiting for specific instructions from Home: and when I recollect that the means by which I hope to obtain this object, is not by any taxes upon the produce of this country, or upon the people themselves, but only in putting in force that power which the British Parliament has already given us by a legislative enactment, I anticipate your ready co-operation.

I shall therefore lay upon the table a bill to raise the *ad valorem* duties on foreign goods, imported into this country.

I anticipate some relief to the deficiency of the Revenue, by introducing some measures of Police by which officers of that department may with more facility be able to repress illicit distillation, which has been going on to the great injury of the fair trader. It has also become necessary to make some provision against smuggling, especially since New Zealand has declared all her ports to be free.

It has been represented to me by a respectable body of merchants, that it would be a benefit to the colony to exempt Foreign whalers putting into this port for the purpose of refitting, from the payment of Port Charges and Light Dues; and I have consented to lay a bill on the table, subject to her Majesty's approval, for this object—more especially under the belief that the advantages gained by the outlay for the refitting will more than compensate for the loss sustained by the remission of the Port Charges.

There are other bills already before you which were laid upon the table last Session, but which were postponed to enable me to bring it to a close, that you might return home to superintend the important occupations of harvest and sheep-shearing. I shall have to trouble you with them now, with some few additions and alterations; but as

they are in fact the old Quarter Sessions Act divided into four subjects, I trust, after the scrutiny they have undergone, that they will not long detain you.

I have entered into a preliminary arrangement with the Commercial Bank, to which I request your concurrence, to enable me to meet the exigencies of the Public Service for the current year, and which will be laid before you.

I shall also submit to you, at the usual season, some modification of the Road Act, respecting the Main Road, to meet the altered circumstances of the Colony, as regards the labour of prisoners of the Crown; and I shall also propose to you, at the same time, to vote a sum of money to enable the Executive to assist the Settlers who are willing to contribute towards defraying the expense of executing some of the important lines of communication, according to the proportion which they themselves may contribute, and with reference also to the importance and magnitude of the undertaking; and I therefore invite you, during the recess, to collect the opinions of the inhabitants of the unsettled Districts upon the subject of the Roads generally, and to favor me with them previous to our next meeting.

It being most important that this City, as well as Launceston, should possess a sufficient supply of water, I intend to accomplish these objects through the Convict Department, without burthening the General Revenue of the colony; and I propose by the same means to complete a bridge at Bridgewater. The expenses of these works will be defrayed, if you approve, by annual instalments, from moderate Rates and Tolls which will be fixed on them. The Colonial Secretary will propose to you resolutions to carry out these arrangements.

There is another subject which, you are aware, has engaged the attention of the government, and is already in some forwardness.—I mean the Irrigation of Land in the colony; on which subject I addressed Lord Stanley in the month of August last. But since that period, I have received a despatch, authorising the employment of convicts on works of public utility, provided they are for the immediate or "prospective" advantage of the British Government. Under this authority, I consider myself warranted to proceed at once on a work which will so materially improve the resources of this Colony,—provided that you will, by an Act of Council, furnish funds prospectively, by means of a Rate on the inhabitants to be benefitted thereby.

I have received instructions, since our last meeting, from the Secretary of State to issue a Commission of Inquiry into the working of the present Education System, and to report to him the result. I have selected three gentlemen to act as Commissioners, to investigate (according to the Secretary of State's instructions) "the charges brought forward by Mr. Loch and others—not against the system, but against the manner in which that system has been conducted, and the effects which it has produced;" and they will immediately commence their inquiry.

It has been, and is, my anxious wish, and sincere intention, to reduce the expenditure of the Colony within the narrowest possible limits consistent with its safety and prosperity. For this purpose the Estimates have been reduced since my assuming the Government of

this colony, as compared with previous years, by a sum exceeding £25,000 per annum; and the actual annual reductions have been £16,818. I confess I would have wished to postpone farther reductions, being of opinion that sudden changes are inadvisable in a long established Government; but the circumstances of my being compelled to call for an increase in the Customs' Duties, induces me to proceed yet farther in the work of reduction: and I have recently with this view addressed the Secretary of State, and transmitted to him the report of the Finance Committee, composed of Members of the Legislative Council, accompanied with my recommendation as to reductions to be made, and which in the whole amount to many thousands per annum.

You must be aware, that there are many Offices here which I cannot of myself reduce: there are others, however, which I have the power of dispensing with. You would not, I am convinced, ask this to be done, so as to throw deserving Officers suddenly on their own private resources; but such as I am of opinion can be dispensed with will not be included in the Estimates for the year 1846.

E. EARDLEY-WILMOT.

Read in the Legislative Council,
this nineteenth day of February,
one thousand eight hundred and
forty-five.

Vegetable Phenomenon.—In the garden of W. Grimstone, Esq., of the Herbarry, Highgate, is now to be seen a pea-plant in full bearing, which is remarkably illustrative of the great length of time the germinating property can continue in seeds. This plant was produced from one of three peas presented to the above gentleman by J. T. Pettigrew, Esq., surgeon, of Saville-row, having been taken by the latter and the authorities at the British Museum from one of the vases recently extracted from an Egyptian sarcophagus, and where, according to computation, the vases with their contents must have remained for no less a period than 2844 years. The vases contained a large quantity of dust supposed to be the decomposition of a number of grains of wheat, vetch, and other peas. Some of the grains of wheat have been sown and found productive, but the vetch peas have not germinated; the other pea, resembling the British culinary pea, has in the above instance been tried effectually. The three peas were placed by Mr. Grimstone's gardener in a hotbed, and watched with great care. After some time one only was found to sprout; it gradually increased in height, growing like a sprout, and finally burst forth a beautiful white bloom with green stripes, having only four petals (an English pea having five); at the end of each are three singular fangs. Each flower was of a bell-shape, something like a convolvulus, but not so large, from the centre of which the pods have shot forth, and are now nineteen in number, and fit to gather, and they are in a shape something between our marrowfat and scimitar peas. They have of course not been tried, but it is believed they are suitable for culinary purposes, judging from the blossoms having been white. Mr. Pettigrew, and several eminent botanists, scientific, and other gentlemen, have seen this vegetable phenomenon, and take great interest in it.—*Bell's Weekly Messenger, August, 17, 1844.*

LITERARY REGISTER.

CHARITY.

[BY HENRY HALLOLAN.]

With flaunt and pomp the Pharisee then came,
 And gave the little which his heart denied,
 And had withheld, but for his vulgar pride—
 Meanness contending with the outward shame;
 The Pharisee, the base in soul, tho' high in name,
 Came to the public Treasury and cried
 "The poor must be provided for, their wants supplied,
 I give what give I can; would all men did the same."
 On the other side a widow, pale and lean—
 How goodness beautifies the lowly—went
 Poor in her means, yet rich in her intent,
 And gave 'her all,' yet grieved she to be seen:
 She gave her all—two mites, and hunger keen
 Wrung her to tears, yet was her heart content.

HONOR.

I heard a plunderer by the public way
 Calling thee his; I heard a liveried slave
 Who sent his brother to a bloody grave,
 Calling thee his; I heard a miscreant grey
 With fraud and crime lip deep in infamy, say,
 Gazing upon his scutcheon, where the brave,
 Perchance the good, did their proud deeds engrave,
 That thou wert his!—in grief I turned away,
 And saw a man as humble as a child
 With a bold heart, and conscience calmly clear,
 In quest of thee, pursue his lone career
 Throughout a region desolate and wild,
 Without one friend to cheer, save that within,
 He perit'd death and shame, thy bright reward to
 to win.

BIOGRAPHY.

SIR ISAAC NEWTON.

ISAAC NEWTON was born on Christmas day, 1642 (O. S.), at Woolsthorpe, a hamlet in the parish of Colsterworth, in Lincolnshire, where his family possessed a small estate. His father died there a few months before the birth of his son. Newton's education was commenced at the parish school, and at the age of twelve he was sent to Grantham for classical instruction. At first he was idle, but soon rose to the head of the school. The peculiar bent of his mind soon showed itself in his recreations. He was fond of drawing, and sometimes wrote verses; but he chiefly amused himself with mechanical contrivances. Among these was a model of a windmill, turned either by the wind, or by a mouse enclosed in it, which he called the miller; a mechanical carriage moved by the person who sat in it; and a water-clock, which was long used in the family of Mr. Clarke, an apothecary, with whom he boarded at Grantham. This was not his only method of measuring time; the house occupied by his mother at Woolsthorpe still contains dials made by him during his residence there.

In his eighteenth year he was removed to Trinity College, Cambridge, and was admitted as a sizer on the 5th of June, 1660. He applied himself eagerly to the study of mathematics, and mastered the difficulties with an ease and rapidity which he was afterwards inclined almost to regret, from an opinion that a closer attention to its elementary parts would have improved the elegance of his own methods of demonstration. In 1664 he became a scholar of his college, and in 1667 was elected to a fellowship, which he retained beyond the regular time of its expiration in 1675, by a special dispensation authorizing him to hold it without taking orders.

The earliest of Newton's discoveries appear to have related to pure mathematics. The study of Dr. Wallis's works led him to investigations which soon conducted him to the celebrated Binomial Theorem. The exact

date of his invention of the method of Fluxions is not known; but it was anterior to 1666, when the breaking out of the plague obliged him for a time to quit Cambridge, and consequently when he was only twenty-three years old.

This change of residence interrupted his optical researches, in which he had already laid the foundation of his great discoveries. He had decomposed light into the coloured rays of which it is compounded, and having thus ascertained the principal cause of the confusion of the images formed by refraction, he had turned his attention to the construction of telescopes which should act by reflection, and be free from this evil. He had not, however, overcome the practical difficulties of his undertaking, when his retreat from Cambridge for a time stopped this train of experiment and invention.

On quitting Cambridge Newton retired to Woolsthorpe, where his mind was principally employed upon the system of the world. The theory of Copernicus and the discoveries of Galileo and Kepler had at length furnished the materials from which the true system was to be deduced. It was indeed all involved in Kepler's celebrated laws. The equable description of areas proved the existence of a central force; the elliptical form of the planetary orbits, and the relation between their magnitude and the time occupied in describing them, ascertained the law of its variation. But no one had arisen to demonstrate these necessary consequences, or even to conjecture the universal principle from which they were derived. The existence of a central force had been surmised, and the law of its action guessed at; but no proof had been given by either, and little attention had been awakened by the conjecture.

Newton's discovery appears to have been quite independent of any speculations of his predecessors. The circumstances attending it are well known: the very spot in which it first dawned upon him is ascertained. He was sitting in the garden at Woolsthorpe, when the fall of an apple called his attention to the force which caused its descent, to the probable limits of its action and law of its operation. Its power was not sensibly diminished at any distance at which experiments had been made: might it not then extend to the moon, and guide that luminary in her orbit? It was certain that her motion was regulated in the same manner as that of the planets round the sun: if, therefore, the law of the sun's action could be ascertain, that by which the earth acted would also be found by analogy. Newton, therefore, proceeded to ascertain by calculation from the known elements of the planetary orbits, the law of the sun's action. The great experiment remained: the trial whether the moon's motions showed the force acting upon her to correspond with the theoretical amount of terrestrial gravity at her distance. The result was disappointment. The trial was to be made by ascertaining the exact space by which the earth's action turned the moon aside from her course in a given time. This depended on her actual distance from the earth, which was only known by comparison with the earth's diameter. The received estimate of that quantity was very erroneous; it proceeded on the supposition that a degree of latitude was only sixty English miles, nearly a seventh part less than its actual length. The calculation of the moon's dis-

tance and of the space described by her, gave results involved in the same proportion of error; and thus the space actually described appeared to be a seventh part less than that which corresponded to the theory. It was not Newton's habit to force the results of experiments into conformity with hypothesis. He could not, indeed, abandon his leading idea, which rested, in the case of the planetary motions, on something very nearly amounting to demonstration. But it seemed that some modification was required before it could be applied to the moon's motion, and no satisfactory solution of the difficulty occurred. The scheme therefore was incomplete, and, in conformity with his constant habit of producing nothing till it was fully matured, Newton kept it undivulged for many years.

On his return to Cambridge Newton again applied himself to the construction of reflecting telescopes, and succeeded in effecting it in 1668. In the following year Dr. Barrow resigned in his favour the Lucasian professorship of mathematics, which Newton continued to hold till the year 1703, when Whiston, who had been his deputy from 1699, succeeded him in the chair. On January 11, 1672, Newton was elected a Fellow of the Royal Society. He was then best known by the invention of the reflecting telescope; but on his election he communicated to the Society the particulars of his theory of light, on which he had already delivered three courses of lectures at Cambridge, and they were shortly afterwards published in the Philosophical Transactions.

It is impossible here to state the various phenomena of light and colours which were first detected and explained by Newton. They entirely changed the science of optics, and every advance which has since been made in it has only added to the importance and confirmed the value of his observations. The success of the new theory was complete. Newton, however, was much vexed and harassed by the discussions which it occasioned. The annoyance which he thus experienced made him even think of abandoning the pursuit of science, and although it failed to withdraw him from the studies to which he was devoted, it confirmed him in his unwillingness to publish their results.

The next few years of Newton's life were not marked by any remarkable events. They were passed almost entirely at Cambridge, in the prosecution of the researches in which he was engaged. The most important incident was the communication to Oldenburgh, and through him, to Leibnitz, that he possessed a method of determining maxima and minima, of drawing tangents, and performing other difficult mathematical operations. This was the method of fluxions, but he did not announce its name or its processes. Leibnitz, in return, explained to him the principles and processes of the Differential Calculus. This correspondence took place in the years 1676 and 1647: but the method of fluxions had been communicated to Barrow and Collins as early as 1669, in a tract, first printed in 1711, under the title 'Analysis per equationes numero terminorum infinitas.' Newton had indeed intended to publish his discovery as an introduction to an edition of Kinckhuysen's Algebra, which he undertook to prepare in 1672; but the fear of controversy prevented him, and the method of fluxions was not publicly announced till the appearance of the Principia in 1687. The

edition of Kinckhuysen's treatise did not appear; but the same year, 1672, was marked by Newton's editing the Geography of Varenus.

In 1679 Newton's attention was again called to the theory of gravitation, and by a fuller investigation of the conditions of elliptical motion, he was confirmed in the opinion that the phenomena of the planets were referable to an attractive force in the sun, of which the intensity varied in the inverse proportion of the square of the distance. The difficulty about the amount of the moon's motion remained, but it was shortly to be removed. In 1679 Picard effected a new measurement of a degree of the earth's surface, and Newton heard of the result at a meeting of the Royal Society in June, 1682. He immediately returned home to repeat his former calculation with these new data. Every step of the process made it more probable that the discrepancy which had so long perplexed him him would wholly disappear: and so great was his excitement at the prospect of entire success that he was unable to proceed with the calculation, and intrusted its completion to a friend. The triumph was perfect, and he found the theory of his youth sufficient to explain all the great phenomena of nature.

From this time Newton devoted unremitting attention to the development of his system, and a period of nearly two years was entirely absorbed by it. In 1684 the outline of the mighty work was finished; yet it is likely that it would still have remained unknown, had not Halley, who was himself on the track of some part of the discovery, gone to Cambridge in August of that year to consult Newton about some difficulties he had met with. Newton communicated to him a treatise *De Motu Corporum*, which afterwards, with some additions, formed the first two books of the *Principia*. Even then Halley found it difficult to persuade him to communicate the treatise to the Royal Society, but he finally did so in April, 1686, with a desire that it should not immediately be published, as there were yet many things to complete. Hooke, whose unwearied ingenuity had guessed at the true law of gravity, immediately claimed to himself the honour of the discovery; how unjustly it is needless to say, for the merit consisted not in the conjecture but the demonstration. Newton was inclined in consequence to prevent the publication of the work, or at least of the third part, *De Mundi Systemate*, in which the mathematical conclusions of the former books were applied to the system of the universe. Happily his reluctance was overcome, and the whole was published in May, 1687. Its doctrines were too novel and surprising to meet with immediate assent; but the illustrious author at once received the tribute of admiration for the boldness which had formed, and the skill which had developed his theory, and he lived to see it become the common philosophical creed of all nations.

We next find Newton acting in a very different character. James II. had sent a requisition to the University of Cambridge to admit a Benedictine monk to the degree of Master of Arts without taking the usual oaths. The mandate was disobeyed; and the Vice-Chancellor was summoned before the Ecclesiastical Commission to answer for the contempt. Nine delegates, of whom Newton was one, were appointed by the University to defend their proceedings; and their exertions

were successful. He was soon after elected to the Convention Parliament as member for the University of Cambridge. That parliament was dissolved in February, 1690, and Newton, who was not a candidate for a seat in the one which succeeded it, returned to Cambridge, where he continued to reside for some years, notwithstanding the efforts of Locke, and some other distinguished persons with whom he had become acquainted in London, to fix him permanently in the metropolis.

During this time he continued to be occupied with philosophical research, and with scientific and literary correspondence. Chemical investigations appear to have engaged much of his time; but the principal results of his studies were lost to the world by a fire in his chambers about the year 1692. The consequences of this accident have been very differently related. According to one version, a favourite dog, called Diamond, caused the mischief, and the story has been often told, that Newton was only provoked, by the loss of the labour of years, to the exclamation, "Oh, Diamond! Diamond! thou little knowest the mischief thou hast done." Another, and probably a better authenticated account, represents the disappointment as preying deeply on his spirits for at least a month from the occurrence.

History, chronology, and divinity were his favourite relaxations from science. In 1690 he communicated to Locke his 'Historical account of two notable corruptions of the Scriptures,' which was first published long after his death. About the same time he was engaged in those researches which were afterwards embodied in his *Observations on the Prophecies*: and in December, 1692, he was in correspondence with Bentley on the application of his own system to the support of natural theology. His theological researches add but little, however, to his reputation.

During the latter part of 1692 and the beginning of 1693 Newton's health was considerably impaired, and he laboured in the summer under some epidemic disorder. The disease was soon removed, and there is no reason to suppose that it ever recurred. But the course of his life was changed; and from this time forward he devoted himself chiefly to the completion of his former works, and abstained from any new career of continued research.

His time indeed was less at his own disposal than it had been. In 1696, Mr. Montague, the Chancellor of the Exchequer, an early friend of Newton, appointed him to the Wardenship of the Mint, and in 1699 he was raised to the office of master. He removed to London, and was much occupied, especially during the new coinage in 1696 and 1697, with the duties of his office. Still he found time to superintend the editions of his earlier works, which successively appeared with very material additions and improvements. The great work on Optics appeared for the first time in a complete form in 1704. It was accompanied by some of his earlier mathematical treatises; and contained also, in addition to the principal subject of the work, suggestions on a variety of subjects of the highest philosophical interest, embodied in the shape of queries. Among these is to be found the first suggestion of the polarity of light; and we may mention at the same time, although they occur in a different part of the work, the remarkable conjectures,

since verified, of the combustible nature of the diamond, and the existence of an inflammable principle in water. The second edition of the *Principia* appeared under the care of Cotes in 1713, after having been the subject of correspondence between Newton and his editor for nearly four years. Dr. Pemberton published a third edition in 1725, and he frequently communiated about the work with Newton who was then eighty-two years old.

These were the chief scientific employments of Newton's latter life. In 1712 he made some improvements in his *Arithmetical Universalis*, a work containing his algebraical discoveries, of which Whiston had surreptitiously published an edition in 1707. It is also worthy of remark that at the beginning of the year 1697, John Bernoulli addressed two problems as a challenge to the mathematicians of Europe, and that Leibnitz in 1716 made a similar appeal to the English analysts; and that Newton in each case undertook and succeeded in the investigation.

In 1699 Newton was elected one of the first foreign associates of the Académie des Sciences at Paris; and in 1701 he was a second time returned to Parliament by the University of Cambridge. He did not, however, long retain his seat. At the election in 1705 he was at the bottom of the poll, and he does not appear again to have been a candidate. In 1703 he was chosen President of the Royal Society, and held that office till his death. In 1705 he was knighted by Queen Anne upon her visit to Cambridge.

Newton's life in London was one of much dignity and comfort. He was courted by the distinguished of all ranks, and particularly by the Princess of Wales, who derived much pleasure from her intercourse both with him and Leibnitz. His domestic establishment was liberal, and was superintended during great part of his time by his niece, Mrs. Barton, a woman of much beauty and talent, who married Mr. Conduitt, his assistant and successor at the Mint. Newton's liberality was almost boundless, yet he died rich.

The only material drawback to Newton's enjoyment during this portion of his life, seems to have arisen from controversies as to the history and originality of his discoveries; a molestation to which his slowness to publish them very naturally exposed him. There was a long and angry dispute with Leibnitz about the priority of fluxions and of the differential calculus; and, after the fashion of most disputes, it diverged widely from the original ground. Such discussions had always been distasteful to Newton, and this controversy, which was conducted with great rancour by his opponents and some of his supporters, embittered his later years.

The same fate awaited him in another instance. His system of Chronology had been long conceived, but he had not communicated it to any one until he explained it to the Princess of Wales. At her desire, he afterwards, in 1718, drew up a short abstract of it for her use, and sent it to her on condition that no one else should see it. She afterwards requested that the Abbé Conti might have a copy of it, and Newton complied, but still on the terms that it should not be farther divulged. Conti, however, showed the manuscript at Paris to Freret, who, without the author's permission, translated and published it with observations in opposition to its