

**An eulogium, intended to perpetuate the memory of David Rittenhouse, late president of the American Philosophical Society : delivered before the Society in the First Presbyterian Church, in High-Street, Philadelphia, on the 17th Dec. 1796 ; agreeably to appointment / by Benjamin Rush, a member of the Society.**

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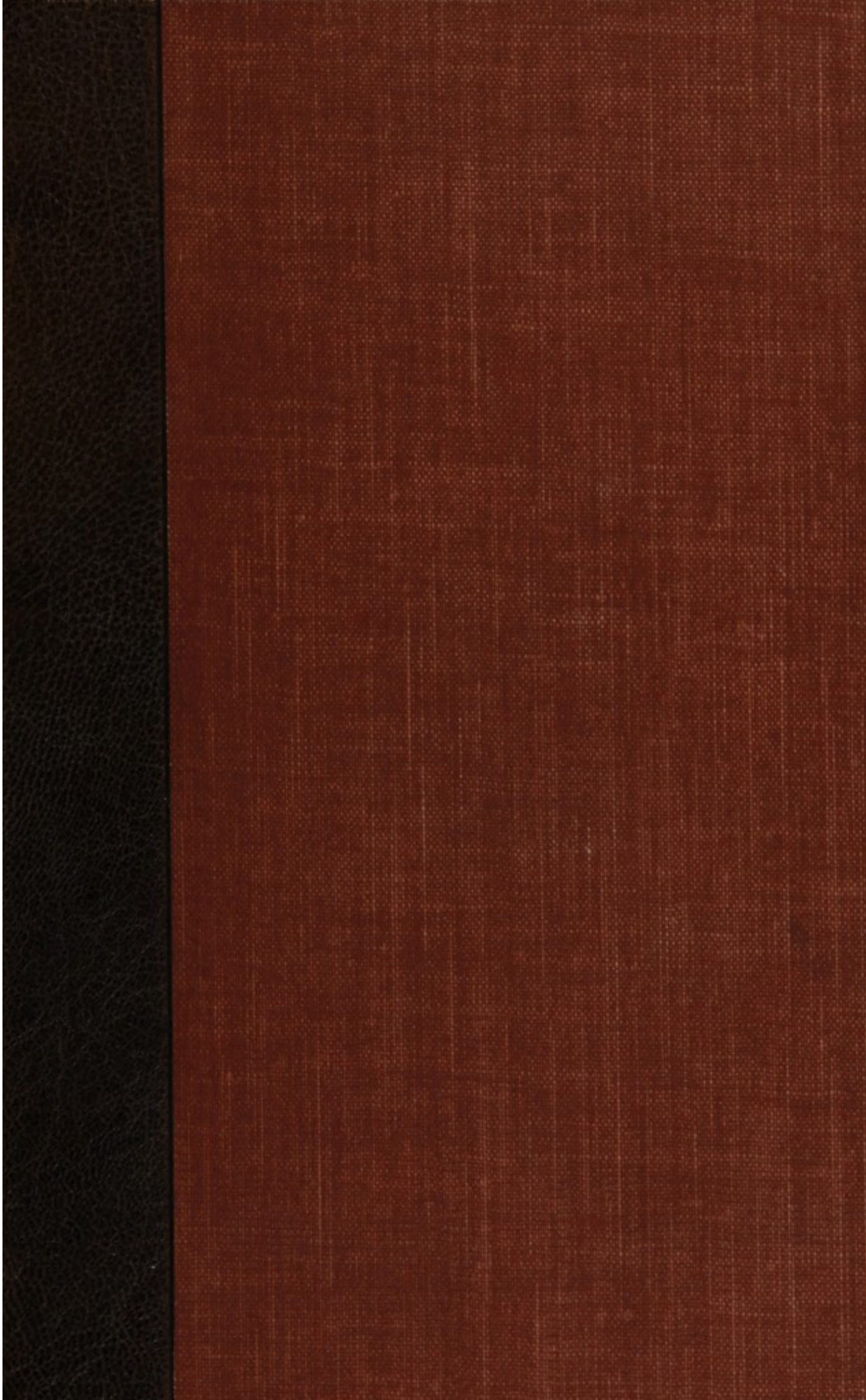
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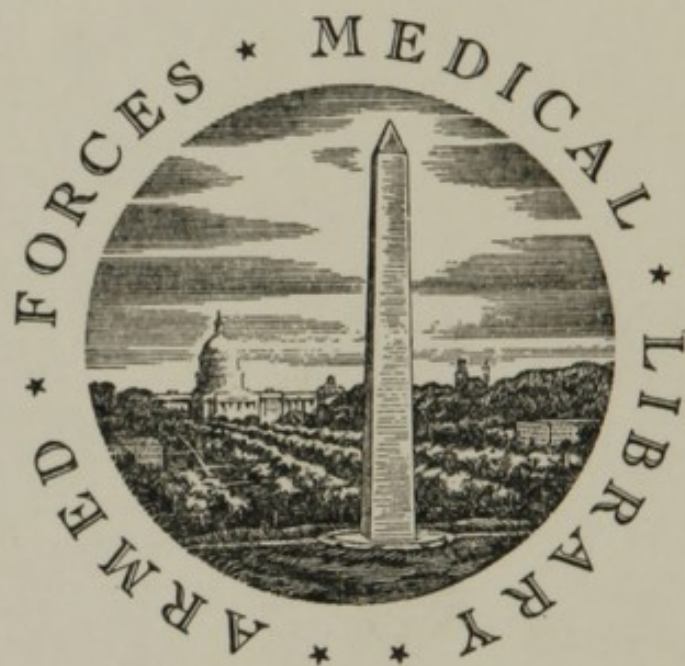


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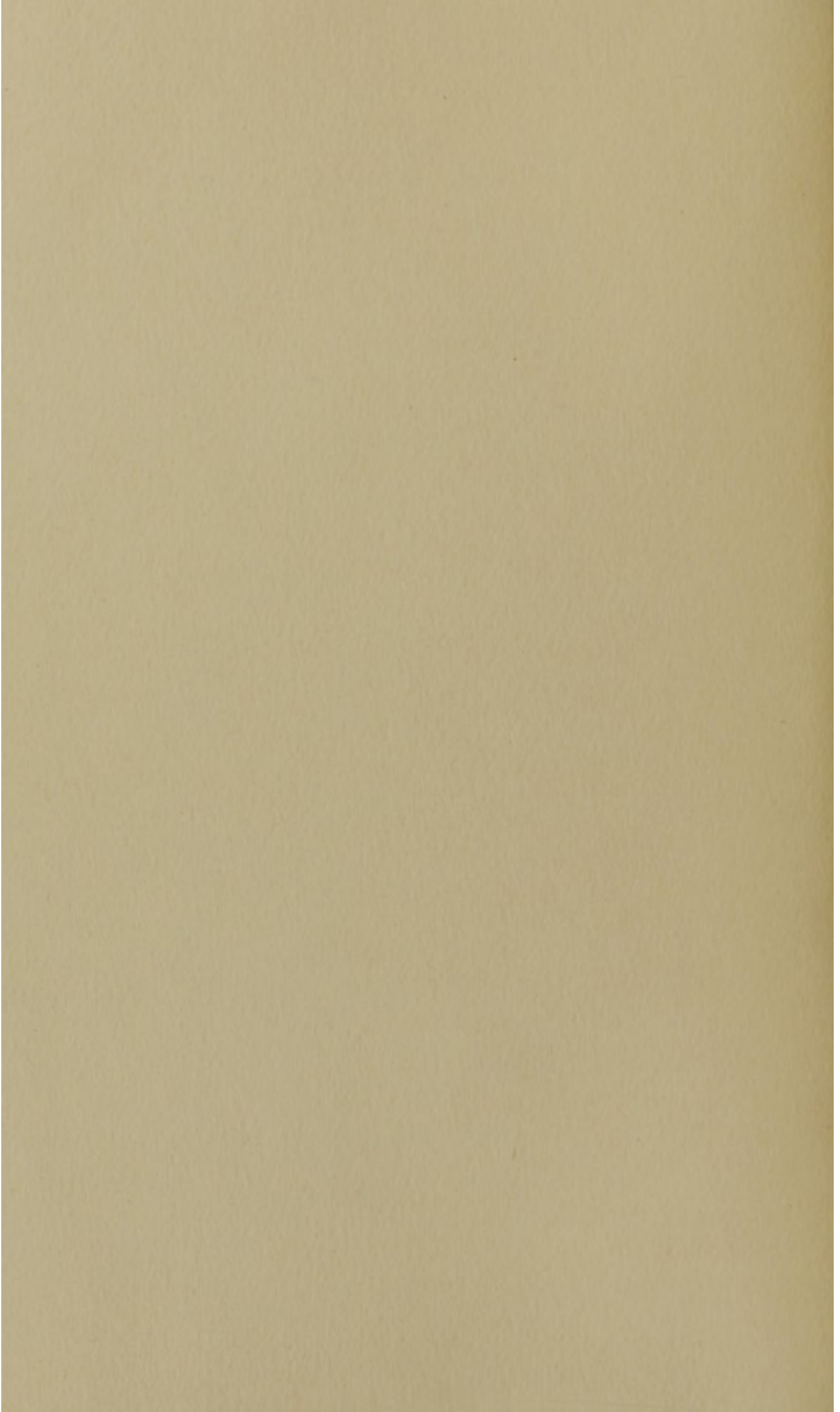
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WASHINGTON, D.C.







A N  
EULOGIUM,  
INTENDED TO  
PERPETUATE THE MEMORY OF  
DAVID RITTENHOUSE,  
LATE PRESIDENT OF THE  
*AMERICAN PHILOSOPHICAL SOCIETY,*

Delivered before the Society in the First Presbyterian Church,  
in High-street, Philadelphia, on the 17th Dec. 1796.

AGREEABLY TO APPOINTMENT,

*By Benjamin Rush,*

*A MEMBER OF THE SOCIETY.*

PHILADELPHIA:

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THE HISTORY OF THE

REIGN OF THE

EMPEROR

OF THE

WESTERN

EMPIRE

BY

JOHN

WILKINS

OF THE

UNIVERSITY OF

OXFORD

IN TWO VOLUMES

THE SECOND

VOLUME

*Philosophical Hall, December 17, 1796.*

*In Meeting of the American Philosophical Society,*

RESOLVED, unanimously, That the thanks of this Society be presented to Dr. Benjamin Rush, for the eloquent, learned, comprehensive, and just Eulogium, which he has this day pronounced upon the character of our late respected President, Dr. David Rittenhouse.

Resolved, unanimously, That Dr. Rush be requested to furnish the Society with a copy of the Eulogium, to be published under their direction.

*An Extract from the Minutes,*

SAMUEL MAGAW,	}	Secretaries.
ROBERT PATTERSON,		
W. BARTON,		
JOHN BLEAKLEY,		



AS a reason for introducing several sentiments into the following Eulogium, apparently foreign to its design, it is necessary to inform the reader, that the President, Senate and House of Representatives of the United States, the Senate and House of Representatives of Pennsylvania, foreign Ministers, Consuls, Secretaries of the General Government, the Judges of the Courts of the United States and of Pennsylvania, the Corporation and Clergy of the City of Philadelphia, the College of Physicians, the Trustees, Faculty and Students of Philosophy and Medicine in the University, the Corporation of the First Presbyterian Church, and a number of Ladies and Gentlemen attended the delivery of the Eulogium, by an invitation from the Philosophical Society.

# E U L O G I U M.

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*Gentlemen of the Philosophical Society.  
Friends and Colleagues,*

WE are assembled this day upon a mournful occasion. Death has made an inroad upon our Society. Our illustrious and beloved PRESIDENT, is no more. RITTENHOUSE, the ingenious, the modest, and the wise—RITTENHOUSE, the friend of God and man, is now no more!——For this, the temple of Science is hung in mourning,—for this, our eyes now drop a tributary tear. Nor do we weep alone.—The United States of America sympathize in our grief, for his name gave a splendor to the American character, and the friends of humanity in distant parts of the world, unite with us in lamenting our common loss,—for he belonged to the whole human race.

By your vote to perpetuate the memory of this great and good man, you have made a laud-



able attempt to rescue philosophers from their humble rank in the history of mankind. It is to them we owe our knowledge and possession of most of the necessaries and conveniences of life. To procure these blessings for us, "they trim their midnight lamp, and hang o'er the sickly taper." For us, they traverse distant regions, expose themselves to the inclemencies of the weather, mingle with savages and beasts of prey, and in some instances, evince their love of science and humanity by the sacrifice of their lives.

The amiable philosopher whose talents and virtues are to be the subject of the following eulogium, is entitled to an uncommon portion of our gratitude and praise. He acquired his knowledge at the expence of uncommon exertions, he performed services of uncommon difficulty, and finally he impaired his health, and probably shortened his life, by the ardor of his studies and labors for the benefit of mankind.

In attempting to discharge the difficult and painful duty you have assigned me, it will be necessary to give a short account of the life of Mr. Rittenhouse, inasmuch as several of the most interesting parts of his character are intimately connected with it.



The village of Germantown in the neighbourhood of this city, had the honor of giving birth to this distinguished philosopher on the 8th day of April, in the year 1732. His ancestors migrated from Holland about the beginning of the present century. They were distinguished, together with his parents, for probity, industry, and simple manners. It is from sources thus pure and retired, that those talents and virtues have been chiefly derived, which have in all ages enlightened the world. They prove by their humble origin, that the Supreme Being has not surrendered up the direction of human affairs to the advantages acquired by accident or vice, and they bear a constant and faithful testimony of his impartial goodness, by their necessary and regular influence in equalizing the condition of mankind. This is the divine order of things, and every attempt to invert it, is a weak and unavailing effort to wrest the government of the world from the hands of God.

The early part of the life of Mr. Rittenhouse was spent in agricultural employments under the eye of his father, in the county of Montgomery, twenty miles from Philadelphia, to which place he removed during the childhood of his Son. It was at this place his peculiar genius first dis-



covered itself. His plough, the fences, and even the stones of the field in which he worked, were frequently marked with figures which denoted a talent for mathematical studies. Upon finding that the native delicacy of his constitution unfitted him for the labors of husbandry, his parents consented to his learning the trade of a clock and mathematical instrument maker. In acquiring the knowledge of these useful arts, he was his own instructor.—They afforded him great delight, inasmuch as they favoured his disposition to inquire into the principles of natural philosophy.—Constant employment of any kind, even in the practice of the mechanical arts, has been found, in many instances, to administer vigor to human genius. Franklin studied the laws of nature, while he handled his printing types. The father of Rousseau, a jeweller at Geneva, became acquainted with the principles of national jurisprudence, by listening to his son while he read to him in his shop, the works of Grotius and Puffendorf; and Herschel conceived the great idea of a new planet, while he exercised the humble office of a musician to a marching regiment.

It was during the residence of our ingenious philosopher with his father in the country, that



he made himself master of Sir Isaac Newton's Principia, which he read in the English translation of Mr. Mott. It was here likewise he became acquainted with the science of Fluxions, of which sublime invention he believed himself for a while to be the author, nor did he know for some years afterwards, that a contest had been carried on between Sir Isaac Newton and Leibnitz, for the honor of that great and useful discovery. What a mind was here!——

Without literary friends or society, and with but two or three books, he became, before he had reached his four and twentieth year, the rival of the two greatest mathematicians in Europe!

It was in this retired situation, and while employed in working at his trade, that he planned and executed an orrery, in which he represented the revolutions of the heavenly bodies in a manner more extensive and complete, than had been done by any former astronomers. A correct description of this orrery drawn up by the Rev. Dr. Smith, is published in the first volume of our Transactions. This master-piece of ingenious mechanism was purchased by the college of New-Jersey. A second was made by him, after the same model, for the use of the college



of Philadelphia. It now forms part of the philosophical apparatus of the University of Pennsylvania, where it has for many years commanded the admiration of the ingenious and the learned, from every part of the world.

The reputation he derived from the construction of this orrery, as well as his general character for mathematical knowledge, attracted the notice of his fellow-citizens in Pennsylvania, and in several of the neighbouring states, but the discovery of his uncommon merit belonged chiefly to his brother-in-law, the Rev. Mr. Barton, Dr. Smith, and the late Mr. John Lukens, an ingenious mathematician of this city. These gentlemen fully appreciated his talents, and united in urging him to remove to Philadelphia, in order to enlarge his opportunities of improvement and usefulness. He yielded with reluctance to their advice, and exchanged his beloved retirement in the country for this city, in the year 1770. Here he continued for several years, to follow his occupation of a clock and mathematical instrument maker. He excelled in both branches of that business. His mathematical instruments have been esteemed by good judges to be superior in accuracy and workmanship to any of the same kind that have been imported from Europe.



About the time he settled in Philadelphia he became a member of our Society. His first communication to the Society was a calculation of the transit of Venus as it was to happen on the 3d of June, 1769, in  $40^{\circ}$  north latitude, and 5 hours west longitude from Greenwich. He was one of a committee appointed by the Society to observe in the township of Norriton, this rare occurrence in the revolution of that planet, and bore an active part in the preparations which were made for that purpose. Of this Dr. Smith who was likewise of the committee, has left an honourable record in the history of that event which is published in the first volume of the transactions of our Society. "As Mr. Rittenhouse's dwelling (says the Doctor) is about twenty miles north-west from Philadelphia; our other engagements did not permit Mr. Lukens or myself to pay much attention to the necessary preparations; but we knew that we had intrusted them to a gentleman on the spot [meaning Mr. Rittenhouse] who had, joined to a complete skill in mechanics, so extensive an astronomical, and mathematical knowledge, that the use, management and even construction of the apparatus, were perfectly familiar to him. The laudable pains he had taken in these material articles will



best appear from the work itself, which he hath committed into my hands, with a modest introduction, giving me a liberty with them, which his own accuracy, taste and abilities leave no room to exercise."

We are naturally led here to take a view of our philosopher with his associates in their preparations to observe a phænomenon which had never been seen but twice before by any inhabitant of our earth, which would never be seen again by any person then living, and on which depended very important astronomical consequences. The night before the long expected day, was probably passed in a degree of solicitude which precluded sleep. How great must have been their joy when they beheld the morning sun, "and the whole horizon without a cloud;" for such is the description of the day given by Mr. Rittenhouse in the report referred to by Dr. Smith. In pensive silence, and trembling anxiety, they waited for the predicted moment of observation; it came, and brought with it all that had been wished for and expected by those who saw it. In our philosopher, it excited in the instant of one of the contacts of the planet with the sun, an emotion of delight so exquisite and powerful, as to induce



fainting. This will readily be believed by those who have known the extent of that pleasure which attends the discovery, or first perception of truth. Soon after this event, we find him acting as one of a committee appointed to observe the transit of Mercury on the 9th of November in the same year. This was likewise done at Norriton. An account of it was drawn up, and published at the request of the committee by Dr. Smith. A minute history of the whole of these events, in which Mr. Rittenhouse continued to act a distinguished part, is given in our transactions. It was received with great satisfaction by the astronomers of Europe, and contributed much to raise the character of our then infant country for astronomical knowledge.

In the year 1775, he was appointed to compose and deliver the annual oration before our society. The subject of it, was the history of astronomy. The language of this oration is simple, but the sentiments contained in it are ingenious, original, and in some instances sublime. It was delivered in a feeble voice, and without any of the advantages of oratory, but it commanded notwithstanding, the most profound attention, and was followed by universal admiration and applause from a crowded and respectable audience.



From the contents of this oration, it appears that Astronomy was the favourite object of his studies. Attempts have been made to depreciate this branch of natural philosophy, by denying its utility, and application to human affairs.—The opinion is an unjust one, and as it tends to convey a limited idea of the talents of Mr. Rittenhouse, I hope I shall be excused in saying a few words in favour of this science.

It is to astronomy we are indebted for our knowledge of navigation, by which means the different parts of our globe have been discovered, and afterwards cemented together by the mutual wants and obligations of commerce.

It was astronomy that taught mankind the art of predicting and explaining eclipses of the Sun and Moon, and thereby delivered them from the superstition which in the early ages of the world, was connected with those phænomena of nature.

We are taught by astronomy to correct our ideas of the visible heavens, and thus by discovering the fallacy of the simple evidence of our senses, to call to their aid, the use of our reason, in deciding upon all the material objects of human knowledge.

Astronomy delivers the mind from a groveling attachment to the pursuits and pleasures



of this world. “Take the miser (says our philosopher in his oration) from the earth, if it be possible to disengage him—he whose nightly rest has been long broken by the loss of a single foot of it, useless perhaps to him; and remove him to the planet Mars, one of the least distant from us—Persuade the ambitious monarch to accompany him, who has sacrificed the lives of thousands of his subjects to an imaginary property in certain small portions of the earth, and point out this earth to them, with all its kingdoms and wealth, a glittering star, close by the moon, the latter scarce visible, and the former, less bright than our evening star.—They would turn away their disgusted sight from it, not thinking it worth their smallest attention, and seek for consolation, in the gloomy regions of Mars.”

Once more—the study of astronomy has the most friendly influence upon morals, and religion. “Yes, (says our philosopher in another part of his oration) the direct tendency of this science is to dilate the heart with universal benevolence, and to enlarge its views. It flatters no princely vice, nor national depravity. It encourages not the libertine by relaxing any of the precepts of morality, nor does it attempt to



undermine the foundations of religion. It denies none of those attributes, which the wisest, and best of mankind have in all ages ascribed to the Deity. Nor does it degrade the human mind from that dignity which is ever necessary to make it contemplate *itself* with complacency. None of these things does astronomy pretend to, and if these things merit the name of philosophy, and the encouragement of a people, then let scepticism flourish, and astronomy lie neglected. — Let the names of Berkley and Hume become immortal, and that of Newton be lost in oblivion.” —

The following is a list of such of Mr. Rittenhouse's other publications as are contained in the three volumes of our transactions.

Observations of the comet which appeared in June and July 1770, with the elements of its motion and the trajectory of its path, in a letter to Dr. William Smith.

An easy method of deducing the true time of the sun's passing the meridian, by means of a clock, from a comparison of four equal attitudes, observed on two succeeding days, without the help of the equation tables, communicated by Dr. Wm. Smith.

An explanation of an optical deception, namely, that the surfaces of bodies viewed through



the double microscope, sometimes appear to be reversed, that is, those parts which are elevated seem depressed, and the contrary.

An account of a remarkable meteor observed at Philadelphia on the 31st of October, 1775, with some conjectures relative to the theory of meteors, in answer to a letter from John Page, Esq. giving an account of the same meteor seen in many distant places in Virginia.

Conjectures, corroborated by experiments, relative to a new theory of magnetism; in a letter to John Page, Esq. of Virginia.

A new method of placing a meridian mark for a transit instrument within a few feet of the observatory, so as to have all the advantages of one placed at a great distance; in a letter to the Rev. Dr. John Ewing.

Observations on a comet discovered in the month of January 1784.

An explanation of a curious optical phenomenon, namely, if a candle or other luminous body be viewed through a silk umbrella, handkerchief or the like, the luminous body will appear to be doubled; in a letter to Francis Hopkinson, Esq.

A series of observations made at sundry times in the years 1784, 85, and 86 on the



new planet, or Georgium Sidus, also an observation of the transit of Mercury over the Sun's disk on the 12th of November 1782.

An account of three houses in Philadelphia struck with lightning on the 7th of June 1789.

An account of the effects of a stroke of lightning upon a house furnished with two metallic conductors on the 17th of August, 1789; in a letter to Mr. Robert Patterson.

Astronomical observations made at Philadelphia, containing an account of the eclipse of the Moon on the 2nd of November 1789.

An account of the transit of Mercury over the Sun's disk, on the 5th of November 1789.

An account of the eclipse of the Sun, on the 6th of November 1790, with an account of corresponding observations, made at the university of William and Mary, in Virginia, by Dr. J. Madison, and at Washington college, in Maryland, by the Rev. Dr. Smith.

Short, and elegant theorems for finding the sum of the several powers of the lines, either to a radius of unity, or any other; in a letter to Mr. Robert Patterson.

An account of a comet discovered in the month of January 1793; in a letter to Mr. Robert Patterson.



Besides these publications, our society is in possession of the following communications from Mr. Rittenhouse, which are now in the press, and will be speedily published in the fourth volume of our transactions.

A method of determining the true plane of a planet in an elliptical form, by converging series, directly from the mean anomaly.

A new and easy method of calculating logarithms ;—in a letter to Mr. Robert Patterson.

A description of an improvement on pendulum clocks, by which the error arising from the different density, or resistance of the medium in which the pendulum vibrates, is effectually obviated.

Lastly, experiments on the expansion of wood by heat.

Talents so splendid, and knowledge so practical in mathematicks, are like mines of precious metals. They become public property by universal consent. The State of Pennsylvania was not insensible of the wealth she possessed in the mind of Mr. Rittenhouse. She claimed him as her own, and employed him in business of the most important nature.

In the year 1779 he was appointed by the legislature of Pennsylvania, one of the commis-



sioners for adjusting a territorial dispute between Pennsylvania and Virginia, and to his talents, moderation and firmness, were ascribed in a great degree, the satisfactory termination, of that once alarming controversy in the year 1785.

In 1784 he assisted in determining the length of five degrees of longitude from a point on the Delaware, in order to fix the western limits of Pennsylvania.

In 1786, he was employed in fixing the northern line which divides Pennsylvania from New-York.

But the application of his talents and knowledge to the settlement of territorial disputes, was not confined to his native state. In the year 1769, he was employed in settling the limits between New Jersey and New York, and in 1787 he was called upon to assist in fixing the boundary line between the States of Massachusetts and New York. This last business which was executed with his usual precision and integrity, was his farewell peace offering to the union and happiness of his country.

In his excursions through the wilderness, he carried with him his habits of inquiry and observation. Nothing in our mountains, soils, rivers, and springs escaped his notice. It is to



be lamented that his private letters, and the memories of his friends, are the only records of what he collected upon these occasions. Philosopher, or naturalist, whosoever thou art! that shalt hereafter traverse the unfrequented woods of our state, forget not to respect the paths, first marked by the feet of this ingenious, and faithful servant of the public. Honour the fountains consecrated to science by his skilful hand, and inhale with double pleasure the pure atmosphere of the mountains, on which he renewed his acquaintance with the canopy of heaven, after passing whole weeks in forests so shady, as to conceal from him the rays of the sun. And citizens of Pennsylvania, friends and patrons of literature, be grateful for his services. Let the remembrance of them be dear to the present generation, and let a part of the state, distinguished in a more especial manner for its resources in natural knowledge, bear his name with honor to the latest posterity.

In the year 1791 he was chosen successor to Dr. Franklin in the chair of our society. In this elevated station, the highest that philosophy can confer in our country, his conduct was marked by its usual line of propriety and dignity. Never did the artificial pomp of station



command half the respect, which followed his unassuming manners in the discharge of the public duties of this office. You will often recollect, gentlemen, with a mixture of pleasure and pain, the delightful evenings you passed in the society, every time he presided in your meetings. They were uniformly characterized by ardor in the pursuits of science, urbanity and brotherly kindness. His attachment to the interests of the society was evinced soon after he accepted of the President's chair, by a donation of three hundred pounds.

But his talents and knowledge were not limited to mathematical or material subjects; his mind was a repository of the knowledge of all ages and countries. He had early and deeply studied most of the different systems of theology. He was well acquainted with practical metaphysics. In reading travels he took great delight. From them, he drew a large fund of his knowledge of the natural history of our globe. He possessed talents for music and poetry, but the more serious and necessary pursuits of his life, prevented his devoting much time to the cultivation of them. He read the English poets with great pleasure. The muse of Thomson charmed him most. He



admired his elegant combination of philosophy and poetry. However opposed these studies may appear, they alike derive their perfection from extensive and accurate observations of the works of nature. He was intimately acquainted with the French, German, and Dutch languages, the two former of which he acquired without the assistance of a master. They served the valuable purpose of conveying to him the discoveries of foreign nations, and thereby enabled him to prosecute his studies with more advantage, in his native language.

In speaking of Mr. Rittenhouse, it has been common to lament his want of what is called a liberal education.—Were education what it should be, in our public seminaries, this would have been a misfortune, but conducted as it is at present, agreeably to the systems adopted in Europe in the fifteenth century, I am disposed to believe that his extensive knowledge, and splendid character are to be ascribed chiefly to his having escaped the pernicious influence of monkish learning upon his mind in early life. Had the usual forms of a public education in the United States been imposed upon him; instead of revolving through life in a planetary orbit, he would probably have consumed the



force of his genius by fluttering around the blaze of an evening taper. Rittenhouse the Philosopher, and one of the luminaries of the eighteenth century, might have spent his hours of study in composing syllogisms, or in measuring the feet of Greek and Latin poetry.

It will be honourable to the citizens of the United States, to add, that they were not insensible of the merit of our philosopher. Inventions and improvements in every art and science, were frequently submitted to his examination, and were afterwards patronised by the public, according as they were approved of by him. Wherever he went, he met with public respect, and private attentions. But his reputation was not confined to his native country. His name was known and admired in every region of the earth, where science and genius are cultivated and respected.\*

Such were the talents and knowledge, and such the fame, of our departed President ! His

\* The degree of Master of Arts was conferred upon him by the College of Philadelphia, in 1768. The same degree was conferred upon him by the College of William and Mary, in Virginia, in 1784. In the year 1789, he received the degree of Doctor of Laws from the College of New-Jersey. He was elected a Member of the American Academy of Arts and Sciences at Boston in 1782, and of the Royal Society in London in 1795.



virtues now demand our tribute of praise.—And here, I am less at a loss to know what to say, than what to leave unsaid. We have hitherto beheld him as a philosopher, soaring like the eagle, until our eyes have been dazzled by his near approaches to the sun. We shall now contemplate him at a less distance, and behold him in the familiar character of a man, fulfilling his various duties, in their utmost extent. If any thing has been said of his talents and knowledge that has excited attention, or kindled desires in the younger members of our society, to pursue him in his path of honor, let me request them not to forsake me here. Come, and learn by his example, to be good, as well as great.—His virtues furnish the most shining models for your imitation, for they were never obscured in any situation or stage of his life, by a single cloud of weakness or vice. As the source of these virtues, whether of a public or private nature, I shall first mention his exalted sense of moral obligation founded upon the revelation of the perfections of the Supreme Being. This appears from many passages in his oration, and from his private letters to his friends. In his oration we find the following pious sentiment. “Should it please that Almighty Power who hath



placed us in a world in which we are only permitted "to look about us and to die," to indulge us with existence throughout that half of eternity which still remains unspent, and to conduct us through the several stages of his works, *here* [meaning in the study of astronomy] is ample provision made for employing every faculty of the mind, even allowing its powers to be enlarged through an endless repetition of ages. Let us not complain of the vanity of this world, and that there is nothing in it capable of satisfying us. Happy in those wants,—happy in those desires, forever in succession to be gratified,—happy in a continual approach to the Deity."

"I must confess that I am not one of those sanguine spirits who seem to think that when the withered hand of death has drawn up the curtain of eternity, all distance between the creature and the Creator, and between finite and infinite, will be annihilated. Every enlargement of our faculties,—every new happiness conferred upon us, every step we advance towards the Divinity, will very probably render us more and more sensible of his inexhaustible stores of communicable bliss, and of his inaccessible perfections."

There appears to be a natural connection between a knowledge of the works of nature and



just ideas of the divine perfections ; and if philosophers have not in all ages been equally devout with our President, it becomes us to enquire how far the beneficial influence of philosophy upon religion, may have been prevented by their minds being pre-occupied in early life with the fictions of ancient poets, and the vices of the heathen gods. It remains yet to be determined, whether all the moral as well as natural attributes of the Deity may not be discovered in the form, and œconomy of the material world, and whether that righteousness which descended from heaven near eighteen hundred years ago, may not wait for philosophical truth to spring up from the earth, in order by uniting with it, to command universal belief and obedience. This opinion, as far as it relates to one of the moral attributes of the Deity, seems to have been admitted by our philosopher in the following elegant and pious extract from a letter to one of his friends, “ give me leave (says he) to mention two or three proofs of infinite goodness in the works of creation. The first is, possessing goodness in ourselves. Now it is inconsistent with all just reasoning to suppose, that there is any thing good, lovely or praiseworthy in us, which is not possessed in an in-



finitely higher degree by that Being who first called us into existence. In the next place, I reckon the exquisite and innocent delight that many things around us are calculated to afford us. In this light the beauty and fragrance of a single rose is a better argument for divine goodness than a luxuriant field of wheat. For if we can suppose that we were created by a malevolent Being with a design to torment us for his amusement, he must have furnished us with the means of subsistence, and either have made our condition tolerable, or not have left the means of quitting it at pleasure, in our own power. Such being my opinions, you will not wonder at my fondness for what Mr. Addison calls the pleasures of the imagination. 'They are all to me, so many demonstrations of infinite goodness.'

If such be the pious fruits of an attentive examination of the works of the Creator, cease ye ministers of the gospel to defeat the design of your benevolent labors, by interposing the common studies of the schools, between our globe, and the minds of young people. Let their first ideas be those which are obtruded upon their senses, by the hand of nature. Permit the firmament of heaven, and the animal, vegetable, and mineral productions of the earth,



to instruct them in the wisdom and goodness of the Creator, and let the effects of physical evil upon general happiness, vindicate the divine government, in permitting the existence of moral evil in our world. Thus the perverse passions of man, may be made to unite with storms and tempests, in furnishing proofs of the goodness of the Creator of the universe.

But the religion of Mr. Rittenhouse, was not derived wholly from his knowledge and admiration of the material world. He believed in the Christian revelation. Of this, he gave many proofs, not only in the conformity of his life, to the precepts of the gospel, but in his letters and conversation. I well recollect in speaking to me of the truth and excellency of the Christian religion, he mentioned as a proof of its divine origin, that the miracles of our Saviour differed from all other miracles, in being entirely of a kind and benevolent nature. It is no small triumph to the friends of Revelation to observe, in this age of infidelity, that our religion has been admitted and even defended by men of the most exalted understanding, and of the strongest reasoning powers. The single testimony of David Rittenhouse in its favor, outweighs the declamations of whole nations against it.



As the natural effect of his belief in the relation of the whole human race to each other in a common Father and Redeemer, he embraced the whole family of mankind in the arms of his benevolence. The force and extent of this virtue in his heart, will appear from my reading one more extract from his oration. I am aware how much I suffer by introducing quotations from that eloquent performance, for they will cast a shade upon all I have said, or shall say upon this occasion.

“How far, (says our philosopher) the inhabitants of the other planets may resemble man, we cannot pretend to say. If like them they were created liable to fall, yet some, if not all of them may still retain their original rectitude. We will hope they do ; The thought is comfortable.—Cease then Gallileo to improve thy optic tube, and thou great Newton, forbear thy ardent search into the mysteries of nature, lest ye make unwelcome discoveries. Deprive us not of the pleasure of believing that yonder orbs, traversing in silent majesty the etherial regions, are the peaceful seats of innocence and bliss, where neither natural or moral evil has ever intruded, and where to enjoy with gratitude and adoration the Creator’s bounty, is the business of exist-



ence. If their inhabitants resemble man in their faculties and affections, let us suppose that they are wise enough to govern themselves according to the dictates of that reason God has given in such a manner, as to consult their own, and each other's happiness upon all occasions. But if on the contrary, they have found it necessary to erect artificial fabrics of government, let us not suppose they have done it with so little skill, and at such an enormous expense, as to render them a misfortune, instead of a blessing.—We will hope that their statesmen are patriots, and that their kings (if that order of beings has found admittance there) have the feelings of humanity. Happy people!—and perhaps more happy still, that all communication with us is denied. We have neither corrupted you with our vices, nor injured you by violence. None of your sons and daughters have been degraded from their native dignity, and doomed to endless slavery in America, merely because their bodies may be disposed to reflect, or absorb the rays of light different from ours. Even you, inhabitants of the Moon, situated in our very neighbourhood, are effectually secured from the rapacious hands of the oppressors of our globe. And the utmost efforts of the mighty Frede-



rick, the tyrant of the North, and scourge of mankind, if aimed to disturb your peace, becomes inconceivably ridiculous and impotent."

"Pardon these reflections. They arise not from the gloomy spirit of misanthropy. That Being, before whose piercing eye all the intricate foldings of the human heart, become expanded, and illuminated, is my witness with what sincerity, with what ardor—I wish for the happiness of the whole race of mankind.—how much I admire that disposition of lands and seas which affords a communication between distant regions, and a mutual exchange of benefits—how sincerely I approve of those social refinements, which add to our happiness, and induce us with gratitude to acknowledge our Creators goodness, and how much I delight in a participation of the discoveries made from time to time in nature's works, by our philosophical brethren in Europe. But (adds our philosopher) when I consider that luxury, and her constant follower tyranny, which have long since laid the glories of Asia in the dust, are now advancing like a torrent irresistible, and have nearly completed their conquest over Europe,—I am ready to wish——vain wish ! that nature would raise her everlasting bars between the new



and the old world, and make a voyage to Europe as impracticable as one to the moon."

As when a traveller in passing through a wilderness, slackens his pace to prolong the pleasure of a sudden and unexpected prospect of a majestic river pouring its waters down the declivity of a cloud-cap't mountain, and spreading fertility and verdure throughout the adjacent vallies, so we feel disposed to pause, and feast upon the sublime sentiments contained in the passage which I have read. Citizens of the United States, receive and cherish them as a legacy from a friend, or a brother. Be just, and loose the bands of the African slave. Be wise, and render war odious in our country. Be free, by assuming a national character and name, and be greatly happy, by erecting a barrier against the corruptions in morals, government, and religion, which now pervade all the nations of Europe.\*

\* Mr. William Barton, nephew to Mr. Rittenhouse, has favoured me with the following extract of a letter dated in September, 1755, to his brother-in-law, the Rev. Mr. Barton, who was the friend and correspondent of his youth, which shews how early and deeply the principles of universal benevolence were fixed in his mind.

"I would sooner give up my interest in a future state, than be divested of humanity;—I mean that good will I have to the spe-



But the philanthropy of Mr. Rittenhouse did not consist simply in wishes for the happiness of mankind. He reduced this divine principle to practice by a series of faithful and disinterested services to that part of his fellow creatures, to which the usefulness of good men is chiefly confined. His country, his beloved country, was the object of the strongest affections of his heart. For her, he thought,—for her, he laboured,—and for her, in the hours of her difficulties and danger, he wept,—in every stage of the American revolution. Patriots of 1776, you will acquit me of exaggeration here, for you feel in the recollection of what passed in your own bosoms, a witness of the truth of each of these assertions. The year of the declaration of Independance, which changed our royal governments into Republics, produced no change in his political principles, for he had been edu-

cies, although one half of them are said to be fools, and almost the other half knaves. Indeed I am firmly persuaded, that we are not at the disposal of a Being who has the least tincture of ill-nature, or requires any in us.—You will laugh at this grave philosophy, or my writing to you on a subject which you have thought of a thousand times : but, can any thing that is serious, be ridiculous ?—Shall we suppose Gabriel smiling at Newton, for labouring to demonstrate whether the earth be at rest or not, because the former plainly sees it move ?



cated a Republican by his father. I can never forget the pleasure with which he avowed his early but secret attachment to an elective and representative form of government. Often have I heard him above twenty years ago, predict the immense encrease of talents and knowledge which has been produced by the strength and activity that have been infused into the American mind, by our republican constitutions. Often, likewise, at the same remote period of time, have I heard him anticipate with delight, the effects of our revolution in sowing the seeds of a new order of things in other parts of the world. He believed political, as well as moral evil to be intruders into the society of men,—that general happiness was the original design, and ultimate end of the divine government, and that a time would come, when every part of our globe, would echo back the heavenly proclamation of universal peace on earth, and good will to man.

Let it not be said, that he departed from the duties of a Philosopher, by devoting a part of his time and talents to the safety and happiness of his country. It belongs to monarchies, to limit the business of government to a privileged order of men, and it is from the remains of a monarchical spirit in our country, that we



complain when clergymen, physicians, philosophers and mechanics, take an active part in civil affairs. The obligations of patriotism are as universal and binding, as those of justice and benevolence, and the virtuous propensities of the human heart are as much resisted by every individual who neglects the business of his country, as they are by the extinction of the domestic affections in a cell. Man was made for a republic, and a republic was made for man, otherwise Divine Power and goodness have been wasted, in the creation and gift of his public affections.—Our philosopher adopted this truth from the evidence of his feelings, in common with the rest of mankind, but it was strongly reinforced in his mind by numerous analogies of nature. How was it possible for him to contemplate light and air as the common and equal portions of every man, and not acknowledge that heaven intended liberty to be distributed in the same manner among the whole human race ! Or how could he behold the beauty and harmony of the universe, as the result of universal and mutual dependance, and not admit that heaven intended rulers to be dependant upon those, for whose benefit alone, all government should exist. To



suppose the contrary, would be to deny unity and system in the plans of the great creator of all things.

I shall make no apology for these sentiments. They are not foreign to the solemnity of this discourse. Had I said less of the political principles and conduct of our enlightened President, hundreds and thousands of my fellow-citizens would have accused me, of an act of treachery to his memory. May the time never come, in which the praises of our republican governments, shall not be acceptable to the ears of an American audience!

In the more limited circles of private life, Mr. Rittenhouse commanded esteem and affection. As a neighbour he was kind and charitable. His sympathy extended in a certain degree to distresses of every kind, but it was excited with the most force, and the kindest effects, to the weakness, pain and poverty of old age.—As a friend he was sincere, ardent, and disinterested. As a companion, he instructed upon all subjects. To his happy communicative disposition, I beg leave to express my obligations in this public manner. I can truly say, after an acquaintance with him for six-and-twenty years,



that I never went into his company, without learning something. With pleasure have I looked beyond my present labors to a time, when his society should constitute one of the principal enjoyments of the evening of my life.—But alas ! that time, so often anticipated, and so delightful in prospect—will never—come !

I hope it will not be thought that I tread too closely upon his footsteps, when I presume to lift the latch of his door, and to exhibit him in the domestic relations of a husband and father. It was the practice of the philosophers of former ages, to pass their lives in their closets, and to maintain a formal and distant intercourse with their families; but our philosopher was a stranger to pride and imposture in every thing. His family constituted his chief society, and the most intimate circle of his friends. When the declining state of his health, rendered the solitude of his study, less agreeable than in former years, he passed whole evenings in reading or conversing, with his wife and daughters. Happy family ! so much and so long blessed with such a head ! and happier still, to have possessed dispositions and knowledge to discern and love his exalted character, and to enjoy his instruct-



ing conversation!—Thus sir Thomas Moore lived with his accomplished wife and daughters;—Thus Cicero educated his beloved Tullia; and in this way only, can the female sex be elevated to that dignity, and usefulness in society, for which they were formed, and by which, from their influence upon manners, a new æra would be created in the history of mankind.

The house, and manner of living, of our president, exhibited the taste of a philosopher, the simplicity of a republican, and the temper of a Christian. He was independent, and contented with an estate, small in the estimation of ambition and avarice, but amply suited to all his wants and desires. He held the office of treasurer of Pennsylvania, by an annual and unanimous vote of the legislature, between the years 1777, and 1789. During this period, he declined purchasing the smallest portion of the public debt of the state, thereby manifesting a delicacy of integrity, which is known and felt only by pure and elevated minds.

In the year 1792, he was persuaded to accept of the office of Director of the mint of the United States. His want of health, obliged him to resign it in 1795. Here his conduct was likewise above suspicion, for I have been inform-



ed by his colleague in office,\* that in several instances, he paid for work done at the mint out of his salary, where he thought the charges for it, would be deemed extravagant by the United States.

His œconomy extended to a wise and profitable use of his time. No man ever found him unemployed. As an apology for detaining a friend a few minutes, while he arranged some papers he had been examining, he said, "that he had once thought health, the greatest blessing in the world, but that he now thought there was one thing of much greater value, and that was time." The propriety of this remark will appear when we consider, that Providence, so liberal in other gifts, bestows this, in a sparing manner. He never gives a second moment, until he has withdrawn the first, and still reserves the third in his own hand.

The countenance of Mr. Rittenhouse, was too remarkable to be unnoticed upon this occasion. It displayed such a mixture of contemplation, benignity, and innocence, that it was easy to distinguish his person in the largest company, by a previous knowledge of his character. His manners were civil, and engaging to such a

\* Dr. Way.



degree, that he seldom passed an hour, even in a public house, in travelling through our country, without being followed by the good wishes of all who attended upon him. There was no affectation of singularity, in any thing he said, or did. Even his hand writing, in which this weakness so frequently discovers itself, was simple and intelligible at first sight, to all who saw it.

Here I expected to have finished the detail of his virtues, but in the neighbourhood of that galaxy created by their connected lustre, I behold a virtue of inestimable value, twinkling like a rare, and solitary star. It is his superlative modesty. This heaven born virtue was so conspicuous in every part of his conduct, that he appeared not so much to conceal, as to be ignorant of his superiority as a philosopher and a man, over the greatest part of his fellow-creatures.

In reviewing the intellectual endowments and moral excellency of Mr. Rittenhouse, and our late intimate connection with him, we are led to rejoice in being men.

We proceed now to the closing scenes of his life.

His constitution was naturally feeble, but it was rendered still more so, by sedentary la-



bour, and midnight studies. He was afflicted for many years with a weak breast, which, upon unusual exertions of body or mind, or sudden changes in the weather, became the seat of a painful and harraffing disorder. This constitutional infirmity was not without its uses. It contributed much to the perfection of his virtue, by producing habitual patience and resignation to the will of heaven, and a constant eye to the hour of his dissolution. It was a window through which he often looked with pleasure towards a place of existence, where from the encrease and perfection of his intuitive faculties, he would probably acquire more knowledge in an hour, than he had acquired in his whole life, by the slow operations of reason ; and where, from the greater magnitude and extent of the objects of his contemplation, his native globe, would appear like his cradle, and all the events of time, like the amusements of his infant years.

On the 26th of June, of the present year, the long expected messenger of death, disclosed his commission. In his last illness, which was acute, and short, he retained the usual patience and benevolence of his temper. Upon being told that some of his friends had called at his door to inquire how he was ; he



asked why they were not invited into his chamber to see him. “ Because (said his wife) you are too weak to speak to them.” “ Yes (said he) that is true, but I could still have squeezed their hands.”—Thus with a heart overflowing with love to his family, friends, country, and to the whole world, he peacefully resigned his spirit into the hands of his God. Let the day of his death be recorded in the annals of our society, and let its annual return be marked by some public act, which shall characterise his services and our grief, and thereby animate us and our successors, to imitate his illustrious example!

It has been the fashion of late years, to say of persons who had been distinguished in life, when they left the world in a state of indifference to every thing, and believing, and hoping in nothing, that they died like philosophers. Very different was the latter end of our excellent president. He died like a christian, interested in the welfare of all around him—believing in the resurrection, and the life to come, and hoping for happiness from every attribute of the Deity.

Agreeably to his request, his body was interred in his observatory near his dwelling



house, in the presence of a numerous concourse of his fellow-citizens. It was natural for him in the near prospect of appearing in the presence of his Maker, to feel an attachment to that spot in which he had cultivated a knowledge of his perfections, and held communion with him through the medium of his works. Hereafter it shall become one of the objects of curiosity in our city. Thither shall the philosophers of future ages resort to do homage to his tomb, and children yet unborn, shall point to the dome which covers it, and exultingly say, "there lies our Rittenhouse."

Let us my respected colleagues, repair for a few minutes to that awful spot.—In entering it,—we behold the telescope, dear instrument of his discoveries, turned upon its axis, and pointed to the earth, which has closed its master's eyes.—How artless—the inscription upon his tombstone!—It contains nothing but his name, and the simple record of the days and years of his birth and death.—Very different would have been the monument of his worth and fame, had not the gratitude and affection of his friends been controuled by his dying request. His head would have reclined in marble, upon the lap of religion. At his feet, science would have sat—



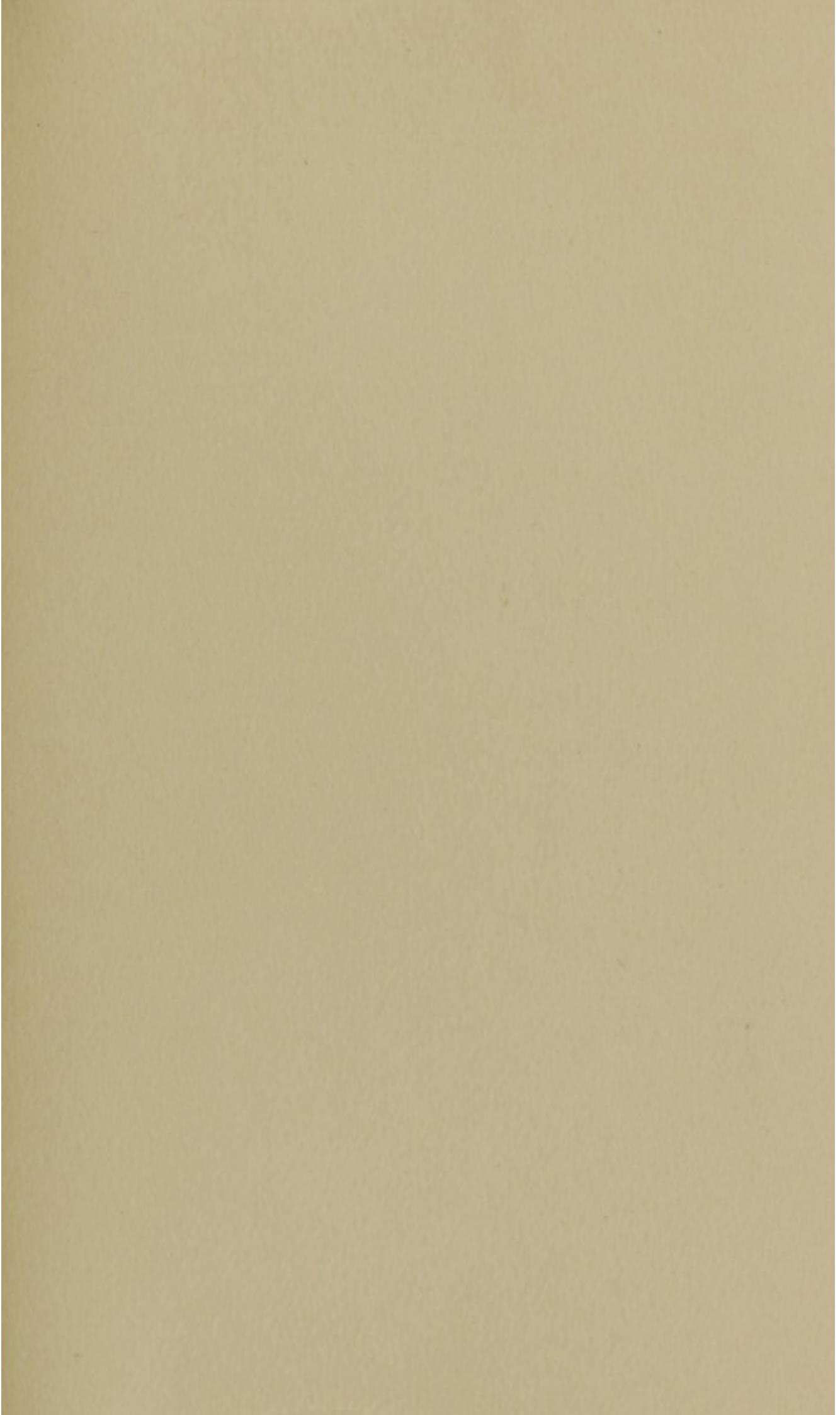
bathed in tears; while the genius of republican liberty, in the figure of a venerable hermit, bending over his grave, would have deplored the loss of his favorite son.—Alas!—too—too soon has our beloved president been torn from the chair of our society!—Too soon has he laid aside his robes of office, and ceased to minister for us day and night at the altar of science!—Ah!—who now will elevate his telescope, and again direct it towards yonder heavens? Who now will observe the transit of the planets? Who now will awaken our nation to view the trackless and stupendous comet? Who now will measure the courses of our rivers, in order to convey their streams into our city, for the purposes of health and commerce?—Nature is dumb;—for the voice of her chief interpreter is hushed in death.—In this hour of our bereavement, to whom shall we look?—but to THEE, FATHER of life and light:—thou author of great and good gifts to man. O! let not thy Sun, thy Moon, and thy Stars now shine unobserved among us! may the genius of our departed president, like the mantle of thy prophet of old, descend upon some mem-



ber of our society, who shall, as he did, explain to us the mysteries of thy works, and lead us step by step, to THYSELF, the great overflowing fountain of wisdom, goodness and mercy, to the children of men !













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