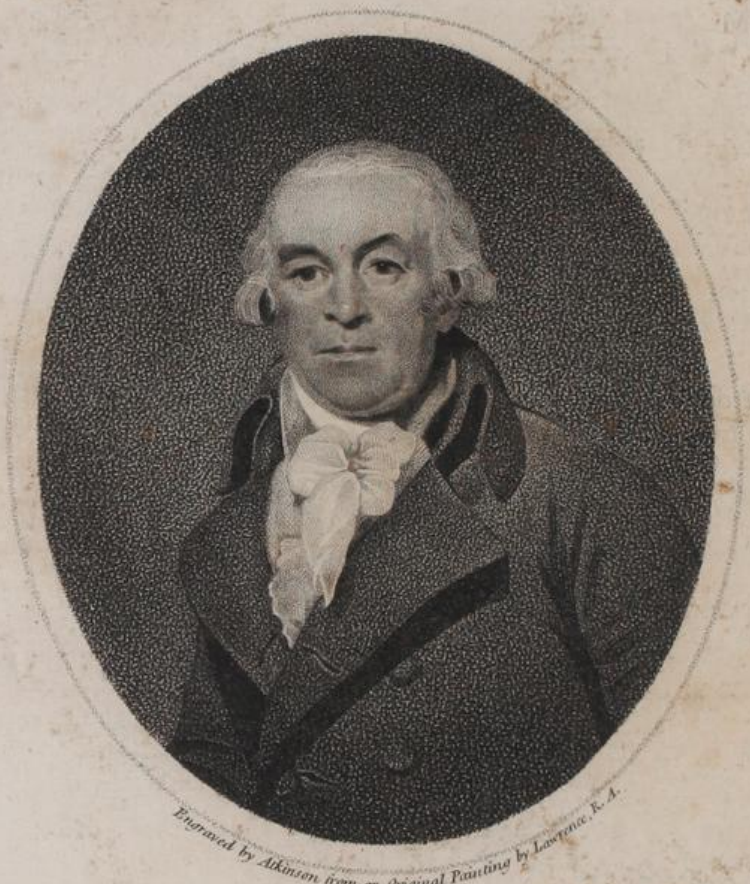

Engraved by Atkinson from an Original Painting by Lawrence, R. A.

Thomas Williams, Esqr. M.P.

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THE

Commercial and Agricultural Magazine.

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MEMOIR OF THE LIFE OF THOMAS WILLIAMS, Esq. M. P.

THOMAS WILLIAMS, of *Temple Houſe*, Eſq. *Berks*, M. P. for *Great Marlow*, is a native of the Iſle of *Angleſea*.—He was bred to the law, in which he practiſed with ſucceſs and credit for nearly 20 years. Having by that time acquired a competent fortune, he reſolved to retire from the fatigues of his profeſſion, and to devote the remainder of his days to the ſtudy of agriculture; a ſcience to which he always was and ſtill continues much attached, and which at leaſt in his native country, is not a little indebted to him. At that period, the profits derived from the Paris-Mountain Mines, were very inconſiderable. Some of the proprietors, therefore, turned their eyes towards Mr. Williams, as a gentleman, with a ſtrong and active mind, well inured to buſineſs, who having long held ſhares, and been converſant, in the Mines of Flintſhire and other places, might improve their mines, and place them on that footing in point of profit and conſideration, which their extent and value ſeemed ſo ſtrongly to promiſe. — He accepted their propoſals, and moſt amply juſtified the good opinion they had entertained of his talents. Having become a partner, he laboured with his characteriſtic ardour, to make himſelf maſter of his new trade, and was ſoon a miner among miners.—Life and vigour were quickly imparted to the induſtry of the country around; and its population increaſed rapidly.---The mines became the admiration of the world, and a ſource of immenſe wealth to the proprietors, who before certainly had no very ſubſtantial reaſons to boaſt of that part of their poſſeſſions.—Mr. Williams did not ſtop here. He eſtabliſhed the moſt complete and extenſive manufactories in all the world, for the ſmelting, refining, and working up of the copper in all thoſe various branches, in which it is not only uſeful but indiſpenſibly neceſſary, thus connecting under his own immediate inſpection, the whole of the proceſſes from the crude lump of ore to the *poliſhed copper ſheet*, *nail*, and every article uſeful for ſhipping, as well as other purpoſes.--The magnitude of ſuch an undertaking, can only be appreciated by perſons who have an intimate knowledge of the different details.---Suffice it to ſay here, that no individual, nay, that no government, ever before accompliſhed that object upon ſo enlarged a ſcale or to ſuch perfection. The conſumption of coals alone, at all his eſtabliſhments connected with the copper trade, may enable us to form ſome idea of it, being no leſs than 750 chaldrons daily for ſeveral years together, as ap-

pears in the Report of the Committee of the House of Commons, appointed last year to enquire into *the state of the copper trade.*— To him our navy and commerce owe the incalculable benefits resulting from the present system of copper-fastening and sheathing our ships. In 1782, and some time before, many fatal accidents having happened to our vessels from copper-sheathing upon *iron* bolts, it was generally resolved to discontinue the practice of copper sheathing, because it was deemed impracticable to make copper bolts hard enough for their necessary drifts into the timber. Through his means, a mode of preparation was introduced, by which copper bolts, nails, and other fastenings were made, equal to any of iron or even of steel, in hardness, strength and elasticity; and from that time, the practice of copper fastening and sheathing has been universally adopted. We will not attempt to enumerate the advantages of this practice.---But it has fallen within our knowledge, that coppered vessels, upon an average, save full 25 per cent. upon the premium of insurance, both of ships and cargoes; and that our ships trading to the East Indies, now make three voyages in less time than they could perform two when they were not coppered. The account of our Marine Insurance Duties, laid on the table of the House of Commons, shews the immense amount per annum.

Mr. Williams has through life been characterized by an extraordinary attention to business, an enthusiastic warmth in the prosecution of his plans, and an unremitting perseverance in bringing them to maturity, which are equalled only by his acuteness and discernment in their formation. We shall close our account of this gentleman, with sincerely wishing him health and life to enjoy his well-earned riches.---For we have been informed by many of the friends of his earlier days, that *He bears his Faculties most meekly*---that, like a true ancient Briton, he is distinguished by a generous spirit of hospitality, and that the poor and distressed always find in him, a benevolent, charitable friend.

HAND-HOEING OF WHEAT.

For the Commercial and Agricultural Magazine.

Mr. Editor,

I Find that your Magazine has even found its way into the hands of practical farmers: permit me then, by your means, to remind them, that they now have it in their power to adopt a simple process that must prove highly beneficial to the public, and certainly not injurious to themselves. They now have the fairest opportunity of introducing the hand-hoe into their wheat-field, which they know is peculiarly encouraging to such crops as are thin, weak or foul. And, let me beg of them, when they have given such crops one complete hoeing, and see the almost instantaneous effect which it has in invigorating the plant, not to

reſt ſatisfied, this ſpring, till they have, in a ſimilar manner, gone over the ſame land a ſecond time. This double hoeing, indeed, muſt be attended with conſiderable expence,—probably with as much as ten or twelve ſhillings per acre; and in return, perhaps, the farmer may receive little more than a bare equivalent in wheat for the money which he has thus, with ſome difficulty, ſpared to expend: But, I truſt, that he will, feelingly, conſider the two-fold benefit which he will thus confer upon the public, by raiſing an extra quantity of grain, and at the ſame time, increaſing that kind of labour which poor females can join in, and which they ſo much ſtand in need of in the preſent ſeaſon. Can any thing be deviſed, more proper, profitable, or more truly charitable, than the general adoption of this ſimple piece of huſbandry?

In the deſcripton which I ſent you of the ſhew of fat cattle at the Smithfield great market, I am told that I omitted to mention two prizes which were adjudged to his Grace the Duke of Bedford, one for the beſt fat heifer, the other for the beſt fat wether, both fed on graſs and hay only. Though this was not a wilful omiſſion, I feel myſelf bound to beg pardon of all whom it may concern.

I am, Sir, yours, PRACTICUS.

EFFECTS OF FROST ON VEGETATION.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

LOOKING lately into a journal of remarkable phyſical phœnomena, which was, for many years, kept by my father; I was particularly entertained by the following facts concerning the power of froſt. If they can be, without impropriety, inſerted in your Magazine, I ſhall, with great pleaſure, ſee them recorded in a Miſcellany ſo truly reſpectable, which will, indeed, be particularly endeared to me by ſuch connexion, with the memory of the ingenious and excellent man by whom thoſe facts were obſerved.

By ſevere froſt, great *elms ſuffer* the leaſt of all our common trees, except thoſe of the *pine* and *fir* ſpecies. *Oaks*, eſpecially if ancient and full grown, are, very generally liable to be, by extreme intenſity of froſt, riſted. *Limes*, *walnuts*, *aſhes*, *beaches*, *horn-beams*, *birches*, *cheſnuts*, are not ſo readily injured. The rifts produced in trees by froſt, are again cloſed, upon a thaw, though with leſs of coheſive ſolidity, than they had before. The *laurel* is apt to be diſcoloured by froſt, and to ſuffer a mortification in ſome of its branches. In a winter exceſſively ſevere, *hollies*, if very old, or if recently clipped in hedges, are ſubject to be, more or leſs, withered. A *land-tortoiſe* is accuſtomed, in winter, to bury himſelf, deep, in the earth; and, if in a winter of unuſual ſeverity, he ſhould, by any accident, be hindered from penetrating to his

wonted depth,---it is not probable, that he can ſurvive. The trees having clammy, viſcid juices, ſuch as thoſe which produce *apricots*, *peaches*, *plumbs*, *cherries*, &c. are little liable to be injured by any changes in the weather. The termination of a very intenſe froſt by a very ſudden and rapid thaw, is apt to prove extremely hurtful to the healthy vegetation of trees. *Artichokes*, *winter-cauliflowers*, *ſage*, *thyme*, *maſtic*, *lavender*, &c. are generally killed by extreme intenſity of froſt.

I will not lengthen out this letter, leſt it might prove inconvenient for your inſertion.

I am, Sir, your humble ſervant, W. B.

For the Commercial and Agricultural Magazine.

Mr. DODD's PLAN *of the* GRAND SURRY CANAL.

THIS Canal is intended to paſs nearly in a ſouth-weſt line from London, to form a junction with the river Wey, whence a communication may be opened to Portſmouth, by way of Southampton, in continuing the Baſingſtoke or Guildford canal, the former of which is already completed from the river Wey to within twenty miles water-communication now effected to thoſe places. A principal object of the propoſed canal navigation is to create an uninterrupted inland water-carriage from Portſmouth to the metropolis, as alſo to afford a general accommodation to the counties of Surry and Hants. The intended canal is propoſed to paſs by, or in the vicinity of, the following places, either by collateral cuts, or the main trunk, this latter being to communicate with the river Thames, near the King's Mills, at Rotherhithe, at which place is meant the grand baſin; from thence to paſs in a ſoutherly direction near the back of his Majeſty's yard and Victualling Office, Deptford: from which place a collateral cut may be made for the uſe of thoſe two great national depôts; the line will then run nearly ſouth-weſt (ſubject to ſuch variations as may be expedient to be introduced after the actual ſurvey), furniſhing a water-communication to Peckham and Camberwell, while, between the latter of theſe places and Walworth, a collateral branch is propoſed to run behind Blackman Street, near St. George's church in the Borough, for the uſe of paſſage-boats as well as barges, which may, ſtatedly, navigate the line. This canal will, moreover, open a water-communication with Stockwell, Clapham, Upper and Lower Tooting, Streatham, Merton, Mitcham, Wimbledon, Morden, Cheam, Ewell, Epſom, Leatherhead, Maldon, Kingſton, Thames Ditton and Long Ditton, Weſt-end, Horſham, Cobham, Walton, Weybridge, Byfleet, together with various detached places. The whole of this immenſe water-communication, uniting ſuch populous towns to ſo great a metropolis, will, probably, not be equalled in the univerſe; for, independently of barges, the vaſt

number of *trekſchuyts*, or *paſſage-boats*, that will be always paſſing and repaſſing on the line near the metropolis, it will rival, in appearance, the ſcenes of China or Holland; and, with reſpect to water-carriage and population, no other canal in this kingdom can enter into competition, or aſſure the tranſit of an equal number of barges, from the univerſal demand for that neceſſary article coal, for the uſe of the numerous inhabitants on the line and the adjacent country, for manure, Britiſh manufactured and foreign goods, from the metropolis, the returns of timber, grain, and minerals, of native produce; but, as the whole of this tonnage will be properly inveſtigated by Mr. DODD, during his actual ſurvey, its further conſideration muſt be deferred till that period. But it may be neceſſary further to remark, that, upon this canal, when completed to Southampton, mercantile goods of every deſcription may be conveyed from the Britiſh Channel to the Metropolis, as well as warlike ſtores from our arſenals in the Thames to Portſmouth, free from the preſent circuitous route, and of ſea hazard or detention from the abſolute neceſſity of two winds to convey them round the North Foreland, thereby avoiding a dangerous navigation of about two hundred and twenty miles.

This ſtatement being only as a preliminary ſpecies of information to the Gentlemen intereſted, it may be neceſſary to obſerve, that, in as early a ſtage as convenient, Mr. DODD will complete the actual ſurvey, draw up his Report, furniſh the plans and ſections, whereof the former will be printed, and the latter engraved, for the uſe of the ſubſcribers; whilſt not only a general ſurvey of the country contiguous to the canal, for the extending collateral cuts or railways, is intended, but likewiſe a ſearch for its mineral productions, as far as they may be wrought, or give occaſion to increaſed tonnage on the canal. The length of this canal, calculated from Rotherhithe, to its junction with the river Wey, will not exceed twenty-eight miles, and eſtimating the expenſe at a very liberal ſum of three thouſand five hundred pounds per mile, will amount to no more than ninety-eight thouſand pounds; a ſum ſo inconſiderable, as, when put in compariſon with its revenue to be derived from the tolls, to make it matter of ſurpriſe the project had not been formed ſeveral years ago; for, whether we conſider the canal in the extended view of national improvement, the new communication it will open between Portſmouth and the metropolis, the facility it will give to the trade of London, the local improvements it will communicate to the counties of Surrey and Hants, conſidered equally in an agricultural and commercial point of view, every intelligent mind muſt be impreſſed with conviction of its great utility. It is preſumed, from the amazing quantities of tonnage which will centrate on this canal, and which will be demonſtrated in the Reports ſoon after the actual ſurvey, that the profits of the

ſhare-holders muſt be very conſiderable; nevertheleſs, as this information, to be obtained with preciſion only from ſuch ſurvey, cannot be brought forward to the ſubſcribers without conſiderable expenſe, it is propoſed to draw one per cent. upon the ſhares, agreeably to the following plan:

The ſhares to be of one hundered pounds value each, transferable and payable by inſtalments; each ſubſcriber to have an excluſive right to whatever number of ſhares his or her name ſhall ſtand againſt, with reſervation, however, of a ſufficient number of ſhares for landholders, through whoſe grounds the canal may paſs.

A ſubſcriber of one pound to have a claim upon one ſhare; of ten pounds upon ten ſhares; and ſo on progreſſively.

The ſubſcription to be accounted as part payment of ſhare or ſhares.

The whole of the ſubſcribers to form an open committee, and to hold monthly meetings in London, for the diſburſement of ſuch ſum or ſums as may be eſſential for defraying the expenſes of the ſurvey, and for the direction of every other neceſſary meaſure in this undertaking.

That, on the completion of the ſurvey, each ſubſcriber ſhall receive Reports, Plans, &c. and a day be appointed for a public meeting, in order to receive ſubſcriptions for ſuch ſhares as may be then unemployed, if any.

Immediately afterwards, that a general meeting of all ſubſcribers be appointed, for the purpoſe of adopting ſuch meaſures as may be conceived expedient, to give facility to the undertaking, and prepare the buſineſs for Parliament.

And that, laſtly, ſignatures and ſubſcriptions be received by the following bankers:

PYBUS, CALL, GRANT, and HALE, *Old Bond Street*;
MARTINS, STONES, and FOOTE, *Lombard Street*;
WILKINSON, BLOXHAM, BULLOCK, WILKINSON, and TAYLOR, *Southwark*;
WESTON, PINHORN, GOLDING, NEWSOME, and WESTON, *ditto*. &c. &c.

HEDGE-ROWS OF TREES HURTFUL TO THE FARMER.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

IT is aſſerted in the public prints, that Parliament is about to ſanction a clauſe, to be inſerted in every future Incloſure Bill, which will compel the proprietors of the land incloſed to raiſe a certain number of oak plants in every fence or hedge-row. Such a clauſe as this, it appears to me, will prove highly injurious to the true intereſt of this Iſland. And therefore I beg permiſſion thus to ſhew cauſe, why it ſhould not paſs into a law.

I have long thought, and now aſſert without heſitation, that the man who raiſes an oak tree in a hedge-row, is in fact an enemy to his country. But, as I am preſuming to controvert the opinion of men not only dignified by ſtation, but venerated for talents and integrity, it will behove me to reaſon in my beſt ſyllogiſtic manner, and to mind my ſtops. I ſay then, that every huſbandman who does not make the moſt of his land, is an enemy to his country: the man who raiſes an oak tree in a hedge-row, does not make the moſt of his land: ergo, the man who raiſes an oak tree in a hedge-row, is an enemy to his country. My major propoſition, I preſume, will ſtand its ground unaſſailed; but, "negatur minor," ſeems to reſound from almoſt every quarter. I ſhall not, therefore, as the voice of the many is againſt me, content myſelf with defending my minor by arguments of my own, but call in the authority and irreſiſtible reaſoning, of a very intelligent old Cheſhire Farmer, which was given to me in words ſimilar to the following.

My father, ſays he, took great delight in the growth of timber, and on his death bed enjoined me to pay due attention to the ſame object; and particularly to give every encouragement in my power to three oaks, that were planted in a good deep ſoil, in a certain hedge, and were now about twenty years old, and the ſame age with myſelf.

This injunction I moſt ſcrupulouſly obſerved, and never ſuffered axe or hammer to do violence to a hair of their heads, till my crops and fences had felt the fatal effects of their ſhade for forty years. I have now taken them down, at their full growth, and have ſold them, timber, bark, and fire-wood, for leſs than a fifth part of the ſum of the injury which I ſuſtained from them during their growth.

The firſt injury that I perceived was done me by the ſhade of theſe trees, was that of weakening my fence; my cattle unfortunately perceived this likewiſe, and took advantage of it one dewy morning by breaking into a field of young clover, and were not diſcovered, till the lives of moſt of them were endangered, and two of the beſt of them abſolutely killed. A few years afterwards, the ſame fence was again broken through, under another of theſe trees, and all my cattle remained in undiſturbed poſſeſſion of a field of ſtanding corn for the ſpace of a whole night. Thus more than twice the value of trees was gone in this way; and in the injury which the ſucceſſive crops which grew under theſe trees ſuſtained, I compute my loſs to be four ſhillings, each year, from each tree, for the forty years whilſt they were in my poſſeſſion; here again, more than twice the value of the trees was loſt, without mentioning the hinderances occaſioned in the drying of corn and hay, and the encouragement given to mildews, blights, &c. by ſhady ſmall incloſures.

Such were the arguments of an experienced man, which, in

my mind, amount to an irrefragable proof, and ſuch will be the arguments of every diſcerning occupier of land. A landlord is not a fair judge in this caſe.

It may here be ſaid, if theſe things are true, who then is to provide timber for the Navy of Old England? To this queſtion I will not be ſo ungrateful as to reply, in the words of the man who was deſired to make proviſion for poſterity, by aſking, "what has the navy done for me," for the whole world knows and gratefully feel what it has done: but I will ſay, let the navy provide timber for itſelf ſome other way, or make me an adequate compenſation, which it will not do, were it to pay me ten ſhillings for every foot of oak which I raiſe in a hedge-row. It is the buſineſs of a Farmer to raiſe corn and graſs, not trees. It is my duty to provide that which is moſt profitable for my family, and in ſo doing, if I miſtake not, I make the beſt proviſion for the community at large, and am a true friend to my country.

Cheſter, Feb. 14. I am, yours, P. S.

THE PRESENT GOLD COINAGE OF GREAT BRITAIN.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

THE following facts concerning the preſent ſtate of the *Gold Coinage of Great Britain*, are, perhaps, not unworthy of being made generally known in a publication which begins to be univerſally read among *Mercantile* GENTLEMEN *of liberal curioſity.*

Between the 25th of Auguſt 1773 and the 10th of June 1777, there was received at the MINT, in conſequence of the meaſures for the calling in, and recoinage, of the gold coin deficient in weight, £. 15,246,279.

Between the years 1772 and 1777, the Bank ſent to the Mint gold coin to the value of £. 5,200,723.

The amount of the new gold money at the end of the year 1777, was, therefore, £. 20,447,002.

The heavy gold coin then remaining in currency,—and conſiſting of guineas, at 5 dwts. 8 grains and upwards, each, was about £. 5,000,000.

The amount of the gold in circulation at the end of the year 1777, was, therefore, ... £. 25,447,002.

From the firſt of January 1778, to the 31ſt of December 1798, there has been coined of gold that had not been before in coinage, . . £. 18,503,040.

The ſum of our gold coin at preſent in circulation is, then, about . . . . . £. 43,950,042.

But, it may be, that ſome part of our Engliſh gold coin has found its way to America, Ireland, to Hamburgh, and has been there too favourably entertained, to return with real haſte to Britain.

Theſe facts, Sir, were collected, ſome time ſince, for the uſe of the Public, by MIDAS BRITANNICUS.

For the Commercial and Agricultural Magazine.

Tranſlation of Mr. HELMS'S JOURNAL *of his* TRAVELS *in* PERU.

(Continued from p. 194.)

TO *Eſquina de la Guardia*, the ſoil is exceedingly fertile, richer than our beſt garden-ground, and luxuriantly covered with clover and other flowering herbage. On theſe immenſe and beautiful fields, feed incredible multitudes of horſes, cows and oxen, ſheep, oſtriches, and deer of all ſorts. To view them,—one ſhould think, that all the ſame animals in Europe, if aſſembled together, would appear leſs numerous than thoſe which cover the plains between Buenos Ayres, Chili, and Tucuman. As far as the viſion of the eye can extend, you ſee herds of oxen, and droves of horſes, each from 5000 to 10,000 in number, ſporting playfully together, and ſucceeding, on all hands, drove after drove, at ſhort diſtances one beyond another, and in countleſs multitudes. One of the largeſt of theſe oxen may be purchaſed for a ſingle piaſtre; a horſe, for two piaſtres. For a cow, it is rare to give even ſo high a price, on account of the extraordinary abundance of theſe cattle.

From *Eſquina de la Guardia* to *Paſo Ferreira*, . . 23,4 Engliſh miles.

From *Paſo Ferreira* to *Tio Paſio*, . . . 15,6 miles.

From *Tio Paſio* to *Cannada del Govierno*, . 23,4 miles.

From *Cannada del Govierno* to *Impira*, . 23,4 miles.

The way now lies between South and Weſt, along the river *Tercero*.

The influence of the North Wind is here remarkably differ- from what it is in Europe. *There*, as is well known, it blows keenly cold and dry from the frozen Ocean and the Polar Circles. But, before it reaches theſe parts of South America, it has been heated in the Torrid Zone and the Equatorial Circles,—ſo that both men and beaſts languiſh and ſicken under its intolerable ardour and withering dryneſs. On the contrary, the ſouth and weſt winds, blowing from the vicinity of the South Pole, are exceedingly cold, they are thus chilled by the mountains of ice in the Southern Seas, and by the ſnows and ices of the Cordilleras and the Audes, which they croſs in their paſſage hither. But, in theſe Equatorial Regions, the coldneſs of thoſe winds is ſo moderated by the intenſe heat of the ſun, that they aſſume over theſe plains, all the genial mildneſs of the temperature of ſpring. Though there reign all the ſeverity of winter, on the ſummits of the lofty mountains by which they are bounded, they bring with them, copious, but very chilling rains. On the contrary, the weſt winds of Europe, are always of a genial warmth, of an agreeable, mild temperature.

From *Impiro* to *Rio Segundo*, . . . 19,5 miles.

The diſtrict and the river which runs through it, are both of the ſame name. The river is only a continuation of that of *Rio Tercero*; which, from this place to the commencement of the Peruvian mountains, bears the name of *Rio Segundo*.

From *Ria Segundo* to *Punto del Monte*, is a diſtanc of about 15 Engliſh miles.

The total diſtance from the Capital of *Buenos Ayres* to the town of *Cordova*,—is, thus, about 542,1 Engliſh miles.—In the charming environs of *Cordova*, are,—many great rattle-ſnakes, eider-ducks, of extraordinary ſize and beauty,—abundance of parrots,—and a multitude of other fowls of the moſt beautiful and ſplendid diverſity of colouring. Being ſeldom or never moleſted; they cannot but multiply very rapidly. For the ſame reaſon, fowls and quadrupeds are, here, in general, not at all wilder, than if they had been actually domeſticated: they avoid not the approach of men; and hardly even make way, unleſs they be driven with ſome degree of violence.

It may be not improper, here, to remark, that all the way from *Buenos Ayres* to *Cordova*, you do not find more than a ſingle hut, occupied by a family of lazy *Creoles*, beſides each poſt-houſe. Theſe *Creoles* are well-known to be the progeny of Spaniſh parents. But, they differ exceedingly in their temper and qualities from thoſe of whom they are deſcended. They ſhew little or no ſenſe of moral obligation. Their genius is deceitful, untractable, ſluggiſh, and ungrateful. This I can affirm from my own experience in the School for Chemiſtry and Metallurgy at Petoſi, of which I was Director. They are, with very few exceptions, utterly neglected as to education, lazy, diſorderly, diſguſtingly filthy. What little inſtruction they receive, is nothing but the groſſeſt and moſt unenlightened fanaticiſm. They are hypocritical—and intolerant to a degree of bigotry that makes them regard with the bittereſt rancour, all the manners and principles of thoſe who are, in any meaſure, more enlightened and civilized, than they themſelves are. To their ſlaves, they are cruelly and capriciouſly tyrannical. Yet his amours and ſenſual paſſions uſually ſubjugate the maſter himſelf to female negroes and mulattoes, who, in their turn, domineer over him with the moſt deſpotic ſway. They are revengeful; and prone to every low paſſion by which man can be diſgraced; ſuſpicious and malignant; more abhorrent of the Spaniards from whom they have their deſcent, than of other Europeans.

The *Creole* is of a tawny complexion. His large black eyes, glow with the expreſſion of the ardour and activity of thoſe paſſions which inflame his ſoul. He is in the higheſt degree, cloſe and cunning; hiding his malice under the guiſe of ſmoothneſs and flattery; and cheriſhing his malice in his heart, till the hour of his deſired revenge ſhall arrive. His underſtanding

being uncultivated, and he being a ſtranger to the exerciſe of any uſeful employment; his time, conſequently, hangs heavy upon his hands, and he is the prey of every baſe and impotent paſſion. He is faithleſs to his promiſes and engagements, whenever his favourite propenſities can be gratified, or his private intereſts advanced, by perfidy. Yet their native qualities are not ſuch, but that the prudent care of parents, a judicious education, and early impreſſions of moderate and rational religion, might improve them to become highly uſeful and eſtimable members of ſociety. A pre-eminent characteriſtic of all theſe *Creoles*, however humble in condition, is with great ſelf-conceit, a childiſh partiality againſt every production of art, and every piece of dreſs and furniture that comes from Europe. They diſlike whatever is not, immediately, an object of deſire to themſelves; and hence ariſes their averſion for the manners and commodities of Europe, not from rational reflexion and compariſon. Hence, too, amid the greateſt ſuperfluity, they often live, in want of the moſt common accommodations, in the moſt ſordid naſtineſs and meanneſs. They are baſely avaricious and niggardly. They ſcruple at nothing, to profit by the misfortunes of others. Even perjury becomes to them, quite a matter of courſe, at which they never once boggle,—if there be aught to be gained by it.

Such are the maſters under whoſe ſway, the poor patient *Indians* of theſe parts, have ſo long lived. They languiſh for liberty; which, however, they what ſpirit and talents to vindicate to themſelves. Yet, they are not deficient in natural ſagacity, or imprudence reſpecting the common affairs of their ſimple mode of life. Sometimes, too, the wrongs which they ſuffer, force them to break out into tranſient guſts of remonſtrance and complaint.

It is the king's deſire to make his American, as happy, as his Spaniſh ſubjects. While I was in Peru, ſeveral Royal mandates were, there, received, of which the object was, to mitigate the diſtreſſes of this unhappy race of men. But, on account of the great diſtance of the mother-country, thoſe mandates, were, at the pleaſure, and for the convenience of the officers of the Colonial Government, either not made public, and carried into actual execution,—or if publiſhed,—yet, by one contrivance or another, fruſtrated and evaded. Nay, if any thing ſo generally diſagreeable to the ruling part of the community, ſhould be carried into effect; the conſequences would be hurtful to the agents, and beneficial to none but the poor Indians, and the true intereſts of the government. Every governor now does as ſeems good to himſelf: the public revenues are diminiſhed: and the inhabitants of the country are reduced to a ſtate of poverty and deſpair.

The Indians are the only productive labourers among the king of Spain's ſubjects in theſe parts. All the gold and ſilver

which come from Spaniſh America, are procured by the labour of theſe unfortunate victims. No European, nor even the Negroes themſelves, are ſo well able, as the native Indians, to endure fatigue and toil under the climate of South America. All that theſe valuable ſubjects of the Spaniſh crown, are allowed to retain for their ſubſiſtence, conſiſts of yams or potatoes, and a little maize, ſimply boiled in water, and without the addition of aught that might ſerve to render them ſavoury.

CORDOVA lie ſtraight South; and its ſituation and neighbourhood are extremely pleaſing. It ſtands on a height of gentle elevation. In front of the town, is a charming wood.

In this place, we had to tranſact ſome part of the buſineſs which was the object of our journey from *Buenos Ayres* to *Potoſi*.

The *cathedral church* of *Cordova*, is a very fine ſtructure. The great *market-place* is, likewiſe, handſome, and is adorned with ſeveral ſpacious buildings. The ſtreets are cleaner than thoſe of *Buenos Ayres*; and are paved,—an advantage which is wanting to thoſe of the capital.

Our *Commiſſion for Mines and Buildings*, had, here, their reſidence, in a very agreeable houſe, which was formerly a college of the Jeſuits. It is a ſpacious and maſſy ſtructure, and is the ordinary dwelling of the reſident biſhop. But the biſhoprick was, at this time, vacant: otherwiſe the manſion could not have been aſſigned to accommodate us.

In its extent, and in the number of its inhabitants, *Cordova* is much ſmaller than *Buenos Ayres*, the capital of the province.

The average ſum of the population of *Buenos Ayres*, is eſtimated at from 24,000 to 30,000 ſouls, including Spaniards from Europe, Creoles, and ſlaves. This information I had from the viceroy.

The inhabitants of *Cordova* are, in number, only about 1500 Spaniards and Creoles, with 4000 Slaves.

The heat of the ſun is, here, much more intenſe than at *Buenos Ayres*, which lies between the great river *Rio de la Plata* and the Atlantic Ocean.

About twenty leagues ſouthward from *Cordova*, at *Tucuman*, where begin the firſt acclivities of the *Cordilleras* mountains,—there are found;—(1.) An open, but unwrought vein of *lead-ore*, compact, continuous, and covered with bright golden-coloured ſpangles, which the people of the place deſcribe as affording, out of every cwt. of ore, 12½ ounces of ſilver, and which, from its appearance, may be judged to contain about 70 or 80 parts of lead, in each 100 parts of the ore;—(2.) Another vein of *lead-ore*, partly of the ſame gliſtening colour, but interſperſed with *grey ore*;—(3.) A *grey ore*;—(4.) A *copper-ore*; intermingled with a pale earth: the gangue,—quartz, with an intermixture of ore of gold, in a ſort of leaves.

The following is a TABLE of all the mines which are now wrought in the Vice-royalty of *Plata* or *Buenos Ayres*, a territory of about 2,242½ Engliſh miles, from *Santa Roſa* on the one ſide, to the kingdom of Peru on the other.

TABLE.

Provinces.	Mines.				
	Gold.	Silver.	Copper.	Tin.	Lead
Tucuman	2	1	2		2
Mendoza a Chile		1			
Atacama	2	2	1		1
Lipez } Province of Potoſi	2	1	1		1
Porco } Province of Potoſi	1	2	1		
Caranges		2	1		
Pacages or Berenguela		1			
Chucuyto		2			
Paucarcolla Settlement of Puno		1			
Lampa		2			
Montivides	1				
Chicas or Tarifa	4	5			
Cochabamba	1				
Zicazica	2				
Lavicaja	4				
Omaſuijos	4				
Avangaro	3				
Carabaya	2	1			
Potoſi		1			
Chayanza	2	3	1	1	1
Mizque		1			
Paria		1		1	1

On Sunday the 16th of November, the Company of Mineralogiſts went from Cordova, to examine a tract of mountains, where were ſaid to be ſome ſtriking indications of rich mineral treaſures. After travelling for the length of 69 miles, we reached the range of mountains, which we ſought. They formed the commencement of Andes; and as we advanced to them, preſented a proſpect exceedingly pleaſing. We found here an excavation of ſmall depth, which had been long ſince abandoned. The rocks are granite, compounded of gueis, feldſpar, and mica. The moſt remarkable mineral vein, in a gangue of quartz, 1½ feet in diameter, contains yellow, white and grey ore of lead, with ores of copper and iron, mingled with ore of lead, azure-ſtone with fibrous malachite, and a mixture of natural borax, and ore of copper with a mixture of lapis calaminaris. All theſe we diſcovered in the ſpace of 5½ hours of a morning excurſion. We viſited another place which was ſaid to be of ſome expectation, but without ſucceſs. There are, alſo, the wood and water neceſſary to the working of mines.

We proceeded from *Cordova*, in continuation of our journey, to Noria, a diſtance of 21½ Engliſh miles.

Our journey was, now, along the foot of the Andes, from noon to midnight.

From *Noria* to *Sinſacate*, about 17 Engliſh miles.

The poſt-houſe, here, is ſituate at the foot of a loftly riſing hill very pleaſingly covered with wood. It is the firſt granite mountain on the way from *Cordova* hither.

From *Sinſacate* to *Totoral*, about 20 Engliſh miles. From *Totoral* to *San Antonio*, about 17 miles. From *San Antonio* to *Coral de Baranca*, 17 miles.

The direction of the mountains is from North to South; and they begin to riſe with a gradual elevation.

In theſe pleaſing woods, I, for the firſt time, ſaw ſome American palms,—a tree, the fineſt ornament of all theſe parts.

From *Coral de Baranca* to *San Pedro* 13 miles. From *Cordova* to this place, the population becomes, ſenſibly, more conſiderable. The elevation now riſes conſiderably; and they run on in the ſame direction.

From *San Pedro* to *Duranzo*, 13 miles. The mountains are, here, ſtill, primitive rocks, red and green granite, with a mixture of hornſtone.

From *Durazno* to *Channar ô Cachi*, 17½ miles.

At the diſtance of two miles from *Durazno*, on the way towards *Cachi*, the hills ſubſide into an extenſive and pleaſing vale. The Poſtmaſter of this place brought us a ſpecimen of a foſſil, which, from its fracture, appeared to my colleague to be a corneous ore of cobalt. But, upon farther examination, it appeared to be only a ſpecies of pyrites.

From *Channar* to *Pontezuelo*, 31 miles. Thence, to *Remanzo*.—27½ miles.

(To be continued.)

Anſwers to ſome Objections which have been urged to the propoſed Inſtitution of the PLOUGH,

By Sir JOHN SINCLAIR, *Bart. M. P.*

FIRST OBJECTION. *That no Experimental Farm at all is neceſſary.*

It is ſuppoſed by ſome, that no Experimental Farm is neceſſary, and that the principles of agricultural improvements will be brought to a ſufficient degree of perfection without ſuch an eſtabliſhment. That grain may be raiſed, and cattle bred, without the aid of Experimental Farms, may be ſafely acknowledged, in the ſame manner as, in early ages of ſociety, manufactures were carried on for domeſtic purpoſes, without the aid of much machinery? but no ſooner had the population and commerce of a country increaſed than it became neceſſary to improve the art of

manufacturing even in the moſt common artieles, by means of new inventions, and it is equally neceſſary to improve the art of agriculture, ſo as to produce more grain, and to feed more cattle on the ſame extent of ground, otherwiſe it will be impoſſible to furniſh food to the increaſing population of a country. Without Experimental Farms this cannot be effected.—Without ſuch eſtabliſhments it is impoſſible to aſcertain what practices ought to be avoided, and what ought to be purſued. The former is as important to be known as the latter, yet they are ſeldom communicated to the public, becauſe the farmer is in general aſhamed of acknowledging his want of ſucceſs, and indeed, where his experiments anſwer they are frequently concealed, leſt others ſhould avail themſelves of ſuch diſcoveries. The object of an Experimental Farm, however, is to aſcertain facts and to publiſh them, and as much credit would be acquired by an intelligent and public ſpirited ſociety for their exertions in detecting errors, as in proving facts likely to be uſeful.

SECOND OBJECTION. *That there are many Experimental Farms, now carried on by Individuals, which will anſwer the ſame Purpoſe.*

It is ſaid, in the ſecond place, that there are many diſtinguiſhed characters, who carry on experiments for their own amuſement and information, by whoſe means every important fact will, in proceſs of time, be aſcertained. No man is more diſpoſed to do juſtice to the merits of the reſpectable perſonages above alluded to than I am, nor can be more convinced, that their example is of infinite advantage to thoſe who have the means of examining the progreſs they make. Their farms, however, are more properly to be accounted *pattern farms*, for the advantage of their own immediate neighbourhood, than experimental ones, in the ſtrict ſenſe of that word. In order to render indeed Experimental Farms generally uſeful, the farms muſt be open to the to the inſpection of the public; the account of each experiment muſt be regularly publiſhed, and every experiment likely to effect the cultivation of any part of the kingdom, muſt be tried with the utmoſt preciſion It cannot be expected, that perſons of high rank, and whoſe attention is neceſſarily directed to other objects, can renounce every other purſuit, and devote themſelves excluſively to the conducting of experiments. Whereas, when an Experimental Farm is once eſtabliſhed, it will ſoon be proved by the evidence of facts: 1. What is the beſt mode of rendering arable land productive, and the proper rotation of crops to be adopted in all ſoils and ſituations: 2. What is the beſt ſyſtem for the management of graſs land: 3. What are the moſt uſeful implements of huſbandry; 4. What are the moſt profitable breeds of animals, and the beſt and cheapeſt mode of rearing, of feeding, and of fattening them: 5. What is the beſt plan for rendering waſte or barren land productive.

Theſe are points of infinite conſequence, which never have yet, and indeed never can be aſcertained, unleſs by means of farms appropriated for that ſpecial purpoſe. It will require, it is true, the unceaſing attention of an intelligent manager, and the experiments, in order to be relied on, muſt be made with almoſt mathematical accuracy and ſtrictneſs. The expence alſo muſt be conſiderable, but the ultimate advantage to the public muſt be ſo great as amply to compenſate for any trouble or coſt which may attend the execution.*

THIRD OBJECTION. *That it would be difficult to find Managers.*

It is an obſtacle to this meaſure, in the apprehenſion of ſome, that it will be ſcarcely poſſible to find managers qualified for the purpoſe. It certainly will be attended with ſome difficulty, but it would be libelling the agricultural ſkill and integrity of the country to ſuppoſe that ſuch men could not be found. I know ſome myſelf, who would carry on the undertaking with zeal and energy, who would take ſome ſhares in the propoſed undertaking, as a ſecurity for their good behaviour, and a pledge of their being intereſted in its ſucceſs, and who, in every other reſpect, would, I am perſuaded, be found perfectly adequate to the taſk. And here, I beg to remark, that it is hardly poſſible to ſuppoſe any perſon placed in a more deſireable ſituation than the manager of ſuch an Experimental Farm, if he felt a zeal in the cauſe, nor more likely to be detected, if he was either negligent of the duties he had to perform, or was guilty of diſhoneſty. He would lie under the neceſſity of making regular weekly reports of all his tranſactions. The books of the farm would be conſtantly liable to inſpection, and the farm itſelf open to the examination of the ſubſcribers, and perhaps, at ſtated times, of the public. A man placed in a ſituation ſo peculiarly oſtenſible, muſt be both honeſt and diligent. If he ſucceeds in his management, he has the credit of accompliſhing one of the moſt important objects that any individual could undertake, and if he is detected in acts of negligence or diſhoneſty, his guilt could not be concealed, it muſt neceſſarily become public, and he is ruined for ever. With ſuch inducements to act well, and ſuch ſerious grounds of apprehenſion if he ſhould act otherwiſe, it is ſcarcely poſſible to ſuppoſe, that any human being of common underſtanding, could be deficient in his duty.

* For inſtance, if the queſtion is,—what is the beſt breed of cattle? their food muſt be accurately weighed, and a regular account preſerved of the whole quantity they eat during the courſe of the experiment. If the queſtion is to aſcertain whether large or ſmall animals pay beſt for the food they eat, the experiment muſt be begun from their birth, and continued till they are ſlaughtered. In ſhort, almoſt every experiment of great conſequence requires a degree of attention and preſeverance, and a duration in point of time which can only be expected from a public inſtitution devoted excluſively to that purpoſe.

In regard to the particular plan of experiments to be purſued, the following meaſures may be adopted. As ſoon as a farm is taken, an accurate plan of it ſhould be obtained, diſtinguiſhing the different ſoils, and every other circumſtance connected with it. Every aſſiſtance will then be procured from the moſt ſkilful practical farmers in the kingdom, to draw up a regular courſe of experiments, and a rotation of crops beſt calculated for the different fields, and ſuch a plan muſt be rigidly adhered to by the manager, unleſs the committee of management give directions to the contrary. Thus the manager will only be accountable for the ſtrict execution of the order he receives, and as thoſe orders will be given, in conſequence of the moſt mature conſideration; hence the whole ſyſtem, it is hoped, will be carried on with the utmoſt regularity and correctneſs. There would not then be a ſingle principle in agriculture, that might not thus be aſcertained in the ſpace of a few years: and farmers in future would have an invariable ſtandard to go by, which they might rely on with certainty.

FOURTH OBJECTION. *That the profits of the propoſed plantations are over-rated.*

It is evidently impoſſible to foreſee, what will be the value of timber 30 years hence, as that muſt entirely depend on the quantity brought to market, on the demand, and on the ſtate of credit and the quantity of money in circulation at the moment. As the price of every article, however, is progreſſively riſing, is there not reaſon to imagine, that it will alſo be the caſe with timber? But, even if that ſhould not be the caſe, ſhould timber ſell only at its preſent value, the following circumſtance will ſufficiently prove, that the calculation of profit given in the original propoſals, *is greatly under-rated.* The circumſtance alluded to is this: in the neighbourhood of Edinburgh, there is a conſiderable wood amounting to above 300 acres, called the foreſt of Culroſs. It conſiſts of Scotch firs, 43 years old. An exact ſurvey has been taken of it, and an eſtimate of its value drawn up. It is ſtated in the advertiſement, that there are 3500 cubical feet of meaſurable timber, the upſet price of which is 6*d.* per foot; and 6000 running feet of pit-timber, at a farthing per foot. The value of both per acre, would then be as follows:

1. 3500 cubic feet at 6*d.* per foot	- -	£. 87	10 0
2. 6000 running feet at ¼d. per foot	- -	6	5 0
Total per acre	- -	£. 93	15 0

It is well known, that the value of larch at 30 years of age, is equal to that of fir at 45 years. There is reaſon therefore to hope, that the 5000 acres of land, propoſed to be planted with larch, would be worth £. 90 per acre, which for 5000 acres,

would amount to £. 450,000, inſtead of £. 218,000, at which the ſale of the timber, the ground, &c. was originaly eſtimated. What the timber in Culroſs foreſt will really ſell for, is not yet known, but there is every reaſon to believe, that the price muſt be higher than 6*d.* per foot, and that the calculation of profit from the propoſed plantations, originally ſtated at £. 218,000, will be found greatly under-rated.

On the whole, I hope it will appear, that though there is no plan of ſo extenſive and complicated a nature, to which ingenious men may not diſcover objections, yet that none can be urged againſt the preſent propoſal which may not be ſatisfactorily anſwered; and that even if ſome difficulties ſhould remain, they ought not to ſtand in the way of carrying a meaſure into effect, of ſuch infinite public importance, which would lay the foundation of rendering this country ſuperior to every other, for agricultural ſkill, and conſequently the moſt likely to reach the ſummit of power and opulence.

THE RURAL ŒCONOMIST.

NUMBER FIFTH.

HITHERTO it has been unneceſſary to diſtinguiſh the education of the ſon of the OPULENT FARMER, from that of the child of the PEASANT, who is deſtitute of capital, and ſubſiſts, from day to day, or at the beſt, from year to year, on the produce of his perſonal labour. From birth to the age of 10 or 12 years, all children however different the conditions of their parents, ſhould be brought up in the ſame manner. Marriage is not favourable to population, nor beneficial to ſociety,---unleſs in circumſtances which may permit even the pooreſt and humbleſt of married pairs, to educate their offſpring, as to all that is eſſentially important, with thoſe advantages which have been ſuggeſted in the two laſt preceding eſſays of *this* PAPER. Children born to die of want, or by thoſe diſeaſes which originate in want, cannot prove uſeful recruits to ſociety. Children born to be educated in the work-houſe, are much more a burthen, than a ſubſidium, to ſociety: And though moſt of them periſh in the rearing;---yet, their maintenance, for however ſhort a period, prevents, by various influences, the birth of a much greater number, who might probably be brought up to manhood. No: to be removed, either by the miſery, or the grandeur of parents, from the benefits of ſuch an education, for the firſt ten or twelve years of life,---is to be too wretched, for the individual,---for ſociety, ſo very unfortunate, that it were better that this being had never been added to its numbers!---

At the age of twelve years, the child of the LABOURER, if in good health, may be diſmiſſed to earn his ſubſiſtence by his own

toil. Apprenticeſhips, in the Art of Huſbandry, are not uſual: Nor is it to be deſired, that theſe ſhould be ſubſtituted, inſtead of the preſent mode of leaving the young peaſantry, to learn the practices of farming, in hired ſervice. As plough-boys, as cow-herds or ſhepherds, in the labours of the farm-yard, in driving cattle or carts, in weeding, hay-making, reaping;---theſe youths may both earn reaſonable wages, and acquire, gradually, that ſkill and that dexterity in the exerciſe of the whole buſineſs of a farm, which are requiſite to make them truly uſeful labourers in huſbandry, after they ſhall have attained to mature age. Sunday ſhould be invariably devoted by them, while they earn ſubſiſtence by employment, as farm-ſervants, not only to the duties of religion, but to writing, arithmetic, reading, and the acquiſition of every ſort of uſeful knowledge. In the progreſs of thoſe years in which parental authority ceaſes, and the youth is left to the guidance of his own judgment, though it be, as yet, unformed,---parents ſhould anxiouſly do what may yet be poſſible, to ſave their children from vice and folly. Let them ſtrive to prevent their ſons from entering into the ſervice of maſters who are notoriouſly licentious in their converſation and morals, who are abuſively paſſionate, or who entertain in their ſervice, worthleſs perſons, by intercourſe with whom, the morals of the yet uncorrupted boy might be eaſily vitiated. As he advances in years, let him paſs from the ſervice of a maſter under whom he has ſeen the practice of huſbandry, common in one part of the country, into that of one who purſues on his fields, the practice of a different county. He ought to aſpire to ſkill, in every different branch of the buſineſs of a farm. He ſhould liſten to information concerning thoſe places, in which the management of cattle, the rotation of crops, the ſubdiviſion of fields, the practice of tillage, &c. are the beſt: And he ſhould earneſtly travel about, to obtain employment, as a labourer, where he may find means to make himſelf maſter of the whole arts of huſbandry in their beſt perfection. Parents, maſters, the young man himſelf muſt, in this ſame time, watch againſt the corruption of his morals. The careleſs uſe of oaths in ordinary converſation; the uſe of obſcene or opprobrious language; cruelty to horſes and other tame animals; a diſpoſition to labour negligently when not under the maſter's eye, to murmur againſt what a maſter commands, to pilfer from a maſter's property; a paſſion for ſcenes and occaſions of ruſtic carouſal and feſtivity; and eſpecially the company of other young perſons who are ſtrangers to all the ſanctity of chaſtity; muſt be earneſtly avoided by the young man himſelf,---and by every ſuitable means rendered odious to him by thoſe, who have it in their power to influence his conduct, and to whom his intereſts and his ſocial utility may be dear. Even the poor labourer who, from the age of twelve to that of five and twenty years, advances in this courſe of diligent labour, of con-

tinual improvement, of uncorrupted virtue,---will, at the latter age, be qualified to earn ſuſtenance for a family of children to be brought up, as labourers, like himſelf. If he attain not above the condition of a labourer; even in that, he may paſs through the ſubſequent part of his life, reſpectable and happy. But, he will moſt probably riſe to the condition of an overſeer, or ſteward, worthy of high confidence, and deſervedly receiving no inconſiderable emoluments. He may perhaps, within no long time, by induſtry and frugality, accumulate a capital, ſufficient to enable him to commence farmer for himſelf. The reputation which cannot but attend his ſagacity, diligence, and integrity, will not fail to make every diſcerning landholder willing to accept *him* for a tenant, rather than any other whoſe fortune may be much greater, but his qualities and habits, leſs excellent. If he can meet with a virtuous and lovely young woman, of his own condition; let him not ſcruple, even at the age of ſeventeen or eighteen years, to attach himſelf to her with ingenuous, ſincere, and conſtant affection. Let them, in the ſanctity of chaſtity, thenceforth, cheriſh, for one another, the kindneſs of mutual love. Yet, let them not haſten to marry, till they ſhall have, firſt, ſaved by their own frugality and induſtry, enough to fill the little cottage they are to occupy, with neat and convenient, though ſimple, furniture, as well as to provide againſt ſome of thoſe difficulties which may be expected to ariſe the firſt, to them, in their married ſtate. Then let them marry; truſting, that, for as much as the lot of humanity permits, their marriage cannot but be happy. Let every young man and young woman conſider it as their duty to prepare for entering into the ſtate of marriage; yet, regard it as guilt and folly to marry, if they may not hope both a comfortable ſubſiſtence for themſelves when married,---and to rear their children with that reaſonable meaſure of tenderneſs and care, which are neceſſary to the education of a healthy, a virtuous, and an intelligent progeny.

The ſon of the OPULENT FARMER enjoys advantages above the *ſon of the peaſant-labourer*, which it would be criminal, not to apply to the improvement of his EDUCATION, between the age of twelve years and that of five and twenty. Till the age of fourteen, he may, perhaps, uſefully enough divide his time between the buſineſs of his father's farm, and the inſtruction of any good ſchool which, without leaving his father's houſe, he can the moſt conveniently attend. At ſchool, he may, during this period, make himſelf more perfectly maſter than before, of the arts of writing, arithmetic, book-keeping, and epiſtolary compoſition; of the firſt principles of mathematics, with their application to the meaſurement of ſolids, of heights and diſtances, &c.: and if he have any fondneſs for the knowledge of any other language, ancient or modern, beſide his mother tongue,

he may learn it. Much more uſeful, however, will it be, if, without aſpiring, in languages, above the knowledge of his mother-tongue, he rather continue to read, in compariſon, with nature, ſome inſtructive volumes of natural hiſtory, and peruſe thoſe books of elegant morality, of civil hiſtory, and of biography, which cannot but form the beſt *ſchool of the book knowledge of life.* In proportion as he diſplays more of induſtry, of ſagacity, and of a due attachment to the principles of rectitude; let him be ſtill more truſted with the management of thoſe pieces of farming and of market-buſineſs, which may be, without too much danger to his father's intereſts, committed into his hands. Has he done well, in one inſtance? Let this be a reaſon for giving him ſtill more of the honour of your confidence, on another. If he has, in this inſtance, failed, without exceſſive badneſs of heart, or weakneſs of underſtanding; let your unwillingneſs to believe, that he cannot do better, be your reaſon for affording him new opportunities of trial. Watch him in all his management, not with the ſuſpicion of a jealous and tyrannical maſter, but with the benign vigilance of a parent, ever ready to withdraw from danger, and to protect from harm.

In this manner, may the young farmer, between the ages of fourteen and fifteen years, have attained as much of ſcholaſtic inſtruction, and of acquaintance with the affairs of huſbandry, as is to be eaſily acquired, on his father's farms, in their neighbourhood, and at any ſchool which he may conveniently attend without ceaſing to reſide, entirely or chiefly, in his father's houſe. Send him, now, to acquire knowledge and experience, elſewhere. At ſuch a univerſity as any of thoſe in Scotland, or any in which *Lectures* on uſeful branches of knowledge, are commonly read,—let him hear a courſe of lectures on *natural hiſtory*, on *chemiſtry*, on *natural philoſophy*, on *moral philoſophy*, on *agriculture*, on the *uſeful arts*. The ſtudy and attendance of two ſucceſſive winters, may be requiſite. Let the intervening ſummer be paſſed by the young farmer, in rural ſtudy, in *Botanical* excurſions, and in aſſiſting in the principal labours on his father's farms.

After the ſecond ſeaſon of his ſtudy at an univerſity, has paſſed: let him, then, be ſent to make a journey of agricultural obſervation and enquiry, throughout the iſland of GREAT BRITAIN. We hope, that the genius and patriotiſm of *Sir* JOHN SINCLAIR, ſhall not fail to accompliſh the inſtitution of that SYSTEM OF EXPERIMENTAL FARMS and PLANTATIONS, which he has ſo ingeniouſly and beneficently propoſed. When this inſtitution ſhall have been effected; thoſe *experimental farms* and *plantations*, will be the chief objects of attention to our young agricultural traveller, in the courſe of his journies. At ſeveral of thoſe *farms*, it will be proper for him to fix his reſidence, for at leaſt ſome weeks at each. The practices of all the moſt emi-

nent farmers, in every different neighbourhood; the nature of ſoils; the ſpecies of vegetables; the breeds of animals; roads, canals, markets; the general ſpirit of induſtry, the local cauſes on which it depends, and the immediate effects which it produces; muſt all be, in a particular manner, the ſubjects of his obſervation. He muſt viſit the towns, the great eſtabliſhments of manufacture, the ſea-ports, and all the grand marts of traffic. The previous courſe of his education, ſuch as it has been marked out, in the preceding eſſays, has prepared him to perform theſe journies with due keenneſs of obſervation, and with ſufficient intelligence. It will become him, not only to mark all that is important in the ſcenes through which he paſſes, but to record what he obſerves, in writing, for his reviſal at a future time. Let him in the mean while, avoid all looſe and worthleſs ſociety; preſerve in his converſation, a ſcrupulous abſtinence from oaths, obſcenity, and from all groſs and indelicate words; if ſome virtuous and lovely maiden of his own condition, attract his love,---not refuſe to attach himſelf to her, nor heſitate to woo her modeſtly for his future wife.

At the termination of his agricultural journey, throughout his native iſle, let him return to the houſe of his parents. For ſome ſhort time, it may become his father to detain him with himſelf, and to employ him as his book-keeper, aſſiſtant, or ſteward, till the young man's conduct ſhall evince, that he poſſeſſes intelligence, activity, uprightneſs of principles, and ſteady diſcretion, ſuch as it has been the object of the whole courſe of his education, to form him to. After theſe few years have paſſed; ſettle him, at the age of 21 or 22 years, on a farm of his own; or, if circumſtances ſo adviſe, take him into partnerſhip with yourſelf. Let him, now, marry the woman who is the object of his affections. If ſhe be worthy of his love; and if his mind and body be hitherto unpolluted by unchaſte licentiouſneſs; they ſhall not miſs of that happineſs which Heaven has deſtined to conjugal prudence, tenderneſs, and virtue.

Methinks I ſee this virtuous, healthy, active and intelligent young man, on his wedding day. The child of healthy parents of decent form, he is healthy, vigorous, robuſt—not lubbardly.---His eye, his whole countenance glow with the freſhneſs of virtue, health, and youth, with the animated expreſſion of a mind cultured yet ingenuous, with the conſcious joy of high and honeſt hopes, of virtuous and honourable reſolutions. His gait, his geſtures, his attitudes have, all, an unaffected manlineſs, a ſimple dignity, a native, unſtudied gracefulneſs, in which are combined whatever is pleaſing in the manners of the common ruſtic, whatever is decently grave without ludicrous ſolemnity in thoſe of the ſcholar, whatever is unambitiouſly elegant in thoſe of the man of the world. He glances his eyes on his bride, with modeſt looks of manly tenderneſs, delicacy, and eſteem. He regards his parents and friends around them, with kindneſs, gra-

titude, and unalterable friendſhip. With what kindneſs and attention, he introduces their young miſtreſs to the ſervants of his houſehold! Walking out over his farm; he views it with a delight and intelligence unknown to the vulgar boon. It is the ſcene of his labours; the ſource of his fortune; the place, where he continually ſtudies the wonders of nature, and aſſociates ſcience with ingenious art. The education in the principles and practice of huſbandry, which he has received, together with that ſound ſagacity and *mother wit*, which are the moſt diſtinguiſhing qualities of his underſtanding,---exempt him from the danger equally of ruining himſelf by fooliſh agricultural experiments, and of perſiſting in a blind adherence to ancient practices which are known to be incomparably leſs profitable than new ones of tried utility. He accounts it of primary importance, to keep regular accompts of his ſtock, his gains, and expenditure; knowing, that, in no way of living nor ſpecies of buſineſs, leaſt of all, in that of a farmer, can any ſucceſsful œconomy be purſued, without the accurate keeping, and the very frequent balancing, of ſuch accompts. He, with equal diligence, keeps a regiſter of all thoſe natural appearances in the ſucceſſion of the ſeaſons, which affect his labours and management, as a farmer,—and of all the remarkable experiments and tranſactions in his buſineſs, whether in the œconomy of the farm, in dealing with his landlord, or in the fluctuations of the markets. In the courſe of his literary education, he has ſtudied all the beſt books upon ſubjects of Rural Œconomy, and upon the Uſeful Arts: Of theſe he has a ſmall library: They are intermingled with books of elegant morality, of hiſtory, of voyages and travels, and of thoſe ſciences which afford the fundamental principles of rational agriculture. On Sundays, at ſome morning and evening half-hours, whenever the buſineſs of his farm, or his duties as a member of the community and the maſter of a family, forbid not,—he delights to amuſe and cultivate his mind by converſing with his books.--- He is peculiarly qualified for the diſcharge of every pariſh-duty; but, he does not ſuffer any officious inclination to intermeddle in parochial or other public buſineſs, to withdraw him from proper attention to his own family affairs and farming-buſineſs. New diſcoveries in ſcience, and the events and tranſactions going on in the world, cannot but engage his curioſity. He therefore ſelects and peruſes ſome *weekly newſpaper*, and ſome *magazine*, ſuch as are ably written and deſerve encouragement. But, he is not a *political buſy-body*. He labours only for the improvement of his perſonal character, of his family, of his farm, and by fair means, of his private fortune. It is probable, that he may ſo riſe to opulence. If he do; he will be able to honour that opulence by an innate nobility of character, ſuch as ſhall put to ſhame the hereditary great.

Scientific INACCURACIES, *involving* DANGEROUS *conſequences, in the* REPORT *of the* COMMITTEE *of the* HOUSE *of* COMMONS, *concerning* BREAD-CORN, *&c. of the* 10*th of* FEBRUARY, 1800.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

I Have juſt read the late *Report of the Committee of the Houſe of Commons, reſpecting Bread-Corn, &c.* It is a care highly patriotic, in Parliament, to have ſo ſeaſonably turned their attention upon this important ſubject of univerſal and infinitely anxious concern. I ſhould have thought—only of applauding their vigilance, and availing myſelf of their advice; had I not obſerved an incorrectneſs and imperfection in the information that appears to have been before them,—which, if not rectified, muſt neceſſarily have effects very oppoſite to thoſe which the honourable reporters could not but intend to produce.

The Report ſtates, among other things:

1. That the brown and coarſer bread, in which the flour is uſed without the abſtraction of that which is called the *bran*, or of any thing more, than ſimply the *huſks* of the wheat,—is liable, to be, at firſt uſe, *leſs wholeſome*, than the *fine houſehold bread* from the flour of which the *bran* has been previouſly taken away:

2. That, however, in continued and habitual uſe, the brown and coarſer bread may, at length, become equally wholeſome as the finer:

3. That any weight of pure flour, in which the *bran* is retained with the other part of the wheat, will not afford ſo much nouriſhment in *bread*, as an equal weight of flour in which there is no bran:

4. That any portion of newly baked bread, *however diminiſhed in weight* and bulk, by being kept to *ſtaleneſs*, will, in conſequence of this keeping, afford more nouriſhment, than if it had been eaten when it was newly baked:

5. That, it is, *in all caſes*, better to diſtribute ſoups, rice, potatoes, &c. than to give bread, in charity, to the poor.

Now, Sir, I am ſorry to obſerve, that every one of theſe propoſitions, though produced upon authority thus reſpectable, is *fundamentally incorrect*.

1. It is not true, that *bread* made of flour in which the bran is retained, is, by its nature, leſs wholeſome, than that from which the bran has been taken away.

All human aliment, of whatever ſort, *eſſentially conſiſts*—only of theſe four matters,—*hydrogen*,—*carbon*,---*oxygen*,---and *azote*. Any human body, chemically analyſed into its component principles, will be found to conſiſt, *eſſentially* and *indiſpenſibly*,---for all but the oſſeous part of its ſubſtance,---of theſe four ingredients only: Nor can any thing ſerve, as aliment, but what is capable of entering into the compoſition of the ſubſtance of the human body.

Now, Sir, there is between *animal* and *vegetable* food, this diſtinction;---that, in *animal food*, are combined all the four principles of aliment,---hydrogen,---carbon,---oxygen,---and azote, ---with perhaps an exceſs of the latter;---but that *vegetable food* affords only---hydrogen,---carbon,---oxygen,---with often an entire want of *azote*,---and almoſt always a very inferior proportion of it. It is not ſalutary to be confined to the uſe of animal food alone, becauſe it uſually ſupplies---hydrogen and azote in too large proportion for a healthy ſtate of the vital functions,---oxygen and carbon, in a proportion too ſcanty. On the other hand, it is not ſalutary to be confined to the excluſive uſe of *vegetable food*, ---becauſe this ſupplies,—particularly azote—in a proportion far too ſmall for health,---oxygen and carbon in unwholeſome exceſs. A mixture of a moderate portion of animal food, with a larger proportion of vegetable food, neceſſarily compoſes the moſt ſalutary ſpecies of diet. Thoſe who cannot refrain from the uſe of large quantities of animal food, will do well to uſe chiefly ſuch vegetables as afford little or none of that azote which predominates in animal matter. They who cannot procure a ſufficient quantity of animal food, ought to prefer thoſe vegetables, in which *there is* azote,---and in which it is eſpecially abundant.

Now, Sir, any grain of wheat, pure from the huſk, and from all other extraneous matter, conſiſts ſolely of theſe two parts,--- *gluten*, and *farina*. In *farina*, hydrogen and carbon predominate: of the *gluten*, the principal ingredient is azote. But, the inner and white part of the grain of wheat, that which affords the flour for the fine, white bread, is chiefly *farinaceous*: and on the other hand, the *exterior coats* of the grain of the wheat, or the bran, are chiefly *glutinous*. It follows, that *coarſe bread*, baked of flour in which the bran is retained, contains a larger ſhare of *gluten*, and therefore, of *azote*, than the fine white bread, out of which the bran has been rejected. Differing from the *fine wheaten loaf*, only in theſe particulars,---the *coarſe bread*, conſidered alone, and independently of all other food, is, neceſſarily, the moſt wholeſome of the two ſorts. When we conſider theſe two ſpecies of bread, as uſed together with other ſorts of food; we ſhall, of courſe, find, that *for thoſe who can procure but little animal food, the coarſe brown bread, is the moſt nouriſhing,---but that they who eat much animal food, need not the ſupply of azote which brown bread more eſpecially affords, and may therefore find the fine white bread, the moſt ſalutary*. Eating brown bread, you may with equal labour, uſe leſs of butcher's meat: white bread is leſs ſtrengthening, unleſs it be uſed with a larger proportion of butcher's meat.

2. It is not true, *as a general law*, that brown bread can become by habitual uſe, ſalutary to any conſtitution of human health, to which it was, at the firſt, noxious. Habit is, indeed,

capable of accompliſhing ſlighter accommodations of this ſort; but, over the primary and fundamental relations, it has little or no power. It may render brown bread, more agreeable, than it was at the firſt, to the ſtomach and bowels of this or that perſon: but, it can never alter the proportions in which this bread naturally furniſhes the elements of animal ſubſtance.

3. It is a ſtrange miſapprehenſion, to fancy that the ſame weight of flour in which the bran is retained, will *not go ſo far*, as if it were fine white flour, pure of bran.---The truth is, that, in the *newly baked brown loaf*, there exiſts a larger proportion of water, and of gaſes, than in a *newly baked white loaf* of equal weight: Beſides, the *brown bread* exerts more of a ſtimulating energy, than the *white bread*, on the organs of digeſtion. But, if there be, in the brown loaf, more of water and of gaſes, than in the white loaf of equal weight; there muſt, conſequently, be leſs of flour: And therefore, the ſame weight of the brown flour *goes farther* in making bread, than if it were white flour: ſo that, though one ſhould eat a greater weight of brown than of white bread; yet he will not, for this, conſume a greater weight of the brown flour, than of the white. Again, if, becauſe brown bread ſtimulates the ſtomach more than white bread; there be actually a much larger proportion of the former, than there could be of the latter, eaten at a meal: yet, ſince the brown bread is rather more nouriſhing, than leſs nouriſhing, than the white bread; it follows, that, by the conſumption of ſuch an increaſed proportion of the brown bread, there muſt be a neceſſary ſaving obtained of other aliment.

It is then certain, that, *as food, the brown flour never does go farther than the white.* Only, brown bread involves more than the white, of air and water: and one's ſtomach may be, at times, ſo agreeably excited by brown bread, as to prefer it to moſt other ſorts of food.

4. Neither is it preciſely true, even that *ſtale* white bread *goes farther* than what is *newly baked.*

The ſame loaf will be found to weigh ſomewhat leſs, after it has been kept for two or three days, than when it was newly taken out of the oven.

Stale bread excites the ſtomach leſs, and is leſs eaſily digeſtible, than *freſh* bread.

From theſe two facts, it follows; that reſerving bread, till it be *ſtale*,—you loſe, by needleſs evaporation, ſome part of what you do not eat; and that, if there be, ſtill, a ſaving in the uſe of *ſtale* bread,—that ſaving is obtained by making the bread leſs wholeſome, and by incurring a greater conſumption of other food.

5. It will, in general, be wiſe, to give, in charity, rather ſoups, rice, potatoes, than bread. But, it would be exceedingly wrong and waſteful, to carry this principle too far. The needy have prejudices, which render it often impoſſible to aſſiſt them, otherwiſe

than in a manner agreeable to their own humour. Even when considerably distressed, they will contrive to consume just so much the more bread, if you attempt to confine them to the use of rice and potatoes. We must, therefore, watch what their humour will bear, and, in our charity, join bread, in certain proportions, suitable to their ordinary mode of living, with the soup and rice, and potatoes, which we give them.

I believe, that nothing could be more beneficial, than for the great, the wise, and the humane to engage, throughout the isle, in Voluntary Associations, to use certain diminished proportions of bread, weekly, in their respective families, according to the numbers of which each family consists.

You will do me the justice to believe, Sir;—that I offer the foregoing observations with the most profound deference to the honourable authors of the report to which they refer;—that, I should not have troubled you with them, if I were not well assured of the truth of the positions which I have maintained, and if I did not think the *inaccuracies here exposed, to be such as might, if overlooked, prevent almost all advantage from the Report, and from whatever measures may be founded on it.*

I am, Sir, with esteem,

London, Your very humble servant,

February 18, 1800. ROBERT HERON.

HISTORY *of the* SOCIETIES *for the Improvement of the* SCIENCES *and* ARTS.

NUMBER SECOND.

The SOCIETY *instituted at* LONDON, *for the Encouragement of* ARTS, MANUFACTURES, *and* COMMERCE.

IN the year 1754, the patriotism of Englishmen, and their love of the Sciences and Arts, were distinguished by the institution of a Society, of which the views and the exertions have been among the most judiciously, and successfully beneficent, of all that have ever been employed for the extension of useful knowledge or the improvement of ingenious industry. That institution still continues to flourish, under the denomination of the SOCIETY OF ARTS, *&c.* Their labours eminently deserve to be recollected, and commemorated with zealous and respectful applause.

The express intention with which this Society was, first, instituted, was,—*to excite, by the proposal of* PREMIUMS, *a generous competition, among the inhabitants of* ENGLAND, *in the Improvement of Arts, Manufactures, and Commerce.*

For this purpose, the Members who, first, associated in this Institution, agreed to contribute, each, *a subscription-sum*, of *five* guineas, of *three* guineas, or, at the least, of *two* guineas, annually, *or else*, twenty guineas at once—the giver of which

was to continue, without any ſecond payment, a member, during his life. Theſe contributions, were to compoſe the fund, out of which the PREMIUMS ſhou'd be paid. A *Preſident*, twelve *Vice-Preſidents*, a *Secretary*, an *Aſſiſtant Secretary*, a *Regiſter*, a *Collector* of the *Subſcription-money*,—were the *Officers* whom they reſolved to employ. The number of the *Members*, was to be unlimited. *Candidates* were to be elected into the fellowſhip of the Society, upon the recommendation of three members, by ballot, and by a majority of not leſs than one-third of the whole number of members then voting. *Non-payment* of the ſubſcription-money, was to diſqualify any member from continuing to take a part in the labours of the Society. The buſineſs of the Society, was to be tranſacted, for every year,—in *four general meetings*, on the 3d Wedneſday of April, the 2d Wedneſday of May, the 2d Wedneſday of November, the 2d Wedneſday of December,—and in *ordinary weekly meetings*, on every ſucceſſive Wedneſday from the fourth Wedneſday in October to the firſt Wedneſday in June. From the firſt Wedneſday in June, to the fourth Wedneſday in October, there were to be no meetings of the Society, ſave ſuch as ſhould be extraordinarily called, by the Preſident, or by two Vice-Preſidents. It was likewiſe ſettled, that Committees, for correſpondence and agriculture, for trade and manufactures, for mechanics, for the polite arts, and for chemiſtry,—ſhould prepare the buſineſs for diſcuſſion in the regular and open meetings of the ſociety. That there might be no diſorder of *accompts*, to fruſtrate the beneficent ends of the inſtitution, it was agreed, that theſe ſhould be examined and ſettled, on the firſt week of every month.

The projectors and firſt promoters of this inſtitution, were men of conſiderable talents, activity, and enthuſiaſm for the arts which they engaged to patronize. The great, the learned, the wiſe, men of action, and men of ſpeculation, were eaſily united to forward the deſign. A body were ſoon aſſociated, ſufficiently reſpectable in every eminently diſtinguiſhing quality, to make that which they favoured, an object of faſhionable attention and curioſity; and ſufficiently numerous to form by their joint contributions, a very ample yearly revenue, to foſter and reward the arts. One of the early Members of this Society, was *Dr.* SAMUEL JOHNSON, who, we are told, made, once or twice, at its meetings, ſuch attempts at public ſpeaking, as he would have choſen, much rather to try in the Houſe of Commons.

Among the firſt happy effects reſulting from their exertions, was, the *excitement of the general attention* of the nation, towards the objects, for the ſake of which, thoſe gentlemen had aſſociated. Hitherto, the greater part of the perſons in the active claſſes of the community, had uſually believed the arts of life to be little improveable, otherwiſe, than, by ſome accidental diſcovery or invention, ſtruck out, the inventor himſelf ſcarcely knew how,—

by recovering the loſt dexterity and ſkill of their anceſtors,—or by borrowing the practices of ſome foreign country. That the application of ſcience, the excitement of genius, the enquiries of literature, and the propoſition of rewards, are the beſt means for advancing the *uſeful Arts* towards perfection, in any country, is a truth, which was far from being, before, familiarly received in England, as a common principle of general and practical knowledge. In the *Fine Arts*, till this period, not only the multitude, but even the deeper and more refined thinkers were diſpoſed to believe, that, in the climate, in the very local nature of the country, in their bodily organization, there was ſomething which made it phyſically impoſſible for Engliſhmen ever to attain equal excellence, with the natives of Greece, Italy, and France. But, while the attention of Engliſhmen was by the inſtitution of the SOCIETY OF ARTS, earneſtly fixed on theſe objects; more generous principles, and better hopes were quickly propagated, reſpecting them. The true means for the improvement of the *uſeful arts*, came to be generally underſtood, and put in action. Even in regard to the *Fine Arts*, Engliſhmen, now, quickly learned to ſcorn that deſpondent ſluggiſhneſs by which they had been, hitherto, withheld from emulative exertion. Such were the effects—ſimply, of the firſt publication of the deſign, of the enquiries and diſcuſſions which engaged the public mind while the formation of the ſociety was going on, of thoſe repreſentations by which the inſtitutors endeavoured to juſtify the prudence and patriotiſm of their undertaking.

When the meetings of the ſociety commenced; new diſcuſſions aroſe, in regard to the train of their future buſineſs; by which the minds of thoſe who attended the meetings, could not but be ſharpened, enlightened, kindled to new enthuſiaſm in favour of the arts. The ſelection of the objects of the firſt premiums, gave occaſion to much uſeful thought, and ſerved both to call forth, and to diſſeminate much of beneficial knowledge. An expectation of ſomething much more important, than actually enſued, aroſe, amidſt the propoſal of the firſt *præmia*: And, though it was deluſive; yet, fixing the eyes of the nation, ſtill more and more, upon the inſtitution, it did, by this effect, conſiderable good.

The firſt objects of their *premiums* appear to have been, in truth, very judiciouſly choſen.

In AGRICULTURE, they ſtrove to encourage—*the plantation of oaks* and other trees, of which the TIMBER is the moſt generally uſeful, and the fitteſt for great national purpoſes,—the cultivation of HEMP, the material for our canvas and cordage,—the improved culture of GRAINS and *graſſes*,—the diſcovery of articles which might afford the moſt certain ſupplies of *ſucculent* FOOD TO CATTLE, in Winter and Spring—the production of MADDER, a vegetable dying-ſtuff of great importance to the ſtaple manufactures of England, and which had, hitherto, been obtained,

only by importation from Holland, &c. &c. Between the years 1754 and 1783, they had beſtowed as præmia for deſerving endeavours in agriculture, 3281l. 8s. ſterling, in money,—77 gold medals, and 31 medals of ſilver. They had completely ſucceeded in eſtabliſhing the cultivation of *madder* in England. They had greatly promoted the culture of thoſe valuable graſſes, *burnet*, *lucerne*, and Dutch white *clover*. That excellent article of fallowing crop,—the *Turnip-rooted cabbage*, after being long peculiar to *Kent*, was by their care and encouragement, propagated much more extenſively. In the increaſe of the plantations of the kingdom, their patronage had been not leſs happily exerciſed.

In CHEMISTRY, DYEING, and MINERALOGY, their exertions were within the ſame period, highly beneficial and fortunate. They encouraged the ſearch for mines of COBALT, in Britain; inveſtigated the beſt means of preparing it in *zaffre* and *ſmalt*, for the uſes of dyeing, enamelling, and painting; earneſtly promoted the eſtabliſhment of Engliſh manufactures of theſe two laſt articles, which might remove the neceſſity of any farther importation of them from abroad. *Crucibles* and *retorts* had been, till after the inſtitution of this ſociety, procured for the *chemiſts* and *miners* of England, ſolely by importation from foreign countries: The *blue melting-pots* uſed by the tin-ſmelters in Cornwall, were to be obtained only from *Hafner's Zal* near *Rohgenſberg* in Germany. By their excitement and præmia, the ſociety procured a manufacture of theſe important utenſils of the chemical arts, to be eſtabliſhed at *Chelſea*: and the works of that manufacture, were happily found by the beſt aſſay-maſters and chemiſts, to be equally fit for all their purpoſes, as the beſt which they could obtain from the Continent. The *tanning* of leather with *ſaw-duſt of oak*; the *dyeing of leather* after the eaſtern manner; the art of *dyeing cotton of a red-colour*, hitherto peculiar to *Turkey*, and ſuppoſed to be inimitable in other countries; were ſo many objects of the præmia of the ſociety, by which improvements, the moſt extenſive and permanent, were introduced into the manufactures of Britain. Till encouraged by præmia from this ſociety, the manufacture of SAL-AMMONIAC had not been either very extenſively, or very ſucceſsfully tried in England. In the courſe of 29 years, they had given in *præmia* for objects of this ſort, the ſum of 1391l. 10s. in money,—3 gold,—and 3 ſilver, medals.

The provinces of NORTH AMERICA, now independent, were, for more than 20 years after the inſtitution of the SOCIETY OF ARTS, dependencies of the Britiſh empire. Their improvement as colonies, was thought to be intimately connected with the proſperity of Engliſh commerce. The ſum of 2785l. 13s. and 8d. ſterling in money,—with 14 honorary medals of gold, were, therefore, beſtowed, between the year 1754 and the year 1783, to reward and encourage various new undertakings in the arts, agriculture, and trade of the Britiſh AME-

RICAN COLONIES. That which is ſtill a ſtaple branch of induſtry in America,—the manufacture of *pot and pearl-aſhes*,—was, firſt, perfected under the encouragement of this ſociety. America owes to this ſame encouragement, the introduction of the *ſilk-worm* and the *mulberry-tree*, as well as of ſeveral ſorts of *vines*.

The MANUFACTURES of *Carpets*, in the *Turkiſh* manner,—of Cameos and Intaglios in *Artificial Gems*,—of *Chip-Hats*,—of *Comb-Pots* with which Pit-coal might be employed to heat the Combs in combing Wool,—of *Druggets*,—of *Red Leather*,—were, all, either invented,—introduced from foreign countries,—or, at leaſt ſignally improved, under the encouragement of the SOCIETY OF ARTS. To the exertions of this SOCIETY, is to be chiefly attributed the firſt invention of that application of machinery to multiply the powers of the human hand in ſpinning cotton, which is at preſent, the pride of the manufactures of Britain. In the year 1760, the Society offered præmia "for "the beſt invention of a machine for ſpinning ſix threads of "wool, cotton, flax, or ſilk at one time, and which ſhould re-"quire but one perſon to work and attend it." In 1764, præmia were paid in reward of ſome ingenious, though imperfect attempts. The attention of artiſans and men of ſcience was thus for the firſt time, earneſtly turned upon this object. A Mr. HARGREAVES, of the Cotton-manufacture at Blackburn in Lancaſhire, about the year 1764, made a hand-machine with which one perſon might ſpin *eleven threads* at once. Mill-machinery was ſoon added. The SOCIETY OF ARTS had in regard to this object, put the ſprings of invention in movement; and all the natural effects happily followed. *Papers*,—of *Silk-rags*,—for *Copper-plate Printers*,—*Emboſſed*—and *marbled*,—were, all, either in the firſt inſtance, introduced into manufacture,—or at leaſt eminently promoted in their riſe from ſmall beginnings, by the ſociety's endeavours. In the encouragement of theſe manufactures, the præmia beſtowed between the year 1754, and the year 1783, conſiſted of £. 2057, 11*s*. in money,—one honorary gold medal.—and four ſilver medals.—The ART of QUILTING IN THE LOOM was one of the moſt generally uſeful of all thoſe which, in the preparation of elegant cloths, this Society's exertions gained to Britain.

For the improvement of that claſs of the Arts, which they denominated MECHANICS, they beſtowed £. 2453. 4*s*. 6*d*. in in money,—9 gold medals,—14 ſilver medals. The eſtabliſhment of ſaw-mills in England; the uſe of the Gun-Harpoon in the whale-fiſhery; the machine for planning plates of caſt-iron, the engine for poliſhing plate-glaſs, and the application of the pendulum, as a general ſtandard for weights and meaſures; were remarkable improvements which thoſe rewards produced.

For the improvement of the POLITE ARTS of Sculpture,

Painting, Engraving, &c. the Society, within the same period, bestowed no less than £.8595. 10s. in money,—23 gold medals, 26 silver medals,—23 gold pallats,—68 great silver pallets,—and 53 smaller ones. Such encouragement could not but eminently promote the improvement of the Fine Arts. Exhibitions of the works of Artists whom the Society patronized, naturally attracted so much of the public notice, as to give rise to rival exhibitions of the productions of other artists. The competition suggested the design of the ROYAL ACADEMY. To the exertions of the SOCIETY OF ARTS, therefore, Britain certainly owes an institution which, by presenting to the pupils of the Fine Arts, advantages of study before unknown, by establishing a sort of national hall for the mutual intercourse of the sellers and buyers of the works of elegant art, by exciting and giving a suitable direction to the national pride relatively to this object, has created a new school of painting, &c. which may, hereafter, vie with those of Florence and of Rome.

These effects of the institution and exertions of the SOCIETY OF ARTS, took place, gradually, with a succession and an operation similer to those of the great changes of Nature, the relations and systimatic connexions of which are little remarked by the ordinary and superficial observer. Many pretenders to consummate wisdom, have affirmed; that the labours of this SOCIETY were but an idle trifling and a vain pretence; that those improvements, which have *certainly* arisen from them, were rather casual and accidental, the births of time, in which the efforts of men had no share. But such are, ever, the sagacious reasonings of the foolish and the ignorant, concerning the progress of human affairs.

(*The History of this* SOCIETY, *will be concluded in our Number for March.*)

COMPARISON OF ROMAN WITH ABYSSINIAN CRUELTY.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

YOUR Plan is,—to insert in your Miscellany, not merely express elucidations of the state of Agriculture, Manufactures, and Trade, but *whatever the Merchant, Manufacturer, or improving Landholder and Farmer of liberal education, may be expected to read with interested curiosity.* I therefore, hope, that you will not, too hastily, throw the following very short article into the fire.

Whatever may be, in other respects, the character of that singular Work,—BRUCE'S TRAVELS *in* ABYSSINIA; it must, at least, be owned to display much of the manners-painting genius of a *Homer* and a *Herodotus*, and of the soul-searching, guilt-detecting penetration of a SUETONIUS or a TACITUS.

It is, in truth, exceedingly curious, to remark the ſtrange ſimilitude that has ſubſiſted between the cruelties of the Cæſars and thoſe of the monarchs of Abyſſinia. I was lately ſtruck with the following inſtance of co-incidence *even in minute particulars*, between the conduct of *Tiberius Cæſar* and that of *Tecla Haimanout*.

Mr *Bruce* relates, that, in one of the laſt marches in which he had the honour to attend the young Abyſſinian King,—the robe of the monarch happened to be torn, as he rode on, by a projecting branch of the *Kantuffa* thorn. The *Shum* or ruler of diſtrict, whoſe duty it was, to make the way clear before his Sovereign's paſſing through it,—was inſtantly called into the Prince's preſence. While the poor man thought of nothing leſs, both he and his ſon were, for the ſlight inconvenience *Tecla Haimanout* had ſuffered, inſtantly hanged before him, without delay, without pity, even without more than a nod from the monarch, to the executioner to do his duty.

The following are the words of *Suetonius*, in regard to *Tiberius Cæſar*;—" *In quodam itinere, lecticâ quâ vehebatur vepribus* " *impeditâ, enploratorem viæ, primarium cohortium, centurionem.* " *ſtratum humi, pene ad necem verberavit.*"

In all this, Sir, I cannot but own, that there is nothing very ingenious or very important. But, ingenuity is not an ordinary quality in the compoſitions which fill Magazines.

I am, Sir, Your very humble Servant,

Gray's Inn,
Feb. 5, 1800.

CRITO.

ON THE IMPORTANCE OF ACCURATE BOOK-KEEPING TO MERCANTILE PROSPERITY.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

I AM an old merchant, who, if I live a couple of years longer, ſhall be able to keep my eightieth birth-day. I began the world, for myſelf, with *a ſhilling*. In my will I have bequeathed among my children *a plumb and a half*, fairly earned. Without pinching back or belly, without withholding what it was reaſonable for me to beſtow in voluntary charity, without acquiring among my neighbours the character of a hard or ſelfiſh man, have I gained and accumulated *this fortune*. The *principal ſecret* to which I owe it, I ſhall now communicate to you, for the *benefit* of younger men who may deſire to trade with equal ſucceſs.

When I, firſt, went out to ſell my *needles and pins*, for ſuch was my firſt ſtock of merchandize, I had learned only to read, to write, and to perform the common operations of arithmetic, as

Allen, Printer, Paternoſter-Row.

far as to the *rule of practice*. A desire to exercise myself in my writing and arithmetic, more than any other consideration, engaged me to keep an *exact account* of the sale of my small stock, and of the profits I made by it. For a number of times in succession, I sold out and renewed my small wares, before the whole quantity of them became considerable. Still I kept my *accompts* with anxious strictness; and, with the vanity of a poor boy, fancied that in doing so I acquired somewhat of a merchant's consequence. It gave me infinite pleasure to look back over my *accompts*, and to remark how one penny after another had been added to my original stock. At length, my original shilling was, thus, multiplied to a few pounds. I augmented my stock, and began to think I might, in time, become a reputable shopkeeper.

My delight in keeping *accurate accompts* still increased. I thought it now necessary to record the transactions of my business more in the method of formal book-keeping, than I had hitherto done. I returned for a few months to school, and learned the regular method of *Italian book-keeping*. So eager was I to acquire it, and such advantages for its acquisition, had I derived from my little experience in petty traffic, and in the keeping of small accompts, that my teacher declared, he had never taught an apter scholar.

I returned from school to my former industry in petty merchandize. My care in *keeping accompts* was increased by my newly acquired ability to keep them with formal regularity. It was not with the cold indifference of mere business, that I posted my books, but with the fondness of one who had a sort of passion for the exercise of *book-keeping*, and precision in accompts, independently of every interested consideration of advantage to be derived from them. I knew every evening, within a shilling or two, what I was worth. The impression of this was constantly present to my mind, prevented me from laying out ever a farthing more than I could prudently spare, prompted me to incessant activity for the increase of my capital. It taught me to do business not less with caution than with activity, to give credit only to persons who were, certainly, rich and honest and to no person long, to take no goods upon credit from others; in short, to entangle myself in nothing that might hinder me from the frequent, clear, and regular *balancing of my books*. Every thing succeeded in my hands. My punctuality was universally esteemed. Every night, after examining my books, I went to bed with a quiet conscience and a cheerful heart. I was enabled to make cheap purchases. My sales also were, therefore, cheap. As a retailing shop-keeper, my business became very great.

I was now invited to occasional dinners with merchants of great eminence. The only daughter of one of these, a man of very considerable wealth, discovered, though with modesty, a partiality for me, which I could not help noticing; nor, as the young lady was

very amiable, avoid returning. Her father perceived that I was not disagreeable to his daughter. With the frankness of a worthy man who desired to see his child happily settled, he enquired, whether I were aware of her regard for me? whether I could sincerely return her affection? what was the precise state of my business and property? As to every thing else, my answers gave him satisfaction. In regard to my business, I told him *from my books*, to a farthing, what was my clear capital. He enquired farther. I requested him to inspect *my books* with his own eyes. He had a curiosity to see the whole. I shewed him the whole series backwards to the day on which I began with my shilling. This was enough. He declared that, even if I had been absolutely destitute of fortune, the merit alone of having kept the *accompts* of my business with such unparalleled regularity and precision, was sufficient to make him prefer me to any other young merchant he had ever known, as a husband for his daughter. He gave me his daughter. At his death, we inherited his whole fortune. I still applied with the same diligence to the pursuits of commercial business; and still, even with a growing fondness of attention, continued to *keep and to balance my books*. Till within these last ten years, I have continued in trade, have traded with great activity, and to great extent. Never have I, for a week, neglected the *care of my books*. Never have I launched out into those wild speculations, amidst the confusion and the suspense of which it is impossible for a man to know what he is worth. Never has a farthing been either received or expended in the course of my business and living, without being faithfully entered in my books.

To the care, therefore, of *regularly, precisely, faithfully keeping the books and accompts of my business, as a merchant, do I attribute, with due thankfulness to Providence, all the prosperity of my life.*

I am the more confident of the importance of this accuracy in accomptantship and book-keeping to the merchant, because, out of all the bankruptcies of which I have had occasion, in the course of my life, to know the particulars, I do not know that more than one-tenth part owed their origin to any other cause, than the irregularity with which the bankrupt had been wont to keep his books of accompts, the uncertainty of expence into which he was, in consequence of this, driven, the wild speculations into which he suffered himself to be enticed, and the want of certain punctuality in payments and in answering orders which hence necessarily disordered his business.

Go into the counting-houses of great merchants; even amidst a seeming order and a fair shew of accuracy in their books and accompts, how much confusion, uncertainty, and irregularity in balancing do you invariably find? Among retailers and small-dealers how very very few are these who keep a record of their

buſineſs in any thing like regular books at all? Even of thoſe who do keep ſuch books, few or none are careful to note down in them every item of receipts and expence, without exception.

The accurate *keeping of books* may ſeem to many to be in compariſon with the effects I aſcribe to it, but a trivial matter. I, however, from the experience and obſervation of my whole life, regard it as being of all things in mercantile œconomy, the moſt important. Not even in the opinion of old Mr. *Shandy*, could the *Chriſtian name* of any perſon be of higher importance to the formation of his diſpoſitions and genius, than are, in my eſtimation, the young merchant's accuracy in the keeping of his accompt-books to all his moral habits and all his hopes of commercial proſperity.

I intreat you, Sir, to try every means your ingenuity can deviſe, in order to impreſs this truth on the minds of all the young mercantile men who read your magazine.

I am, Sir, your friend and well-wiſher,

R. C.

Feb. 15, 1800.

On the SILVER, &c. MINES of ENGLAND.

To the Editor of the Commercial and Agricultural Magazine.

Sir,

I READ, with pleaſure, your late brief enumeration of the foſſils of Cumberland. Perhaps the following particulars concerning the ſtate of mining in England, from ancient times to the cloſe of the laſt century, may alſo prove acceptable to ſome of your readers.

At the time when the Romans invaded this iſle, its native inhabitants were deſtitute of the precious metals. Whether any mines of Silver were opened in Britain while it was ſubject to the Roman ſway, is not very certainly known. That a silver mine was anciently wrought in Wales, appears probable from the teſtimony of *Giraldus Cambrenſis*. From the mines of *Comb-Martin* in Devonſhire, silver was extracted, in conſiderable quantities, in the reign of Edward I. The silver mines of Derbyſhire appear to have afforded large profits during the ſame reign. Edward III. derived from his silver mines no ſmall ſupply of money, for the expenditure of his French wars. In the reign of Henry the Sixth, a mine of silver was profitably wrought, in the pariſh of Bear-Ferris, in Devonſhire, on a place contiguous to the ſea-ſhore. A silver mine was, in the end of the reign of Queen Elizabeth, diſcovered in the mountain of Consomlack in Cardiganſhire in Wales. After being firſt wrought by a Mr. *Smith*, the enterprize was proſecuted by Sir Hugh Middleton, who for a while paid for the mine a yearly rent of £400 ſterling, and had from it a monthly gain of £2000. More happily for the City of London than for his family and his own private fortune, he

was drawn away from this prosperous undertaking to that of forming the NEW RIVER. Under the reign of Charles I. the working of these mines was prosecuted by other lessees. They yielded at one time a profit of more than £100 a week. Their continued working was interrupted by the civil wars. The SILVER in these mines was in intermixture with lead. The shillings, half-crowns, &c. coined from it, were stamped with *Ostrich-feathers*, the device of the Prince of Wales. The produce of *silver* was at the rate of £14 out of every ton of lead. The mines of BRUNGHILL-MOOR and SKELKORN, in the West-Riding of Yorkshire, were likewise wrought for their silver in the reign of Queen Elizabeth. The ore of the *former* yielded at the rate of £67 a ton; the produce of the latter was but about £26 a ton. The mines in Cardiganshire were, in the reigns of King William and of Queen Anne, wrought, on account of their SILVER, with great spirit, and at a great expence, which they amply repaid. The purest ore of these mines yielded, at that time, 65 ounces of pure silver in the ton.

It was the general practice of FEODISM to reserve in every royal grant of lands, the mines of the precious metals which should be discovered in those lands, to the sovereign. All the English mines affording SILVER were, therefore, anciently reserved to the crown. That they might be opened and wrought, leases of them were granted to various enterprizing undertakers. The earliest undertakers to work the lead and silver mines of England appear to have been Germans. Queen Elizabeth, in the sixth year of her reign, invited over a company of German miners, and authorized them to explore the mines of gold, silver, copper, quicksilver, &c. in the eight counties of Yorkshire, Lancashire, Cumberland, Westmoreland, Cornwall, Devonshire, Gloucestershire, Worcestershire, as well as in Wales, on the condition of paying to the crown 1-10th part of the produce of the mines which their searches should discover. In the seventh year of her reign she granted to *another company*, a lease of all the mines *they* should be able to discover in her other dominions of England and Ireland. The former of these two companies were afterwards incorporated under the appellation of the *Governors, &c.* of the *Mines-Royal*, under which they long continued, though various interruptions, to work the mines in the eight counties above-mentioned.

A *mine-royal* was defined to be a mine in which there was a greater value of GOLD or SILVER than of baser metal.

It is remarkable that our British mines are chiefly on the western side of the island.

I am, sir, yours, &c.

A MINER.

LIST OF INVENTIONS IN THE ARTS, OF WHICH THE PROPERTY HAS BEEN SECURED TO THE INVENTORS, UNDER LETTERS PATENT FROM THE KING, AGREEABLY TO ACT OF PARLIAMENT.

(Continued from P. 348, Vol. I.)

1797.

FEB. 23. Mr. G. Hodſon of Cheſter, for an improved method of ſeparating ſoda from various ſubſtances.

—— 28. Mr. T. Oxenham, of Oxford-ſtreet, for a portable Lever Mangle.

March 9. Mr. J. Silveſter, of St. Pancras, for a method of Maſhing, and mixing Malt and Grain for Brewing.

———. Mr. H. Goodwyn, of Lower Eaſt-Smithfield, for an improved Maſh-Tun and Maſhing-Machine, for Brewing and Diſtilling.

—— 11. Mr. W. Sellars, of Briſtol, for Machines drawing out Wool or Flax, combed by the hand into a perpetual Sliver.

—— 14. Mr. W. Siddon, of Weſt Bromwick, county of Staffordſ, for a method of ſcrewing and faſtening the Hammer-Springs and Lear-Springs to Gun-Locks and Piſtol-Locks.

—— 25. Mr. E. Bunting, of Pittman's-buildings, Old-ſtreet, for a method of producing a forward and a retrograde Motion applicable to Mangles, Pumps, &c.

———. Mr. R. Barber, of Bilborough, County of Nottingham, for an improvement in the Stocking-Frame.

———. Mr. J. Barton, of Biſhopſgate-ſtreet, for preparing Indigo for dying Wool, &c.

———. Mr. J. Paſſman, York, for an improvement in Machinery for Drawing, Roving, and Spinning Wool, &c.

April 12. Mr. J. Manton, Pariſh of St. George, Hanover-ſquare, for an invention in the Conſtruction of Guns and Piſtols.

—— 26. Mr. R. Croſs, of Quaker Brook, Lancaſhire, for a newly-invented Tan-Pit, and mode of Tanning.

May 9. Mr. T. Told, of Kingſton-upon-Hull, for an Hydraulic Pump.

—— 29. Mr. R. Varley, of Damſide, Lancaſhire, for a perpetual Moving Power.

July 4. Mr. T. Harris, of Waltham-Abbey, Eſſex, for a method of Manufacturing White Pins of Iron, &c.

———. Mr. J. Slater, of Sharples, Lancaſhire, for an improvement in a Machine for Finiſhing Muſlins.

———. Mr. A. G. Eckhardt, of Charing-Croſs, for Draw or Bench Looms for Carpets.

———. Mr. J. Hawkſley, for a method of Combing Wool, &c.

July 4. Mr. J. Maule, Oxford-ſtreet, for an improvement on a Machine for Cleanſing Grain from the Straw.

———. Mr. J. Richardſon, Optician, for a Machine to be applied to Glaſſes, &c. for the Uſe of Sights.

—— 7. Mr. H. Johnſon, London, for a Water-Proof Compound, and a Vegetable Liquid for Bleaching, &c.

Auguſt 16. The Earl of Dundonald, for a method of preparing Ceruſe, without injuring the Health.

—— 18. Mr. A. G. Eckhardt, for a Pump or Engine for Evacuating of Water, and Extinguiſhing Fires.

Sept. 13. Mr. W. Chapman, of Newcaſtle-upon-Tyne, for a method of making Cordage, &c.

———. Mr. S. Stanfield, Lancaſhire, for a Machine for Roving and Spinning Cotton, &c. and for Doubling and Twiſting Silk.

Oct. 11. Mr. C. Baker, for a method of preventing Smut in Wheat.

———. E. Cartwright, A. M. for an Incombuſtible Material for Building.

—— 19. Mr. H. Watts, of Benley, Warwickſhire, for an Implement for Draining Land.

—— 31. Mr. J. Bramah, Piccadilly, for a method of retaining, clarifying, preſerving, and drawing off Liquors, &c.

———. Mr. J. Harriott, Preſcot-ſtreet, for a new-invented Capſtan to work Ships' Pumps, &c.

———. Mr. T. Paton, Chriſt-Church, Surrey, for a new-invented Preſs.

———. Mr. J. Parriſh, Somerſetſhire, for a method of making Woollen Cloths Water-Proof.

———. Mr. R. Beatſon, Fifeſhire, for an Application of Wind or Water to Horizontal Mills.

Nov. 9. Mr. H. Overend, of Briſtol, for a Machine to be uſed, as a Waggon, Cart, or Dray, with fewer Horſes, &c. than uſual.

—— 11. E. Cartwright, A. M. for an improvement in the Steam-Engine.

—— 18. Mr. D. Langton, of Wandſworth, for Locks, Springs, and Machinery for ſecuring Doors.

Dec. 12. Mr. J. Crooks, of Edinburgh, for a method of making Soap.

—— 22. Mr. J. Weldon, of Litchfield, for a Machine for pulverizing Bark.

—— 23. Mr. W. Milton, of Briſtol, for a method of building Ships, &c. with diminiſhed Expence.

—— 30. Mr. Matth. Boulton, Staffordſhire, for an Apparatus and Method for Raiſing Water and other Fluids.

1798.

Jan. 16. Mr. A. G. Eckhardt, Chelsea, for a method of making Chairs, &c.

—— 23. Mr. S. Rogers, Yorkshire, for working, adjusting, &c. Slide-Tube Candlesticks.

———. Mr. C. Tennant, of Darnley, near Glasgow, for a method of using Calcareous Earth, &c. instead of Alkalis, in Bleaching.

—— 25. The Earl of Dundonald, for a method of manufacturing Neutral Salts.

Feb. 1. Dr. R. Shannon, of St. Pancras, for an improvement in Brewing and Distilling.

———. Mr. H. Clay, of Birmingham, for a method of saving Water at the Locks of Navigable Canals.

—— 10. Mr. R. Howden, of Hoxton, for a Portable Furnace for Heating Ovens.

—— 20. Mr. F. Farquharson, of Birmingham, for Machinery for making Bricks and Tiles.

———. Mr. J. Douglas, of Christ-Church, County of Surrey, for a Machine for making Bricks.

—— 21. Mr. W. Taylor, of Portwood-Green, County of Southampton, for an improvement of Machines for raising Water, &c.

—— 28. Mr. A. Cederberg, Clerkenwell, for a Machine for glazing Leather.

March 6. Mr. W. Chapman, of Newcastle-upon-Tyne, for a method of making Ropes.

—— 10. Mr. Henry Goolding, of Willesden, Middlesex, for a Machine for raising and removing Earth.

———. B. D. Perkins, A. M. for the Cure of Diseases by Metallic Tractors.

———. W. Bolton, Esq. Captain in the Navy, for an improved Capstan.

———. Mr. W. Letter, of Yardley-Hastings, County of Nottingham, for an improved Harrow.

—— 23. Mr. J. Haycraft, Rotherhithe, for a Gun-Carriage on a New Construction.

—— 30. Mr. J. Douglas, of Christ Church, Surrey, for Machinery for Sheering Woollen Cloth.

———. Mr. R. Johnson, Greek-Street, Soho, for a Medicine for the Cure of Rheumatism.

April 5. Mr. W. Deverell, of Widcomb, Somersetshire, for a new-invented Pump.

—— 18. Mr. W. Sellars, of Bristol, for a new invention in the making of Spinning Machines.

———. Mr. F. Hollick, of Birmingham, for an improvement in Curry-Combs.

(To be continued.)

Allen, Printer, Paternoster-Row.

POETRY.

IMITATED FROM HORACE;

To a Nymph not so Kind as Beautiful.

O THOU, whom beauty crowns, disdain inspires,
Whose charms inflame all hearts with soft desires;
When age arrives, when blooming youth decays;
When drinks thine ear, no more, the voice of praise;
When at thy feet no kneeling youth appears,
When cheeks and hair become the prey of years;
Those eyes no more with love's own lightning shine,
Nor swells thy song with melody divine:
How oft shalt thou lament, alas! too late,
The harsh, irrevocable doom of fate,
That, cold, thou lingeredst in a maiden bed,
Till all the loves, and all the graces fled;
That joys, once slighted, can no more return,
But thy old bosom with vain fires must burn

The following sweet and affecting verses are extracted from the Links o' Forth *by* Hector Macneill, *Esq.; whose feelings, imagination, and experience in the scenes of nature and of life, endow his mind with all the rare inspirations of Genuine Poesy; whose* Will *and* Jean, *is well known, as one of the most beautiful pieces of* Rural Poetry, *and the most happily instructive, that have ever been published; whose* Mary of Castlecary *is one of the sweetest of modern ballads in the ancient style, that were ever sung. The* Doric *of the Scottish Dialect does not disfigure these verses, but renders them doubly pleasing.*

II. *Recollection of the Scenes and Joys of Youth, from Macneill's* Links o' Forth.

POOR, fond enthusiast! whither stray?
By whimpering burn and broomy brae?
Wasting, I ween, the live-lang day
In am'rous rhime;
The hour will come, thou'lt sigh, and say,
What loss o'time!
Yet, wharfore shou'd nae Youth engage
In pleasures suited to its age?
To catch the tids o' life is sage,
Some joys to save:
Wha kens the fights he's doom'd to wage
This side the grave!
To sport on *Pleasure's* flowery brink,
And beek a wee in *Luve's* warm blink,
Is wiser far, I'm sure, than think
O distant harm;
Whan Eild and cauld Indifference shrink
Frae Pleasure's charm.
Then strike ance mair the trembling lyre;
And, Muse, do thou the sang inspire;
Ah! check nae yet the glowing fire,
Tho' Luve divine,
And Youth and Pleasure's fond desire
Fast, fast decline!
Attune the lay! whan Nature's charm
First seiz'd his bosom flutt'ring warm;
Ere *Care* yet came, wi' rack'd alarm,
Or *Friendship's guile*;
Or *Fortune*, wi' uplifted arm,
And treach'rous smile.
Attune the strain that shou'd adorn
Ilk verse descriptive o' the morn;
Whan round Forth's Links o' waving corn,
At peep o' dawn,
Frae broomy know to whitening thorn,
He rapturd ran;
Or fragrant whar, at opening day,
The whins bloom sweet on Ochil brae;
There, whan inspired by lofty lay,
He'd tak his flight;
And towering climb, wi' spirits gay,
Demyit's height.
Oh! grander far than *Windsor's* brow!
And sweeter too the vale below!
Whar Forth's unrivall'd windings flow
Thro' varied grain,
Brightening, I ween, wi' glittering glow,
Strevlina's plain!
There raptured trace (enthroned on hie)
The landscape stretching on the ee,
Frae Grampian's heights down to the sea,
(A dazzling view!)
Corn, villa, hamlet, water, tree,
In varying hue,
Owre lofty here, ilk charm to trace
That decks, sweet plain! thy cultured face;
Aft down the steep he'd tak a race,
Nor, rinning, flag,
Till up he'd climb, wi' rapid pace,
Yon "*Abbey craig.*"
There seated, mark, wi' ardour keen,
The skelloch bright 'mang corn sae green;
The purpled pea, and speckled bean;
A fragrant store!
And vessels sailing, morn and e'en,
To "*Stirling shore.*"
But aftner far, he'd, late and ear,
To yonder *castled height* repair,
Whar Youth's gay sports, relax'd frae care,
Cheat Learning's toils,
And round her Doig's classic chair
Fond Genius smiles!
'Twas here, O Forth! for luve o'thee,
Frae wine, and mirth, and cards he'd flee;
Here too, unskilled, sweet Poesy!

Alas! nor ſkill nor guide had he,
Save warmth o' heart!
Yet feckleſs as his numbers fell,
Nae tongue his peacefu' joys can tell,
Whan, crooning quietly by himſel,
He fram'd the lay,
On GOWLAND's whin-beflowered hill,
And rocky brae.

How richly then the landſcape glow'd,
As faſt the welcome numbers flowed!
How ſmooth the plying bargie row'd
Frae ſhore to ſhore!
How ſaft the kye in *King's Park* low'd,
At milking hour!

And ah! how ſweet the murmurs rang
Frae buſy Labour's rural thrang!
That ſta' the upland heights amang,
And echoing ſpread
Owre *Caſtle*, *Butts*, and *Knott*, alang
The *Backwalk* ſhade!

Dear, peacefu' ſcenes! how ſweet to ſing!
Whan morn's freſh gales their fragrance bring,
Wi' balmy ſough.
And e'evening paints (how ſweet in Spring!)
The "braes o' Tough!"

But ſweet, thro' a' the varying year,
Will AIRTHRIE's banks and woods appear;
And eke CRAIGFORTH, and princely KEIR,
That crowns the ſcene;
And *Allan water*, glittering near
Its *Bleaching green*.

And Shaw-Park, gilt wi' e'ening's ray;
And Edinbro' Caſtle, diſtant grey;
Wi' Alva, ſweet by Ochil brae,
'Mang grove and bower!
And rich Clackmannan, riſing gay,
Wi' woods and tower;

And Blair, half hid in ſilvan ſhade,
Where *Taſte* and *Home* delighted ſtray'd;
What time? whan Lear and Genius fled
Frae bar and town,
To Teath's clear ſtream, that babbling play'd
By Caſtle Down.

—There, aft he trac'd fond Nature's child;
But maiſt at e'ening bluſhing mild,
As owre the weſtern cliffs ſae wild
OLmond's height,
The ſun, in ſetting glory, ſmiled
In purple light!

'Twas then, by gloaming's ſober hour,
He'd court ſome ſolitude obſcure;
Or round Camſkenneth's ancient tower,
Whar winds Forth's ſtream,
He'd wander, meditate, and pour
This mortal theme:—

"How ſtill and ſolemn ſteals the gloom,
"Mild owre the garden's fading bloom,
"Dim flits the bat athwart the tomb,
"On leathern wing;
"—Hark! what bemoan'd the ſlaughter'd doom
"O' Scotia's King?
"'Twas but the dove that woo's his mate,
"Regardleſs of the Monarch's fate:
"Whar, *Grandeur*, now thy regal ſtate?
"—Unmarkt—unknown—
"Nor ſculptur'd verſe records thy date,
"Nor moſs-grown ſtone."

Yet regal pomp, and courtly ſhow,
Aft graced yon caſtle's princely brow,
Whan Scotland's Kings, wi' patriot glow
Delighted, woo'd
Strevlina's fertile fields below,
And winding ſtood.

III. *Contemplation of a deſerted ſcene of ancient grandeur.—From the ſame.*

—Sublime retreat—beloved—admired—
Whaſe rural charms ſae aft conſpired
To call the raging breaſt, whan fired
'Gainſt lawleſs power,
And yield, mid ſocial ſweets retired,
Life's happier hour;

To ſheath in peace War's ſlaughtering ſword;
To drap the *King* at *Friendſhip's* board;
To draw frae Luve's delicious hoard
Her honey'd ſweet;
And chain fierce Valour's lofty lord
At *Beauty's* feet.

Or join the chace, at purple morn,
Owre lawns, and heath-bloom'd mountains borne;
Wi' hounds, and hawks, and bugle horn,
And ſhouting thrang;
While Sauchie's dales, beflower'd wi' thorn,
The notes prolang;

Or break the lance, and couch the ſpear,
At *tilts tournaments* o' weir,
Whar mony a valiant knight and peer
Diſplay'd their ſkill,
To courtly beauty, brightening near,
On Lady's hill.

—Thus tun'd to Paſtime's peacefu' ſtring,
Strevlina's craigs and valley ring;
Blythe roam'd the Courtier and his King
Round *Fortha's* flood,
Till *Faction* ſoar'd on raven wing,
Bedrapt wi' blood;

'Twas then ilk ſport and rural charm
Fled court, and plain, and joyleſs farm;—
Rebellion dire, wi' dead alarm,
Strik'd madd'ning by,
And *Murder* dark, wi' dagger'd arm
And blood-ſhot eye;

CRITICAL CATALOGUE.

I. REPORTS *reſpecting the* DISTILLERIES *in* SCOTLAND, by *Committees of the Honourable the Houſe of Commons, appointed in* 1798 *and* 1799, &c.—Wright, *Piccadilly*.——Theſe reports evince the diſtillation of ſpirits from corn to have been improved in Scotland to extraordinary perfection, and rapidity of manufacture. This they ſhew to have been accompliſhed, chiefly by the adopting of the uſe of *broad-bottomed ſtills*, and by diſtilling immediately from corn, not previouſly malted. In ſpite of the repreſentations contained in theſe reports, we cannot but think, that ſpirits leſs noxious to the health of the conſumers might be produced, if the advantages of ſlow *diſtillation* from a *fermented waſh* of *malted grain*, might be combined with thoſe of the uſe of the *broad-bottomed ſtills*, and the other more recent improvements in this manufacture. In collecting the exciſe duties upon the diſtilleries, it was at one time the law, to maintain exciſemen to watch the manufacture, and to levy the duty upon the quantity of the ſpirits diſtilled. That of impoſing an annual licence-tax upon the *ſtills*, was afterwards adopted, as more convenient for the manufacturer, and leſs troubleſome to government. To obtain the means of judging between theſe two modes of levying the duty, and to find out a method of *effectually equalizing* the weight of the duty upon all the diſtillers in the different parts of the iſle; were the objects of the enquiries of which theſe reports exhibit the reſults.

II. *Anſwer to Lord* SOMERVILLE'S ADDRESS, *&c. on the Subject of Sheep and Wool, of the* 14*th of May*, 1799.—The circumſtances of the war threatened to injure the Engliſh manufacture of ſuperfine woollen cloths, by rendering it impoſſible to procure the wonted ſupplies of Spaniſh wool. The Preſident of the Board of Agriculture, therefore, in his addreſs to the board on the 14th of May, 1799, recommended the uſe of Engliſh wools excluſively in our woollen manufactures. This recommendation appeared unfavourable to the intereſts of thoſe who were gainers by the importation of Spaniſh wool, and by the enormous riſe of its prices. This pamphlet is intended, in favour of theſe perſons, to repreſent Spaniſh wools as indiſpenſibly neceſſary in our finer cloths, and to prove that the diſuſe of them would prove fatal to the woollen manufacturers of England. It is written with prejudice, and without any very able intelligence; yet, it contains uſeful facts; and its author is, in his grincipal poſition, not altogether in the wrong.

III. REPLY, *&c. to an* ANSWER *to the* PRESIDENT'S ADDRESS, *&c. &c.*—This is an anſwer to the preceding pamphlet. The view which it gives of the ſubject, is alſo imperfect, and preſented with prejudice. In the whole, we are inclined to conclude, that at preſent Spaniſh wools are in a certain proportion, indiſpenſably neceſſary to the perfection of ſome of the finer fabricks of our woollen manufactures; but that our native Engliſh wools may be improved, ſo as entirely to ſupercede the Spaniſh; and that the uſe of them in fine cloths ought to be, juſt now, particularly encouraged, on account of the danger of

holding our ſtaple manufacture precariouſly on ſupplies of the raw material from a hoſtile country.

IV. A MEMORIAL *read to the* SOCIETY *for the Encouragement of* ARTS, *&c. and a Speech delivered before the ſame* SOCIETY. By E. CARTWRIGHT, *M. A. and* PREBENDARY *of* LINCOLN; *with an Appendix*, 1800.—The Reverend *Mr.* CARTWRIGHT, upon the death of the late Mr. MORE, Secretary to the Society of Arts, was encouraged to offer himſelf a candidate for the ſucceſſion to that appointment. The ſociety wiſhed the candidates to explain to them their qualifications. In compliance with the Society's deſire, *Mr.* CARTWRIGHT, on the 18th of December, 1799, read in their preſence the Memorial, which is the firſt of theſe papers. With a modeſt firmneſs, in a ſtyle of glowing eloquence, with an agitation of feelings to us exceedingly intereſting, he briefly explains, in this Memorial, the progreſs of his education, purſuits, inventions, and ſtudies, from the time when he went to the Univerſity of Oxford to the preſent year. He was educated at Magdalen College. He was elected to a fellowſhip before he had taken his firſt degrees. By a ſignal mark of eſteem from the whole Univerſity, a particular act of convocation was paſſed, to enable him, though without a degree, to receive the honours and emoluments of a Fellow. During his ſubſequent reſidence in the Univerſity, he had the honour of living in friendſhip with many of its moſt excellent and eminent members; among others, with the late *Sir* WILLIAM JONES and the *late Biſhop of* DURHAM. The latter of theſe friends, when *Biſhop of Lincoln*, beſtowed on Mr. CARTWRIGHT, without his ſolicitation, that prebend which he ſtill poſſeſſes. With Sir WILLIAM JONES, Mr. CARTWRIGHT had an occaſional epiſtolary correſpondence, of which there are ſubjoined, in the appendix, ſome ſpecimens, highly honourable to the memory of that accompliſhed ſcholar and judge. Of the *modern languages*, Mr. Cartwright profeſſes himſelf to be acquainted with none but the Italian and the French. In *Chemiſtry*, he profeſſes not to be an eminent proficient; yet, he juſtly claims the praiſe of having diſcovered one of the moſt important applications of chemiſtry to the uſes of life, in the *uſe of yeaſt as a ſpecific remedy for putrid fevers*. The atteſtations which he brings in proof of the power of this remedy, are highly reſpectable, and perfectly coincide with his own aſſertions. Of the productions of the *Polite Arts*, he declares himſelf an enthuſiaſtic, and, as he hopes, not undiſcriminating admirer. To AGRICULTURE, he profeſſes to have paid, for a period of thirty years, the moſt vigilant attention. He has obſerved it in all its different forms; he has tried, or witneſſed the trial of, almoſt every varied experiment that has been hitherto ſuggeſted for its improvement in England. He believes, that it will never have attained its due perfection in this iſle, till every field ſhall have been brought to exhibit the cultivation and fertility of a garden. In the *Manufactures* and *uſeful Arts*, he profeſſes, that he has had more of dear-bought experience, than moſt men can boaſt. He has diſtinguiſhed himſelf as the author of many uſeful inventions, for the improvement and abbreviations of the manufactures of *Cotton* and *Wool*. Of theſe, he particularly mentions his method of *combing wool by machinery*, as one by which at leaſt 40,000*l*. a year, are ſaved to the manufacturers,—a ſaving that will, within a ſhort time, be augmented to be-

tween one and two millions. His invention for the *conſtruction of arches, ſo that they ſhall be without lateral preſſure*, he mentions, as one which renders it poſſible, without augmented expence, to conſtruct buildings ſecure from all danger of fire. His *improvements on the ſteam-engine*, in conſiſtency with what we had before underſtood of them; he ſtates to have ſimplified its conſtruction, diminiſhed its expence, and augmented its power, ſo as to make it much more extenſively uſeful to all the arts, than it has ever yet been. This is the ſubſtance of the MEMORIAL, the firſt of the papers in this valuable pamphlet. An air of veracity and ingenuouſneſs, is remarkably diffuſed over the whole. Enquiry has ſatisfied us, that Mr. CARTWRIGHT has, in every particular, greatly under-rated his own merits. He is, evidently, not one of thoſe men who are deſtined to make their fortune in the world by oſtentation and unſubſtantial pretence.

Even a man of theſe diſtinguiſhed merits, could not command the ſuffrages of the members of the SOCIETY OF ARTS, in a majority ſufficient to defy competition. A Mr. TAYLOR preſented himſelf, as a rival candidate, for the appointment of Secretary to this Society. Of Mr. TAYLOR's qualifications we have heard much that is very favourable; but nothing, we will confeſs, ſufficient to make us think it to the credit of any body of men, to prefer him to Mr. CARTWRIGHT. While the day of choice was approaching, and the deciſion uncertain, Mr. CARTWRIGHT withdrew himſelf;—either, he muſt allow us to ſuppoſe, from a competition of which he felt himſelf unworthy; or, if this could not poſſibly be the caſe, from a competition in which his friends might think, that it was beneath him to be held one moment in ſuſpenſe. In the SPEECH, which is the ſecond article in this pamphlet, he informed the SOCIETY, that he ceaſed to offer himſelf a candidate for the office of their Secretary; applauded the talents and accompliſhments of Mr. TAYLOR, as greatly ſuperior to his own; and in the language of elegance and ingenuous truth, offered to his friends his beſt thanks for the encouragement with which they had honoured him, while he had offered himſelf to their choice.

The teſtimony of the late Sir WILLIAM JONES cannot but be highly honourable to whoever has the happineſs to obtain it in his favour. The reader will, therefore, regard Mr. CARTWRIGHT with increaſing reſpect, when he peruſes thoſe letters from that eminent man which fill a part of the appendix. They are very elegant, and happy ſpecimens of epiſtolary compoſition. They preſent the character of Sir W. J. in a very amiable point of view. They evince him to have entertained a high regard to the gentleman to whom they were written. Letters from ſome manufacturers and others which follow, evince the utility of Mr. CARTWRIGHT's *Combing Machines*, of his arches built with geometrical bricks, and of his Steam-engines. The latter, working with a preſſure of $13\frac{1}{2}$ lbs. upon a ſquare inch, appear to be, indeed, in the higheſt degree worthy of particular public attention at this very moment. The compoſition of this pamphlet, ſhews Mr. CARTWRIGHT to be not leſs an eloquent writer, than one of the moſt ingenious of all who have ever diſtinguiſhed themſelves in the application of ſcience to the improvement of the uſeful arts. We have profeſſed our reſolution to endeavour at all times to ſingle out the productions of worth and genius, and to beſtow upon them the beſt tribute of our reſpectful ap-

plauſe. In this inſtance, we have had the happineſs of doing ſo. It becomes our readers to peruſe this pamphlet with care, and to give every encouragement which they can offer to men who deſerve ſo well of their country, as its worthy author. *We ſhould be glad to ſee Mr. Cartwright eugaged in ſome undertaking in which his talents might be made uſeful to the improvement of the grain-producing agriculture, and of the rural œconomy in general of Great Britain; ſince to this, do his talents and his wiſhes, appear to be particularly directed.*

V. *A* NEW SYSTEM *of* MINERALOGY, in the *Form of a* CATALOGUE, *&c. By* WILLIAM BABINGTON, *M. D.* 4to. 280 *Pages.*—This CATALOGUE exhibits, as is uſual in works of a ſimilar nature, firſt, a SCHEME of the orders, genera, ſpecies, and varieties of the whole mineral kingdom of nature, with the reſults of the chemical analyſis of the ſpecies and varieties. It then fills the great body of the work, with a detail of all the orders, genera, ſpecies, varieties, and individuals, with an ample diſplay of their reſpective characteriſtics. We have read it with ſome care, and can perceive in it many proofs of diligence, accurate diſcrimination, and extenſive mineralogical intelligence. It is, however, fitter to lie in a mineralogical cabinet, in which it may be compared with ſelect and poliſhed ſpecimens, than to be uſed by the mineralogiſt who purſues the ſtudy of this branch of natural hiſtory in the fields, on the rocks, in the mines, and among the quarries in nature.

VI. *The True* CAUSES *of our preſent* DISTRESS *for* PROVISIONS, &c. *By* WILLIAM BROOKE, *F. S. A. Symonds, Paternoſter-row,* 1800. —Mr. BROOKE is of opinion, that, "the monopoly of farms, the immenſe number of horſes kept in the kingdom, the neglect in breeding cows, horned cattle, hogs, aſſes, and goats, the diſuſe of fiſh, and careleſſneſs of our fiſheries, the preſent method of ſupporting the clergy, the extenſive hop-grounds, neglect of orcharding, &c. are the principal cauſes of the preſent general ſcarcity of wheat and bread, as well as of the enormous dearth of other proviſions in general." He *affirms*, that, by what he calls the *monopoly of farms*, the produce of crops of grain, and of *proviſions* in general has been exceedingly diminiſhed within theſe laſt fifty years. That ſuch a monopoly has actually taken place, he entertains not the leaſt ſligheſt doubt,—no more than that the agricultural produce of Britain is actually leſs than it was in the days of our great-grandfathers. Another ſource of diſtreſs, by want of proviſions, appears to him to exiſt in our *uſe of horſes* inſtead of oxen, for the draught and the ſaddle, and in our neglect to maintain, throughout the country, a greater number of *milk-cows*. He does, not, indeed, pronounce a violent invective againſt *ſheep*; yet, he ſhews *ſufficiently*, that he has no great liking for them. Our *hogs*, he thinks, far from being ſufficiently numerous. He is aſtoniſhed that we ſhould ſo neglect to cheriſh our breeds of *goats*, which might, as he thinks, by their milk, render themſelves much more profitable than thoſe favourite animals on which we delight to waſte ſo much expence. He thinks, that the proportion of *fiſh*, *fowl*, *veniſon*, and *game*, annually conſumed in Britain, is, in compariſon with that of all our other animal food, far too ſcanty; ſince, of the former ſpecies, only 10,000,000 lb. are annually

conſumed; while, of the latter, the annual conſumption amounts to 1,416,000,000 lb. He complains, that the fiſh-markets of London are ſupplied at an expence enormouſly greater than thoſe of Paris, and that Dutch fiſhermen are ſuffered to buy their baits in our own rivers, and to vie with our Engliſh fiſhermen in our markets. He ſuggeſts the propriety of making our canals receptacles of fiſhes; and exclaims againſt our negligence in reſpect to oyſters, lobſters, crabs, and ſhrimps. He inſiſts, that ſince more than half *the tithes* are in the hands of laymen; ſome eſtabliſhment for the ſupport of the church might be deviſed, which would diſcourage agricultural improvements, leſs than the preſent one undeniably does. He thinks our *hop-grounds* extenſive in a proportion highly unfavourable to a ſufficient cultivation of grain, and wiſhes that, inſtead of hops, we would uſe flowers of camomile, wormwood, and rue, in our beer. He wiſhes that we would produce and uſe greater quantities of fruits; that we would plant our wheat with the hand;—that, in London that filth which might enrich the fields, were not, as it is, waſteſully thrown into the Thames; that coffee and chocolate were brought into general uſe as food for the poor; that mules were introduced into general uſe in our huſbandry; that our canals were finiſhed, repaired, and extended, &c. &c.

Partly the importance of the ſubject of which this pamphlet profeſſes to treat, in part, the wideneſs of that range of facts, which its author reviews, partly, the ſingularity of ſome of his opinions, and in part the earneſt benignity of inattention with which he appears to have written it, have induced us to exhibit to our readers a conſiderably ample analyſis of its contents. But, we think that Mr. *Brooke* is often inaccurate in his facts, and almoſt always miſtakes in his reaſonings. The pamphlet ſufficiently deſerves to be read; but, let the reader beware of adopting the prejudices and whims, with which it is, for the greater part, filled.

VII. Elements of Chemisty, &c. intended, not *only for Men of Science, but for Farmers, Dyers, and all the Artiſans of the Chemical Arts*. *By* Robert Heron. *Longman and Rees, Paternoſter-Row, in one large volume*, 8vo. This work *endeavours* to unfold with an order of arrangement, a preciſion of ſcience, and an elegant correctneſs and perſpicuity of language, ſuperior to thoſe which have diſtinguiſhed former ſyſtems of chemiſtry, all the principles of chemical ſcience as they are now received among Philoſophers, in connexion with all the moſt capital facts upon which thoſe principles have been eſtabliſhed. The concluding book applies the principles of chemiſtry to the eſtabliſhment of a *New Theory of Earth*, to the explanation of the *Phænomena of vegetation*, to the operations of *Agriculture*, and to the *Theory of Medicine*, with an extent and dexterity of induction, a boldneſs and vigour of invention, an originality, a beauty, a ſublimity of views, which cannot be contemplated otherwiſe than with ſurpriſe and delight by every man of ſcience, and of a vivacious enlargement of mind. We, without heſitation, prefer Mr. Heron's Theory of the Earth, *as far as it goes*, to thoſe of former Geologiſts, We are exceedingly pleaſed with his account of the chemical phyſiology of vegetation. We agree with him, in all that he advances concerning the importance of chemiſtry in Agriculture.

We cannot doubt of the certainty of his general principles, as to the chemical changes which continually take place in the animal œconomy: And we rejoice, that ſcience is, at length, about to explode thoſe theories which have ſo long diſgraced Medicine. The chemical arts of bleaching, dyeing, brewing, cookery, ſoap-boiling, glaſs-making, &c. are treated of in the ſubſequent part of the ſame concluding book. In ſeveral articles of *Appendix*, the author explains ſome intereſting opinions and facts which he did not to introduce into the ſyſtem of his work. Among theſe, we cannot but diſtinguiſh a ſtatement of facts and reaſonings which appear, deciſively to refute thoſe poſitions of the excellent and moſt ingenious Count Rumford; that water and elaſtic fluids are non-conductors of heat; that heat itſelf is but a modification of motion. We know not, that the doctrine of the *compreſſibility and the elaſticity of heat*, was ever before ſo well explained. Another of the papers in the *Appendix*, produces many arguments, and ſuggeſts ſome deciſive experiments, which, however, have not yet been performed, to prove, that LIME *is but* OXYGEN *in a concrete ſtate;* and that POTASH *and* SODA *are but* kindred modifications of *the ſame* ſubſtance. This doctrine is ſo beautiful, and ſuggeſts ſo many wonderful relations and analogies, that we cannot but earneſtly wiſh it to prove true. We ſhould ſuppoſe that this work muſt prove highly ſerviceable for the diffuſion of chemicial knowledge. We earneſtly recommend it, in particular, to thoſe Readers to whom this Magazine is eſpecially addreſſed.

XI. MORDAUNT, *or* SKETCHES *of* MEN *and* MANNERS, &c. *By the Author of* ZELUCO, 3 *vols.* 8*vo.* ROBINSONS, London. Theſe volumes are, perhaps, leſs valuable, as a mere novel, than on account of the arch, elegant, clear, and flowing ſimplicity of ſtyle in which they are written—,for the ſake of that ſagacious knowledge of the world which they exhibit,—for the lively wit which is plentifully ſcattered through them,—for the ſoundneſs of underſtanding, and the delicacy and correctneſs of feeling which they every where diſplay. The work is in the form of letters: and among theſe letters, are many happy ſpecimens of that epiſtolary compoſition which muſt become a lively and well-educated gentleman. The fable of the novel, though not haſtily opened, is, however, not at all ill-wrought. The characters are, in various inſtances well imagined and diſcriminated, and ſtrikingly marked by many happy touches of a maſter's hand. A keen critic might no, doubt, ſpy and ſpeak of faults but, by Dr. MOORE we have been ſo often delighted and inſtructed, that we can retain little or no inclination to find fault with him.

We regret, that we cannot, as we once intended enter here into a full analyſis of Dr. NISBET's excellent Work on Schrophula, which was mentioned, with reſpectful recommendation in our Catalogue for laſt month.

HISTORY.

National Transactions,

CIVIL AND MILITARY.

ACCORDING to intelligence from the Cape of Good Hope, dated October 23, 1799, it appears that a peace has been concluded by the Britiſh government at the Cape, with the Caffrees. No general action had taken place; but the Britiſh troops had loſt in a ſkirmiſh a lieutenant and twenty men of the 81ſt regiment, who were ſurrounded and maſſacred by a Caffrean detachment. General Dundas ſtill remained with his troops, about a thouſand miles up the country, to aſcertain and fix the boundary between the contending parties. The march of the troops was moſt diſtreſſing, over immenſe mountains, and through woods inhabited by wild beaſts, or by boors ſcarcely leſs ſavage. There are now 150 boors with the detachment, which increaſes its force to 650 men; conſiſting of two troops of dragoons, the flank companies of the 91ſt, part of the 81ſt, and a corps of Hottentots.

An embargo has been laid upon all neutral veſſels at the Cape.

Official liſt of the ſhips driven on ſhore in Table Bay (Cape of Good Hope) on November 5, 1799. The Sceptre ſhip of war of 64 guns, Capt. Edwards; his ſon, two lieutenants, the maſter, gunner, boatſwain, three midſhipmen, and two hundred and eighty men drowned. The Oldenburgh, Daniſh 64 gunſhip, Commodore Fiſher; crew drowned. Sierra Leone, Engliſh whaler, Mr. James Waterman, maſter; crew all ſaved, and the cargo likely to be ſaved. Anubis, American ſhip, Mr. James Bridges, maſter; crew ſaved; laden with cotton; cargo likely to be ſaved. Hannah, American brig, Mr. James Weyman, maſter; crew ſaved; laden with piece goods; cargo likely to be ſaved. A Spaniſh prize brig; crew ſaved.

The Americans appear deeply ſenſible of the loſs they have ſuſtained in the death of General Waſhington. The ſenate and houſe of repreſentatives adjourned immediately on receiving intelligence of that melancholy event. The citizens of Alexandria and many other places agreed to wear crape for 30 days. The theatres were cloſed for a week. All the printers placed broad black lines round their news papers; in ſhort, the various claſſes of Americans vie with each other in teſtifying their reſpects to the memory of that great ſoldier and ſtateſman.

According to letters, dated Dec. 8, it appears that an alarming conſpiracy had been detected in the iſland of Jamaica, which had for its object the maſſacre of the Whites, and the deſtruction of the whole colony. This infernal plot was concerted between the Negroes of Jamaica, and thoſe lately imported from St. Domingo. By the ſeaſonable exertions, however, of the troops, which were inſtantly put in motion by order of Lord Balcarras, the ſymptoms of inſurrection were ſoon ſuppreſſed, the conſternation at firſt excited was appeaſed, and the public ſecurity reſtored. The conſpiracy was to have been put in execution on the 6th of January.

Switzerland, a country endeared to every friend of liberty by the noble ſtruggles it made to ſecure its independence, at a time when all the reſt of Europe was plunged in ſlavery, beloved by every moraliſt for the unaſſuming virtues of its inhabitants, their peaceful and paſtoral habits, the ſobriety, ſincerity and ſteadineſs of their character, is, at preſent, in a very deplorable ſtate. Nothing is heard but the cry of miſery and the groans of deſpair. In

the diſtricts of Walderſtetten, Zurich, Sentis, Turgovia, and Lenth, in the villages ſituated along the Rhone and the Thor, the price of neceſſaries increaſes daily in dreadful proportion; grain can only be procured at an exorbitant rate, and ſeveral of the Communes are totally deſtitute of fodder. The inhabitants are forced either to kill or ſell moſt of their cattle, the chief ſource of their ſubſiſtence. The manufacturers are in a ſtate of ſtagnation, and thouſands of hands are without work. Many families are without bread, and live entirely on potatoes. The number of mendicants is almoſt incredible. The ſtate of the Upper Valais and the Underwald is equally deplorable —the buildings are without windows or rafters; (the military having taken away the wood for firing) there is no inn where the traveller can reſt; the houſes are decayed or in ruins; and the people nearly famiſhed, live in barns. In the ſpace of more than ſeven leagues, all the right bank of the Rhone, is ſacked and laid waſte; Varonne, once a populous and rich village in that diſtrict has been reduced to aſhes; in ſome parts the inhabitants are almoſt naked, both rich and poor being expoſed to the ſame wants. All places preſent a ſcene of the greateſt miſery; but at Brigg particularly, the devaſtation is at its height. Articles of luxury, neceſſity or ornament, the churches, articles of worſhip, and even the tombs, have all been involved in one common deſtruction. The whole country between Brigg and the Semplin is abſolutely ruined; the land is not ſown; and the laſt harveſt, the moſt abundant that ever was ſeen, ſome weeks ago, was ſtill in heaps in the field.

In the ſtate of Kentucky, there are 28517 ſlaves; of which number, 15868 are above twelve years of age, and under ſixty.

Letters from Agra, in the Eaſt Indies, ſtate, that 40,000 Mahratta marauders had inveſted Chittora, 300 miles Weſt of Agra.—Colonel Sutherland, with ſix battalions, had been ſent to diſperſe them.

The ſame letters indicate a ſpeedy renewal of a general war amongſt the Mahrattas; whoſe feuds and internal commotions, though diſtreſſing to the philanthropiſt, are gratifying to the Britiſh politician, as they materially tend to promote our ſtrength in India.

The trial of the perſons ſaid to be the accomplices of Pichegrue, commenced at Straſburg, December 16, before a military commiſſion appointed for that purpoſe, by General Thurreau. Among the accuſed are Chambe, ex-deputy, Lajolais, Demonge, Badonville, St. Remond Gomard, and many others. A great deal of ſolemnity is ſhewn in this proceſs.

The governor general of Bengal, previouſly to the date of September 7, had iſſued orders to raiſe immediately three regiments of ſea-poys, and five troops of cavalry.

The report tranſmitted by the Myſore commiſſioners, ſtates the amount of ſpecie found at Seringapatam at about ſixteen lacks of pagodas, and the amount of jewels at about nine lacks more.

A negotiation of a commercial nature is in agitation between the Britiſh government in India, and the king of Acheen, a diſtrict on the north weſt of the iſland of Sumatra. This country was once conſidered of ſuch importance that its ſovereigns received embaſſies from ſome of the greateſt potentates in Europe, and it is now capable of yielding conſiderable and important advantages in a commercial point of view.

The Britiſh ſquadron on the Babelmandel ſtation, June 27 laſt, under Admiral Blankett, conſiſted of the Leopard and Centurion of 50 guns each; Fox and Dædolus of 32; Albatroſs and Oreſtes of 18; and the Princeſs Charlotte, Indiaman, armed in flute; all well proviſioned.

The iſland of Perim, in the ſtraits, (of Babelmandel where the Britiſh ſquadron is ſtationed) is of itſelf barren and miſerable, yielding neither food nor water. The bay, however, affords excellent ſhelter to our ſhipping, and is ſhaped like a horſe-ſhoe. Fortifications have been lately conſtructed there at a conſiderable expence, which effectually cover the harbour, but do not command the ſtraits on either ſide of the iſland.

The Auſtrians, at preſent, retain poſſeſſion of the whole of the Griſon county. The French, however, exerciſe undiſputed ſway over Switzerland, and have ſtill in their power the paſſage from that country into Italy. Their line of poſts ſtretches through the defiles of the Alps, as far as the Apennines, and continues to occupy the latter from the Col di Tende to the Bochetta, which ſecures to them the undiſturbed poſſeſſion of Liguria.

Buonaparte's aim ſeems to be to gain adherents from all parties. Accordingly, *freedom of worſhip*, in all the churches that *have not been ſold*, has been lately decreed. But the great meaſure of the new government is what is entitled in ſome of the French papers, "The General Reparation." This reparation is the repeal, with ſome exceptions, of the famous Act of Baniſhment of the 4th of September 1797, and of ſome previous acts of ſeverity. The exiled directors, deputies, printers and editors, of that remarkable revolution, are recalled, with the ſingle exception of general Pichegru. Carnot and Barthelemy are amongſt this number, and they are permitted to reſide at Paris; while Boiſſy d'Anglas, Dumolard, and others, ſuppoſed to be attached to the ancient regimen, are reſtricted to various provinces.

The French journals contain long details of the ſkirmiſhes which have taken place in Egypt between General Deſaix, and the Mamalukes and Arabs. They conclude by ſtating, that the latter were defeated in various actions and finally driven into the deſart.

The number of horſes at Paris, at a late enumeration, amounted to 5961; of which every thirteenth horſe has been put into requiſition, to be furniſhed by the canton of Paris.

The name of the Army of England, has by a formal decree of the conſuls, been changed to that of the Army of the Weſt.

The Turkiſh ambaſſador at Paris, confined by the late Directory, having been lately releaſed, has had frequent conferences with Buonaparte and the miniſter for foreign affairs.

Near 4000 proſcribed Neapolitans, condemned to perpetual baniſhment by the king of Naples, have lately arrived at Nice, Toulon, and Marſeilles, in neutral veſſels.

According to official accounts in the Paris papers, a general peace has been lately concluded with the Chouans.

Two hundred and twenty-one American veſſels have been condemned by the French conſul at Cadiz.

According to the late diſpatches ſent home by General Kleber (but intercepted), Sir Sydney Smith was lately diſcomfited, with the loſs of 3000 Turks in his attack upon Damietta.

The ſtates of Swabia, in a note to Mr. Wickham, the Britiſh reſident, have requeſted a loan of one million ſterling, or a ſubſidy, for the 10,000 men who are to be embodied in their circle.

Lord Keith has declared Cadiz, and the port of St. Lucar, in a ſtate of blockade;—neutral veſſels will, of courſe, be refuſed entrance.

The Ruſſian troops under General Suwarrow, cantoned in Bohemia, ſince their return from Italy in December laſt, have received poſitive orders to march to the frontiers of Gallicia, in order to return home.

The prince of Condé, with his corps, is ſtill at Lintz in Upper Auſtria.

Exact report of the number of priſoners under the charge of the French commiſſary, when they were lately delivered over to the tranſport board, in conſequence of the conſular government refuſing to provide for them any longer: Plymouth 7477; Portſmouth 10128; Liverpool 2298; Stapleton 693; Chatham 1754; Yarmouth 50; Edinburgh 208; and Norman Croſs 3038. Total 25,646.

The frigate, La Bourdelaiſe, conſidered by ſhip-builders as the moſt beautiful model ever brought into an Engliſh port, (to carry 28 thirty-two pounders) has been lately commiſſioned at Plymouth. She is ſo completely formed for faſt ſailing, that though often chaced by Engliſh men of war, none could

come up with her, and her captain and owners at Bourdeaux often boaſted that they ſet the whole Britiſh navy at defiance, provided they did not fall in with the Revolutionnaire, in blowing weather; fortunately this event took place about two months ago, when, after a chace of nine hours, going thirteen or fourteen knots the whole time, La Bourdelaiſe ſtruck to Capt. Twiſden. This ſhip was then on her ſecond cruize ſince launching; at which time ſhe had taken and deſtroyed 29 Britiſh veſſels; the inſurance on which at Lloyd's coſt the under-writers *two hundred and thirty thouſand pounds!* Her capacity is 680 tons, ſhe is 159 feet long, and 32 feet 6 inches beam. The command of this choice and deſirable frigate is given to Capt. Thomas Manly.

Application is intended to be made to parliament by the bakers generally throughout England, during the preſent ſeſſion, for leave to bring in a bill to amend and render more effectual an act made in the 31ſt year of the reign of his late majeſty, intitled, "An act for the due making of bread, and to regulate the price and aſſize thereof, and to puniſh perſons who ſhall adulterate meal flour or bread." Alſo to amend another act made in the 13th year of his preſent majeſty, intitled, "An act for better regulating the aſſize, and making of bread, &c."

The Weſt India fleet, conſiſting of 120 veſſels, ſailed from the Cove of Cork, January 15, under convoy of the Decade; and will be eſcorted to the latitude of Madeira, by the Santa Margarita and Revolutionnaire frigates.

The outward bound Liſbon, Oporto and Mediterranean fleets, ſailed from Falmouth, January 28.

Veſſels from New York are now exempt from performing quarantine, in conſequence of the re-eſtabliſhed health of that city.

The number of privateers taken by the Britiſh cruizers in the courſe of laſt year, from the Texel to the Bay of Biſcay only, amounts to 57, with 750 guns, and 4200 men, excluſive of the priſoners brought in by recaptures.

It appears from a paper laid on the table of the Houſe of Commons, in the firſt week of February, that the amount of the revenue for the laſt year, is greater by two milllions than the ſum produced by the ſame taxes in any former year, and that even the old taxes, which might be expected to be diminiſhed by the new, have produced more than formerly.

The Gazette of February 8, contains an order in council, for a general faſt to be obſerved throughout England and Wales, on Wedneſday the 12th, and in Scotland on the 13th day of March next.

A pardon has lately paſſed the Great Seal of Ireland, for Hamilton Rowan, now or lately in America.

On February 6, a patent paſſed the Great Seal, granting to Lord Loughborough (the Lord Chancellor) a penſion of 4000l. per annum.

Three princes of the Houſe of Orleans, in an application to his majeſty, dated at the Bahamas, have lately requeſted permiſſion and paſſports for their voyage to this country. Their memorial ſtates their ſincere contrition for former culpabilities, and profeſſes a deſire to return to their duty to their lawful ſovereign. His majeſty has ſignified his acquieſcence in this ſolicitation, and the duke of Orleans and his two brothers have ſince arrived in town.

The number of the Iriſh militia to be drafted into the regular ſervice is 10,000.

Houſe of Commons, February 3. On the order of the day being read, to take into conſideration his Majeſty's meſſage, Mr. Dundas entered into a minute ſtatement of the origin and progreſs of the war, attributing the late conduct of Buonaparte, in ſeeking a correſpondence, to inſidious motives, for the purpoſe of traducing this country, &c. &c. Mr. Dundas went at conſiderable length into the recent correſpondence,—detailed the continued ſyſtem of treachery and rapine practiſed by the French Republic,—contraſted the ſtate of the enemy's almoſt annihilated marine, with ours, which had, every where, afforded protection to our unparallelled commerce; and concluded by moving an addreſs, the eccho of the ſpeech. On the queſtion being put, Mr. Wht-

bread ſaid, that the Right Hon. Secretary had endeavoured by invective againſt France to divert the attention of the houſe from the queſtion before it, which was not the enormities that had been practiſed by the republic, but to enquire into the manner in which an overture made by France for peace, had been received. Mr. WHITEBREAD here entered largely into the queſtion; arguing that the form of government which France might think proper to adopt, ought not to preclude negotiation or even peace, alluding here to the former profeſſions of miniſters, and to the two prior miſſions of Lord Malmſbury.—Mr. Canning replied at length, to the arguments of the laſt ſpeaker, further illuſtrating the character of Buonaparte, and urging that our faith no leſs than true policy incited to unity in action with the other powers forced by France into the war. Mr. Erſkine took a copious review of the conduct of miniſters, and ſaid we had no right to interfere with the conſtruction of the French government, the crimes as well as continuance of which, had proceeded from the hoſtility of this country. Mr. Pitt entered into a detailed ſtatement of the origin of the war, which he contended was ſolely imputable to the aggreſſion of France. He inſtanced their conduct in regard to Holland, Belgium and Savoy; the famous decree of the 19th of November, promiſing protection to all who wiſhed for revolutionary freedom, and their ſubſequent decree of the 13th of December, which he conſidered as tantamount to a declaration of war againſt all regular governments; yet it was not till after theſe and the murder of Louis XVI. which put a period to the functions of M. Chauvelin, that that miniſter was ordered to leave the kingdom; yet previouſly to this event, he inferred from the publications of Dumourier, Briſſot, and Genet, that France had determined on hoſtilities againſt this country. Mr. Pitt here entered into a minute ſurvey of the conduct of Buonaparte; war, he contended, is the only poſſible means of his permanence; and therefore he muſt be inſincere in his overtures for peace. Adverting to the miſſions of Lord Malmsbury to Paris and Liſle, he obſerved, "We treated before becauſe an appeal ſhould be made to the people, and it was important that the people ſhould receive an abſolute proof of the neceſſity of the war. In caſe of a change of circumſtances, however, wherein the hopes of a vigorous proſecution of the war might be ſlackened, ſaid Mr. Pitt, I and my aſſociates will not fail to counſel our ſovereign accordingly.—Mr. Fox obſerved, that every principle and ſpeculation upon which this moſt burthenſome conteſt had been protracted to its ſeventh year, had proved fallacious—a new æra, ſaid he, is now propoſed, and principles are laid down, upon which it may be carried on to eternity. This war, he pronounced, a war of aggreſſion againſt France; Auſtria and Pruſſia were the aggreſſors. The very diſmiſſal of M. Chauvelin was in itſelf a declaration of war, conformably to the expreſs letter of the treaty of commerce then ſubſiſting between the two countries. The internal and external politics of France had been hideouſly bad; yet in exterior relations ſhe had only imitated and executed the ambitious projects of the Bourbon family. Mr. Fox entered into a perſpicuous review of the arguments uſed in ſupport of the Addreſs. He contraſted the partition of Poland with the uſurpations of France, and the maſſacre of Praga with the murders of Buonaparte. He inſtanced the practices of this country to ſeduce Switzerland, Genoa, and Tuſcany from their neutrality, and argued, that if France had unjuſtly ſeized Venice, the Emperor could not with juſtice accept of the transfer, and incorporate it with his own Imperial dominions. Mr. Fox, after deſcanting with great warmth and freedom on the conduct of Ruſſia in regard to Denmark, Hamburgh, and Spain, reverted to the queſtion, and inferred that miniſters will not liſten to negociation unleſs in the moment of defeat and adverſity. Their laſt note to the French Government he termed arrogant and equivocating. At half paſt three the houſe divided; for the Addreſs 265, againſt it 61.

'An Addreſs, ſimilar to that carried in the Houſe of Commons, was moved by Lord Grenville, and which, after producing a debate in which Lord

Holland took an animated part againſt the motion, was carried by a great majority.

Mr. Wyndham, in moving for the extraordinary expences of the army, on Feb. 7, ſaid that there had been an increaſe of 48,000 men to the regular force, and a reduction of 32,000 from the militia. The whole force he propoſed was 192,000 men, which was near 30,000 leſs than laſt year, and would produce a diminution of expence of 500,000l. The whole expence of the year under the head of Army to be 8,854,700l.

110,000 ſeamen (inſtead of 120,000) have been voted for the ſervice of the year 1800, including 22,600 marines.

On the ſecond communication from the French Government (brought by the courier who carried Lord Grenville's letter to Paris) Buonaparte has not written at all. It is not addreſſed to the king; the ſtyle of it is, on the whole, reſpectful, and thet one and temper are moderate. Talleyrand, however, juſtifies the conduct of the former rulers of France, though he acknowledges that ſome of them had afforded juſt motives for alarm and complaint to foreign powers. The French miniſter concludes his letter by ſtating, "that none of the circumſtances which relate to England, to France, and to the reſt of Europe, appear to him to be an obſtacle to immediate negociations for peace." He therefore preſſes our miniſters to accede to a conference, and propoſes that it ſhall be held "at Dunkirk, or any other place which may be more convenient." In this ſecond letter the introductory words "Liberty" and "Equality" are omitted.

Articles of the propoſed Legiſlative Union between Great Britain and Ireland, as preſented by Lord Caſtlereagh to the Iriſh Houſe of Commons, on Wedneſday, February 5th:

Article I. On the firſt day of January, 1801, the kingdoms of Great Britain and Ireland to be united into one kingdom, by the name of the United Kingdom of Great Britain and Ireland; the royal ſtyle, titles, &c. to be ſuch as his Majeſty ſhall be pleaſed to appoint. II. The ſucceſſion to the imperial crown of the ſaid united kingdom to continue limitted and ſettled as it now ſtands. III. The United Kingdom to be repreſented by the ſame Parliament. IV. Of the Peers of Ireland at the time of the Union, four ſpiritual lords, by rotation of ſeſſion, and twenty-eight temporal lords for life, to be the number to ſit and vote in the Houſe of Lords; and one hundred commoners. V. The Churches of England and Ireland to be united into one church. VI. Articles exported from Ireland to Great Britain to pay on the import a duty equal to that paid in Great Britain by the Britiſh ſubject on ſame article. The trade of the two countries to be free from all prohibitions, bounties, and drawbacks, excepting thoſe under the corn laws. VII. For twenty years Great Britain to pay fifteen parts, and Ireland two parts, toward the expenditure of the United Kingdom. After opening his plan, Lord Caſtlereagh moved, that his Majeſty's meſſage preſented by him (which recommended to the Commons to take into conſideration the reſolutions of the Britiſh Parliament on this ſubject) be diſcuſſed by a committee of the whole houſe on the Wedneſday following. Mr. G. Ponſonby oppoſed the motion in a ſpeech of great ability. The debate continued with great warmth till half paſt twelve on Thurſday afternoon, when the houſe divided, for taking his Majeſty's Meſſage into conſideration, Ayes 158, Noes 115—Majority 43.

The public papers of Ireland are filled with long and ſpirited advertiſements from every part of the country, as well as from almoſt every corporate body, on the important ſubject of the Union. A very great majority of both the counties and corporate bodies have voted petitions (which ſtill continue to be daily preſented, and couched in language remarkably energetic, or rather violently adverſe) againſt the meaſure. In ſhort, the perturbed ſtate of the ſiſter kingdom muſt naturally excite the fearful anxiety of every friend to the common intereſts of the empire; ſuch is the agitation, effervеſcence, and diſtraction of the public mind there!

Commercial Affairs.

IN the colony of Botany Bay there are about 6000 inhabitants, who expend, upon a moderate calculation, 1000 gallons of ſpirits weekly. The favourableneſs of the climate produces an effect wonderfully prolific, upon the animal creation and indeed upon females of all deſcriptions. Children abound in every hut; goats bring forth three, four, and ſometimes five kids; ſheep commonly two lambs. A clergyman, who purchaſed a cow three years ago, has now from her, her children and grand-children, nine fine cows, of which three are again in calf.—Some ſmall veſſels of the wood of the country, and a great number of good boats, have been lately built there. Government have upon the ſtocks one ſhip of 200 tons, and another of 80. Two private ones are building; one of 50, and another of 80. The former (which is the property of Mr. Palmer and his friends) is meant to trade round to the new ſettlement upon the banks of the Hawkſbury river, and Norfolk iſland. (The above information is of the date of December 1, 1798.)

As it has not been thought requiſite to make any new regulation, with regard to the diſtillation from grain (the neceſſity of ſuſpending or reſtricting which had been matter of conſideration) the diſtilleries have been permitted to proceed without any other reſtriction than that which now exiſts of not diſtilling from wheat. In conſequence of this reſolution (agreed to between Mr. Pitt, and a deputation from the malt diſtillers) the latter immediately lowered the price of ſpirits 2s. 6d. a gallon. They alſo informed the rectifiers that thoſe who had made purchaſes at the late high price, ſhould be allowed a diſcount equal to the above ſum.

At a General Meeting of Dealers in London, held purſuant to public advertiſement, at the London tavern, on the 29th of January, Mr. Joſeph Kemble in the chair, it was reſolved unanimouſly; 1ſt, "That the demand lately made at ſeveral inns in London, for booking goods delivered, is extremely unreaſonable, and will prove highly injurious both to town and country dealers." 2. "That the ſaid demand, as appears from the counſels' opinions this day read is illegal." 3. "That ſuch demand be therefore vigorouſly oppoſed, and that the dealers in the country be requeſted to concur with the dealers in London, in ſuch oppoſition; with other reſolutions, appointing committees from different trades to conduct the buſineſs of the meeting, &c."

Innumerable loſſes of lives and property, having happened in the river Humber, from the ignorance and unſkilfulneſs of improper perſons acting as pilots, a plan has been for ſome time under conſideration for making THE HUMBER, PILOT-WATER, and for the Appointment and Regulation of HUMBER PILOTS. A petition to the Houſe of Commons for leave to bring in a bill for that purpoſe, is to be preſented during the preſent ſeſſions, and a very liberal ſubſcription has already been made, and is ſtill ſolicited, for defraying the expence of carrying this important meaſure into execution. The firſt meeting of the merchants, under-writers, ſhip-owners, and others, for raiſing a fund for the purpoſes mentioned in the draft of the bill, took place at Hull the 26th of laſt December.

The fleet of Eaſt-India ſhips, which ſailed from St. Helen's, on the 16th of November laſt, arrived at Cork on the 12th of January. It conſiſts of the following ſhips, Thetis, Capt. H. Bullock; Walpole, Capt. C. M. Venner; and Worceſter, Capt. J. Hall, from Madras; the Earl of Wycombe, Capt. D. Meadows, and Belvidere, Capt. C. Chriſtie, from Bombay; with the Seringapatam and the Cornwallis, which bring diſpatches from the governor general of Bengal.

On January 18 or 19, a moſt complete and extraordinary theft was perpetrated in Exeter; the city bank was robbed of caſh and bills to the amount of ſeveral thouſands of pounds. The circumſtance was peculiarly ſurpriſing, as the doors of the bank and ſtrong iron repoſitory were found locked, when the attendants entered upon their buſineſs on the Monday morning following. Nothing has yet appeared that tends to throw any light on the matter.

We beg leave to recommend the following caution to all perſons who receive bank bills, that they require the *payers* of ſuch bills to *write* their names on the back thereof. This will enable the receiver to recover the value in caſe of forgery, from the payer of ſuch bills.

Our loſſes upon the Northern coaſt of Britain, in conſequence of the late tempeſtuous weather is ſtated to comprize 150 veſſels and 1000 ſeamen.

It is of importance to be univerſally known that the admiralty, treaſury, poſt-office, war-office, and many other departments have no holiday but the ſabbath; and it would perhaps be well for commerce, if the cuſtom-houſe, bank, &c. were upon a ſimilar eſtabliſhment.

Such has been the late general increaſe and extenſion of our commerce, that 72 ſhips belonging to Great Britain were employed laſt ſeaſon in the Greenland and Davis's Straits whale and ſeal fiſhery.

Some forged bank-bills have been lately uttered, in the neighbourhood of Lynn. Theſe notes are known by the laſt ſtroke of N. in the number, being contracted inſtead of being free; and the paper which has the water-mark, has been finiſhed with bad oil, ſo as to appear greaſy.

The bank of France has lately publiſhed the act of its incorporation. Its capital will be about 40,000l. ſterling, divided into ten thouſand ſhares. It will diſcount bills of exchange, notes payable to order; and iſſue notes payable to the bearer.

It appears from a work lately tranſlated from the Dutch language into the French, that from 1669 to 1778, both years incluſive, the Dutch alone took on the coaſts of Greenland 57589 whales; and from 1719 to 1778 both years incluſive, 7586 of theſe fiſh in the ſtraits of Davis; which makes a total of 65175 whales.

Mr. R. Child of Worceſter, Meſſrs. Mule, Banet, & Co. of Stourport, Mr. William Devey of Bewdley, and Meſſrs. S. and H. Jones of Bridgnorth, being the regular carriers of goods on the river Severne, to and from Briſtol, Worceſter, Stourport, Bewdley, and Bridgnorth, have announced their intention by public advertiſement (in conſideration of the great difference of expence attending the navigating and working their veſſels, the high price of proviſions, ſtores, and other increaſed expences) to advance the price of freight on goods carried in their veſſels, &c. This regulation was to take place on the firſt of January laſt.

Accurate ſtatement of the Eaſt-India company's declaration for the March ſale of teas.

Bohea - -	500,000
Congou - -	3,500,000
Souchong - -	600,000
Single Twankay -	600,000
Hyſon Skin - -	80,000
Hyſon - -	520,000
	lb. 5,800,000

Trett to be diſcontinued.

A cuſtom has prevailed in ſeveral of the ſea-ports, particularly in Liverpool, for captains of ſhips to negotiate promiſſory notes, commonly called ſhip notes, drawn on paper not ſtamped as the law directs;—all ſuch notes however are illegal, and all parties concerned with them are liable to heavy penalties, recoverable in any court of record, one half to the king, the other to the informer, with full coſts of ſuit.

Elſineur, Jan. 2. During laſt year the following number of ſhips were cleared here: Engliſh 2599—Daniſh 1571—Swediſh 1674—Pruſſians 1420—Americans 152—Roſtocker 137—Papanburgers 97—Hamburgers 5—Oldenburgers 33—Bremeners 61—Lubeckers 54—Ruſſians 13—Portugueſe 2.—Total 7848.

All the outward bound fleet have arrived ſafe at Jamaica, except the General Goddard, a valuable ſhip which was captured by ſome Spaniſh ſhips of war.

The following notice to mariners is copied from an official paper lately publiſhed. The light houſe, ſituated on the point of Lindeſneſs in Norway, not being ſufficiently elevated, nor diſcernable by day, his Daniſh majeſty has thought proper to cauſe to be erected on the ſame ſcite, a tower of ten yards, or thirty feet, in height, painted white, upon which a fire, as formerly, will be lighted on the firſt day of February of the preſent year.

The Ark, Capt. Worſley, which arrived at Cowes, January 20, was the laſt ſhip of the Leeward Iſland fleet that was unaccounted for. Every other veſſel reached ſome port or other; a fortunate circumſtance conſidering that they had loſt their convoy and were ſcattered in a gale of wind.

The number of enemy's merchant veſſels taken and retaken by Britiſh cruizers, ſince the commencement of the war, amount, on a groſs calculation, to 6000.

Some new ſloops, for the pilot ſervice, are building at Bombay, modelled after a fine veſſel in the poſſeſſion of the Nabob. They are to carry 14 guns on the main deck, and are to run upon a wind with greater facility than any at preſent in the ſervice.

The Sound Liſt announces the paſſage from the Baltic for Britain, between the 3d and 24th of December, of 52 ſhips, laden with wheat, 10 with oats, and 5 with rye.

Propoſals have been lately advertiſed for building a NEW PIER and QUAY, at the harbour of Kirkcubright, an improvement which will be of conſiderable uſe to the trade in the northern parts of the Iriſh channel.

It is in contemplation to effect a navigable canal from Croydon to the Thames at Rotherhithe.

Oxford canal ſhares of 100l. ſtock, ſold a few days ago, in Banbury, by auction, at 194l. each.

Manufactures and Useful Arts.

RIVOIRE, an officer of the French marine, has lately ſuggeſted a propoſition, which, by diminiſhing the quantity of ſalted meats uſed at ſea, and reſcuing the men, in a certain degree, from the ravages of the ſcurvy, may effectually contribute to the health of ſeamen. His method is to prepare meat ſo that it may be preſerved a long time without the uſe of ſalt, and conſequently without impairing its nutritive qualities. When he was in the Spaniſh part of the iſland of St. Domingo, he had frequent occaſion, he obſerves, to make uſe of *Taſſos*, which are long ſlices of meat, deprived of its fat, and afterwards dried in ſmoke. This Taſſo preſerves itſelf for a long time, without any alteration, even in that hot climate, when it is well preſerved. He employs ſimilar means with ſome modifications to ſecure dried meats, &c. In the ſlaughter houſe it will be neceſſary to ſelect the moſt fleſhy parts of beef or mutton to clear the muſcles of the ſurrounding fat, and to cut the fleſh into large ſlices perpendicularly, according to the direction of the fibres. Theſe ſlices are to be expoſed to the heat of the ovens in which biſcuits are baked for the uſe of the navy, when the ovens are at the heat of 50 degrees by Reaumur's thermometer, and are to remain there until the ovens be cold. This operation is to be repeated, turning the larger ſlices till they are entirely dried, and of an horny but friable conſiſtence. The ſlices ſhould then be placed in caſks, and the fat melted and purified by means of ſalt and boiling water: the moiſture being abſorbed, not however too hot, ſhould be poured in upon them. The caſks are then to be headed, taking care that no vacant ſpace be left, and both ends are immediately to be caulked. The fat may ſerve to ſeaſon the roots and greens, and enrich the ſoup of the crew, &c.

It is a well-known fact, that the land-crab, (*cancerterrestris*) when taken near the manchinel tree, is found, particularly in dry seasons, at one time safe, at another poisonous—from feeding on the bark or leaves of that tree in lieu of other nourishment. The mountain crab is likewise dangerous at particular times of the year, from a similar cause. The inhabitants of the West India Islands are so sensible of this that they never eat them, unless they have been previously kept in coops a fortnight or three weeks, and purged with the physic nut leaves; a convincing proof that amphibious animals may acquire this noxious quality from their food, without inconvenience or danger to themselves.

The Royal Society of London, have lately voted thanks to Mr. PERKINS, proprietor of the metallic tractors, for some experiments performed by him, which have determined the question that the tractors really have a salutary action in diseases; contrary to the suggestions of many who ascribe their effects to the imagination. The experiments submitted to the Royal Society were chiefly on infants, persons suffering by epileptic fits and horses; in all of which cases the tractors were found to give relief, as likewise in rheumatical and topical complaints.

Dr. S. H. JACKSON, in his "Cautions to Women respecting the State of Pregnancy," &c. condemns the practice of blowing with the breath into the mouth or nostrils of a still-born infant for the purpose of distending the lungs. He remarks that the excitement of respiration, is but a secondary consideration in the resuscitation of infantile life, and that our chief attention should be directed to restore the action of the heart, and circulatory system on which the fœtal life almost solely depends. He observes also, that the air, which an attendant has already breathed, and which, by the common practice, is breathed over and over again, at the mouth of the child, is the worst air that can be put into it, and the most unlikely to answer the intended purpose.

Persons employed in pointing needles by dry—grinding them in the needle manufactory, are particularly liable to a species of phthisis, or pulmonary complaint, such as cough, and purulent or bloody expectoration; they gradually waste in flesh, and strength, and hardly ever attain the age of forty years. Dr. JAMES JOHNSTONE of Worcester, to alleviate or prevent this mischief, suggests that the particles of iron and dust produced in the operation of grinding, might be in a great measure prevented from flying off, by occasionally dipping the hand in cold water: A crape, or gauze hood, or helmet might also be so contrived as to intercept the passage of the dust to the lungs, during inspiration.

At a general meeting of the manufacturers of white metal buttons, held in Birmingham, January 14, to take into consideration the present high price of metals, and to adopt some mode of remedying the alarming evils occasioned thereby, it was unanimously resolved as a speedy and temporary relief, to reduce the present FIVE PER CENT. upon all patterns now in circulation; such reduction to take place on the first of February, and all orders not executed by that time, to be subject to the same reduced discount,—also that a committee be appointed to take into consideration the present deplorable state of the trade, and to arrange a plan for its better regulation in future.

N. B. The trade for some time past has laboured under many disadvantages, occasioned by the almost continually advanced prices of metals, and the enormous increase of the discount allowed.

A tree has been lately discovered on the coast of Sumatra, called by the natives the silk cotton tree. It produces a substance similar to that of the cotton tree in Bombay, but which is of a superior, fine, silky nature;—and the manufacture promises to be very lucrative.

Dr. J. HARNESS, Physician to the fleet in the Mediterranean (in a communication for Dr. TROTTER'S *medica nautica*, lately published) gives an account of the good effects he derived from the application of the gastric juice

of graminivorous animals, to ulcers of a ſcorbutic kind inclining to ſphacelus. He obſerves that he has found this remedy ſucceed in more than a hundred inſtances where ſphacelus occurred.

The uſe of oil as a remedy for the bite of ſerpents, was long ago recommended in the tranſactions of the Royal Society of London; but it appears to have received no ſanction from ſubſequent experience. Of late, however, its efficacy has been aſſerted, in caſes of the bite of the rattle-ſnake, by Mr. J. MILLER of Pendleton County, North America. In a great number of inſtances, he obſerves, olive oil, taken inwardly in the quantity of a few ſpoon-fulls, and applied alſo to the bitten part, has proved itſelf adequate to the worſt of caſes, if timely exhibited.

Mr. MURDOCK, a Corniſh Engineer, has lately invented a conſiderable improvement in ſteam engines; the principal merit of this invention lies in ſimplifying the conſtruction of the ſteam valves, or regulators, by which two valves anſwer the ſame purpoſe as four on the old conſtruction.

Mr. C. TAYLOR, on February 5, was elected principal ſecretary to the ſociety for the Encouragement of Arts, Manufacturers, and Commerce.

Agriculture.

FRom the intereſting account of Mr. KENT's improvements on his Majeſty's farm in the great park at Windſor, (lately addreſſed to the Secretary of the Society for the Encouragement of Arts, &c.) it appears that in the year 1791, the great park, containing about 4000 acres, fell into his Majeſty's poſſeſſion. At that time it might be truly called a rough jewel. The whole, as a natural object, was grand and beautiful, of a foreſt appearance; but the parts were crowded and indiſtinct. The ſoil was various, ſome parts clay and loam, and ſome ſharp gravel or poor ſand; a great part of the former was covered with ruſhes and mole hills, and the latter with fern and moſs.

About 1000 acres of the lighteſt part were ſeparated from the reſt at one extremity, and formed what is called the Norfolk farm; about 400 acres more at the other extremity, of a good loam and ſoil were ſeparated and called the Flemiſh farm; both being named from the nature of the huſbandry, meant to be adopted upon them.

The reſt about 2400 acres remains ſtill in plantations and park land; and though ſo much reduced, yet, from the improvements which have been made upon it, is now capable of carrying more ſtock than the whole 4000 acres did before. All the unſound, wet parts have been drained by the Eſſex mode, ſo as to be rendered firm and productive of an improved herbage. The mole hills have been levelled, chiefly by dragging, and the courſe and moſſy parts fined by repeated harrowing and rolling, (being one of the firſt improvements upon park land of this deſcription), beſides which, a variety of beauty has being laid open by clearing the villages and low parts, to give a bolder effect to the woody ſcenes upon the higher ground; and by making judicious openings, ſo as to break ſtrait lines and ſeparate parts that were in ſome places too heavy and ſamely; ſo that the ſame extent of land has now not only a much larger appearance, but exhibits a much greater variety of ground.

The ſacrifice of timber, in effecting theſe improvements, has not been greater than was requiſite. There has not a tree been taken down but what was either in decay, or removed to give room for the growth of others, or to ſet them off to greater advantage in picturesque appearance.

The motives which induced his Majeſty to adopt the farming ſyſtem upon ſo large a ſcale, were chiefly to create uſeful labour for the induſtrious poor

in the neighbourhood, and by trying experiments in agriculture, to excite irritation, while ſucceſs might encourage it.

The Norfolk farm borders on that extenſive waſte, called Bagſhot Heath, hitherto conſidered as too barren for cultivation, though large tracts of a ſimilar quality have been long ſince rendered uſeful to the community on the ſouth weſt part of Norfolk. Arable land of this deſcription is generally managed there under a five-courſe ſhift: firſt wheat, ſecond turnips; third, barley with ſeeds, which continue laid two years. But as the ſeeds turn to very little account after the firſt year, his Majeſty's, which, though a five courſe ſhift, likewiſe, of one hundred acres in a ſhift, is upon a much improved courſe of cropping; firſt wheat or rye; ſecond the irregular ſhift; third, turnips; fourth barley or oats; fifth clover. The irregular ſhift, which is of great uſe on a light land farm, is meant to be partly productive, and partly preparative. Forty acres of it are ſown with vetches, to be fed off; forty are ſown the latter end of Auguſt with rye for early ſeed the next ſpring, for the ewes and lambs; the remaining twenty acres are planted with potatoes, and the whole comes round for turnips the next year.

From the advantage of running ſheep in the park, this farm has been brought ſurpriſingly forward, conſidering the ſhort time it has been cultivated; and a great part of it which produced nothing but heath and moſs, and would have been dear at five ſhillings an acre to rent, now produces crops worth more than the original fee ſimple of the land.

The comparative advantages of the labour of horſes and oxen have been for ſome time under the conſideration of the public. His Majeſty has unqueſtionably tried the latter upon a larger ſcale than any other perſon, as he does not work leſs than one hundred and eighty oxen upon his different farms, parks and gardens; and has found them to anſwer ſo well that there is not now a horſe kept.—Upon the two farms and the great park, two hundred are kept, including thoſe coming on and going off; forty are bought in every year, riſing three years, and are kept as ſucceſſion oxen in the park; one hundred and twenty are under work; and forty every year are fatted off, riſing ſeven years.

Natural Phenomena.

IT is a ſerious and remarkable truth, that within the laſt fifty years, many of our fineſt antient churches have, by conſtant neglect, fallen down in utter ruin. About the year 1750, the large pariſh-church of Whitchurch, in Shropſhire, inſtantaneouſly fell on a Sunday, between morning and evening ſervice. In the year 1786, part of the great nave, and the whole of the curious and magnificont front of Hereford cathedral gave way, and in a moment became a heap of ruins. In the ſame year, the large pariſh-church of St. Chad, in Shrewſbury, alſo ſuddenly fell down. In the following year, the church of Banbury, in Oxfordſhire, one of the largeſt in the kingdom, ſhared the ſame fate.

A milk-white cock robin, the breaſt excepted, was taken in a ſhop at Whiteman's, Suſſex Green, in Cumberland, during the late froſt. This *rara avis* has been caged, and is much admired for its ſingular beauty, and elegance of ſhape.

At the Odeon, one of the theatres of Paris, was religiouſly preſerved the great chair in which Moliere played *Le Malade Imaginaire*; the conflagration which lately conſumed that edifice did not reſpect this valuable piece of furniture.

The *Agave Americana*, or large ſtriped Americana Agave is now in flower in the Botanic Garden, Cambridge.

A violent ſtorm lately blew down the remains of King John's Caſtle, at Old Ford, near Bow. This antient pile or palace was built in 1203, and was the reſidence of the king whoſe name it bears. It was firſt mutilated during the civil wars of Charles I. About 40 years ago the chapel fell, and about 10 years afterwards two wings tumbled down. It is now levelled.

A very ſingular fiſh called *Barracuræ*, a great enemy to pilchards and herrings, (whole ſhoals of which diſperſed on its approach), was lately taken in a net off the Ram Head on the coaſt of Cornwall.

Fine Arts, Science and Literature.

IT appears from a deſcription of the colony of French Guiana, lately publiſhed at Paris, that a number of errors have eſcaped the writers, who have hitherto treated of that ſubject.—One of theſe, is, to diſtinguiſh the iſland of Cayenne from the Continent, as if it were perfectly detached from it,—another is, in ſpeaking of the climate to pretend that it exhales a peſtilential air, as is juſtly advanced with regard to Batavia, and ſome other parts of the globe,—ſome authors have likewiſe given an unfavourable judgement as to the fertility of the land,—the falſity of which aſſertion this author demonſtrates, and proves on the contrary, its very great fertility,—and the French exiles, have it ſeems, made the moſt lively reclamations to their friends in France; of the ſcarcity of poultry and cattle, while in reality, the colony, as this author ſhews, might, if it were leſs diſtant, eaſily ſupply all France with proviſions of both kinds.

The firſt claſſical book that ever iſſued from the Ruſſian Preſs, was Cornelius Nepos, in the original language; it was printed at Moſcow in 1700.

A beautiful figure of a bird of paradiſe, delicately formed, brought from Seringapatam, lately arrived in the ſhip Cornwallis, and is now depoſited in the India Houſe. This ſuperb figure, which formed part of the throne belonging to the late Sultan of Myſore, and valued at 60000l. ſterling, is to be preſented to the King. The jewels about it are of the firſt kind, its tail exhibits a profuſion of rubies (and emeralds fancifully placed ſo as to repreſent real life), the neck is adorned with brilliants, the legs are of gold ſtudded with jewels, and the tout-enſemble is a perfect maſter piece.

The opinion of Vanhelmont and of Boyle, that *plants draw their principal nouriſhment from water*, is nothing leſs than a new diſcovery; this ſame idea has been found in a work intitled *Recognitions Clementines*, the author of which lived many ages before Vanhelmont.

The National Inſtitute of Cairo has already founded there a botanical garden, a menagerie, a public library, an obſervatory, a cabinet of Natural Hiſtory, a chymical obſervatory, a hall of antiquities, &c.

At Geneva is now publiſhing a Splendid Journal, entitled BIBLIOTHEQUE BRITANNIQUE, or a collection extracted from the Engliſh periodical and other works; conſiſting of memoirs and tranſactions of the Societies and Academies of Great Britain, as well in Europe as in Aſia, Africa, and America. Among other learned authors of this novel undertaking, deſigned to tranſplant into the ſoil of France the moſt agreeable and valuable flowers, and fruits of Britain, in literature, the ſciences and the arts, are the Pictets, a family celebrated for half a century for their love of letters and devotion to the uſeful arts.

Some learned men of Pheladelphia and Baltimore in the U it.d States of North America are about to reprint the works of the principal German poets and philoſophers, to diffuſe, and keep up a taſte for reading in the German coloniſts who live in that country. The firſt volume of this collection appeared in 1796, (by G. KEALINGE), under the title of *D. Dem Andenken deutſcher Dichter und Philoſophea gervidmet von Deutchen in Nord America.* This volume contains the death of *Abel*, *Daphries* and *Night*, by GESNER, with a portrait of that author. The impreſſion is very accurate.

On the 20th of March next will be publiſhed a SERIES of PLATES, repreſenting the *neat cattle* and *ſheep*, to which the PRIZES given by the SUSSEX AGRICULTURAL SOCIETY were adjudged in the year 1798; together with an account of the riſe of the Inſtitution and its progreſs up to that period. By EDMUND SCOTT of Brighthelmſtone. The work will conſiſt of ten plates, four of ſheep, and ſix of neat caſtle. To be printed on fine wove royal paper and hot preſſed. Price to Subſcribers 10s. 6d. plain; and 25s. coloured from nature.—The drawings have been made by admeaſurement.

Lately, ſome workmen, employed in the demolition of the old chateau of Bayeaux-join diſcovered, under the foundations of the chapel, a ſpecies of monument, which, from its form, is ſuppoſed to have been a millidy column; what remains of the inſcription is thus read by the members of the Commiſſion of Arts of that commune, who were deputed to examine it: Cæſari. Septimo. Severo. Pio. Pertinaci. Patri. Patriæ. Pontifici. Maximo. Parthico. Arabico. Adiabemico. Imp. XII. Coſs.——Aurelio. Antonino. &c.

The Emperor here referred to, is doubtleſs Septimus Severus, who, in fact, ſolemnly aſſumed the ſurname of Pertinax, received thoſe of Conqueror of the Parthians of Arabia and of Adiabene, and aſſociated in the Empire his ſon Caracalla, under the name of Marcus-Aurelius Antoninus. The Commiſſaries have not been able to penetrate the ſenſe of the laſt line, and another line is effaced. This fragment is about five feet in length, and truncated at the two ends; it compoſed formerly a *fut de colonne* about two feet in diameter.

It is a fact which requires to be generally known, that vinegar thrown on iron or bricks, heats nearly to a red heat, becomes decompoſed, and a large quantity of carbonic acid gas (fixed air) is thereby formed, which is totally unfit for reſpiration. When vinegar is to be evaporated, for the ſake of purifying the atmoſphere in ſick rooms, it ſhould be done by heating the veſſel which contains it.

Morals and Manners.

IN Carnarvonſhire and many other parts of Wales, there are ſocieties of religious worſhippers called JUMPERS, who, when the preacher delivers himſelf with vehemence and in ſhort extatic ſentences, (eſpecially if he poſſeſſes uncommon powers of lungs), will, after a ſmall HUM which increaſes more and more, break out into the moſt rapturous violence of voice and geſture. Any ſentence which they have caught from the miniſter they will vociferate with all the exertion they are capable of, and this too, in a kind of cadence. One hundred different tunes, yelling from one hundred different voices, muſt produce ſounds diſcordant in the extreme. They perform in parties of from two to eight.—Sometimes the two ſexes join, but generally not. If one begins to jump, another will anſwer him face to face, then a third, fourth, &c. forming a kind of ring.—That perſon is the happieſt who can vociferate the loudeſt, continue the longeſt, and jump the higheſt.—The preacher however diſappears when he has raiſed his people to the pitch of enthuſiaſm he wants.

The late Collection at Lincoln Cathedral for the benefit of the County Hoſpital did not exceed 47l. The Rev. Dr. HERBERT, in his ſermon, lamented the indifference that could not but be obſerved in that large, opulent country, towards the inſtitution.—From the ſtatements publiſhed annually, it appears likewiſe, that many of the ſubſcribers are much in arrear in their payments. At midſummer, 1798, the treaſurer was obliged to advance £.219 to pay bills upon the houſe, although at the ſame time £.369 15s. was due to it for arrears and ſubſcription; which ſum at midſummer laſt had increaſed to £514

Intellegence has been received (from Captains, Bligh and Moore on the Whale Fiſhery, at the Gallipagos) that the 7 or 8 miſſionaries who remained at Otaheite, were well in September laſt. The Miſſionaries at the Cape (part of the original Otaheite eſtabliſhment) have travelled, it ſeems, 400 miles up

the country, amongſt the Boſchemen, and Dr. Vonderkemp and Mr. Edmonds had gone twenty-ſix days journey among the Caffres.

A ſociety has been lately eſtabliſhed in Edinburgh (on the ſuggeſtion of Principal Baird, and on the motion of Sir William Forbes, at a general meeting, &c.) on the model of that in England, "for bettering the condition of the poor, and increaſing their comforts." Among the gentlemen already enrolled as members are the Lord Provoſt, Lord Preſident, Lord Bannatyne, Lieut. Col. Robert Murray, Mr. Kenneth, Mr. M'Kenzie, &c. &c.

At the anniverſary meeting of the MARINE SOCIETY of Liverpool, on January the 7th, the Committee (in conſequence of the liberal ſupport which has been given to that benignant inſtitution) were enabled to encreaſe the annuity to widows from 10l. to 15l. per annum. GEORGE VENALLES and WILLIAM FORBES, Eſqrs. were, at the ſame time, elected preſident and vice-preſident.

It appears from a ſtatement of the "Governor of the Corporation of the Sons of the Clergy," lately publiſhed, that the Rev. JOHN JONES, after being efficiently employed 68 years in the duties of his profeſſion, had but thirty pounds a year, to miniſter to his infirmities and to ſupport and educate twelve *children*!—It appears likewiſe, from an advertiſement recently publiſhed in the London prints, (reſpecting the appropriations of Mr. Stock's bequeſt of 10l. to each of ten curates, of the eſtabliſhed church, whoſe reſpective incomes did not exceed 40l. per annum,) that *ten officiating gentlemen*, of uniform meritorious labours, members of the moſt liberal profeſſion, *had among them but* 299*l. a year!* A ſtipend not equal to the ſupport even of a coal-porter.

On February 2, veneration was paid to the memory of the deceaſed General Waſhington, by the officers and ſailors of the American ſhips in London, who aſſembled in ſolemn devotion at St. John's Church, Wapping, clad with mourning for the irreparable national loſs.

Six ſervants of a late nobleman in the county of Rutland, the ſteward, butler, valet, groom, coachman, and footman, having met on the laſt day of the old year in a convivial manner, it was proved that their united ſervitude amounted to 154 years.

Upwards of 121,000l. has been ſubſcribed by the liberal and benignant ſpirit of Britiſh benevolence, for the relief of the brave ſufferers from the battles fought by Lords Howe, St. Vincent, Duncan, and Nelſon, on the 1ſt of June, 1794; 14th of February, 1796; 11th October, 1797; and 1ſt of Auguſt, 1798.

The managers of the Royal Humane Society have unanimouſly voted their honorary medallion to Mr. John Honey, ſtudent in divinity, of St. Mary's College, St. Andrews, for an unparallelled act of philanthropic heroiſm, in bringing five ſeamen on ſhore, at the riſk of his own life, from the Janet, of Macduff, wrecked on St. Andrew's Sands. To the aſtoniſhment of the magiſtrates and inhabitants on the beach, who conſidered the crew (a maſter and four ſeamen) as inevitably loſt, he daſhed into the waves, and after repeated exertions, unintimidated by the ſight of many perſons nearly drowned in the attempt, ſucceeded in bringing the exhauſted crew ſafe on ſhore. The annals of the world do not record an inſtance of greater individual gallantry, and Mr. Honey, by this glorious deed, which, indeed, deſerves a permanent memorial, has unqueſtionably performed an important ſervice to his country and mankind. The magiſtrates afterwards gave Mr. Honey an elegant ſupper, at which they preſented him an hereditary burgeſs and gold ticket, with a ſuitable addreſs annexed.

Lately in the Court of King's Bench, Mr. Erſkine moved for a criminal information againſt S. F. Waddington, on a charge of foreſtalling, in purchaſing the greateſt part of the crop of hops in the county of Kent, in order to raiſe the market. The motion was made on the affidavit of Mr. Knipe, and many other gentlemen. It was ſtated in ſupport of the application, that Mr. Waddington had commenced his ſpeculations in 1798, and continued them to the preſent time. Proſecutions for this crime, Mr. Erſkine obſerved,

were very uncommon; but it was neceſſary for the world to know that it was ſtill a miſdemeanour. Mr. Waddington had ſwept all hop-countries like a ſwarm of locuſts; he had monopolized the hops for two crops, and had even purchaſed great part of the next crop. Lord Kenyon expreſſed not the leaſt doubt of this being an offence actionable at common law, lamented the dreadful effects produced upon the country at large by foreſtallers, and obſerved that great credit was due to the gentlemen who had been inſtrumental in bringing the ſubject before the Court. The other Judges concurring in this ſentiment, the rule to ſhew cauſe was granted.

Several gentlemen of Birmingham have it in contemplation to bring forward immediately a plan for a *Benefit Society*, or *Sick Club*, on a large ſcale. Their object is to cut off the abuſes, and to prevent the frauds ſo frequently complained of on the plans now generally adopted, and to ſecure to the honeſt and induſtrious poor, at the ſmalleſt poſſible expence to themſelves, an adequate ſupport in ſickneſs, and a certain proſpect of comfortable aſſiſtance in old age.

The Magiſtrates of Bath are laudably exerting themſelves in endeavouring to check the vices of *gambling* and *tippling*, ſo prevalent among the apprentice-boys of the preſent day. They have for this purpoſe advertized to withhold licenſes from any inn-keeper or alehouſe-keeper in the city for offending by keeping a diſorderly houſe, or ſuffering ſuch miſbehavior as the above therein.

Meſſrs. Goldſmid have ſet on foot a ſubſcription in the metropolis for the eſtabliſhment of a Soup Houſe for the *indigent* Jews.

An action was tried in the court of King's Bench, February 6, which forcibly points out the obligations of maſters towards their ſervants in ſickneſs. It was brought by the Steward of the Eaſt Indiaman, againſt the Captain. Lord Kenyon held that a maſter took a ſervant for better and for worſe; that if that ſervant, conducting himſelf properly in the ſervice of his maſter, and diſcharging his duty with fidelity, ſhould fall ſick, the maſter was bound to pay for medical aſſiſtance, and for other neceſſaries, till he recovers. His Lordſhip; however, made this diſtinction;—if the ſervant's illneſs was the effects of his own vice and folly—if he had brought it on himſelf, merely by his own miſconduct—for that his maſter was not anſwerable.

The London Yearly Bill of Mortality, for 1799.

Chriſtened in the 97 pariſhes within the walls,	1246; -	Buried, 1289.
Ditto in the 16 pariſhes without the walls, -	4552; -	Ditto, 3953.
Ditto in the 23 out-pariſhes in Middleſex and Surrey. - - - -	8573; -	Ditto, 8058.
Ditto in the 10 pariſhes in the city and liberties of Weſtminſter, - -	4597; -	Ditto, 4834.
Ditto males within the bills of mortality,	10,087; -	Ditto, 9046.
Ditto females, - -	8883; -	Ditto, 9088.
	Total - 18,970; -	Total 18134.

Whereof have died			Of which two only were above 100 years of age.	
Under 2 years of age,		5211;	40 and 50,	1924.
Between 2 and 5,	-	1790;	50 and 60,	1758.
5 and 10,	-	1644;	60 and 70,	1565.
10 and 20,	-	573;	70 and 80,	1125.
20 and 30,	-	1299;	83 and 90,	456.
30 and 40,	-	1724;	90 and 100,	63.
			of 101,	2.

Decreaſed in the burials this year 21.

There have been executed in Middleſex and Surry 25, of which number, 12 only have been reported to be buried.

AVERAGE PRICES OF CORN, &c. FOR FEBRUARY, 1800.

Counties Inland by the Standard Winchester Bushel of 8 Gallons.

	Wheat s	d	Rye s	d	Barley s	d	Oats s	d	Beans s	d	Peafe s	d	Oatmeal s	d
Middlesex	112	3	60	0	44	11	38	11	59	10	60	10		
Surry	113	4			55	8	44	0	60	0	66	0		
Hertford	109	4			49	3	38	0	58	3	52	4		
Bedford	110	10	80	4	49	4	31	9	36	0	64	9		
Huntingdon	112	3			53	4	39	0	43	0	56	0		
Northampton	107	8	75	6	50	0	33	6	69	8	40	0		
Rutland	97	6	60	0	47	0	38	0	49	0			54	10
Leicester	99	9			54	1	34	5	56	5				
Nottingham	108	8			48	6	40	6	94	0	49	0		
Derby	112	10			48	2	42	10	79	3	55	0		
Stafford	111	9			64	4	46	6	97	6			65	8
Salop	113	9	74	0	62	2	34	6			55	1	90	6
Hereford	102	4	64	0	48	4	33	8	57	7	54	4	76	2
Worcester	115	1	71	1	54	1	41	6	70	1	65	4		
Warwick	110	10			67	5	39	2	77	5	94	0	68	10
Wilts	101	0			45	4	33	4	73	4	46	0		
Berks	101	0			34	0	34	2	53	6	57	6		
Oxford	110	5			40	10	36	0	59	1	56	6		
Bucks	116	0			44	3	35	9	67	3	58	0		
Montgomery	112	0	86	4	55	5	32	0			48	0	72	6
Brecon	96	2			32	0	34	11			48	0	59	4
Radnor	95				46	3	26	6			47		89	2
Maritime Counties														
Essex	110	8	55	0	47	10	41	6	55	0	46	0		
Kent	105	8			50	8	41	9	58	2				
Sussex	105	8			49	6	35	2			54	0		
Suffolk	105	4			40	11	33	7	36	10	58	0	76	4
Cambridge	102	2			35	10	20	11	28	1				
Norfolk	100	0	70	6	35	0	31	6	29	2	57	1		
Lincoln	94	7	67	6	41	4	29	6	30	0	100	0		
York	87	11	64	7	44	1	32	5	70	4	80	0	67	0
Durham	92	5	92	0	50	7	32	1						
Northumberland	79	10	67	8	45	6	34	7						
Cumberland	80	1	67	8	48	4	36	10					63	7
Westmorland	66	9	74	8	49	6	59	4					36	0
Lancaster	106	9			56	3	37	11	66	6			39	9
Chester	104	3			57	8	46	11					42	5
Flint	99	10			51	7	35	4						
Denbigh	108	1			60	0	32	1	64	6	57	8	71	2
Anglesea							20	6						
Carnarvon	98	4			45	0	24	0					50	10
Merioneth	92	10	68	2	54	3	27	6			48	0	58	11
Cardigan	90	4	68	0	54	11	17	2						
Pembroke	82	2			50	11	21	3						
Carmarthen	99	10			52	9	22	6						
Glamorgan	110	7			47	10	26	7						
Gloucester	109	8			46	10			61	3	33	4		
Somerset	108	5			43	11			56	8	66	0		
Monmouth	110	3			54	4	30	0			90	0		
Devon	106	4			46	9	28	4	68	0			50	2
Cornwall	90	0			44	9	26	6						
Dorset	106	4			39	11	31	9						
Hants	808	11			45	7	34	9	59	9	81	0		

ALPHABETICAL LIST *of* BANKRUPTCIES *and* DIVIDENDS *announced between the 21th of January, and the 20th of February, 1800, extracted from the London Gazettes.*

BANKRUPTCIES.

(The Solicitors' Names are between Parenthesis.)

ANDERSON, C. of Grosvenor Mews, hackneyman. (Allen, Frith-street, Soho.)
Allen, R. of High Wycombe, carrier. (Tebury, Ely Place.)
Burford, J. of Holborn Bridge, linen-draper. (Searle, St. Paul's Church-yard.)
Barry, J. of Orchard-street, Portman-square, haberdasher. (Farrer, Lacy, Steadman and Wall, Bread-street-hill.)
Bonney, W. of Liverpool, soap-boiler and tallow-chandler. (Freckleton, Liverpool.)
Booty, W. of Hepworth, Suffolk, seed merchant. (Barsham, Ixworth.)
Bamber, W. of Chorley, Lancashire, muslin-manufacturer. (Singard and Mason, Stockport.)
Brewer, W. of Bristol, tea-dealer. (Allen and Exley, Furnival's Inn.)
Burgis, T. of Grey Tey, Essex, gardener. (Simpson, Artillery-lane.)
Clark, J. of Pancras-lane, taylor. (Barber, Thanet Place, Temple Bar.)
Cole, J. of North Tawton, Devon, shopkeeper. (Bowning, Exeter.)
Clampit, J. of Liverpool, shopman. (Wallworth, Liverpool.)
Croft, L. of St. James's-street, pastry-cook. (Blomfield, Smith's Buildings, Leadenhall-street.)
Clementson, W. of Noble-street, warehouseman. (Adams and Cocke, Old Jewry.)
Cooper, J. of St. Giles in the Fields, printer. (Berridge, Wood-street, Cheapside.)
Clowes, J. of Blackrod, Lancashire, muslin-manufacturer. (Threfhall, Little Bolton, London.)
Cutler, M. of Bedford-street, Covent Garden, woollen-draper. (Williams, Aldermanbury.)
Collen, M. of Liverpool, merchant. (Lace, Liverpool.)
Cook, J. of Kingfwood, clothier. (Williams, Trowbridge.)
Davis, T. of Briftol, cheesemonger. (Thomas, Broad-ftreet, Briftol.)
Drury, T. and Gilbert R. of Bread-ftreet, linen-weavers. Shaw, R. and R. Tudor-ftreet, Blackfryars.
Edwards, T. of Fore-ftreet, St. Anne, limehouse.—(Mawley, Jealous Road, New Road, St George East.)
Egerton, S. of Shoreditch. (Hudfon, Winkworth Buildings, City Road.)
Fallon, A. of Liverpool, merchant. (Eliames, Livorpool.)
Fitch, J. of Dowgate-hill, wine and brandy-merchant.—(Vanderman, Bush-lane, Cannon-ftreet.)
Finlay, Amelia, of Caftle-ftreet, Oxford-road, linen-draper. (Loxley, Cheapside.)
Groom, J. of Chifwell-ftreet, ftable-keeper. (Pullen, J. and S. Fore-ftreet, Cripplegate.)
Goldfmith, L. of Thayies Inn. (Willet and Annefly, Finfbury fquare.
Giles, of Frome Selwood, brandy-merchant. (Bowden, Frome.
Howell, R. of Queen-ftreet, Cheapside. (Lloyd, Thavies Inn.)
Hilder, G. of Bocking, Effex, fhopkeeper. (Searle, St. Paul's Church-yard.)
Haddon, S. of Oxford-ftreet, haberdasher. (Smith and Tilfon, St. Paul's Church-yard.)
Hemingway, J. of Royton, Lancashire, innkeeper,—(Hewis, Marfden, Yorkfhire.)
Johnfon, J. of York, grocer. (Allen and Exley, Furnivalls Inn.)
Jones, J. of Longnore Forge, Salop. (Woodward, Cleobury, Mortimer.)
Jackfon, D. of Charles-ftreet, Southwark, needle-merchant. (Speck, in St. John, Southwark.)
Kirkman, J. of Kirkdale, Lancashire, merchant.—(Crump, T. and J. Liverpool.)
Kenyon, J. of Liverpool, merchant. (Lace, Liverpool.)
Knowles, J. of Manchefter, ale-houfekeeper. (Taylor, Manchester.)
Lehcore, A. of Finch-lane. (Smith and Lawfon, Great St. Helen's, Bifhopfgate-ftreet.)
Lowe, H. of Liverpool, hardwareman. (Kirkpatrick and Jones, Liverpool.)
Long, J. of Portfea, mariner. (Willet and Annefley, Finfbury-fquare.)
Long, C. of Malden, Effex, fhopkeeper. (Ireland, Staple Inn, Holborn.)
Lyon, J. of Goodman's Fields, jeweller. (Howard, Jewry-ftreet.)
Mawham, J. of Fore-ftreet, builder. (Hall, Bucklersbury.)
Marrin, S. and Holland, W. of Manchefter, cotton-manufacturers. (Duckworth and Chippendall, Manchefter.)
Mafon, H. of Baldock, Herts, baker. (Roe, Baldock.)
Merrick, J. and Hufkins, S. of Mark-lane, merchants. (Willis, G. and R. Throgmorton-ftreet.)
Mills, T. of Sadlefworth, Yorkfhire, cloth-manufacturer. (Foulkes, Manchester.)
Morley, R. of Claxton, Yorkfhire. (Brook, jun. York.)
Newfhead, T. of York, confectioner. (Crook, J. jun. York.)
Nicholfon, M. of Howden, grocer. (Spofforth, jun. and Pierfon, Howden.)
Onions, W. of Manchefter, porter-merchant. (Price, Wolverhampton.)
Owen, W. of the Haymarket, fhoe-maker. (Bourn and Courteor, New Inn.)
Patience, J. T. of Bifhopfgate-ftreet, carpenter. (Collins and Reynolds, Spital-fquare.)
Pourtales, A. P. and Pourtales, A. G. of Broad-ftreet-buildings, merchants. (Nicholls, and Nettleship, Queen-ftreet, Cheapside.)
Potter, G. of Charing Crofs, haberdasher. (Walton, Bafinghall-ftreet.)
Prickett, R. of Lancaster, merchant.
Pye, J. of Liverpool, merchant. (Thompfon, W. jun. Liverpool.)
Pendred, J. of Wellingborough, fhoe-maker. (Hudfon Wellingborough.)
Platt the younger, and Platt, H. B. of Wigan, Lancashire, linen-manufacturers. (Baldwin, Wigan.)
Rofs, A. of the Minories, merchant. (Loxley, Cheapside.)
Roberts, W. of St. Clement's, Cornwall, fhopkeeper.—(Warren, Truro.)
St. Croix, N. de. of Homerton, Middlefex, coal-merchant, (Dann and Dunn, Threadneedle-ftreet.)
Shallcrofs, W. of Fleet-ftreet, hatter (Batchelor, Clements-inn.
Simpfon, T. and Townfend, G. of Leicefter, hofiers.—(Heyrick, Leicester.)
Slaughter, A. of Cow-crofs, Norwich, fhawl manufacturer. (Johnftone, Southampton-Court, Bloomfbury.)
Smith, G. of Pudding-lane, wine-merchant. (Wadefon, Hardy, and Barlow, Auftin Fryars.)
Sweatman, —of Briftol, linen-draper. (Morgan, Briftol.)
Taylor, J. of Maiden-lane, Wood-ftreet, weaver and ftraw hat-manufacturer. (Mawley, J. Zealous-road, New-road, St. George East.)
Tetley, J. of Leeds, brandy-merchant. (Hailftone and Malon, Bradford.)
Thompfon, C. of Manchefter, liquor-merchant. (Knight and Heron, Manchester.)
Turner, G. of Whittingham, Lancashire, cotton-manufacturer. (Startifant, Preston.)
Turner, T. of Greville-ftreet, Hatton Garden, ironmonger. (Taylor, Holborn-court, Gray's Inn.
Wilton, W. of Nine Elms, Surrey, Spanifh leather-dreffer. (Toulmin and Dickfon, Walbrook.)
Whitaker, W. of Lancaster, fuftian-manufacturer. (Hobrow, Bolton.)
Wood, W. of Finfbury-fquare, merchant. (Williams, Aldermanbury.)
White, T. of Pacton, Norfolk, miller. (Gregfon and Smart, Throgmorton-ftreet.)
Weatherftone, J. of St. Catherine's-lane, Tower, baker. (Ledwich, Queen Hithe.)
Young, J. of Sculcoates, near Hull, furgeon and apothecary. (Farnando, Hull.
Yate, W. of Little Guilford-ftreet, Southwark, hat-manufacturer. (Fairbank, Ely-place.

DIVIDENDS ANNOUNCED.

Atthil, W. of Norwich, apothecary and druggift, Feb. 5.
Abell, W. the younger, of Leicefter, parchment-maker, March 4.
Bailey, G. of Manchefter, timber-merchant, Feb. 20.
Bartlett, J. of New Ormond-ftreet, mafter-mariner, Feb. 14.
Burton, W. of Chatham Place, money-fcrivener, March 4.
Benoit, S. of Manchefter, grocer.
Bigland, R. of Frocefter, Glocefterfhire, cheefefactor, April 29.
Chambers, R. of Salford, Manchefter, brewer, March 3.
Cave, T. of Pilton, Devon, merchant, Feb. 19.
Charlton, P. of Newcastle-upon-Tyne, linen-draper, Feb. 24.
Cox, J. and Heifick, F. of Crutched Fryars, merchants, Feb. 15.
Cardwell, J. of Preston, Lancashire, tallow-chandler, March 3.
Cowley, J. and Field, F. of Bafinghall-ftreet, Blackwell-hall-factors, March 4.
Clarp, C. of Exeter, ironmonger, March 8.
Cowen, R. of Little East Cheap, wine-merchant, March 25.
Chambers, R. of Salford, Manchefter, brewer, March 3.
Eborn, J. of Watford, Herts, leather-breeches maker, April 15.
Filby, C. and Crout, R. of Ludgate-ftreet, haberdasher, April 29.
Fifher, R. of Witney, blanket-weaver, Feb. 24.
Fither, J. of Peterborough, grocer, April 29.
Frys, G. of Totteth in court-road, hawker, Feb. 25.
Gibbons, J. of Coventry, fcap-boiler, March 4.
Gretlier, J. H. and Nicholls, W. of Shoreditch, feather and fringe-manufacturers, March 11.
Green, T. of Upper Thames-ftreet, March 4.
Harris, F. of Le minfter, bookfeller, Feb. 22.
Hill, M. of Manchefter, cotton-fpinner, Feb. 13.
Horsfield, T. of Preston, Lancashire, cotton-manufacturer, Feb. 28.
Humphrys, M. of Lothbury, London, factor, March 1.
Hanes, E. and L. of Bury-ftreet, London, merchants, Feb. 25.

Haſlewood, J. T. of Bridgnorth, grocer, March 10.
Kemble, S. and Spens, W. of Norfolk-ſtreet, merchants, Feb. 25.
Kerrod, J. of Hackney, bricklayer, Feb. 26.
Lawſon, S. of Redriff, ſhip-carver, Feb 15.
Longman and Broderip, F. F. of Gheapſide, muſical inſtrument-maker, May 28.
Mathew, J. M. of Craven-ſtreet, Strand, broker, Feb. 22.
Mean, M. of Royſton, innholder, Feb. 11
Mannell, J. of Colcheſter, gingerbread-baker, Feb. 24.
Morgan, K. B. of Birmingham, button-maker, March 10.
Marſhall, R. of Lynn, bookſeller, March 7.
Mitchell, C. of Lombard-ſtreet, March 1.
Nuney, J. J. of Goſwell-ſtreet, merchant, March 4.
Parker, J. of Chancery-lane, cotton-manufacturer, Mar. 8.
Parlett, J. of Weſt Smithfield, grocer, March 10.
Poyzer, B. of Budge-row, London, chocolate-manufacturer, March 18.
Platton, R. of Clerkenwell, coach-maker, April 5.
Parſons, S. M. of Calmdock, Devon, mercer, March 5.
Pointing, E. of Wigmore-ſtreet, Cavendiſh-ſquare, painter, Feb. 22.
Reith, C. of Holborn-hill, linen-draper, March 15.
Robarts, J. of Biſhopſgate-ſtreet Without, upholſterer, April 29.
Richards, J. of Truro, ſhopkeeper, Feb. 18.
Schneiding, J. F. of Mincs-lane, Cannon-ſtreet, merchant March 1.
Sinclair, w. of Radcliff Highway, tallow-chandler, Mar. 8.
Simpſon, J. of Bartholomew Cloſe, March 28.
Slater, E. and Horne, M. of Well-ſtreet, Wellcloſe-ſquare, glaſs-manufacturer, Feb. 18.
Snuggs, S. S. and Prentice J. of Cold Bath Fields, builders, Feb. 22.
Smith, F. of Groſvenor-ſtreet, taylor, March 1.
Smith, R. of Streatham, and Smith C. of Croydon, brewers, March 1.
Stacey, T. of Tooley-ſtreet, oil and colourman, March 4.
Sampſon, J. of Bartholomew Cloſe, jeweller, Feb. 28.
Thornburn, J. of Halifax, linen-draper, Feb. 11.
Turner, W. of Surrey Road, ſcrivener, Feb. 15.
Taylor, J. of Cheapſide, hardwareman, March 15.
Werton, H. of Fore-ſtreet, Limehouſe, corn-chandler, March 15.
Upton, R. of Walcott, Somerſet, carpenter, March 5.
Webb, T. of Hackney, carpenter, Feb. 25.
Wilſon, R. of Dudley, Worceſter, Feb. 18.
Woollaſton, J. and Upjohn, F. of Holborn Bridge, diſtillers.

PRICES OF COALS AT LONDON, FROM THE 20th OF JANUARY TO THE 20th OF FEBRUARY, 1800.

Names of Coals	Mon 20th. S. D	We 22nd S. D	Frida 24th S D	Mon 27 h. S. D	Wed 29th S. D	Frida 31ſt. S D	Mon 3rd. S D.	Wed 5th. S. D.	Frida 7th. S. D.	Mon 10th S. D.	Wed 12th S. D.	Frida 14th. S. D.
Benton	—	65	—	—	—	No Coals ſold on this and two following market days.	54	54 6	55	57	—	
Byker	—	—	63	—	66		53 9	53 9	55	—	—	
Blyth	—	—	—	—	61		52 6	53	55	57	—	
Brandling	59	—	—	—	—		53 6	54	54 9	57	—	
Bladon Main	—	—	—	—	—		—	—	—	—	—	
Biggs's Main	—	—	—	—	—		55	55	56	—	—	
Baker's Main	—	—	—	—	—		—	—	—	—	—	
Benwell	—	—	—	—	—		—	—	—	—	—	
Greenwich Moor	—	—	—	—	—		—	—	—	—	—	
Gate's-head Park	—	—	—	—	—		—	—	—	—	—	
Hartley	—	—	—	—	61		52 6	53	55	—	—	
Holywell Main	—	—	—	—	61		52 6	52 6	53 6	—	—	
Howard's Main	—	—	—	—	—		—	—	—	—	—	
Montague Main	—	—	—	—	—		54	54	55 6	57	—	
Benton { Windſor	—	—	—	—	—		—	—	55	—	—	
Benton { Simpſon	—	—	—	—	—		—	—	—	—	—	
Benton { Silverpool	—	—	—	—	—		—	—	—	—	—	
South Moor	—	—	—	—	—		—	—	—	—	—	
Sheriff Hill	—	—	—	—	62		—	52 6	—	56 6	—	
Pell's Tanfa Moor	—	65	—	—	58		—	—	—	—	—	
Adair's Main	—	—	—	—	—		52 6	53 9	55 3	—	—	
Bowe's Main	—	—	—	—	—		—	—	54 3	56 6	—	
Team	—	—	60	—	—		—	—	—	—	—	
Walker	—	—	65	—	67		—	52	—	—	—	
Willington	61 6	—	—	—	—		55	54 6	55 6	58	62	
Wall's End	—	—	—	—	67		54 6	54 6	56	51	—	
Walbottle Moor	—	—	—	—	—		56	56 6	57	59	—	
Wylam Moor	—	—	—	—	—		—	—	—	—	—	
Heaton Main	—	—	—	—	67		—	—	54 6	—	—	
Hebburn Main	61 6	—	65	70	—		54 9	—	—	58	62	
							55	55 6	56 6	58	63	
SUNDERLAND												
Boundry	—	—	—	—	—		—	—	—	—	—	
Burn Moor	59	—	—	—	65		53	53 6	54 6	57	—	
Biddicknew Main	—	—	—	—	—		—	—	—	—	—	
Newbottleburn Moor	—	—	—	—	—		—	52 6	34	—	—	
Ravensworth	—	—	—	—	—		52 6	7	—	—	—	
Ruſſell's Main	—	—	—	—	—		—	52 6	53 6	55 3	—	
Wharton Main	—	—	—	—	—		—	—	—	—	—	
Waſhington	—	—	—	—	—		—	53	—	—	—	
	—	—	—	—	—		—	—	—	—	—	
	—	—	—	—	—		—	—	—	—	—	

A TABLE of the Prices of STOCKS in *February*, 1800.

Days	Bank Stock.	3 per Ct. Bs Red.	3 per Cent Consols.	4 per Cent. Consol.	5 per Cent. Navy.	5 per Ct. 1797	Long Ann.	Short Ann.	India Stock.	India Bonds.	S. Sea Stock.	Old Ann.	New Ann.	Exchq. Bills.	Omnium.	Ir 5p	Imp. 3p Ct
1																	
2	Sunday																
3	156	61 1/2	60 3/8	78	90 1/2	91 7/8	17 7/8	5 7/8	196			61 1/8			1 1/2	85 1/4	59 7/8
4	155 1/4	61 3/4	60 3/4	78 7/8	91 7/8	91 5/8	17 7/8	5 7/8	198			61			1 1/2	84 7/8	59 3/4
5	156 1/2	61 7/8	60	78 1/4	91	91 1/3	17 3/4	5 7/8	198 1/2							84 1/2	58 3/4
6	156 3/4	61 1/4	60 7/8	78 1/2	91 7/8	92	17 3/4	5 7/8	200 1/2	1s. pr.							
7	156 1/4	61	60	78 3/8	91 7/8	92 3/8	18	5 7/8	201	1						84 3/4	58 1/4
8	156 1/2	61	61 5/8	78 5/8	91 7/8	92 5/8	18	5 7/8	202	1						85 1/8	58 1/8
9	Sunday									2						84 1/2	59 3/4
10	156 1/2	61 1/2	61 7/8	79 1/2	91 1/2	92 5/8	18	5 7/8	203	2					10	85	59 1/2
11	156 3/4	62 1/2	61	78 7/8	91 3/8	92 3/8	17 5/8	5 3/4	200 3/4	1/4					10	86	59 5/8
12	156	62 7/8	60 1/4	78 5/8	91 1/4	92	17 5/8	5 3/4	200 1/2						9 3/4	86	59 1/4
13	156 3/4	61 3/4	60 3/4	78 3/8	91 3/8	91 5/8	17 5/8	5 3/4	200						9 1/2	86	
14	154 1/2	61 1/2	60 3/4	77 7/8	91 1/4	91 7/8	17 3/4	5 3/4	200							86	59
15	155	61 3/4	60	78	91 7/8	92 1/2	17 3/4	6	200 1/4						9	85 7/8	59 1/4
16	Sunday														8 3/4	86	59 3/8
17	155 1/2	61 7/8	60 7/8	77 7/8	91 7/8	92	17 3/4	5 3/4	195 3/4			61 7/8			9 3/4	86	59 3/4
18	155 1/2	62	60 7/8	78 1/2	91 1/4	92 3/4	17 3/4	5 7/8	195	9s. pr.		61 7/8			10	86 3/4	60
19	156	62 1/8	61 1/8	78 1/4	91 7/8	93	17 3/4	5 7/8	195			61 7/8	60 5/8	Par.	9 3/4	88 7/8	59 1/4
20	156 1/2	62 1/4	61 1/8	78 1/4	90 3/4	92 5/8	18	5 7/8	195	10						88 7/8	60
21	156	61 7/8	62 3/8	80 1/4	91	94	18 1/4	6		10			60 5/8	Par.			59 3/4
22	158	61 7/8	62 1/2	79 3/4	91 1/4	93 1/2	18 1/2	6	195	9			6	1s. pr.		89 3/4	51
23	Sunday									8				1		90	50 1/4
24	157 3/4	62 3/4	62 3/8	79 7/8	99 1/2	93 3/4	11 3/4	6		10				1		89 7/8	60
25	158 3/4	62 1/2	62 3/4	80	92 7/8	93 5/8	18 3/4	6		9				1		88 7/8	59 7/8
26	157 1/2	62 1/2	62 1/4	79 7/8	92 1/2	93 3/4	18 3/4	6						1		88 7/8	59 1/4
27	157 1/2	62 1/2	62 1/2	79 7/8	92 7/8	93 3/8	18 1/4	6		9				1		88 1/8	59 1/4
																88 3/4	59 1/2