Fig. 1

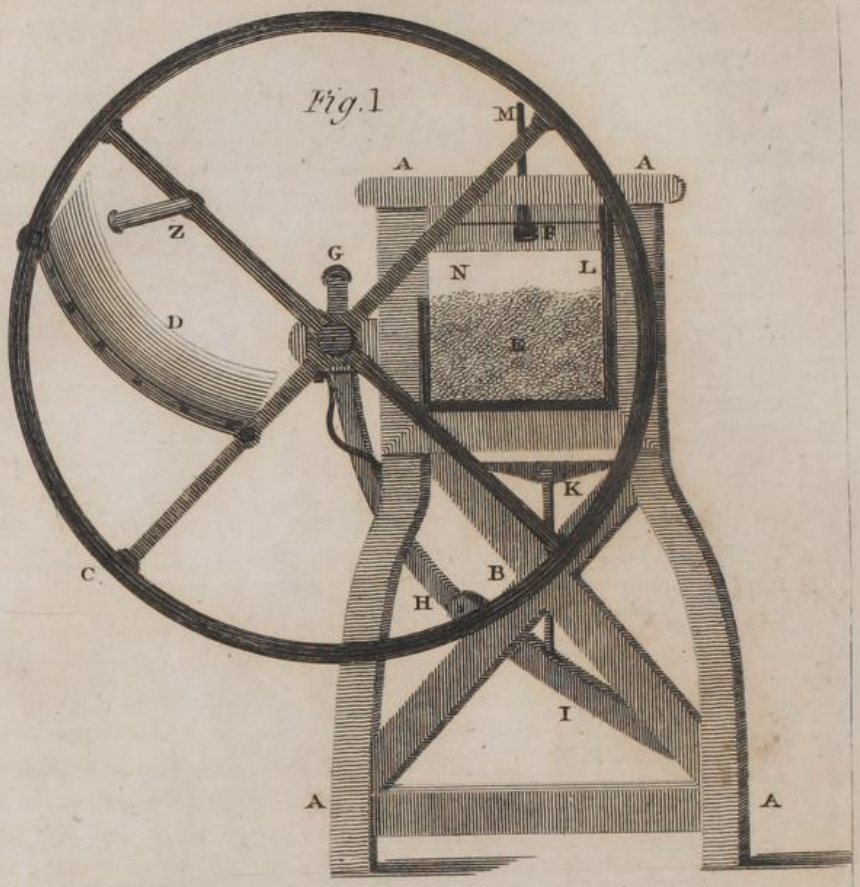
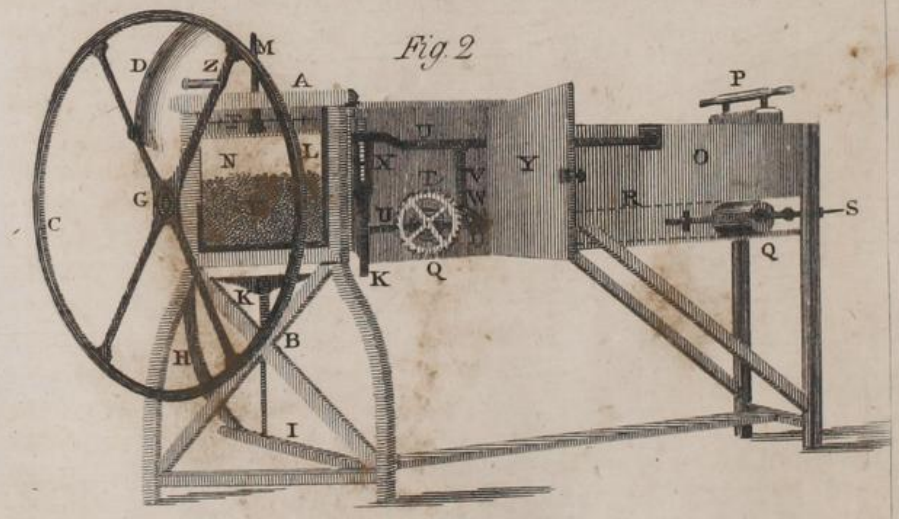


Fig. 2



Mr. Lester's, TOBACCO ENGINE.

Pub. by V. Griffiths, Paternoster Row, April 1.1801.

THE

Commercial and Agricultural Magazine.

No. XX.] MARCH, 1801. [VOL. IV.

We are happy to preſent to our readers, the moſt complete Engine for cutting ſtraw, &c. which has yet appeared. The ſpecification is inſerted at length, as it may gratify curioſity to ſee the *form* of this legal inſtrument. For the future, in like caſes, the preamble will be omitted. E.

SPECIFICATION *of the* PATENT *granted to Mr. William Leſter, of Cotton End, Northamptonſhire, for his* IMPROVED ENGINE, *for cutting Hay, Straw, Tobacco, &c.*

TO all to whom theſe preſents ſhall come; I William Leſter, of Cotton End, in the pariſh of Hardingſtone, in the county of Northampton, Patent Harrow and Chaff Engine Manufacturer, ſend greeting. Whereas, his moſt excellent Majeſty King George the Third, did by his letters patent, under the great ſeal of the united kingdom of Great Britain and Ireland, bearing date the ſeventeenth day of February, in the forty-firſt year of his reign, give and grant unto me the ſaid William Leſter, his eſpecial licence, that I the ſaid William Leſter, during the term of years therein mentioned, ſhould, and lawfully might uſe, exerciſe, and vend within England, Wales, and the town of Berwick upon Tweed, my invention of certain improvements upon an Engine or Machine for cutting hay and ſtraw into chaff, for which I obtained his Majeſty's letters patent, in the year one thouſand eight hundred, by which improvements the ſaid Engine or Machine will cut tobacco and various other articles, with the greateſt regularity and accuracy, to any given length required: In which ſaid letters patent there is a proviſo, obliging me the ſaid William Leſter, by an inſtrument in writing, under my hand and ſeal, to cauſe a particular deſcription of the nature of my ſaid invention, and in what manner the ſame is to be performed, to be enrolled in his Majeſty's High Court of Chancery, within one calendar month after the date of the ſaid recited letters patent. Now know ye that in compliance with the ſaid proviſo, I the ſaid William Leſter do hereby declare, that my ſaid invention is deſcribed in the drawings hereunto annexed, and by the following deſcription thereof, that is to ſay, Figure 1. is a front view. Letters AAAA repreſent the frame of the Machine or Engine. B the braces, to prevent the frame from ſpringing while the knife is going through the cut. C, the fly wheel that carries the knife, and gives motion ſo the crank. D, the knife fixed to the wheel by two male ſcrews, with four regulating nuts. E, the mouth of the box repreſenting the article to be cut. F, the preſs which is raiſed

and lowered alternately by the motion of the crank preſſing, and holding firm the article while the knife makes the cut. G, the crank that raiſes and falls the treadle, which is connected to the preſs. H, the lever, the upper end of which is fixed on the crank, with a pair of braſſes held firm by a ſtaple of iron, the lower end connected to the treadle by a moveable joint. I, the treadle, with the lower end fixed to the frame by a ſtaple and bolt of iron, on which it moves. K, the iron frame to which the preſs F and index X is fixed, which it raiſes and falls by an upright bar fixed to the treadle, both ends of which move upon iron bolts. L, the ſteel which guides the knife to the cut. M, the upright motion fixed to the centre of the preſs, by which means it is raiſed and lowered in a perpendicular direction. N, ſhewing the vacant ſpace betwixt the preſs and the article to be cut, at the inſtant of feeding, which prevents the machine or engine from ever being choaked up by any ſubſtance it may be cutting, and by which means the article is brought regular and accurately forward without any thing to impede its motion. Z, the handle fixed to the fly wheel by a nut and ſcrew, with which the machine or engine is worked.

Figure 2. A ſide view.—O, the box in which the article is laid to be cut. P, the moveable weight which is placed upon the article to keep it down to the moveable bottom, and to overcome the friction betwixt the article and the ſides of the box, which weight, when worked up to the guard muſt be moved back to the hind part of the box. QQ, the two cylinders that move upon their own centres, the ſurface of the firſt rough, and the hind one ſmooth. R, the dotted lines from one cylinder to the other, repreſent the moveable bottom, which by the motion of the firſt rough cylinder works perpetually round the ſmooth one behind, and may be made of ſacking, leather, or any other pliant ſubſtance, that will hang firmly to the rough ſurface of the firſt cylinder. S, a male ſcrew and nut to draw back the iron frame in which the hindermoſt cylinder is fixed, to tighten the bottom occaſionally. T, the ratchet wheel fixed upon the axis of the firſt cylinder; ſeveral of theſe wheels a e neceſſary, with various ſized teeth to cut the whole variety of lengths that are required for the different ſubſtances, to which this machine or engine may be applied to cut. UU, two levers connected together by the bar V, with moveable joints. W, a catch on a moveable joint which moves the ratchet wheel more or leſs in proportion to the raiſing of the levers. X, the regulating index fixed with two nuts upon a male ſcrew to a ſtaple fixed to the iron frame, K, the ſetting of which by the figures thereon raiſes and falls the levers according to the length required to be cut. Y, the door that ſhuts up the index when ſet.

We have the pleaſure to conform to the wiſhes of our correſpondents, by preſenting them with a Plate and Deſcription of a *Family Mill*, which fully merits the reward beſtowed on it by the Society of Arts and Commerce. Indeed this Society ſeems likely to become the uſual medium by which the moſt valuable inventions are preſented to the public.

THE PARISH OR FAMILY MILL,

Invented by Mr. T. RUSTALL, *Wheelwright, of Purbrook-Heath, near Portſmouth, for which he obtained the Premium of Forty Guineas from the* SOCIETY OF ARTS AND COMMERCE.

THIS Mill promiſes to be of great public utility, as it can be conſtructed at a moderate expence, and ſtands on a ſmall ſpace of ground. It may be worked within a room in a farm-houſe, or even in a public kitchen, without occaſioning much incumbrance.

Its peculiar excellence conſiſts in this circumſtance; that, from the vertical poſition of the ſtones, action may be given to it without the intervention of cogs or wheels: it may be uſed to grind malt, to bruiſe oats for horſes, or to make flour, or for all theſe purpoſes; and it can eaſily be altered to grind fine or coarſe, as occaſion may require.

It may be worked by one man: but if two perſons are employed, it will furniſh, in two hours, a ſufficient quantity of flour to ſerve a family of ſix or eight perſons for a week. The farmer, by allotting half an hour's time in the evening for its uſe, may make comparative experiments of the quality of his grain, and, at a trifling expence, provide himſelf with flour from his own wheat, without fear of ſophiſtication, or being liable to the caprice or defrauds of a miller.

Repeated ſatisfactory experiments have been made with this Mill before Members of the Society; and the original Mill is now in their repoſitory for the inſpection of the public.

Reference to the Plate of (*Fig.* 1.)

A, the handle of the Mill. B, one of the mill-ſtones, about 30 inches diameter, and five inches thick, moving with its axis C.

D, the other mill-ſtone, which is ſtationary when uſed, but may be placed nearer to, or further from, the moveable ſtone B, by means of three ſcrews paſſing through the wood-block E, which ſupports one end of the axis C, after it has paſſed through a perforation in the centre of this bed-ſtone. Through this hole alſo the grain paſſes from the hopper F into the Mill.

F, the hopper, to which an agitation is given by two iron pins fixed on the axis C, which alternately raiſe this hopper containing the grain intended to be ground: the hopper ſinks again by its own weight; the corn is delivered by this motion through a ſpout, paſſing from the ſaid hopper into the centre of the Mill behind, and through the bed-ſtone D.

G, a paddle which regulates the quantity of corn to be delivered into the Mill; a greater or leſs quantity of which may be furniſhed, by raiſing or lowering the paddle.

H, the receptacle for the flour, into which it falls from the mill-ſtones when ground.

The bed-ſtone D reſt upon two ſupporters of wood, one of which is ſhewn at I: theſe ſupporters are ſcrewed to the block E, and alſo mortiſed into the lower frame-work of the mill at K: the frame-work is held together by pins or wedges LLL, which admit the Mill to be eaſily taken to pieces.

M, a fly-wheel placed at the furtheſt extremity of the axis C. On this fly-wheel another handle may be fixed occaſionally.

N, a ſmall rail which preſerves the hopper in its place; the furtheſt part of the hopper reſts on a ſmall pin, which admits ſufficient motion for the hopper to ſhake forward the corn.

O, a ſpur-rail, to ſtrengthen the frame-work of the Mill.

P, the front upright, which is mortiſed into the frame-work of the Mill; this is a reſt for that end of the iron axis C which is next the handle. There is a ſhoulder on each of the axis, to keep it ſteady in its place.

N. B. A cloth-hood fixed to a broad wood hoop, is placed over the ſtones whilſt at work, to prevent the fine particles of flour from flying off.

Account of Mr. RUSTALL'S BOLTER.

A Bolter or ſifter to ſeparate the flour from the bran, being neceſſary to uſe along with the Mill above deſcribed, Mr. Ruſtall furniſhed the Society with one made upon a very uſeful and ſimple conſtruction, which is alſo placed for inſpection in their repoſitory. This machine is applicable to other purpoſes; and as its being generally known may prevent many inconveniences which attend the levigation of noxious articles, and a waſte of their finer particles, an engraving and deſcription of this Bolter is annexed for the benefit of the Public.

Fig. 2. repreſents the bolter, the front of which is removed, to ſhow its interior conſtruction; its length is 3 feet 10 inches, its breadth 19½ inches, its depth 18 inches.

A, is a moveable partition, which ſlides above four inches backwards from the centre of the box, upon two ribs of wood, fixed to the back and front of the box, one of which ribs is ſhown at B.

C, the lid of the bolter repreſented open.

D, a ſlider moveable in a groove in the lid by two handles on the back of the lid.

E, a forked iron fixed in the ſlider D: this fork, when the lid is ſhut, takes hold of the edge of the ſieve F, and moves it backwards and forwards on the ribs of wood B, as the ſlider is agitated.

G, a fixed partition in the lower part of the centre of the box, to ſeparate it into two equal parts, in order to divide the fine and coarſe flour; the ſlider A moves about four inches each way from this partition, and thereby gives room for the ſieve F to be worked.

Fig. 1.

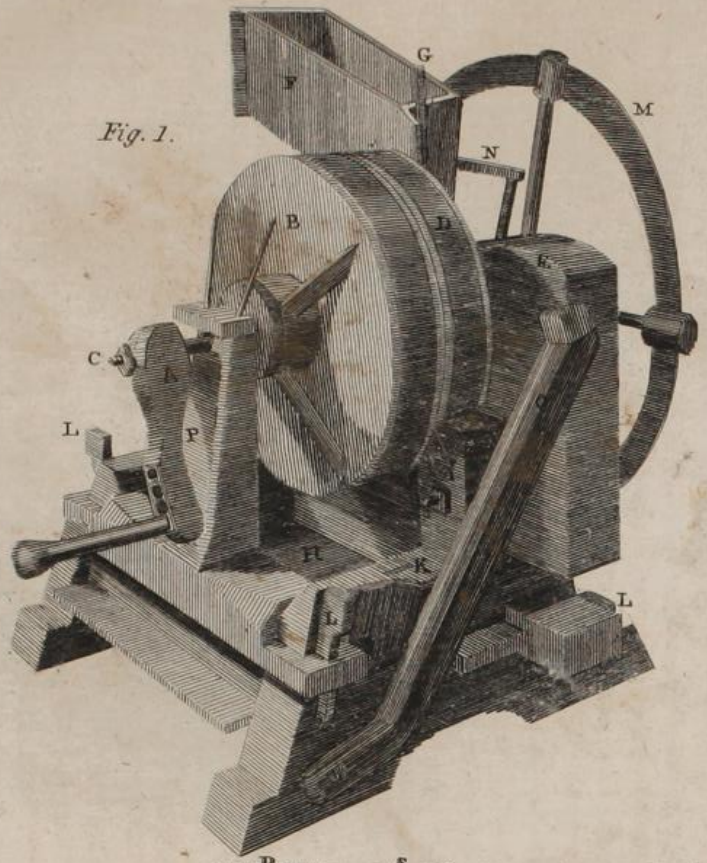


Fig. 3.

Fig. 2.

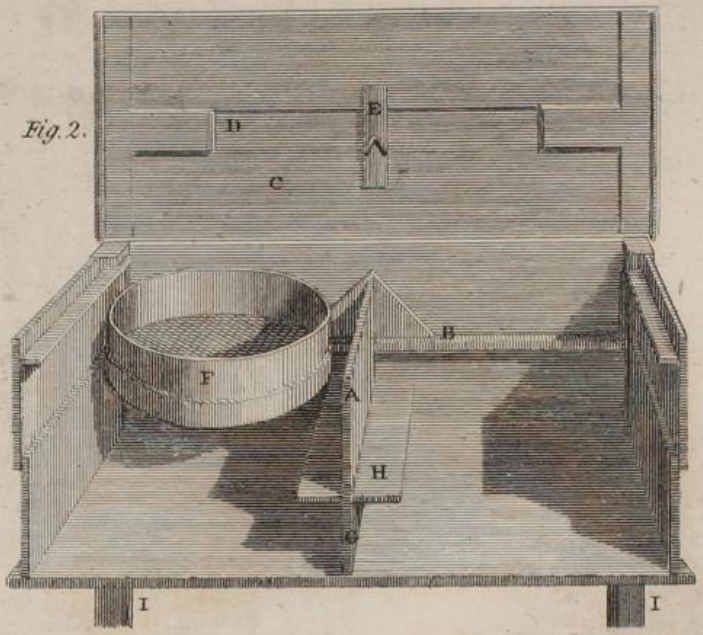


Fig. 4.

Mr. Thos. Rustalls, Family Mill & Bolter.

Pub. by V. Griffiths, Paternoster Row, April 1.1801.

H, a broad parallel to the bottom of the bolter, and forming part of the ſlider A. The uſe of this board is to prevent any of the ſifted matter from falling into the other diviſion.

I, repreſents two of the back-feet on which the bolter ſtands.

Fig. 3. ſhows the top or upper part of the lid of the bolter.

K, the ſlider which moves the lengthway of the bolter.

L L, handles which work the ſlider.

M, a ſcrew holding the fork which gives motion to the ſieve.

Fig. 4. the forked irons ſhown ſeparate from the lid.

ON AN UNUSUAL MANURE.

For the Commercial and Agricultural Magazine.

THE properties and ſpecific uſes of a great variety of manures have already been judiciouſly ſtated in your Magazine, but the ſubject is by no means as yet exhauſted, and indeed, appears to me to be almoſt inexhauſtible. I have ſeen improvements of ſuch magnitude effected by the common application of manure, eſpecially on convertible land, and where it has been ſpread upon green-ſward, for at leaſt ſix months before the plowing, that I ſhould think myſelf juſtified if I were to aſſert that a great part of the myſtery and art of farming depends upon the poſſeſſion and good management of this ſingle article.

By manure, I mean any ſubſtance that is found encouraging to land; almoſt any ſubſtance that is of a quality differing materially with the ſoil on which it is uſed; for the greater that difference, the greater, in general, the improvement made in the land. There is indeed ſcarcely any ſituation, in this iſland, that has not its native, appropriate, and cheap manure, which might be uſed to a greater extent than we at preſent ſee it, and would, no doubt, be far more extenſively made uſe of, if the ſhortneſs, or want of leaſes did not preſent inſurmountable obſtacles. Grant only long leaſes, and you would ſoon ſee even the common rack-renter turning his newly acquired capital to good account both to himſelf and to the public: you would ſoon ſee him engaging in extenſive modes of manuring, ſuch as marling, chalking, liming, and likewiſe, in certain ſituations, in floating and warping, at his own expence.

The manure, however, that I wiſh at preſent to introduce to the notice of your readers, is called Sea-Sludge, which, although it is the moſt enriching and durable of manures, has not, I believe, been recommended in any treatiſe on this ſubject. It is not indeed a general manure, or attainable in every ſituation, but might be uſed much oftener and to a greater extent than it is at preſent. It is to be found upon the lower part of every ſalt-marſh, that part which is generally overflowed by the tide, but not with ſuch conſtancy as to prevent its becoming firm, and its being covered with a thin coat of graſs. I have ſeen this ſurface ſoil of a ſalt-marſh dug out in ſquare lumps, a

full ſpade's depth, and carted to diſtant upland with effects the moſt encouraging both to corn and graſs. It gives ſtrength and firmneſs to the land, as well as richneſs; and its effects, when a good thick coat of nearly two inches has been uſed, have been manifeſt for thirty years. It is uſually carried upon the land towards the end of ſummer, and ſuffered to remain in its lumpy ſtate till the froſt has taken hold of it, when it falls abroad like lime expoſed to moiſture. I have ſeen a bed of onions, raiſed upon land thus manured, as luxuriant as any in the richeſt garden in the neighbourhood of London, I am, yours,

London, March 20, 1801. PRACTICUS.

ON THE MANNERS AND LUXURY OF THE AGE.

To the Editor of the Commercial and Agricultural Magazine.

MR. EDITOR,

IN the commerce of life, we continually witneſs diſſatisfaction. Few indeed are contented with their lot in life, and unavailing wiſhes are the uneaſy tenants of the human breaſt. But this is the dark ſide of the picture; without theſe wiſhes and theſe complaints there would be no *ſtimulus* for exertion, and the improvement of the world would be at a ſtand for ever.

If we turn to the higher orders of ſociety, we diſcover no mitigation of theſe complaints, which only inform us, that the aſpiring principle to which we owe every art, and every convenience, is ſtill active in the human mind. Even thoſe few who look with indifference on the glitter of ſuperior wealth, have not the leſs ambition: its object only is changed from one kind of pre-eminence to another.

But if we can diveſt ourſelves for a moment of this ambition, ſo neceſſary to the general welfare of a nation, we may find no reaſon to fear a compariſon with the much *bepraiſed* time of our anceſtors. It cannot be unfair to take the ſame income, and to examine whether it would have purchaſed greater conveniences of life at any former period, than at the preſent. To thoſe, who calculate only the increaſed demands of government, and perceive how certainly every tax muſt indirectly enter into the price of every commodity, ſuch a compariſon may ſeem to promiſe a reſult unfavourable to the preſent day. But the increaſing facility of manufacture from increaſe of capital, and the conſequent diviſion of labour,* fully balances this evident burden.

Even many foreign productions (which are uniformly and heavily taxed) from the improvements of trade and navigation

* All the articles of clothing and metalline manufacture have decreaſed in price, ſince the time of Henry VIII. though the Spaniſh mines had not then made money plenty in compariſon. Even meat (the commodity moſt diſtant from manufacture) is not much dearer than it was under James I. Cotton-ſtuff is an eminent inſtance of the modern aſſociation of comfort and cheapneſs.

are offered at lower prices than two hundred years ago *. If it be urged, that we purchaſe more of them, I ſhall not deny the fact; ſince that very power of purchaſing, directly demonſtrates the improved condition of every individual from the cottage to the throne. The mighty chief of Greece, Agamemnon, "King of Men †," was his own butcher and cook; and before the improvements of modern art offered more coſtly conveniences, the nobility of England ſpent their time in the ſociety, and their revenues in the maintenance of a crowd of idle *Retainers*, whoſe ſervices were only conſpicuous in the more notorious breaches of the peace of ſociety.

Perſonal enjoyment has ſucceeded to this ferocious ambition ‡: and under the name of *luxury*, we are now clamorous againſt the neceſſary effect of the induſtrious habits of our age. But *luxury* is an equivocal term, and is always applied by the many to the expences of the few: to whoſe more ample fortunes muſt be aſcribed the firſt encouragement of every increaſe of the *comforts* of poliſhed ſociety, which deſcending into vulgar frequency (in the language of the next generation) became the *conveniences*, perhaps the *neceſſaries* of life.

In this inſtance (as in many others) a confuſion of ideas has obſcured the public intellect: the ſame word, *luxury*, having been applied to *Sardanapalus*, and to thoſe effeminate manners which preceded the downfal of ancient Empires, has ever ſince been denounced with diſdain, by every candidate for the reputation of ſevere morality. But a large expenditure infers no moral turpitude; and we muſt avoid the imputation of injurious luxury, while we cannot perceive that it unfits our nobility for any ſtation of public life, or any exertion of private virtue: while we cannot diſcover, that the valour of an officer, or the activity of a ſtateſman is diminiſhed by a ſplendid eſtate, or a noble title. And if, in the higher ranks, there be little minds, who, forming an unjuſt eſtimate of happineſs, enervate their minds, while they diſſipate their wealth, theſe *viciouſly luxurious*, are few in number, and, like ſwine, afford a conſolation to an induſtrious public, which is nouriſhed by the deſtruction of theſe kindred animals, alike valuable only for their ſpoils.

We may read a diminution of injurious luxury, in the altered faſhions of the preſent day. The lace and tinſel which adorned our fathers have diſappeared, and a *Gentleman* is no longer diſtinguiſhed by an embroidered waiſtcoat. Every man's dreſs aſſerts to the eye of the ſpectator that the wearer will not conſent to be hampered with a finery, which for a moment diſqualifies him from a ready exertion of every purpoſe of his exiſtence.

* We talk much of the price of ſugar; in Elizabeth's time it was 20d per lb. we now pay more than 3d per lb. duty, and yet procure it for leſs money. † Ανακ ανδρων Αγαμεμνων.

‡ The moſt numerous eſtabliſhment of men-ſervants does not now exceed 40: and from the complaints of their maſters, it may be inferred, that the plague of their continual miſbehaviour more than balances their utility.

Gluttony has alſo yielded to the increaſing civilization of the age; and neceſſarily, ſince that vice can only originate in the vagrant life of the improvident ſavage; who uncertain of future ſubſiſtence devours to ſatiety the preſent repaſt*.

The diſtance betwixt a modern Engliſhman, and a ſavage is indeed very great: but in the intermediate ſteps of civilization we may trace the gradual diminution of national intemperance. Our ancient kings, our nobles, and even our churchmen † were accuſtomed to celebrate all the feſtivals ‡ (which were conveniently prolonged) by the moſt unbridled imtemperance: and *now* we can ſcarcely even credit the long details of theſe enormous feaſts which accompanied every ſolemnity, and which indicate the extent of the invitation, and the prolonged ardour of the noble and reverend gueſts. Public feaſts in the preſent day are ſcarcely extant, except among corporations, who perhaps rather reſpect the cuſtoms of antiquity than their own gratification in the diſgraceful competition of gluttony at a city-feaſt. But the nature of every corporation infers a certain preponderance of neglected mental cultivation §; and on that conſideration we may eſtimate them about a century behind the general improvements of mankind.

Thus even this ſmall veſtige of gluttony rather aſſiſts the probability of the opinion, that a high cultivation of reaſon, and conſequent civilization tends daily to the utter extirpation of gluttony; a vice which in ſo few inſtances accompanies a brilliant intellect, that we may almoſt determine it to be incompatible with the nobler ſpeculations of the mind.

Perſonal finery and gluttony thus on the decline, the revenues of the opulent are at preſent expended in more honourable purſuits, and on the retroſpect we may conclude, that all ranks of ſociety in England have eminent cauſe of contentment. The poor are by ſalutary laws protected from abſolute famine and nakedneſs: the expences of the rich (in uſeful and honourable purſuits) employ the induſtry of the manufacturer: while education and aſſiduity daily lift ſo many into the higher ranks of life, that no man of ſpirit or emulation can deſpair of attaining the due reward of any exertion of his powers.

* Nature has given to all beaſts, and birds, and fiſhes of prey, a faculty, of receiving into their ſtomach *at once* the nutriment of many days. Nature by the want of this power, deſignates mankind for ſocial and civilized life; ſince no other ſituation can inſure a daily ſupply of food.

† Our ancient hiſtorians (moſtly Monks) are very accurate in relating where the King kept his Chriſtmas, &c. The Abbots (in ſome inſtances) were not aſhamed to eſtabliſh *infirmaries* for ſtated purging and blood, letting of the convent after theſe carnivals. See Groſe's Antiquities

‡ Chriſtmas, Eaſter, and Whitſuntide; called then "The three tider." The inauguration of an Archbiſhop of Canterbury always cauſed an enormous waſte of proviſions and liquor.

§ This preponderence by no means affects the liberal character of thoſe many cultivated minds, which our proſperous commerce has raiſed into eminence, and by whom its intereſts are reciprocally benefited. The *generality* of the members of corporations are certainly below the *par* of ſcience and urbanity indicated by their wealth.

ON THE EXPEDIENCE OF A MAXIMUM.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

I HAVE seen a few (and but a few) of those newspaper dissertations, which have urged the expedience of a *Maximum* in the present scarcity. In parliament it has been mentioned, but has met with little attention there. Perhaps the intelligent Senators did not think it worth while to refute seriously a proposal which displayed such an utter ignorance of political economy, and might even feel the credit of their deliberations a little interested in hushing up such sentiments of individuals of their body.

Perhaps they were judicious in this marked inattention; but as it cannot now be concealed from posterity, that many other persons at the commencement of the nineteenth century were advocates for this frantic expedient, I think you will hardly deem it improper to dedicate a few pages of your Magazine to a cursory examination of the certain effects, and utter impossibility of such a measure. It may seem absurd to discuss the effects of what is impossible: but as the attempt would produce a very extensive injury to valuable individuals, it will not be impertinent to eradicate this flimsy opinion with all convenient speed. I only request your readers to observe that I do not mean to display to them *all* the baneful consequences of a *Maximum*; I shall content myself with producing a few, the most obvious and conclusive; and which first chance to occur to my recollection.

Suppose, then, it were enacted that no wheat should be sold at more than 80s. per quarter: and that the law, by very severe penalties, or miraculous arrangements, were fully effectual. Nobody will suppose (at the present price) that any corn would *any where* be sold *lower* than the appointed sum. In some places the corn grown exceeds the consumption, in others it is much beneath it. Not only large towns, but many whole counties are notoriously in this last predicament. Lancashire, and all the districts where coal has introduced extensive manufacture, form a very considerable portion of the kingdom, which evidently does not grow its own bread. I think in noticing the Survey of Lancashire, you have stated (page 443) that county as importing, on an average, grain to the amount of 700,000l. annually.

By what means can so large a quantity be collected, and forwarded to Liverpool? Clearly it must be bought up somewhere, if not by cornfactors, at least by agents, if the law was so carefully wordeds to suffer their intervention. Say then it has been bought at Lynn at 80s. per quarter. There are such things as

agency, loading, freight, inſurance, and diſcharging, before the purchaſer at Liverpool can touch his conſignment. To ſpeak within compaſs, we will ſuppoſe theſe *items* to add only 10 per cent. to the firſt coſt. It then ſtands in 88s. per quarter, to the Liverpool purchaſer; and, ſays the *Maximum Law*, he ſhall not ſell it to the mealmen or inhabitants there at upwards of 80s. Can any but a blind man avoid ſeeing the neceſſary conſequence? No merchant can poſſibly order any freight of corn, and the people of Lancaſhire muſt be famiſhed, and though thoſe of Norfolk (from a complete prohibition of export) would ſo overflow with grain, that the price there would remain ſteady at the *Maximum*, and large quantity of corn would thus be locked by law from the famiſhed diſtricts, and remain at next harveſt, a ſpeaking comment on ſuch a wiſe regulation.

If it be urged, that hence the price might fall a little below the *Maximum* in Norfolk, and thence might be bought and exported without loſs, I anſwer that only the neareſt places could profit thereby, as they would inſtantly buy it up as ſoon as it was poſſible by law to carry it thence without *loſs*. Even to paſs by the impoſſibility of dealing in corn to a *loſs*, where are we to find ſuch diſintereſted men, who will deal in any commodity without *gain*? And if this is not to be expected, the reſult is clear: every conſumer muſt buy at the *Maximum* price of the grower; that is, every family muſt travel acroſs the kingdom, (as Jacob's ſons did into Egypt) or they muſt each at leaſt eſtabliſh a ſeparate correſpondence. Would any body after this be able to ſay, that corn was actually procured at the *Maximum* price? or would they not then ſee the intolerable inconvenience, and national loſs from any deviation from the uſual courſe of trade. Indeed trade is nothing elſe than the art of procuring by the intereſted agency of individuals, all commodities (eſpecially diſtant ones) at a leſs expence than the value of perſonal attention. If we had to purſue the many thouſand articles which conſtitute the neceſſaries and luxuries of life to their firſt ſource, the whole life of a man, however wealthy, would not ſuffice to furniſh him with half the enjoyments of a peaſant; and the leſs affluent claſſes of ſociety would be immediatly ruined, by quiting their own occupations on ſuch a perplexing errand, to the poor utterly impracticable. Thus we ſhould fall from our preſent civilization to inſtant barbariſm, and the ruins of diſſolved ſociety would overwhelm nine-tenths of our population in a ſingle month. If it ſeems a very ſtale, trite thing thus to point out the neceſſity of commerce to civilized ſociety, it muſt be granted to be in point on the preſent queſtion, which can only be agitated by thoſe, who talk of the moſt eſſential branch of commerce (that of corn) without having conſidered, that no commerce can poſſibly ſubſiſt a moment, which does not offer to us accommodation and conveniences, outweighing the profits of the merchant.

I have thus far confined myself to the display of a *partial* effect of a *Maximum* by law established, though what I have said may appear worthy of deliberate contemplation, when it is seen already that our flourishing metropolis, our busy ports, and all our manufactures, the only sources of national wealth, must fall an immediate sacrifice to this experiment. I shall now proceed to shew in what manner all those who may at first sight seem to have a personal interest in the lingering death of their countrymen, how even these men cannot escape the irresistible effect of any such restraint on the freedom of the corn trade.

When human nature feels any want, however trivial or whimsical, it always resolves to satisfy it as far as is consistent with other more weighty conveniences. Thus people who have affluent fortunes barter away their riches for many things whose absence would not much affect them. In the pangs of hunger and famine, much more will every one procure as large a quantity of food as he can. If a poor family possesses a single shilling it must all go for the cheapest aliment; whether it be a loaf weighing six pounds or two, it is bought, and hard necessity compels to eat sparingly of the costly morsel. But suppose a *Maximum* rendered bread cheaper, for instance, twice as cheap as before; what must be the consequence? Not that the shilling would not be spent on it, but that it would purchase twice as much as before. Consequently twice as much would be consumed. If, then, under a dear price, we possess as much as may maintain us till harvest, under an artificial cheapness we shall inevitably consume it in half the time, and universal famine must ensue. Thus a high price in time of scarcity acts (and is the only thing which can effectually act) against real famine, and universal desolation.

I shall spend no more words in discussing the abstract expedience of a *Maximum*, but rather address myself to those gentlemen who in proposing the measure, have overlooked the necessary details which would prove to themselves the utter impracticability of the proposal. It may be remarked, that all of them confine themselves to general topics—to an affirmation of only a limited property in the necessaries of life—or to a discussion on the proper sum at which *Maximum* should be fixed, to do justice (in their phrase) to both parties. They may spare this last discussion till the fitness of *some Maximum* is recognized by the Legislature, and would find so few people fond of this newly created being, *limited property*, that in a very few years, no necessaries of life would be extant. Who, for instance in the last seed-time would have ploughed more, or sowed more than *usual*, had they not reason to expect a higher price than *usual*?

After combating these difficulties, the advocates for a *Maximum* have universally forgotten to inform us *how* it is to be enforced. They had a good reason for this omission, because the

maze before them was ſo intricate, that the cumbrous enactments of an act of parliament would ſcarce ſucceed in following its many windings. The legiſlature is petitioned on all ſides for regulations; but it, wiſely indeed, is left to the wiſdom of Parliament to diſcover the ſpecific remedies. To propoſe a model of a practicable law is the only fair way of aſking for it.

Suppoſe it enacted that wheat ſhould not be ſold above 80s. per quarter.—*We will not ſell at all.* You ſhall be compelled by the military to bring your corn to market.—*Muſt I ſell to any perſon who offers the price, or chuſe my dealer?* If the former, it will be bought up by the moſt vociferous, and even then he will not ſell again at the *ſame* price—the *Maximum.* If the latter, an indirect bribe will inevitably paſs, which will do away any effect of the law. It is to be alſo aſked, is the *Maximum* law only to attach to the grower, or to any corn-holder? If to the grower *only*, a ſham bargain will eaſily make the property over: if to all others, how can any law determine the exact quantity and time each individual factor, miller, and baker may keep corn and flour. No law can apply to ſuch complicate conſiderations; indeed no one man can determine of his neighbour, what may be neceſſary, or not, to his buſineſs, for the public good. Beſides, ſays the farmer, *I cannot ſell my corn, it is not threſhed out.* You ſhall be compelled to threſh it inſtantly. *How much of it?* If *all* in the kingdom muſt be threſhed and ſold, folly herſelf muſt ſee future deſtruction. If a part, for inſtance a twelfth per month, who can determine that twelfth. The farmer himſelf certainly cannot exactly tell, and the hopeful expedient of putting all ricks and barns under the tuition of the exciſe, would be of little avail. Indeed might not a needy Exciſeman (the pooreſt people in the kingdom) be bribed by a rich farmer? And after this maſs of confuſion, is it not certain, that the moſt open, honeſt man would ſuffer alone for the fancied good of the public, and that the crafty knave would evade the enactment of any law?—I might evidently ſpend many ſheets in following the various ramifications of difficulty attending the enforcement of the *Maximum.* I have recited enough to be juſtified in requeſting every projector of that meaſure, to ſketch an act of parliament to his mind, and then examine the probable evaſions of it without prejudice. I will take upon me to aſſure him, that he will then ſee the naked fact: that it is juſt as practicable to cauſe plenty by an Act of Parliament, as to enforce any law againſt the intereſts of almoſt half the community, all breaking it without remorſe of conſcience, or fear of a tainted character; the only check remaining being the bare tyrannic arm of *penalty* and *puniſhment.*

I am far from objecting criminal intentions againſt the propoſers of a *Maximum*, as ſome of *them* have charitably done againſt all farmers, millers, factors, bakers, &c.—God forbid any

man ſhould exiſt in the kingdom deliberately and knowingly planning the adoption of a meaſure ruinous to the whole community. The crime of poiſoning the New River Head, and by it all the inhabitants of London, would be a trivial offence in compariſon. But that theſe men are themſelves a part of the community threatened by their contrivance, is ſufficient guarantee, that it is not of *malice prepenſe*, but of an idle itch of talking and ſcribbling on a ſubject they are ignorant of, whence this propoſal of ſuch a ſublimely deſolating miſchief has its origin. I ought, therefore, not to addreſs myſelf to their conſciences, but to their intellect. Let them then learn as follows.

The ſcience of political economy, which embraces all the arrangements of civilized life, is not to be known by intuition, or even by ſhort attention. Its principles are to be traced upwards from many details of no eaſy developement, and even at preſent the moſt ſage are not fully agreed on ſome very eſſential points in it. Adam Smith has indeed done much; but without perſonal reflection, and minute attention, even *his* reader will ſtill remain unfit to conduct the weighty affairs of a populous ſociety; and after the beſt intentions, will ſee effects reſult directly contrary to his expectations. In the queſtion of the *Maximum* this is eminently true, and it is not the want of many arguments, but the difficulty of finding any for vulgar comprehenſion, which has not permitted to this paper a more comely, ſcientific form.

If a man ſet up for a Greek critic, without knowing the alphabet, or even without ſome years' ſtudy, he would become juſtly ridiculous to all. Yet by time and attention every body can learn Greek, and may be ſure of a tolerable progreſs. But in political economy, to which (beſides aſſiduity) is neceſſary the moſt cultivated intellect, every prating oracle of a circle (merely from the exceſs of his ignorance, and the very obſcurity of the ſubject) ſeems to have become perfect, without *half* ſo much attention and ſtudy, as is neceſſary to learn the Greek alphabet.

R.

ON THE MANAGEMENT OF BEES.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

I HAVE lately been employed in peruſing ſome of your preceding Numbers, and have certainly gained ſome conſiderable information. Among other ſubjects which claimed my attention, there was one which certainly has not been exhauſted; and, according to my view of it, has fallen far ſhort of that attention which its importance might juſtly claim. I find an enquiry ſtarted in your eleventh number, and put on the ſhelf in the following one.—Do, Sir, permit me to take it down, by claiming the attention of your friends. In the number alluded to,

p. 412, it is asked—" Is there any certain and permanent profit to be made from Bees in this climate?"—In the next number, p. 40, we have a reply (*I beg pardon, I mean some remarks*) on the subject. In reading this I confess myself greatly disappointed, and I do conceive I am not alone. *The learned Doctor tells us, he is capable of resolving the enquiry, for he has had forty years practice—that it is a favourite pursuit with him.* If this, Sir, be the case, I am sure when I presume to request Dr. Isaacs to furnish us with a little more information, I am only calling on him to hand out to us a little of that large fund of practical knowledge, which after so many years experience he must have laid up. My enquiries are not after theoretical knowledge, but practical; not what writers say may be done; but what such a gentleman as Dr. Isaacs has done.

1. What is the best situation for an apiary? 2. What kind of hives are best, and of what substance made? 3. What sized hives are to have the preference? 4. What number of hives is it eligible to keep? 5. What is the best mode of management? 6. What the most productive way (I dont say humane, as that is evident) of taking the honey? 7. If destroying the Bees is rejected, what is the best method of seperating them from the honey; and sustaining the hive? 8. What is the best mode of defending Bees from their enemies, and preserving them in winter? As to the manner in which their produce may be applied, is another enquiry; but I should be obliged to the gentleman mentioned above, or some other person, to give us their sentiments on these enquiries. Should they, however, be considered not sufficiently important to excite attention, I may trouble you again, and shew my opinion, for I also am a practical lover of Bees, And your humble servant,

Long Melford, Suffolk. DAVID FORD.

ACCOUNT OF THE ATTEMPTS WHICH HAVE BEEN MADE TO INTRODUCE THE CULTURE OF SILK IN THE BRITISH COLONIES.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

THE culture of silk having been much extended in France by the patronage of Henry IV. before whose time it had been confined to a few particular districts, it excited in James I. an earnest desire to rival in this respect the French king, who, by having brought the article to great perfection in that country, he observed, had "won to himself honour, and to his subjects a marvellous increase of wealth." The sanction and support of the king were however insufficient to overcome the natural impediments to the breeding of silk-worms in England on a scale sufficiently extensive to become an object of profit; and after

perſevering in the attempt for ſome years, with inadequate ſucceſs, he turned his attention to the colonies then eſtabliſhed in America; the moſt ſouthern of which, from the advantage of climate, appeared to offer a more favourable proſpect. With this view he ſeveral times urged the Virginia Company to promote the cultivation of mulberry trees, and breeding of ſilk worms; particularly in the year 1622, by a letter addreſſed to the Treaſurer and Company of Virginia, expreſsly on the ſubject. In this letter the king charges and requires them to ſee that the people there uſe all poſſible diligence in breeding of ſilkworms, and erecting of ſilk works, and that they beſtow their labour in producing this rich and ſolid commodity in preference to that of tobacco, an article to which it is well known James Iſt. had a violent averſion. The Company appear to have been determined not to be outdone by the king in zeal for the accompliſhment of this object, and accordingly, with a copy of his majeſty's letter, they tranſmitted to the governor and council reſiding in Virginia, very particular inſtructions to employ all their endeavours for eſtabliſhing the two ſtaple commodities of ſilk and wine, for the better accompliſhment of which they ſent at the ſame time a number of copies of a book upon the ſubject, written by Mr. John Bonneil, a member of the Company, who engaged earneſtly in the attempt, and was ſo fully convinced of its practicability, that he ſays, "ſuch quantities of ſilk might eaſily be made in Virginia, if there were a ſufficient number of hands, as in a very ſhort time would ſerve *all Chriſtendom.*"

This book was to be diſtributed to every maſter of a family in the colony; a conſiderable quantity of ſilk-worm eggs was alſo ſent, and the Company in their inſtructions, order, that "if you ſhall find any perſon, either through negligence or wilfulneſs, to omit the planting of vines, and mulberry trees, in orderly and huſbandly manner (as by the book is preſcribed), or the providing of convenient rooms for the breeding of worms, we deſire they may, by ſevere cenſures and puniſhment, be *compelled* thereunto." And they afterwards add, that as there was nothing wanting but induſtry in the planter, to bring the culture of ſilk to perfection, if a view to their own intereſt did not induce them to engage in it willingly, it muſt by a wholeſome and neceſſary ſeverity be enforced.

The misfortunes which the colony of Virginia experienced, and the diſſolution of the Company ſoon after, muſt have checked the execution of this project very materially; and though a conſiderable number of trees were planted, and were found to flouriſh, it ſoon fell into decay.

By a letter of Mr. Edward Diggs, of Virginia, to J. Ferrar, Eſq. of Little Giddin, Huntingdon, dated June 21, 1654, it appears that the culture of ſilk had been revived in Virginia, after having fallen into general neglect; for this gentleman expreſſs

his satisfaction in setting up so beneficial a staple and vendible commodity: the want of mulberry leaves had caused him to make but 400lbs. of silk bottoms, but he was confident that he had conquered all the principal difficulties respecting this rich commodity, and made its profit so evident to all the Virginians, that in a short time there would be great quantities of silk made. It does not however appear that the culture of silk has since been carried to any considerable extent in Virginia, which is probably owing more to the attachment of the planters to the growth of tobacco, than to any natural obstacle.

The settlement of the colony of Georgia was began in the year 1732, and the trustees soon after the commencement of their undertaking, caused a common nursery garden to be laid out for white mulberry trees, for the production of silk. About this time silk was raised in Carolina, in small quantities, some families making forty or fifty pounds weight a year, and the mulberry tree was found to thrive as well as any tree in that province.

In 1733 a compendious account of the management of the silk worm was published, dedicated to the trustees of the new colony; the chief merit of this performance consists in the plates, which convey a very good idea of the management of the insect in France and Italy. In order to instruct the colonists of Georgia, more completely on this subject, some Piedmontese skilled in the winding of silk and tending the worms, were sent thither; and, notwithstandig the difficulties attending the attempt, and the public misfortunes of the colony, many persons persevered in it, and experienced some success; in consequence of which an act was passed in 1749, for encouraging the culture of raw silk in the American colonies, by which raw silk, certified to be the real growth and culture of those colonies, was exempted from any duty on importation into the port of London.

The culture increased gradually, though slowly, both in Georgia and the adjoining province of South Carolina; but a few years after, the produce became more considerable, and the following account, in the year 1759, seemed to afford a very hopeful prospect. "In the year 1757, 1052lbs. weight of raw silk balls were received at the filature in Georgia; and the next year produced no less than 7040lbs. weight thereof. And in this year 1759, there has been received at Savannah, the capital of Georgia, considerably above 10,000lbs. weight of raw silk, although the season has not been favourable." As the probability of the ultimate establishment of the culture of silk as an article of commerce in the American colonies, appeared to increase, an act was passed in 1769 for the further encouragement of the growth and culture of raw silk in his majesty's dominions in America, by which *bounties* were granted as follow, viz. during the first seven years the sum of 25l. for every 100l. value

of such raw silk; during the next seven years the sum of 20l. for every 100l. value; and during the last seven years the sum of 15l. for every 100l. value. In an address to an Assembly of the Friends of American Manufactures, at Philadelphia, in 1787, it was observed, that "silk had long been a profitable production of Georgia, and other parts of the United States; and may be increased, it is presumed, as fast as the demand will rise."

There can be no doubt that in many of the southern parts of the American States, the climate is as favourable to the mulberry tree and the worm, as in those countries of Europe where it is raised; the chief difficulty the Americans have to contend with is, that in most of the southern States, the labourers are negro-slaves, who are not sufficiently attentive and skilful in this business. In Connecticut, where there is a sensible and careful white population, and where land is comparatively scarce and dear, the culture of silk has been found to be practicable and beneficial. A project to extend the white mulberry tree over all the States, was formed a few years since, by some persevering individuals, acquainted with the propagation of it, and a great part of Connecticut was supplied. An extensive nursery was established near Philadelphia in 1789; another at Princeton, in New Jersey; and two more have been commenced on New York and Long Island. These undertakings were encouraged chiefly with the view of preparing things for an expected emigration from the silk countries of Europe. The Duke de Rochefoucault Liancourt, who visited South Carolina in 1796, informs us, that at Elms (about seventeen miles from Charles-Town), the lady of Mr. Isard had made several experiments of rearing silk-worms, (which the two last years had proved uncommonly successful;) whether any other attempts of the kind had been made he did not know; which may be considered as some proof that of late the culture of silk has not made any considerable progress in America.

In the British settlements in the East Indies, the culture of silk has been long established, particularly in the island of Cossimbuzar, and its neighbourhood, in the province of Bengal; it has however been much improved of late years, and attempts have been made to introduce it in other parts of those possessions, especially on the coast of Coromandel. Dr. James Anderson, of Fort St. George, who has been particularly zealous in promoting this among other useful undertakings, introduced mulberry trees at Madras, about the year 1770, and finding they grew luxuriantly, afterwards endeavoured to procure silk-worms eggs from Bengal; his first two attempts were unsuccessful, but the third, in 1789, succeeded, and the advantages likely to accrue from the culture of silk, soon engaged several persons, on

different parts of the coaſt, in the care of the worms. In a letter from Dr. Anderſon to Sir Joſeph Banks, dated Jan. 26, 1792, he ſays. "I have received accounts of the ſucceſs of the ſilk worms at Palamcotta and Maſulipatam, as well as of the recovery of thoſe that had been diſeaſed by the late rains at Tritchinopoly; ſo that a breed of this inſect is already eſtabliſhed in an extent of ſix hundred miles upon the coaſt, but it will reſt with the Company to render it productive." The ſilk which has been brought to this country from Madraſs is, as might naturally be expected in ſo early a ſtage of the undertaking, very gouty and indifferent; but there is great reaſon to believe that, with care and attention, it may ſoon be improved into a valuable article.

March 5, 1801. J. J. G.

ON BOTANY.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

YOUR Magazine is become ſo uſeful a repoſitory of ſcience, that I am happy to avail myſelf of it to communicate a few obſervations to you on the ſubject of Botany, as it now is cultivated in conformity with the *Linnæan* ſyſtem, commonly called the *Sexual* ſyſtem.

Many of the objections formed to this ſyſtem, merely as an artificial one, which diſtorts and confounds the natural order of things, and not of real practical uſe; (but as it fixes a fantaſtical conformity to its own chimeras), are either exaggerated or abſurd. They are *exaggerated*, becauſe though the ſyſtem does not confine its diſtinctions to the habits of plants, as to the vulgar eyes they might be ſuppoſed to ſuggeſt a different and more obvious claſſification, it ſeizes on thoſe parts of plants, which exhibit a manifeſt relation *inter ſe*, and being always to be found in the fructification, furniſh a permanent mark for arrangement and ſcientific regulation. They are *abſurd*, becauſe they originate in ſuch a ſuperficial knowledge of the ſubject, that I conceive it will be found, that thoſe who ſtate them, have only conceived them to *be* objections at all, becauſe they either want application or capacity, to go to the bottom of a ſcience they preſume to attack; and on whoſe merit, therefore, it is folly, in the extreme, for them to attempt to decide.

That Linnæus has very happily aſſimilated the vegetable to the animal world, by his ſexual diſtinctions, and that he has actually aſcertained, wherein thoſe ſexual diſtinctions conſiſt, I have no doubt. Give me leave to mention a curious circumſtance in the Indian wheat, or *Zea Maize*, which may not be generally known, eſpecially in European climates. This

genus of corn, ſo common in Africa, America, and the Weſt Indies, is of the *Monæcia* claſs, in the Linnæan ſyſtem, which conſiſts of plants bearing *male* and *female* flowers in the ſame plant. For the benefit of perſons not converſant in ſexual botany, we would obſerve, that what is vulgarly called the *flag* of the Indian wheat is the *male flower*; and that the *beard* at the end of the ear of corn conſiſts of the *female* ſtyles, and form, of courſe, the *female flower*. The common colour of the ripened corn is a *bright yellow*; but there are two varieties in which the grain is *perfectly white*, or of a *duſky red*, and if care is taken to plant a red ear and a white ear, and plant them by themſelves, all the productions will be reſpectively white and red. But by experiments which have been actually made; if to windward of a patch of white or red corn, there be planted another patch of yellow, or, *vice verſa*, the fecundating *farina*, or pollen, will be diſperſed by the wind over the patch to leeward, and will leave inconteſtible marks of its prolific influence by variegating the colour of the grains; an effect which would not have been produced, had ſuch a neighbourhood of different coloured corn not have been contrived for the purpoſe of making the experiment.

Colour is by botaniſts conſidered as an accident, and not an eſſential quality, but in this inſtance it ſerves as an intereſting criterion of the truth of the ſexual ſyſtem in one particular.

The *Zea Maize* exhibits another curious proof of the truth of that ſyſtem. It is well known to be a cuſtom in certain countries (where that corn is one of the ſtaple eſculent articles of food) to *top* the corn at a certain period of maturity; that is to ſay, to break off the *male* flowers, when they have done their natural office, in order to check the vegetation of the plant, and more quickly dry the grain. An avaritious planter, in the Iſland of Barbadoes, thinking to be wiſer than dame Nature, and to get more than his neighbours, topped his corn before the uſual time, and previous to the ripening of the pollen of the flag or male flower, which was neceſſary to impregnate the female flowers attached to the embryo ear: the conſequence of which was, that the corn was totally barren; the ears proved an abortion, and the abſurd ruſtic, by his diſappointment, gave a convincing proof that there was a ſexual influance and co-operation in the flower, which was neceſſary to the perfections of the fructification.—Theſe obſervations, founded on facts, I think you will conſider as ingenious, and if ſo, you will much oblige me by communicating them to the public through the channel of your valuable work.

I remain your obliged humble ſervant,

H. E.

OF ENGLISH WEIGHTS AND MEASURES.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

IN your ſixteenth Number you inſerted a ſhort Diſquiſition on antient Meaſures: at preſent I ſend you a communication of more general concern, an Examination of the Origin of our Engliſh Weights and Meaſures. I do this with the more pleaſure, as I believe we are ſo lucky as to be more conſiſtent in theſe regulations, than any other European nation. The ounce of our avoirdupois weight remains at this day *exactly* the Roman *uncia*, left behind them at their departure from Britain; ſo that we may ſafely extend the antiquity of our *ounce* ſome centuries beyond the date of the Chriſtian æra.

But though our ounce is of ſuch high origin, our pound has not been ſo fortunate. It has been extended from twelve to ſixteen ounces, and is conſequently one quarter heavier than the Roman *pondo*. This augmentation of weights is but too frequent in a ſemi-barbarous age. It ariſes in this manner: when any article of common neceſſaries becomes (by any caſual plenty, or from other cauſes) cheaper than before, the vender is ever unwilling to ſink his apparent price, and retains his cuſtomers at the old price, by augmenting the real quantity exchanged for it. Hence the pound was in general raiſed from twelve to ſixteen ounces in the period of two hundred years ſucceeding the Norman Conqueſt, at which time the mines not being adequate to the demand for ſilver, money became more valuable; or, in other words, every thing became apparently cheaper.

But the contrary effect does not happen when commodities are *riſing* in price (as ſince the diſcovery of the American mines). The buyer will never conſent to a diminiſhed weight; this he denominates *cheating*; ſo that the price of a commodity always *ſinks* in a rude age by augmented weight; always *riſes* by an augmented money price. Hence all weights and meaſures may *increaſe*, but can never *decreaſe* in a ſemi-barbarous age. Thus in the more remote counties the pound is ſtill farther augmented. In the North, at almoſt every different market, butter varies in weight: in ſome the pound is no leſs than twenty-two ounces; eighteen ounces is moſt common.

It is not only in the Pound that augmentation reſults from the above ſource; if the effect were not general, my opinion in this point might juſtly be deemed an unauthorized aſſumption. But at the ſame period all other meaſures ſurpaſſed their antient bounds. The hundred-weight was transformed from 100lb. into 112lb. (long diſtinguiſhed by the appellation of the *great hundred*), and of courſe the half and quarter cwt. kept the ſame proportion. But where theſe leſs weights were uſually applied without reference to the parent weight, they roſe ſtill

higher, independent of it. Thus the buſhel (originally intended to average at 56lb.) in common uſe, was extended to nine gallons, beſides each gallon being made *good meaſure*; ſo that till our more civilized courts of law reduced it (by the determination of a cauſe in 32 Geo. III.*) to the antient eight gallons, even corn was purchaſed by a moſt uncertain meaſure.

Thus alſo the tod of wool (originally a quarter of a cwt.) has been augmented in cheap years, by giving *good weight* to tempt the buyer. Hence the tod is now of uncertain weight, but no where, I think, ſo low as 28lb. It is in ſome places 29lb. 30lb. 31lb. and, moſt uſually, 32lb.; and even elſewhere it amounts to 33lb.

In the ſame manner the weight uſed for butchers' meat, called, (from its uſual material) a *ſtone* (originally the ſixteenth of a cwt. that is 7lb.) has eſtabliſhed itſelf at 8lb. in the cuſtom of all markets. I may here alſo add the *Load of Wheat*, which plainly (as all other things) muſt originally have conſiſted of *four quarters*. At preſent it contains *five* quarters. I think my readers will allow that this univerſal concurrence of effect eſtabliſhes my opinion on a firm foundation; eſpecially when they learn, that even within the laſt three or four years the rival Staffordſhire collieries have thus endeavoured to keep up the antient price, by augmenting the cwt. to 120lb. the ton to 26 cwt. thus increaſing the ton from 2,240lb. to 3,120lb.

The ſame cauſe, probably, which with us has augmented the original pound, in other countries augmented the *ounce* in preference; hence the Roman ounce in France was increaſed about a tenth part, and was brought over hither by the Normans, under the name of *troyes-weight*. This was introduced by the Norman kings into their mint, where it ſtill obtains; once it was more extenſively uſed, but at preſent is only retained in the precious metals and in drugs (*apothecaries-weight*, vulgarly): unleſs we add the more accurate eſtimations of ſcience concerning ſpecific gravities, and minute weights. In theſe it ſeems only uſed of *neceſſity*, becauſe we have no ſmall diviſions of the averdupois ounce.

Troy-weight while it augments the ounce, retains the original number of ounces in the pound; whence it reſults, that though the Troy-ounce (being 480 grains) outweighs the Averdupois, or Roman ounce (which is 437½ gr.) by 42½ grains yet the Averdupois-pound (7000 gr.) exceeds the Troy-pound (only 5,760 gr.) by 1,240 grains. A Troy-pound therefore is about 13 oz. 2½ drachms, Averdupois weight; and an Averdupois-pound about 14½ oz. of troy-weight.

* Vide Report of *The King v. J. Major*. And again, *The King v. Arnold*. 32, 33. G. III.

It was mentioned in my letter (p. 335) that the foot (the uſual meaſure of moſt nations) was very various, as founded on the arbitrary length of the human foot. From this general aſſertion, the *Engliſh foot*, ſtands a glorious exception. In the ſame manner as the Romans deduced their radical meaſure of capacity, the *Quadrantal**, from a Cubic Roman foot (*Pes Quadratus*) ſo we have formed our *Foot*, from the Roman *Uncia*. For 1000 Roman, or Averdupois *Ounces* of water in a cubic form, exactly fills a ſpace which is bounded by an *Engliſh foot*, in height, length and breadth; in a word, a Cubic foot of water is exactly 1000 Ounces Avoir. In conformity with the Roman cuſtom of dividing *every thing* (years, days and nights, acres, pounds, and money,) into twelve parts; ſo we alſo have divided our foot into *Inches*; which the learned reader will perceive is a word as evidently derived from *Uncia* (meaning always a twelfth part) as is the *Ounce* weight.

Thus the Engliſh *Ounce* and *Foot* are on ſure grounds deduced from the Romans; but the origin of our corn meaſure is quite obſcure. It is deduced (in the oldeſt ſtatutes) from a certain number "of grains of wheat taken from the middle of the ear." This is a very rude criterion, which having been eſtabliſhed by the laws of Edgar, is referred to in the *Magna Charta* under the name of the *Quarter*, and *Buſhel of London*. Many ſubſequent ſtatutes refer to this antient ſtandard, and becauſe it was again eſtabliſhed (in 16 Rich. II.) in a parliament holden at *Wincheſter*, it has ever ſince been uſually called, the Wincheſter buſhel. The firſt law which recognizes it under that name is 22 Charles II. But long before that (12 Henry VII.) a braſs ſtandard buſhel was lodged in the Exchequer, where it ſtill remains. This is properly the *Wincheſter buſhel*, and when carefully gauged in 1696, was found to contain 2145 6-10th cubic inches. The malt act (which was paſſed ſoon after) ordains the *malt buſhel* to be 18½ inches wide, and 8 inches deep. The reſult of this is a triſle more than the Wincheſter buſhel. Its product is 2150½ cubic inches. The legiſlature ſeem to have preferred this ſmall variation for the ſake of convenience, that artificers, by obſerving theſe dimenſions, might not be under the neceſſity of trying every new buſhel by the ſtandard. However there was not the ſame reaſon for ordaining the coal buſhel to be 19½ inches wide and 8 deep. Its product is 2217½ cubic inches. Indeed as traces of antient rudeneſs ſtill are extant in the *up-heaped* meaſure of coal, it was uſeleſs to ordain any thing about the matter. The coal-meter can hence at any time give a fifth or ſixth, more or leſs, at his pleaſure. The buſhel is therefore of little importance.

* Its ſynonym, *Amphora*, is of the ſame meaning, from the Greek Αμφι-φορεω, *to carry round*; i. e. a foot *every way*.

The sealed *wine gallon* (kept in Guildhall) has furnished a curious specimen of the inaccuracy of our fore-fathers. It was always presumed to contain 231 cubic inches: but when carefully measured in 1696, the result was only 224. Thus all the wine vessels in the kingdom were too large, and to obviate the inconvenience, the only remedy was to ordain, that in future the wine gallon should be *esteemed* 231 cubic inches as before.

The only praise-worthy circumstance in our corn measure is its commodious division by *halves* downward from the *Quarter of London*, mentioned by the *Magna Charta*. Thus it runs gradually, the Quarter, Sack, Bushel, Half-bushel *, Peck, Gallon, Pottle, Quart, Pint. The liquid wine pint is merely a Troy pound of water, and 63 instead of 64 gallons are taken for the hogshead, that it might be equal to eight square feet of water.

The ale measure (the largest of all) is of uncertain origin. The gallon contains 282 cubic inches. I shall conclude with a comparative statement of all these measures in cubic inches; which may be useful for reference.

According to	Bushel	Gallon	Pint
Winchester Bushel	2145.60	268.20	33.5
Statute Malt ditto	2150.42	268.80	33.6
Coal Bushel -	2217.47	277.18	34.6
Legal wine measure - -		231	29.0
Ditto beer measure - -		282	35.2

It is usual at present to make bushels according to the Malt-Act; I believe no legal decision has been made between it, and the Winchester-bushel: the difference is indeed minute: but should certainly be done away by a decisive law.

March 9, 1801. METRETES.

P. S. In p. 336. l. 28, a Peck is stated at 544 Cubic inches. In reality this is the content of the Modius. A Peck is 536 cubic inches; therefore (as indeed is said) 8 cubic inches less than the Modius.

† The half bushel is recited as a distinct measure in all ancient statutes.

ON EXPENSIVE EXPERIMENTS.

To the Editor of the Commercial and Agricultural Magazine.

MR. EDITOR,

I FLATTER myself nobody is more fully sensible than I am, of the benefits resulting to the community from experiments in every science, and more especially in agriculture; because in that the requisites of abstract Theory are totally wanting.

The causes of fertility, the mode of the nourishment of plants, and their intestinal arrangement, is little known; so that nothing

can be drawn from analogy; and repeated, diverſified experiment is the only acceſs to knowledge. Hence I am the more grieved, when I ſometimes witneſs a temerity in experiment, which, failing, damps many a man for ever. My dread of a large experiment is hence become exactly commenſurate with my ardour for ſmall ones: indeed the money ſpent on the firſt, too often precludes the laſt.

As I ſuppoſe many enterprizing farmers read your Miſcellany, I requeſt you to inſert the following caution:

Although nothing is more laudable than experiment in general, a judicious and prudent execution of an experiment is neceſſary. Againſt this laſt obſervation, how many offences have I ſeen! I have known an amateur in drilling follow that innovation (with a machine of his own making) to an extent which muſt have coſt him 250l. The damage was thus not inconſiderable to himſelf, and ſtill greater to the community. Not only by the diminution of produce: but by precluding and diſcouraging a man of real genius, from trying numerous other experiments, of which ſome would probably have had a brilliant iſſue. Now, though I eſteem drilling a good thing, with proper inſtruments and careful hoeing. I cannot but ſee, that it may as concluſively be tried on a ſingle acre, as on a hundred. And as it is eaſier to ſeparate carefully, and threſh ſpeedily, a ſmall quantity than a large one, the ſingle acre will probably give the moſt accurate reſult of ſeed ſaved, and produce obtained: and the next application of that acre (along-ſide of others) will give the cleareſt demonſtration of the comparative ſtate in which the ground is left.

I am convinced that next to a brutal mind (which deteſts all improvement under the term of *new-fangled fancies*, or whimſical innovation) he is leaſt uſeful to mankind, who by a large unſucceſsful experiment diſcourages from future ones. A man may try *ten* accurate experiments in a year on a ſmall ſcale, for the riſk of *ten* pounds; and if they ſucceed not, his mind has been uſefully exerciſed by the ſpeculation, and his family is not injured: while on the other hand, after the failure of a *grand* experiment, his mind loſes its energy, and his imprudence wounds his conſcience.

Be it remembered therefore, "That from a ſucceſſion of ſmall accurate experiments, reſults the increaſe of any ſcience; and that the varieties of our climate require repeated ſucceſs, before any innovation in agriculture ſhould be hazarded on a large ſcale."

Chelmsford, Feb. 26, 1801.

AN EXPERIMENTALIST.

ON THE PRESENT SITUATION AND TRADE OF PORTUGAL.

To the Editor of the Commercial and Agricultural Magazine.

MR. EDITOR,

THE death of the *Marquis Ponte de Lima*, is regarded as a fortunate event here. He was an old man, almoſt ſuper-annuated, and miſerably negligent of public affairs. The new miniſtry is hoſtile to the nobles and hidalgos, and therefore popular. They have, moreover, promiſed to remedy the evils of paper currency, by receiving half in payment, and paying half cash; whereas, before they *took* all ſpecie, and *gave* all paper. The diſcount which was before 22, has ſince fluctuated from 17 to 19 per cent. A circumſtance not very diſſimilar exiſted here 250 years ago. There was ſuch a ſcarcity of ſmall coin, that the Malteſe (now turned paper-changers) uſed to change the the large pieces at a diſcount. This practice was prohibited, and a coinage gave effect to the prohibition. This happened in the reign of John III.

The merchants here ſtill look apprehenſively towards France; in my judgment, with cauſeleſs fear, becauſe it is the intereſt of Spain to prevent the revolution of Portugal: and becauſe it is not the intereſt of France, who now receives ſubſidies for reſpite. Beſides the property here lies ſo much in ſterling gold, that it is removeable at an hour's warning, and of the moſt valuable merchandize ſo much could be ſhipped as to leave little plunder. Beſides, if a French army were in poſſeſſion of Liſbon, our fleet would cut off their ſupplies of African corn, and ſtarve the city.

Though theſe ſeem ſtrong reaſons, many apprehend a treaty with France, who may point out the Northern league as a ſafe-guard againſt the Engliſh navy, and that Engliſh property at Liſbon may go like Engliſh property at Leghorn. Certainly the deciſive moment is at hand, and certainly ſo large a body of troops was never before aſſembled at Perpignan, to influence negotiation.

On February 5th, the decree reſpecting the paper was made public. It lies before me; and you, therefore, may depend on the accuracy of my ſtatement. They promiſe to pay faithfully the 6 per cent. intereſt: that all ſums under 100 *mil-reas* (about 27l.) they will pay half in paper, half in caſh; all ſums above one third in caſh. The troops all caſh. The officers two-thirds paper. Crown-lands are to be ſold to redeem the ſmaller paper, and burn it. They hope ſoon to pay all ſums half and half, and look on to totally withdrawing the paper from circulation.

They have abandoned ſome ſtupid ſchemes of the late miniſtry. Among others, that of doubling the nominal value of

copper coin, and of debaſing the ſilver. The projected bank is alſo dropped. Indeed, ſuch a thing could ſcarce find foundation in this tottering country. The ſcheme of raiſing the nominal value of coin is no novelty in any country of Europe. As lately as under Pedro II. (about 110 years ſince) this knaviſh farce was acted by the crown. The money was raiſed 20 per cent. and the debts of the government paid in the new coin. Thus a ſixth was purloined from the public creditor by this roguery. The coin ſtill bears the old figures: the mil-rea exiſts not now as a coin, but what was a mil-rea bears the figures 1000 reas, and paſſes for 1200, a quarter moidore.

The new Miniſter *Dom Rodrigo de Souſa Corſtinho*, is ſaid to be a man of talents, and ambitious of literary patronſhip. On the old *Duke de Lafoen*'s death, he looks on to the preſidentſhip of the academy, and already they talk of continuing the dictionary.

The patriarchal church is rich and ill-managed; it is in agitation to take the eſtates, and pay the church from the crown. It is only the Prince who ſaves the rich orders from a ſimilar guardianſhip, and the poor ones from being limited, reduced, and rooted out.

Little ſeems to be dreaded from the neareſt and almoſt inevitable danger, the yellow fever. It ſtill exiſts, but theſe unthinking people fancy it is dead, becauſe it ſleepeth: baffling medicine here as it has done in America. It is a dreadful calamity from which Portugal has no chance of eſcaping; poſſibly the reſt of Europe may be infected.

We ſoon ſhall ſuffer here from the Northern league; the neutral ſhips were the corn-carriers, and our little loaves will ſoon be leſſened; but not their price. Agriculture here can never improve till the tenures be altered. It is ſo difficult—ſo almoſt impoſſible to alienate lands, that whoever purchaſes an eſtate, purchaſes a dozen law-ſuits with it. The rich merchants therefore never think of retiring, and eſtabliſhing their family on the lands of decayed Hidalgos. The ſale of the crown-lands will have ſome effect in offering them clear titles. They have thought, and written on agriculture, without the power (as yet) of practiſing. The average number of men of information is not perhaps much inferior to what it would be found in England: but they are cruſhed betwixt the Cenſorial-Board and the Inquiſition. If theſe were deſtroyed, if the *fiat lux**, were but pronounced, there would be *light*.

Foreign jews are tolerated in Liſbon; that is, they are in no danger from the Inquiſition, though forbidden to exerciſe the ceremonials of their faith. The intercourſe with Barbary brings

* "Let there be light." Gen. chap. i.

a few Moors here: ſo that the devout Portugueſe are accuſtomed to the ſight of Turks, Jews, and Heretics. You remember the Corniſhman's remark when his maſter ſaid, "Now, John, we are in Devonſhire."—"I dont ſee, maſter, but the pigs have got tails the ſame as along o'we." If the Portugueſe have ſenſe enough to make a ſimilar inference, they will be one degree wiſer than their fore fathers.

Liſbon grows. Many a corn-field in which I have walked five years ago, is now covered with houſes. This is indeed a ſhort-lived increaſe of population; a fine February day: for the Engliſh tenant theſe habitations, and when the army ſhall be finally recalled, the houſes will be deſolate.

But the city exhibits an unequivocal ſign of recovering induſtry and opulence. The gaps in the new ſtreets that have ſtood vacant ſince the diſgrace of *Pombal*, are now filled up, or filling. Theſe are not neſts for birds of paſſage, but large and magnificent houſes for the merchants. But commerce will for a long time be (as in America) a ſordid, ſelfiſh, money-getting drudgery, encouraging no art, and ignorant of every ſcience. It is not genius which is wanting in Portugal; genius exiſts every where, but encouragement, or the hope of encouragement muſt waken it into action; and here no ambition can exiſt, but the deſire of place and court-pageantry.

A Frenchman here is buſy upon the hiſtory of Brazil; his materials are excellent, and he is indefatigable. I hope the government will not interfere with the publication. I need not tell you with what an abſurd ſecreſy, they ſecrete all information reſpecting that country. Its population doubles that of the mother-country. So heavy a branch cannot long remain on ſo rotten a trunk. I doubt whether I ſhall write again.

Yours,

Feb. 7, 1801. INDAGATOR.

ON THE NECESSITY OF AN AGRICULTURAL LEXICON.

To the Editor of the Commercial and Agricultural Magazine.

MR. EDITOR,

MY father (tho' an illiterate farmer himſelf) luckily reſolved to have ſome *learning* in the family, and in conſequence of this determation, ſent me early to a good ſchool, where if I did not become a *Critic* in Greek and Latin, I acquired the more valuable habit of reading, for which the neighbouring circulating library ſupplied the materials. From accident I was induced, at my father's death, to ſucceed to his buſineſs, inſtead of a learned profeſſion, for which his partiality had deſtined me. Books of ſcience had heretofore inſtructed me in general

knowledge, and the recurrence to books of agriculture was natural in my new employment. Here, however, I was rather puzzled than inſtructed, being uſually aſſured by my bailiff and ſervants of the miſchief of all book-learning in agriculture. Sometimes I inſiſted on an experiment, and had uſually to bear the chagrin of diſappointment, as the reward of all my cares. I began to eſteem my authors as a ſpecies of quack doctors, whom, in their extravagant promiſes, they too much reſembled. Within theſe ten years, however, the proſpect is improved, and a large maſs of practical knowlege has been accumulated by various living writers, whom I do not name, leſt I appear invidious, or partial. I addreſs you at preſent for the ſake of preventing or curing a fault which is univerſal in theſe works.

I allude to the *provincial phraſes* which are ſo troubleſome to the reader. Theſe are introduced into agricultural treatiſes from two very diſtinct cauſes: one of them blameleſs, as reſulting from the local ſituation of the writer: the other inſolent, and pedantic; as inſiſting on the reader's accommodation to an uncouth phraſeology, and diſgracing a moſt uſeful ſcience with a pitiful introduction of technical words: the appropriate reſource of every trifling art and impoſture, which has ſucceſſively deluded mankind.

It ſeems almoſt neceſſary that heraldry, hunting, and hawking * ſhould poſſeſs a peculiar jargon to raiſe them into the appearance of knowledge, which was laborious though unreal: ſo alchymy, aſtrology, and modern quack medicines, very *conſiſtently* abound with hard words to conceal theſe cheats from vulgar detection. But this very application of a peculiar idiom, ought to prevent its adoption in every real ſcience, where it muſt always appear ſuſpicious, as a thin veil of ignorance.

Of all occupations, the farmer has the leaſt general intercourſe with his brethren, or indeed with the world; and therefore it is not at all wonderful that the terms of that occupation ſhould be leſs general than in any other. Inſomuch that the beſt informed farmers (thoſe for inſtance who have compiled the County Reports) have not been able to make themſelves wholly

* Since hawking is extinct, and hunting of more confined uſe, the vocabularies of thoſe *ſublime* arts are almoſt forgotten. Enough however is extant in the old *Cyclopædia*, and ſtill more in the *Dictionarium Ruſticum*, to prove that it muſt have been a buſineſs of conſiderable application to attain the needful jargon. It may give an idea of the avidity of our fathers to theſe purſuits, to obſerve, that within twelve years after the introduction of printing, "a Boke of Haukyng and Huntyng, alſo of Coot Armuris (heraldry) a nobull Werke, was printed at Seynt Albons, 1486." At that time even nuns committed no indecorum in following game; for moſt of this "Boke" was written by "Dam Juliane Barnes, prioreſs of Sopwell, Hertfordſhire." She proves herſelf an able preceptor in theſe boiſterous ſports.

intelligible in distant parts of the kingdom. It may be observed, that the "Scots Farmer's Magazine" labours under the same disadvantage, as in different degrees do all agricultural writers. But the "Monthly Report of Agriculture," which is supposed to be issued *officially*, is of all other publications the most offensive in this respect. The lowest *slang* of the lowest farmers seems there sedulously selected for the amusement of the public; whom indeed it may also benefit, by creating a proper *nausea* of its intrinsic deformity.

On a comprehensive view of the improvement of every science, I have no doubt but that the munificent patrons of agriculture will see that the first effort should be to clear away this rubbish, which forms such a serious obstruction at the very threshold; and thence, that no employment would be more profitable or more honourable, than the formation of a *Lexicon*, which, in explaining provincial phrases, might select and distinguish the most general or the most expressive, and which would thenceforth remain a standard of agricultural phraseology.

An extensive observation on various practices, much acuteness of mind, accuracy of discrimination, and especially fame enough to insure a willing correspondence from all quarters, seem requisites to the perfection of this projected *Lexicon*: and these requisites are in fact at this time concentrated in the Secretary of the Board of Agriculture, who may perchance take this hint.

As treatises on husbandry are more and more generally read, such a Lexicon would be sure of very extensive circulation, and might fix *for ever* a general language in this improving science. Writers and readers would mutually understand each other *immediately*, and more general dissemination would be insured by their influence in their various neighbourhoods.

I confess, Mr. Editor, I have been induced to send this communication by reading of *sheep* under the name of *hogs*, at the Wooburn sheep-shearing. At present, I believe, that the sheep and ox-kinds have each above twenty different names in different places. I remain, your reader,

Harworth, Notts. J. FORSYTH.

ON THE SOIL OF THE WEST INDIAN ISLANDS.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

VARIOUS have been the assertions concerning our *old* West Indian islands (as the long settled islands are called in opposition to those which have more lately come into the exclusive possession of the English, and with respect to the Colonies in question are new settlements); various, I say, are the assertions concerning them, on the score of their value; from the idea that it is diminished from the supposition that *the soil is exhausted*

by long cultivation, and therefore that the iſlands, ſo circumſtanced, are worn out. This is, in fact, the term that is uſed; but it appears to me to be extremely erroneous; and the experience of late ſeaſonable years has proved the error beyond the poſſibility of doubt. In countries expoſed to the blazing ſun of the torrid zone, it ſhould ſeem that nothing could more effectually deſtroy the fertility of the ſoil, than leaving it *uncultivated* and *fallow*; as in that ſituation the rays of the ſun muſt operate more immediately on thoſe ſaline principles which are capable of evaporation, and are ſuppoſed to be particularly eſſential to fertility: or were it the nature of Weſt Indian cultivation to work the ſoil, and draw from it the annual returns of production, without a regular compenſation and ſupply of manure, there might be ſome reaſon in the hypotheſis. It undoubtedly is true, that in the New Iſlands there is ſuch an exceſs of vegetation, that in the firſt years of their being cleared, the ſugar-cane outgrows itſelf, and abounds in juices which will not produce ſugar; from whence it would follow that time actually cauſes a diminution in the fertility of the ſoil: but then it ſhould be remembered that this diminution is poſitively *ſought* in the *new* lands, by planting the ſoil without manuring it:—but when this neceſſary diminution has taken place, and the principle of vegetation has been reduced to its due ſtandard, the immenſe quantity of manure which is regularly applied in the *old* iſlands, muſt keep it to that ſtandard, and at the end of any number of years leave the ſoil juſt as little exhauſted as at the beginning of the term. In the Iſland of Barbadoes, of which I would be underſtood to be immediately writing, the proceſs of making artificial manure is attended to with unwearied diligence, in aid of the animal manure, which is procured by keeping a conſiderable quantity of live ſtock on the plantations.

When we recollect that in a ſingle acre of cane land, there are, generally ſpeaking, twenty-ſeven hundred and twenty holes for the cane plant, and a ſquare foot of manure, duly prepared, richly combined, and properly digeſted, thrown to each of theſe holes; that the cane from its mode of growth completely covers and protects the ſoil from being expoſed to the rays of the ſun, and as it advances to maturity, depoſits a very thick bed of dry leaves or blades, we can hardly ſuppoſe that a ſoil ſo circumſtanced can be exhauſted, but muſt at leaſt receive, as much as it ſurrenders to the labours of the planter. The fact was that in the years 1786, 87, and 88, when the Iſland was viſited by the moſt ſeaſonable rains, in a degree of which the want had been before known and grievouſly lamented, the productions of the ſoil were equal to any thing which had ever been heard of in the earlieſt periods of its ſettlement. The cultivation previous to theſe years was conducted preciſely upon the ſame principles, as during their continuance, and the variation of fertility was only occa-

ſioned by the difference of ſeaſon, in reſpect of the falls of rain; as it muſt be obvious, that in a country where the quantum of *heat* is ſo uniformly great, the want of *moiſture* to counterbalance it, muſt be of moſt pernicious conſequence; and *vice verſa*, where it is in due equilibrium, it muſt cauſe the moſt beneficial effects. It is well known, that for many years previous to the hurricane of 1780, there had been a moſt extraordinary deficiency of rain, which occaſioned a temporary ſterility, and ſuggeſted the idea of an intrinſic diminution of fertility in the ſoil, ſuppoſed to be exhauſted by long cultivation; but the hurricane juſt mentioned, produced a complete elemental revolution; and ſubſequent experience has demonſtrated that where the *heavens* have contributed their aids to the induſtrious and intelligent planter, the *earth* has been uniformly juſt and bountiful, in compenſation of his labours. This then being the real fact, the inference is that the notion of the ſoil being exhauſted, is erroneous and utterly falſe; and fully contradicted by experience. Were it true, it would arraign the goodneſs of God, to have ſo conſtituted nature; as it would diſcourage human efforts and aſſiduity; and eſtabliſh a principle which would ultimately lead to hopeleſs indolence, and idle deſperation. The huſbandman who had laboured without ſucceſs for one or two years of inclement and unfavourable ſeaſons, would imagine that his ſoil was no longer capable of rewarding his labours; and would remit his endeavours:—The ſeaſons would return, and the want of cultivation would render them an unproductive bleſſing; the reſult would be famine and diſtreſs; which would have been entirely prevented, if the truth of the caſe had been conſidered; and the patience and perſeverance of the planter had waited for the return of theſe bleſſings, which were ultimately certain of rewarding them, by a plentiful harveſt.

I ſhould perhaps apologize to you Sir, for this diſſertation, but being a *Weſt Indian*, I may be ſuppoſed to write *con amore*: and if I can vindicate my country, without departing from the truth, or miſleading your readers, I think I ſhall be excuſed by your candour.

I am, yours &c.

BARBADIENSIS.

ON SELLING CORN BY WEIGHT.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

I HAVE read in your Magazine * a hint of the expedience of ſelling corn by weight rather than by meaſure. I daily ſee cauſe in this place, for wiſhing this alteration in force. Though

* See Vol. iii. p. 445.

the quality of wheat may be pretty well determined by the ſight and feel, it is not poſſible to aſcertain its weight, on which the quantity of flour ſo much depends. Indeed the compariſon of wheats of ſame harveſt, *in England*, is liable to little error: but when wheat of all countries and every condition is offered for ſale, the aſſiſtance of a knowledge of its weight is very eſſential. This would much diminiſh the apparent difference of price, which daily occurs in this market. The beſt wheat is uſually as three to two in value, when compared with inferior ſamples. But as it weighs full ten lb. per buſhel more, if it were ſold by weight, half this difference would be done away.

Perhaps it is through inadvertence that you propoſe 56 lb. to be ſold as a buſhel: ſince the *law already ordains*, that when wheat is ſold by weight, 57 lb. ſhall be eſteemed a buſhel.—Even this is very light for Engliſh wheat; a hot ſummer (like the laſt) makes it weigh 60½ lb.

Another word, and I have done. Among all the patentees of the preſent day, how is it, that none apply themſelves to preſerve wheat from damage on ſhip-board? Is it impoſſible; or only not thought of? Perhaps this hint may have its effect on ſome of your ingenious readers.

I remain, your humble ſervant,

Corn Exchange, Feb. 9, 1801. P. S.

OBSERVATIONS ON THE WEST INDIAN CLIMATE, WITH SOME REFERENCE TO ANIMAL HEALTH, VEGETATION, AGRICULTURE, &c.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

IN ancient times, before the hardineſs of navigators had adventured into the torrid zone, and ſubſequent children of fortune had left the milder climates of Europe to riſk their fortunes beneath the blazing ſun, in the neighbourhood of the equator, it was the decided opinion that theſe regions were uninhabitable. Repeated experience of the preſent day moſt completely contradicts the aſſertion; and if health is there more precarious, as can hardly be denied, the latter end of life, is frequently prolonged to a very reſpectable old age. Temperance is eſpecially neceſſary, and where diſeaſe makes its attack, its ſtages are ſo rapid and ſo violent, that unleſs watched, and attended to in the firſt inſtance, they paſs on with immedicable rapidity. The great medicinal art, in hot climates, ſeems to be to attend to general evacuation, and prevent obſtructions of all kinds:—Superadded to theſe precautions, the accurate diſcrimination between inflammatory and putreſcent ſymptoms is of indiſpenſible importance, as the miſtaken application of anti-

phlogiſtic, and cordial remedies are of the moſt fatal conſequence. The truth of theſe obſervations will appear when it is obſerved, that the general ſtandard of the thermometer is 87, that the length of the day is nearly equalized through the year, and therefore that the continual influence of the ſun muſt be uniformly extreme; particularly as the Archipelago of the Weſt Indian Iſlands is from eighteen to ten degrees only from the Equator. To an European, who had never viſited the Weſt Indies, and to whoſe ſenſations the thermometer at 70 produces a moſt formidable degree of moſt oppreſſive heat, it muſt ſeem incredible how ſuch a fervid climate can be endured at any rate; but the matter of fact is, that the action of the ſun upon the Atlantic Ocean produces ſuch a continual power of winds, commonly called the *trade wind*, that the heat is moſt conſiderably allayed to the perception by the briſkneſs of the breeze, which relieves the lungs, and keeps off that degree of miſery which ariſes to animal nature from ſtagnant heat of air. The conſequence is, that in the Weſt Indies the thermometer at 87, gives a ſenſible heat leſs ſevere than the thermometer in this country at 67, and provided a little attention can ſcreen the individual from the immediate influence of the ſun, by means of ſome friendly ſhade which is viſited by a free current of freſh air, the effect produced is not only *tolerable* but *pleaſant*; and it is poſſible that the child of the ſun, who does not provoke his parent by intemperate exceſſes, may live for many years in enviable health; eſpecially if he inures his body to the habits of ſimilar endurance, and does not try it by frequent changes of climate, which produce viciſſitudes that are perhaps as fatal as any other imprudent experiment which can be made.

In turning the ſubject to the effect of warm climates on vegetation, we find ſimilar conſequences reſulting.—The check which nature receives in the winter of northern climates, is not known in ſouthern; but the rapid and perceptible progreſs of vegetation, which is experienced in the ſpring of the former, does not exiſt in the latter. Though nature in the torrid zone is always vivid, ſhe has not that luxuriance of verdure which is viſible in a vernal ſcene, in the temperate zone. A certain appearance inclining to a tawny hue ſullies the verdure of the fields; and among other curious effects cauſes plants in general to loſe the power of *germination*; ſo that the proceſs of grafting and inoculating ſeldom ſucceeds, as well from want of proper juices in the trunk, as from the real difficulty of procuring buds for the purpoſe.—At the ſame time the rapid ſucceſſions of plants in all their different ſtages of maturity is remarkable.—The *Citrus Medica*, or *Liſbon Lemon*, as is commonly called, which is a *ſhrubby ſpecies* of the *Genus Citrus*, will produce, in favourable ſituations, fruit in *eighteen* months from the *ſeed*:—

and the *Citrus Aurantium* or *Orange*, which is an *arboreſcent ſpecies* of the ſame *Genus Citrus*, will produce in ſimilar ſituations its fruit in *three* years from the ſeed.—In immediate compariſon of plants not immediately indigenous, we find that the *Hibiſcus Roſa Mutabilis*, or changeable Roſe, which goes through its variations in a *week* in this country, performs them all in one day; from the blooming of the *white* flower in the *morning*, to the *fall* of the *purple* at *night*.—No vegetation however goes on favourably unleſs there be a ſufficient balancing of the heat, by means of an adequate proportion of moiſture, without which plants are ſo exhauſted, that after ceaſing to *outgrow* themſelves, they wither and die.—The reſult, to vegetable and animal nature, ſeems to be that every thing is in extremes; premature perfection, exceſſive vivacity, and early old age characterize the man; and great fertility, abundant production, and rapid decay diſtinguiſh the vegetable.—In European climates the characteriſtics are ſlower, leſs brilliant, but more permanent; advantages and diſadvantages are nearly equivalent, and every where we diſcover the ſame good and gracious Providence, which deals its favours with a liberal and an impartial hand. Man has always reaſon to be grateful; to be incited to obedience by bleſſings received; to learn to love his God, by experiencing him to be in all places, and on all occaſions, the moſt indulgent, the moſt equitable of parents. H. E. HOLDER.

ON THE PROSPECT OF FUTURE PLENTY.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

WHEN ſuffering under any calamity, it has always been my cuſtom to examine whether ſome eventual good may not reſult from it; and I have frequently found this balance of good and evil very efficatious in all "the woes, which fleſh is heir to." The laſt twenty months of ſcarcity has cauſed more individual miſery, than any former period in the memory of man. War and peſtilence *deſtroy* the object of their fury, but famine *dallies* with her victim, ſtill ſenſible of pungent woe. Parents feel doubly in the hunger of their children, and in ſpite of the diſmal complaints of pampered *ſentimentaliſts*, it muſt be allowed that a craving ſtomach is the greateſt of evils. Till our *phyſical* wants are ſupplied, all other vexations are abſorbed: nor does this law ſuffer any deviation during health of body. Indeed it is neceſſary to the preſervation of the ſpecies that it ſhould be ſo; otherwiſe the main ſpring of labour would be annihilated; food and manufactures would no longer be produced, and the world would be ſoon left in the excluſive poſſeſſion of the beaſts of the field, and the fowls of the air.

A ſlight contemplation of the preſſing evil of the ſcarcity ſufficiently informs us, that all benefit from it muſt be proſpective. That is, it can only be beneficial, in as far as itſelf tends to prevent the recurrence of the ſame incident again. That it does ſo, in a conſiderable degree, may perhaps be allowed on the following conſiderations.

The perſons enriched by the high price of food (conſequent on ſcarcity) are almoſt excluſively the farmers. Speculators (that is, gamblers) in the corn-trade *play deeper* in a dear year, and ſome of them gain prodigiouſly; but they might as probably do ſo in any other hazardous purchaſe, and their loſs is almoſt as frequent as their gain. As for millers, mealmen, and bakers, few of them do not deprecate a ſcarcity. A larger capital is required to carry on their uſual buſineſs, and the augmented profit neceſſary to cover the augmented expence, is attributed to their *extortion* by the great maſs of mankind.

Farmers therefore are the only gainers in a dear year; and if the deficiency of one fourth in the quantity of crop fully doubles the price, their gain muſt be very conſiderable, as it ſuffers no ſubtraction but augmented poor-rates; and in few caſes can that augmentation ſubtract above a tenth of the gain.

We have next to conſider in what manner the gain of the farmer will be applied. Luxury increaſes with wealth in all places; but leſs ſo in the country than in towns. Emulation in expence and the whims of faſhion have leſs influence on the farmer, than on the proſperous tradeſman; and a large portion of rural gain will have to ſeek *other* employment than ſenſual gratification and expenſive vanity.

In that period of ſociety, when land is of little value, a ſmall capital ſuffices to occupy a large tract of ground under wretched cultivation; yet its produce will form a very high profit on that capital. This being general, the farmers all grow rich, and the wiſh of extending their buſineſs, or the ſettlement of their children, ſoon renders land more in requeſt, and dearer: the rent is thus neceſſarily raiſed. Under this circumſtance the occupier is compelled to more careful, more expenſive cultivation. The land yields more, though not quite in the proportion of the additional capital employed. But when the general farming capital in a country is at a certain height, no man can profitably occupy land with leſs than that which has thus naturally accommodated itſelf to the uſual rent. Though the produce of a farm does not *quite* keep an equal pace with the increaſe of capital employed on it, it does ſo very nearly. Thus the uſual ſtock, and the uſual produce of a farm, were equally reckoned at *three rents*, at the beginning of the preſent century. At preſent it is not very far from the truth to reckon *five rents* as a uſual amount of ſtock employed, and groſs annual produce.

Neither does this ſtatement fully demonſtrate the quantity of additional ſtock employed in agriculture; for as rents have generally much riſen in the laſt century, *five-times* the preſent rent is fully double the ſtock reckoned formerly at *three rents*.—Thus agricultural capital has evidently doubled within the laſt century, and conſequently the improvements muſt have augmented the produce in *nearly* the ſame proportion. This is a moſt important acquiſition to the nation, and the root which has ſupported the many manufactures, whoſe origin dates ſince the year 1700. I do not mean that the large augmentation of population (ſince that period) is wholly employed in manufactures; no, ſurely; for this increaſed produce of the ground is not obtained without increaſed labour; that is, increaſed agricultural population.

It is indeed notorious, that conſiderable *depopulation* has been aſcribed to the enlarged farms, conſequent on the proſperity of agriculture*. Except in the diſtricts lately appropriated to paſturage, this is however a popular miſtake. Neither an increaſe of paſture, nor any manufacture can be thought to have influenced the population of the *Iſle of Wight*; a diſtrict which remains at this day ſtrictly agricultural †, except perhaps about 2000 ſouls may be added for the increaſe of commerce at Cowes and Ryde.

In the year 1377, the *Iſle of Wight* contained 4733 perſons above 14 years of age. Taking the whole population at double this number (which cannot be far from the truth) the amount is 9466: in the year 1777, (four hundred years after) the population of the iſland was 18,024; and at preſent, probably, full 20,000. Thus we ſee that the human labour beſtowed on the ground, muſt now be twice as much as in the time of Edward III. and we may well conclude that the produce of *corn* is more than doubled.

Nothing therefore conduces more to the ſolid power of a nation, than the augmentation of agricultural capital. The augmented produce maintains more ruſtic labourers, and leaves a ſtill greater ſurplus for the manufacturer and artiſan. Therefore nothing can be more ardently wiſhed than that the agricultural capital may increaſe with accelerated rapidity; and nothing can tend more directly to that deſirable end, than the high prices of the laſt and the current year; and thus it is, that any ſcarcity contains the ſeeds of future plenty in its own conſequences.

* See Vol. iii. p. p. 44, 184.

† In this phraſe I mean to include all the neceſſary trades of a rural diſtrict. Blackſmiths, wheelwrights, butchers, bakers, taylors, ſhoemakers, maſons, ſhopkeepers, &c. and, beſides theſe, the landlords maintained by the rental of the land. If the *human* birds of paſſage (frequenting the Iſle of Wight in the ſummer) *leave* as much gold, as the abſentee landowners *drawn from* the iſland, it may be conſidered as a little inſulated *kingdom*, exporting its ſurplus corn for the manufactures of other countries.

It does ſo more *immediately* than has been ſtated; for no man can doubt, that more acres of young wheat are now growing (by at leaſt a fourth) than ever was known before. If a favourable ſummer ſucceeds the excellent ſeed-time, OLD ENGLAND may yet rejoice in PLENTY before next Chriſtmas.

In the various ages of agriculture the produce from the ſame quantity of land is more different than is uſually ſuppoſed. In America at preſent, the average wheat crop is no more than eight buſhels: In England it is calculated at twenty-three buſhels per acre. The groſs produce of Great Britain (for the laſt twenty years) may be ſafely reckoned between 3 and 4l. per cultivated acre; and it is not likely, that any *European* nation exceeds this eſtimate. But as it is well aſcertained by the benefit of *feeding-off* turnips, that the dung ariſing from the conſumption of one crop in two*, will continually ameliorate the ſoil, there can remain no doubt, but that agricultural produce may be indefinitely augmented till it arrives at the fertility of the gardens which ſurround the metropolis, of which ſome employ a whole family (ſuppoſe five perſons) *conſtantly* on each acre, beſides *occaſional* hands; and return on the loweſt calculation above 100l. in groſs product per acre†.

If then the cultivated acres in Great Britain be ſuppoſed to average at 3l. 10s. (groſs produce) we here ſee an evident poſſibility of augmenting that produce almoſt *thirty-fold*. Long before this height of cultivation, all graſs lands would be broken up (urged by ſuperior profit in tillage, and ſoiling cattle), and all waſte lands would be cultivated. Avoiding the wild calculation which ſuppoſes above 20,000,000 acres in graſs and wood (in England and Wales), we may ſafely take half that as under the truth. The uncultivated waſtes of Scotland are at leaſt 14,000,000; of South Britain nearly 8,000,000. Deducting ſomething for the Northern climate of the Scotch waſtes, we will reduce the total waſte lands to 20,000,000. On the whole we may conclude, that, in Great Britain, about 45,000,000 acres are incloſed paſture, wood-lands, and cultivation. The aſſiduous garden culture of increaſed capital, and increaſed population, might poſſibly increaſe the produce of this, thirty-fold; and, beſides, (in time) make the waſtes of equal fertility. This laſt addition ſhews the poſſible augmented produce of England to be more than *forty-fold* its preſent amount.

I have entered into this little calculation to enlarge the ideas of thoſe who are too apt to conſider every ſcience (in its preſent ſtate) at the *acmè* of perfection; if they ſtill gaze in incredulous

* Suppoſing the Norfolk and Suffolk courſe of cropping light ſoils; turnips, barley, clover, wheat.

† In Mr. Middleton's ſurvey of Middleſex, a much larger groſs product is ſtated. See Critical Catalogue of this Number. E.

wonder, let them conſider the population of China (upwards of 300 millions) ſubſiſting in this manner on the produce of *garden-culture*. The rational fears of thoſe who think that population is always *treading on the heels* of augmented produce too cloſely for *general happineſs* in any nation, will be diminiſhed by this repreſentation, and put off the *evil-day* (of inſufficient food for the exiſting poor) to a diſtance not within the ken of mortal eyes.

I cannot cloſe my letter without a few words on the USUAL PROFITS accruing from a capital employed in agriculture. I obſerved ſuch a violent alteration of ſentiment on this ſubject in the ſcarcity of 1796, 97; and ſtill more exiſts at the preſent period; that I fear the ſentiments of many of your readers will not coincide with mine, *till after the ſcarcity ceaſes to exiſt*. Appealing therefore to their *future opinions*, I ſhall produce proof, that the general profit on domeſtic agricultural capital has been always *leſs* than in any other employment; and that (from the eternal nature of things) it muſt ever remain ſo.

If agricultural capital be eſtimated at only 45s. per acre, the total on 45 millions of acres is above 100 millions ſterling. Surely I am moderate in ſuppoſing this at leaſt equal to any other branch of capital in the kingdom. If then the profits were equal to any other employment, as many opulent farmers would ſtart into notice as from commerce, trade, or manufacture. But an examination of any great family (where hereditary poſſeſſions have not beſtowed wealth from diſtant generations) will prove to us, that even the learned profeſſions, which require *no capital* but the expence of a good education, have produced more conſpicuous acquiſitions of rank and fortune, than the *vaſt capital* conſtantly employed in agriculture. This is proof enough, that its emoluments are below *par*: even down to the country ſhopkeepers, the ſame capital is far more productive than in agriculture. A farmer of five-hundred pounds capital, is fain to add perſonal hard labour to perſonal attention; and in the luxuries of life (beyond ale, and expences of the market day) to be little above his labourer: while the ſhopkeeper, of as much capital, can build up a credit on it, which will enable him to dreſs well and live delicately; and ſtill more, to acquire (very often) a comfortable property for his poſterity.

There are circumſtances in farming which muſt always keep the average profit very low. The natural love of a country life, and the real independence of the farmer (eſpecially if he has a long leaſe) are incentives to many competitors.

The number of theſe competitors for land is ſtill farther increaſed by a circumſtance, which has never (I believe) been noticed. In all other profeſſions, ſucceſs generally precedes matrimony. Prudence effectually ſuggeſts, that a wife is an expenſive luxury. But in the farm-houſe the caſe is different; a

prudent wife is there an immediate gain, because she, from self-interest, *faithfully* superintends the dairy, the kitchen, and the poultry; her more expensive dress on Sunday, costs not so much as the wages of an upper domestic, and any little fortune she may bring is thus clear gain. Hence farmers are almost universally married; and as far as healthful exercise tends to the *procreation* of children, and wholesome diet and fresh air to their *preservation* during childhood; so far, it is more than usually probable, that farmers leave more children than any other set of men in a nation. The male children, from early habits, acquire a love for the business they partake in; the father is partial to his own profession, and, besides, saves the expence of education, by indulging this predilection; so that every prosperous farmer is pushing out young *scions*, who eagerly seize on any proffered land, though on disadvantageous terms. Hence the rent of land will always be as *high* as possible, and consequently the profit of the farmer as *low* as possible; always much lower than that of any other business. In a scarce year, indeed, those who chance to have tolerable crops gain much, all gain something; but with how many draw-backs from their satisfaction! Poor-rates and labour are instantly more expensive; and augmentation of rent hangs over their heads at the next renewal of the lease!

I recapitulate by saying, that the casual profit of farmers is highly conducive to future plenty, and national stability; and that the average profit of agriculture is always lower, than of any other business.

If my first position affords any comfort in the present distress, or if the second alleviates the absurd prejudice against farmers, I shall not have written in vain. Simplicity and purity of manners is sometimes supposed to be *only* extant in the country; and in a scarce year, a similar exaggeration on the other side becomes as general; farmers are *all* then avaritious, deceitful villains, who take advantage of the distress of their countrymen. But as the moral character of a numerous class of mankind can hardly be altered by the weather, that is, by a favourable season, or a rainy harvest, it seems most rational to fix the truth between the two extremes, and to believe, that farmers will always get as high a price as they can: and that they may as fairly and honourably do so, as all other trades: but that from the nature of things, their chance of brilliant success in life is far below that of the same capital employed in any other profession.

Of all the wealthy farmers in England, there is not perhaps one whose wealth has accumulated faster than the known law of compound interest fully accounts for; and whose bodily labour has not fully earned his own maintenance. Those who cultivate their own ground, or who inherit wealth, are out of the question. If by agriculture they do not lose, they may be

as rich as *without it*; but their wealth is not then the product of agriculture. Before the preſent ſcarcity, the gain on agricultural capital was not above 7 per cent. Moſt calculators have made it little above 6 per cent. per annum.

I remain, your humble Servant,

Niton, March 2, 1801. W. SAXON.

NOTICE OF MR. GOWER'S LETTER.

To the Editor of the Commercial and Agricultural Magazine.

THOUGH I am very much aſtoniſhed at the imprudent reſtriction impoſed on you by Mr. Gower, I certainly ſhall not embarraſs you, or diſturb his feelings, by any farther obſervations on the *Tranſit*, or on the defence of her in your laſt Magazine; though, were it permitted, I ſhould allow the validity of ſome part of that defence with great alacrity.

Avoiding, therefore, the *Tranſit*, I expect from your juſtice, that your readers be not permitted to infer from apparent ſilence, that I have been influenced by *any* motive, but "The augmentation of ſcience by diſcuſſion." I am concerned that Mr. Gower apparently attributes the letter under the ſignature of *Scrutator*, to ſome inſidious friend. To this ſource it is not difficult to trace the diſpleaſure manifeſted by his communication; but he aſſuredly errs in his ſuſpicion, ſince I have not the pleaſure of any acquaintance with him, and only have the ſtanding evidence of his floating novelty, that he poſſeſſes an active enterpriſing mind.

An anecdote is preſerved in the *Spectator*, of a clown who was obſerved to attend to the Latin diſputations at Oxford with much intereſt. When queſtioned, "What he underſtood of the arguments produced, he replied, "Do you think I am ſuch a fool as not to know, that he has the worſt of the diſpute, who firſt falls into a paſſion." I relate this that your readers (not verſed in naval affairs) may not too haſtily make this inference from Mr. Gower's letter: but with me, aſcribe his anger to his erroneous ſuppoſition mentioned above.

To this alſo I trace his prohibition of any anonymous diſquiſitions on the *Tranſit*. On cooler reflection he would have diſcriminated betwixt a perſonal attack, and the examination of an experiment intereſting to naval ſcience. In the laſt caſe, whether the objections be ſtrong or weak, it ſignifies not whence they come. When anonymous, they certainly avoid the prejudging influence, too much attached to great names. Truth is mighty, and when brought to the teſt of experiment muſt prevail. I have ſtill hopes of the ſucceſs of the *Tranſit*, though this repugnance to fair inveſtigation is indeed an ominous ſymptom againſt (what I ſincerely deem) a grand and meritorious experiment in naval architecture, and the diſpoſition of the

fails. Certainly it is not often that a *ſucceſsful* experiment ſhuns the light.

Independent of the proper motives which have influenced many of our beſt writers to remain *anonymous*, I have now additional reaſon for withholding my name. What reverence would be paid to *any* name, when Sir Walter Raleigh is treated with contempt, and the authority of "a collier's apprentice boy," oppoſed to Sir Iſaac Newton? The theory of the reſiſtance of fluids is indeed very imperfect in many points, as may be ſeen under that article in the new *Encyclopædia* *; but the experiments of Sir Iſaac Newton are not there controverted. Indeed if the velocity of paſſage through a fluid was leſſened by any depth, all heavy ſubſtances thrown into the water, muſt ceaſe their deſcent at various depths (according to their reſpective ſpecific gravities), and remain ſuſpended at that depth for ever. Notoriouſly this is not the caſe: the fluid following any moving body preſſes it *behind*, exactly as much as the fluid *before* it impedes its progreſs; and this uniformity of preſſure (on all ſides) being equally true at any depth, the motion of the immerſed body is entirely regulated by *extraneous impetus*: whether its own gravity, or the oſcillation of a pendulum; the impulſe of oars againſt the water, or of wind againſt the ſails. The example of a light collier, and a deep-laden ſhip, is no more in point, than if, in the experiment of high and low wheeled carriages, the low wheeled carriage ſhould be *empty*, and the other *laden* with two or three tuns. Certainly, *thus* the low wheeled carriage would require a leſs moving power than the other. The ſenſations of a *horſe* would determine this doubt with ſufficient accuracy.

The queſtion of the comparative reſiſtance of deep and flat veſſels is this: "The ſame weight and ſurface being oppoſed to the fluid, which is moſt powerfully reſiſted by it? An eaſy experiment will at once explain and determine the queſtion.

Take a board, a foot long, four inches wide, and one inch thick; provide a piece of lead an inch wide and a foot long, and of ſuch thickneſs as not quite to ſink the board, when attached to it in the water. By fixing this lead on the edge of the board, it may be dragged (the other edge uppermoſt) through any convenient piece of water, by a weight properly adjuſted to a ſtring and pullies. Then note down (by a ſtop-watch) the time conſumed in its paſſage through a definite ſpace. Afterwards, affixing the lead (lengthwise) on the flat ſide of the board, let it be again dragged (the unloaded ſide uppermoſt) through the ſame ſpace. In the firſt caſe it is evident, that the board draws four inches water; in the ſecond but one inch; and

* See article *Reſiſtance*. It is carefully diſcuſſed, and illuſtrated by figures.

that the *ſame* ſurface meets the oppoſing fluid at a different depth. The identity of the time conſumed in the paſſage (in theſe two experiments) will demonſtrate the uſual accuracy of Sir Iſaac Newton.

To him every navigator is ſo eminently indebted for the reſource of lunar obſervation (made poſſible only by his unerring Theory of the vagrant moon), that Mr. Gower will be gratified by this defence of him; and if he ſees cauſe of doubt, will inſtitute this eaſy experiment. Surely the greateſt philoſopher produced on our planet, is not to be lightly impeached for the ſake of avoiding ſuch a trivial exertion.

I conclude with a hope, that your readers (eſpecially Mr. Gower) will not impute to me any *hypocriſy* in my continued wiſhes for the ſucceſs of the *Tranſit*; from whoſe *long-floor*, great velocity may be expected, whether her ſails be, or be not, in the beſt poſſible arrangement. If Mr. Gower is of opinion, that abſtract ſcience may be diſcuſſed without perſonalities, I have no objection to a private or public correſpondence with him. Otherwiſe, hereafter I ſhall *in ſilence* remain,

March 11, 1801. His, and your humble ſervant,

S——R.

P. S. "A capſtern (I am charitably informed) is a mechanical power." Is it therefore devoid of *weight*, the only quality I have aſcribed to it?

BLEACHING WITH SODA IN VAPOUR.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

A Correſpondent in your Magazine of laſt month calls upon me for ſome communications on *bleaching*, which I many months ſince promiſed you. I did not think my promiſe, or its ſpeedy fulfilment, of great conſequence to your readers, otherwiſe I ſhould certainly ere this time have performed it. I was, beſides, called to the Continent on buſineſs ſoon after I wrote the letter, to which your correſpondent obligingly alludes. And, it is only ſince my return, within theſe laſt ſix weeks, that I have had opportunity to peruſe the ſeries of your numbers, and to perceive how much your publication has, in its progreſs, contributed to enlarge the general ſtock of knowledge, and to produce a public interchange of uſeful information among men of native good ſenſe, and in the œcumenical arts.

I have not, juſt now, leiſure to enter into the requiſite details on the practice of *bleaching*. But, on the Continent, I had occaſion to learn, that the recent invention of M. CHAPTAL, for *bleaching with the* VAPOUR *from a ſtrong ſolution of* SODA, is adapted, not in France alone, but alſo in Germany and Belgium, with advantages even ſuperior to thoſe which attend the uſe of oxygenated muriatic acid in any of its combinations. I

have been told that this invention has been also tried in England; but, where, or with what success, I could not learn. I have not at present convenience to repeat the trial myself, either in the small or in the great way. But permit me to recommend it to your readers, and to intreat, that if any of them shall please to evaporate a solution of soda, and to apply it successfully to whiten cloths, they will please to communicate in your valuable Magazine the result of their experience.

I shall as soon as possible, communicate the details which your correspondent claims from me. In the mean time I am,

Sir, your obedient servant,

Manchester, JOHN WILSON.
March 2, 1801.

ON THE DISTRIBUTION OF THE ROYAL PRUSSIAN DOMAINS IN THE ODERBRUCH *.

AT a time when in England so much clamour is raised against large farms, and the high prices of provisions in a great measure imputed to the *great farmers*, it cannot prove uninteresting for our readers to learn in what manner large tracts of ground have been portioned out into small farms, in those parts of the Continent where this measure, carried into effect with a sufficient share of prudence and practical knowledge, has increased the population and prosperity of the country. This is the case in several districts of the Prussian dominions, where as early as under the reign of Frederic II. many royal bailiwicks or domains have been *parcelled out into small portions* with all possible success. The immense tract of marshy ground, which under the name of the *Upper* and *Lower Oderbruch*, stretches from the Oder towards *Stettin*, having in a peculiar degree experienced this favourable change, we shall here insert a brief narrative of the manner in which it has been effected.

The *Oderbruch*, which contains about 200,000 acres of land, is divided into the *Upper* and *Lower* part. The former extends from Zettin's ferry-house as far as Oderberg, and contains about 94,500 acres of land. The whole of this district was at the time of the accession of Frederic II. to the throne a barren marshy tract of ground, producing nothing but reeds and brushwood, and containing no habitations but a few miserable huts, the tenants of which earned a scanty subsistence by catching craw-fish, wild ducks, and geese, &c. Frederic II. more generally known under the name of Frederic the Great, conceived the plan of converting this extensive barren tract of ground into fertile arable land. In order to drain the *Lower Oderbruch* it was found necessary, 1st. That the Oder, which, in its principal bed, flowed very slowly, and in the lower grounds branched out

* An extensive marshy tract of ground on the river *Oder*.

into ſeveral arms, that at the leaſt riſe of the waters overflowed their banks, ſhould receive a deeper channel, and its courſe be accelerated by means of a canal; 2dly, That the two main branches of the river ſhould be provided with ſtrong dikes; and 3dly, Several canals be dug to receive and carry off the noxious water. All this was ſpeedily and ſucceſsfully effected, and to the utmoſt aſtoniſhment of the whole vicinity, one of the moſt barren diſtricts was converted into the fineſt and moſt fruitful country, which was diſtributed in ſuitable portions among a great number of farmers and labourers, and of the inhabitants of ſome neighbouring cities. Twenty thouſand acres fell to the ſhare of ſeveral noblemen who poſſeſſed eſtates in the neighbourhood, and twenty-five thouſand acres were conſolidated into a roval domain, which, however, was not managed for the benefit of the king, but parcelled out in portions of 90, 60, 45, 20, and 10 acres, in proportion to the means of the coloniſts, as they were called, and the number of their children. The king, who bore all the expence of this patriotic operation, amounting to upwards of a million of dollars *, provided them with the neceſſary buildings, and thus laid the foundation of the proſperity of upwards of 1000 families. The coloniſts obtained unlimited freedom in point of religious opinions; churches were conſtructed at the king's expence, and curates and ſchoolmaſters appointed. To render the ſituation of the coloniſts ſtill more comfortable they were exempted from *the neceſſity of ſerving in the army, ariſing* from the ſyſtem of military cantons which prevails in the Pruſſian dominions, and the rent or fee which they were bound and are ſtill obliged to pay for the land they hold, amounts to 16, 18, and 20 groſhen † per acre. The whole diſtrict being divided into eleven great diviſions, each ſuch diviſion contains, beſides the above ſmall farms, one of larger ſize of from 150 to 200 acres, which is leaſed out for a term of thirty years. The land, thus portioned out, has been gradually improved, and the neighbouring towns have conſiderably gained from the increaſed population and proſperity of the adjacent country. The *Upper Oderbruch* contains about 125,000 acres; their diſtrict was likewiſe drained and converted into arable land, yet originally not diſtributad as the lower part, but divided into large royal farms. A beginning has, however, lately been made with parcelling them alſo out into ſmall farms, and this patriotic plan has already been executed with regard to *Wilthelmſaue*, *Solikante*, and *Poſedin*, yet, on prineiples ſomewhat different from the former, and 3,618 acres have been diſtributed among 107 families in portions of 100, 90, 30, 10, and 3 acres. The number of families of the laſt claſs amounts to 39; they are intended to furniſh the next with the labourers they may ſtand in need of. B——R.

* About 166,000l. ſterling. † From ten to fourteen pence ſterling.

MISCELLANEOUS OBSERVATIONS ON THE ECONOMY NECESSARY TO BE PURSUED IN THE VARIOUS DEPARTMENTS OF COUNTRY BUSINESS.

We extract from Mr. Baniſter's *Synopſis of Huſbandry* the following excellent Precepts of Economy in the Farming buſineſs. They are minute, and for real utility cannot be otherwiſe. Thoſe who already practiſe them will recogniſe their own careful management with much ſelf-complacency; and thoſe who have not yet fully conſidered their importance, will here learn a leſſon moſt neceſſary for their future comfort and proſperity in life.

E.

MUCH hath been already ſaid in the foregoing pages on the general good effects of economy. But as the neglect of this excellent endowment hath ſo often been the means of accelerating the deſtruction of perſons who were otherwiſe no ill managers in their profeſſion, I hope the reader will pardon me, if I attempt to illuſtrate my general obſervations on this ſubject by a more minute inveſtigation; and for this purpoſe I ſhall endeavour to claſs, under particular heads, the ſeveral acts of prudence, economy, and good management, neceſſary to be purſued on each. And firſt, of the houſe and houſekeeping.

Houſekeeping.

The neceſſity of adhering to frugality in the arrangement of their family concerns, will be acknowledged by every houſekeeper; but thoſe who have been accuſtomed to the buſineſs of huſbandry, will (I believe) readily agree with me, that prudence and economy are more particularly needful in a farm houſe than in any other; for vain will the maſter exerciſe his ſkill and good huſbandry without doors, if the domeſtic duties are not properly attended to within. And ſo expert are the general run of farmers ſervants in the various arts of deception, that, maugre every care, they will find ſome opening or another to defraud their employer, either by making waſte of the proviſions, or by purloining the ſame in barter to the threſher, for corn to pamper a favourite team. As a preventative for this evil, the ploughmen ought never to be permitted to ſit down to their meals but in the preſence of their maſter or miſtreſs, nor be ſuffered, when theſe are finiſhed, to loiter away their time within doors; but to paſs their evenings in the ſtable, which is the proper ſtation for the ploughman, when buſineſs does not require his attendance elſewhere. For this may be depended on as an inevitable conſequence, that miſchief of ſome kind or other will enſue, when he is indulged to continue many hours in the kitchen.

Keys of any kind, if laid but for a minute out of the miſtreſs's hand, are in danger of being taken up; and though the locks may not immediately be opened, an impreſſion is readily taken off, which being carried to the friendly ſmith, its fellow is eaſily ſupplied, and a ſecure entrance made into the ale and pork cellars, from whence (through the medium of the female ſervant, generally the ploughman's ſweetheart), theſe articles are handed off by degrees, and the caſks emptied of their con-

tents, without the knowledge or even ſuſpicion of the maſter. Hence it follows, that without the continual and watchful ſuperintendance of the maſter and miſtreſs, frauds will be perpetually exerciſed in a farm houſe, and for this reaſon, the miſtreſs, eſpecially where there are many ſervants, can rarely ſtir abroad, nor often entertain viſitors at her houſe; and when at home muſt aſſociate with the ſervants in the kitchen. Women, therefore, who have been bred up in towns, or have been accuſtomed to live in a genteel ſtile, are totally unfit for the management of a farm houſe: which to ſuch a perſon would open a ſcene ſo eſſentially differing in every particular from thoſe to which ſhe had been before habituated, that ſhe would never be able to lower her ideas, ſo as patiently to ſubmit to the drudgery of this occupation. On this account, it is now become an almoſt univerſal practice with the genteeler kind of farmers in this county to employ a perſon to board the plough ſervants in the farm houſe, and this office there are never wanting people to undertake. The man is to be provided with continual work on the farm, and to be paid wages for the ſame according to the cuſtom of the country. A prudent couple may thus, with eaſe and comfort to themſelves, maintain their own family and the ploughmen; of whom it is to be obſerved, that they will require leſs indulgence from this looker than from their principal, and feed with contentment on ſuch homely fare, which they would have refuſed with murmurs and grumbling at their maſter's table; and the whole buſineſs will be tranſacted at far leſs expence and trouble to the farmer than if he reſided on the ſpot, and boarded his own ſervants: unleſs indeed he can put up with the like coarſe diet he gave his domeſtics, and ſubmit to ruſticate both himſelf and his wife and children.

The economy of the ſervant's table is to be regulated according to the cuſtom of the country, which varies greatly in different parts of the kingdom; but in moſt places ſalted proviſions form the chief part of rural fare. For this reaſon, a number of hogs equal to the conſumption ought to be fattened, in order that there may never be wanting a due ſupply of pork or bacon throughout the year.

Servants and Labourers.

The number of yearly ſervants ſhould be proportioned to the ſize of the farm; for where theſe are in too large abundance, the effects will in the end be ſeverely felt by the maſter. Neither ſhould the ſervants be permitted to loiter away any part of their time in idleneſs, which would not only be an injury to the farmer, from a neglect of buſineſs, but tend to debauch the mind, and taint the morals of the ploughman, which at beſt have a ſtrong bias towards irregularity and perverſeneſs. Neither ſhould a due encouragement be denied to thoſe who are ſober and diligent in their buſineſs; and ſince a draught or two

of mild ale will generally purchaſe the good will of country ſervants, this indulgence ought never to be withheld when they proceed with chearfulneſs in their taſk, or when their work is more laborious than ordinary. It will be likewiſe convenient to preſerve a due ſubordination among the ſeveral degrees of country domeſtics, which will contribute in a great meaſure towards ſecuring regularity and decorum within doors, and accelerate the ſeveral works to be performed in the field. A proper attention to theſe particulars will inſure to the maſter order and quiet in his kitchen, which would otherwiſe teem with uproar, riot, and confuſion.

Of labourers, ſuch are to be preferred for thoſe works which afford conſtant employment, as threſhing, hedging, &c. who dwell in the neighbourhood; and never to employ thoſe who come from a diſtance, and are not well known, but on temporary jobs in the ſummer ſeaſon, to which the number of reſident workmen may be inadequate; ſuch as in the haying, harveſting, hopping, &c. at which times theſe travelling labourers are highly uſeful. But as there can no ſure dependance be formed on their integrity or their aſſiduity, ſuch part of country buſineſs which may conveniently be tranſacted without their aid, ought never to be intruſted to them.

The ſmaller the number of workmen employed on the farm the more eligible, ſince the wages of theſe people will create a perpetual drain from the annual receipts; and they are, moreover, too apt to form intrigues and cabals to the maſter's diſadvantage. Such works which may conveniently be tranſacted by the taſk, ought never to be performed by the day; ſince the labourer that undertakes his work by the great, will uſe the utmoſt diſpatch in the accompliſhment of his job, and for his own credit ſake, if he be conſtantly employed on the farm, he will be anxious to complete it in a workman-like manner; whereas the day's-man comes late to his work in the morning, proceeds with ſluggiſhneſs in his taſk, and loiters away half his time in idleneſs; ſo that where there are many of theſe day's-men employed the maſter's eye is continually required to keep them at their work. Not that the taſkmen are to be left wholly to themſelves; theſe muſt be compelled to perform their ſeveral undertakings with propriety; but as to the time which they may conſume in idleneſs, this reſts entirely with themſelves, and therefore redounds not to their maſter's loſs but their own.

The Stable.

No part of the farmer's economy demands a narrower inſpection than this. Firſt, to provide horſes adequate in number and ſize to the extent of the farm, and labour expected from them. To lay in a ſtock of hay equal to their conſumption throughout the winter; and to raiſe a proportional quantity of green meat for their ſummer provender. To furniſh them a

weekly allowanee of corn, that may be ſufficient to maintain them in good heart and ſpirits, and enable them to thrive in their work; but by no means to get fat and purſy. A team in good working condition, with looſe hides and ſleek coats, will bring to the owner both gain and credit; but a fat and pampered team will never be able to perform their labour with pleaſure to themſelves, or with advantage to the farmer. To guard with caution againſt the arts of the ploughman, neither ſuffering him to diet the horſes beyond their proper allowance, nor to ſtarve them by neglect. To prevent as much as poſſible any league or combination between the ploughmen and the threſher, and to provide good locks both for the barns and granary, and to depoſit the keys in a place of ſecurity; but above all, to guard with all poſſible circumſpection againſt the infernal practice of ſpiceing. To obſerve that the harneſs be kept in its proper place, and that it be mellowed with oil when requiſite, to ſoften and preſerve the leather; and that neither this, nor any other article belonging to the ſtable, be left abroad where it may receive an injury from the weather, or be expoſed to the hands of the plunderer.

Not to ſuffer the forks, rakes, ſpades, ſhovels, or other tools, to lie diſperſed in different places; but to collect them together, and depoſit them in the granary, or other ſecure place, till wanted; and when done with, to count the number brought in, that they agree with what were delivered out. To keep an exact inventory of the ſacks, not permitting any of them to remain in the ſtable, or to ſtand in the barn with ſmall parcels of corn; but to be carried up ſtill as they are emptied into the granary, and there thrown upon a beam beyond the reach of mice or rats, that they may be in readineſs when wanted by the threſher: and that they may be always in proper condition, let them be looked over when they come from market, that if there are any holes, theſe may be repaired, the neglect of which occaſions much trouble at the time when the corn is to be meaſured up, and whiſps of ſtraw muſt be ſtuffed in the holes, which not only look very unpleaſing, but render the ſacks by no means a ſafe depoſit for corn.

The Barn.

To watch the motions of the threſher, and to examine the ſtraw with nice circumſpection, that none of the corn be remaining in the ear; and, if poſſible, to be always *preſent at the time of cleaning*, in order to ſee that this work be conducted with propriety: that the ſample be perfectly clean and marketable, and the buſhel well filled, and carefuly ſtricken.

Waggons, Carts, Ploughs, Harrows, Roll, and other Inſtruments of the Field.

The preſervation of theſe articles depends in a high degree on keeping them perpetually under cover, when not in conſtant

uſe; and conſidering the great expence of theſe inſtruments when firſt purchaſed, it ſeems well worthy the farmer's care to provide lodges for their reception, that they may neither be injured by the ſun or wet. Waggons and carts ſhould never be ſuffered to grate on their axle-trees; and to prevent this, the wheels ſhould be often examined, that they may be greaſed whenever occaſion ſhall require: a precaution, which will not only lighten the draught to the horſes, but prevent the carriage from taking fire by perpetual friction. Whenever any repairs are wanting to the waggons, carts, ploughs, &c. they ought to be applied without delay. When the carts are at work on a dung mixen, or at any other jobs at a diſtance from home, ſo that it may not be convenient to draw them every night into the yard, they ought conſtantly to be ſhelved down when the day's work is finiſhed, and not ſuffered to receive the influence of the weather ſtanding on their wheels, more particularly in a rainy time, which would very ſhortly be the deſtruction of the carriage. Neither ought the ploughs or harrows to ſtand expoſed to the weather, eſpecially in a hot ſunny time, but ſhould be removed under the hedge when the day's work is finiſhed; and let the harrows be ſet aſlope, and not with the tines bearing on the ground.

At Seed Time.

To attend at the brining and liming of the wheat, and to provide (both for the ſowing of the wheat, and Lent corn) a perſon who has been verſed in this buſineſs, and to puſh on both the men and horſes at this time beyond their uſual ſtint, that the buſineſs may be expedited as much as poſſible: and at the bean and oat ſeaſon, to be more than ordinarily circumſpect over the ſervants, who will otherwiſe purloin ſome of the allowance allotted for the field to the uſe of their favourite horſes.

Hay Time and Harveſt.

In the haying ſeaſon; let the mowers be ſelected from amongſt thoſe workmen that are employed throughout the year, and ſuch who have been accuſtomed to that buſineſs, otherwiſe they may chance to leave more than the value of their wages uncut; and if poſſible, hire the haymakers by the acre, which will ſave abundance of fatigue aud trouble. But where it is neceſſary to employ people by the day for this work; let not theſe be in an undue proportion to the quantity of graſs mown, and let them be carefully and narrowly watched, for of all the labourers that are employed in rural affairs, theſe are the moſt unprincipled.

In harveſt; to keep the reapers out of the wheat field in ſhowery weather, and whilſt the dew hangs on the corn in the morning. To be very circumſpect and watchful over them, both to prevent the corn being left, and to guard againſt the

ſheaves being made of too large a circumference; that they be properly bound and regularly ſet up in the ſhocks, and in wet weather to ſee that every fallen ſheaf be raiſed, and to uſe every other precaution to obviate the ſprouting of the corn. Conſtant employment muſt be found, not only for the yearly ſervants, but for thoſe labourers whom it may be neceſſary to employ by the day. But of theſe, the provident huſbandman will be cautious not to retain a larger number than is unavoidably requiſite, to bring the harveſt into the barn. As to the practice of hiring people by the month in harveſt, which uſed to prevail in many parts of the kingdom, this is now (I believe) generally diſuſed; and with good reaſon, ſince both reaping, mowing, raking, and forking, may be all of them executed by the great, to the infinite advantage of the farmer, and more to the approbation of the labourer. Let the barns be thoroughly cleanſed before the approach of harveſt, and as the mowſteads empty by the labours of the threſher, let them not be filled with ſtraw or rubbiſh of any kind, which would form a ſecure retreat for vermin; whereas, when the contrary practice is purſued, the new corn may be laid in bays free from any of theſe annoyances.

If corn ſtacks are ſet up without doors, theſe ſhould always be conſtructed on frames fixed on ſtones, to prevent the depredations from rats; eſpecially wheat ſtacks: and ſuch frames ought to be ſtationed as cloſe as poſſible to the back door of the barn, ſo that at the time of getting in the ſtack, the ſheaves may be eaſily pitched upon the floor.

Setting of ſtacks abroad on a frame, is a very judicious method, as well to preſerve the corn from rats, as to make the more room in the barn for the looſe corn: for it is the ſheaf corn only which ſhould be ſet abroad, which may be got into the barn in the ſpring or ſummer at a trifling expence, and at no loſs: whereas barley or oats, if unbound, would require more hands both at the ſetting up and at the houſing, and much of the corn would neceſſarily be ſhed at each removal.

ANSWER TO MR. FORD, ON PLANTING POTATOES.

To the Editor of the Goſpel Magazine.

MR. EDITOR,

HAVING caſually peruſed your ſeventeenth number, I am induced by my anxiety for the ſucceſs of the Potatoe plantation (which is ſo important) to ſend you ſome haſty obſervations on the propoſed frugality of Mr. Ford. I might oppoſe to his aſſertions my own experience, had I noted the reſults with an accuracy fit for the public eye: but my negligence is of little conſequence, ſince the very careful experiments of Dr. Anderſon have put the matter out of all doubt, and demonſtrated from a vaſt number of regiſtered reſults, that the more heavy the parent plant, the more copious the produce in every inſtance, and in

the moſt regular gradation. In the preſent price of Potatoes, it is already but too probable, that a national loſs will be ſenſibly felt, from too much parſimony in the plantation of the preſent ſpring.

I am not Naturaliſt enough to determine in what manner the ſuperior vigour of the firſt ſhoot is continued throughout the growth, long after the parent plant is putrefied. But the theory of vegetation is not yet quite aſcertained enough to oppoſe its ſpeculations to ſtubborn facts.

I do not at all doubt the veracity, or the accuracy of Mr. Ford in the detail of his experiment, and, with him, adviſe to all men the eaſy repetition of it. But it is not to an experiment made in the vigorous vegetation of a kitchen-garden, that any authority can be aſcribed, without the concomitant experiment, how much *more* produce would have reſulted from a neighbouring plantation of *large* potatoes, of the ſame ſpecies, and in the ſame ſpace of ground?

I have ſomewhere read of an experiment for aſcertaining the beſt *maximum* of ſeed for wheat, and the reſult was, that the ſuperiority of crop was *more than adequate* to the additional quantity of ſeed expended, till it reached five buſhels per acre: and that *no loſs was ſuſtained* up to ſeven. This muſt ariſe from the ſame cauſe as the ſuperior produce of a liberal quantity of potatoes planted; and is (no doubt) the ſilent, but effectual reaſon which ſupports the broadcaſt huſbandry againſt the current of opinions viſible in all the agricultural writers of the day, in favour of ſome modification of the drill-huſbandry. I remain (in haſte)

Your humble Servant, and well wiſher,

Hexham, March 13, 1801. J. ELLISON.

THE PERNICIOUS EFFECT OF PAPER MONEY CONFIRMED.

To the Editor of the Commercial and Agricultural Magazine.

MR. EDITOR,

IF you have a corner to ſpare ſo late in the month, I beg you will not refuſe inſertion to a remarkable confirmation of the ſtatement in your laſt Number.

The reſolution of the Bank Directors to allow a *bonus* of almoſt 5l. value on the preſent half year's dividend, demonſtrates the fact of the unprecedented profit of the Bank, conſequent on the iſſue of *unpayable* Bank notes. It is to be recollected, that beſides this they are paying rather more than 150,000 per annum for the long leaſe of their charter.

The ſtatement of the amount of the advance on all commodities ariſing from this pernicious ſource, has received a ſtill more remarkable confirmation by the conceſſion of the Governor of the Bank; who, in a late debate in the Houſe of Commons (as reported in the newspapers) did not deny the juſtice of Mr. H. Thornton's calculation, that all commodities muſt have been

thus enhanced to the amount of 12 per cent. This differs from my ſtatement but ⅛ per cent. and doubtleſs becauſe Mr. Thornton rates the total of circulating currency in the kingdom rather lower than I have done. Thus the 3½ millions added, would bear a rather higher ratio to that total. How the enhancement is doubled by the neceſſary reſolution of all tradeſmen to ſave themſelves from harm, I have tried to explain in the communication alluded to; ſo that if Mr. Thornton is accurate, and my opinion valid, all fixed income muſt have decreaſed in value 24 per cent.

The near coincidence of the two calculations proves the *approximation to accuracy in both*; and the Public may compute, that they are at preſent paying an additional Income Tax of about 23 or 24 per cent. on account of the ignorance of Mr. Pitt; without a farthing gain to the Exchequer: indeed, to its great *loſs* in the applications of public money. However, as the loans are got on better terms in proportion, government loſes much leſs than other people.

I doubt not but one of the firſt acts of the new adminiſtration will be, gradually to impoſe the ſalutary condition of immediate GOLDEN PAYMENT on the paper currency of the Bank of England.

I feel inclined to aſcribe ſo juſt a ſenſe of ſhame to Mr. Pitt on this unhappy blunder, as to attribute to it the *efficient cauſe* of his quitting the reins of government. He muſt feel the more pungent ſting from the recollection of *the warning letter* received from Mr. Boyd on the very morning which produced the fatal order of council.

I have read ſome pamphlets (ſince ſending my laſt) which aſcribe the enormous price of proviſions to this ſource of exceſſive paper currency. However, I ſee no cauſe to retract my former opinion on that head. Indeed the *freight* of imported *foreign corn* may be a little enhanced by it; but that advancement averaged among all the corn of England, would be little more than an *evaneſcent quantity*.

March 26, 1801. B.

ENUMERATION OF PATENTS LATELY ENROLLED.

1800. *Oct.* 21. MR. THOMAS BOWMAN, New Bond Street, London, Peruke-maker; for a new-invented method of making peruques or wigs, with faſtenings made of a certain elaſtic compreſſed ſteel ſpring or ſprings, and alſo with other flat ſprings, or wires, made of ſteel, for the cloſer adheſion of the points and whiſkers to the head and face.

——11. Mr. William Plenty, of the town of Southampton, Carpenter; for his new-invented pump, and a plough upon an improved conſtruction.

CRITICAL CATALOGUE.

1. *A Journey from London to the Isle of Wight, by* T. PENNANT, *Esq. 2 vols. 4to. West and Hughes.* 1801. 3l. 3s.

THIS is a posthumous work of the late Mr. Pennant, so well known for the quantity of entertainment and instruction contained in his numerous publications. As a Naturalist and Geologist he was inferior to none; eminent as an Antiquarian, and a most acute observer of the interesting bustle of human industry. No *Tour* could be found in which these various accomplishments have more ample scope, than in the subject of the present volumes.

Embarking at the *Temple-stairs*, Mr. P. describes the mercantile wonders of the Thames. The progress of *Deptford*, from a dirty village to a royal-dock; and of *Greenwich* (the antient residence of our kings) to the present magnificent hospital, is very pleasingly and accurately described. *Perry's Dock*, at Blackwall, is the greatest private concern (of that kind) in *Europe*. In it, and in *Greenland Dock*, (above *Deptford*) our unrivalled East-Indiamen are all laid up, in the intervals of their voyages. They are mostly built in the Thames, and all of them repair thither to receive their loading. The copper, lead, provisions, and water, are taken in as ballast at *Deptford*; the bale-goods, guns, powder, and private trade at *Gravesend*. On the return home, the unloading is begun at *Woolwich*. When lightened, they proceed to *Blackwall* and to *Deptford*, to deliver the remainder. The goods are put into Hoys of about 100 tons each, and thus sent up to the various warehouses.

At *Woolwich* the grand *depôt* of British artillery is described; and the particulars of the famous *Breach* at *Dogenham*, which injured the navigation of the *Thames*, by the quantities of mud thereby washed into the river. The national magazine of gunpowder at *Purfleet* is a tremendous curiosity; it appears, that *Dr. Franklin's* conductors of lightning failed there, (almost fatally) in 1777. The chalk-pits of *Crayford* and *Dartford* have been in use from before *Cæsar's* invasion, and still export vast quantities of chalk to *China*, and of flints up the Humber, to the Staffordshire potteries. *Gravesend*, *Tilbury*, *Sheerness*, and *Queensborough*, all furnish matter of useful information. The Dutch expedition up the *Medway* (in 1667) is related with much spirit. A lasting caution against credulous relaxation on the near prospect of peace.

The various fossils in *Sheepey* Isle are scientifically described. Few of our readers need be told that the *Swale* (which separates this isle from the main land) was once the usual navigation up the Thames; but many of them are probably ignorant that a similar channel (now totally obliterated) formed the Isle of *Thanet*. Its western entrance was at *Reculver (Regulbium)* the eastern at *Richborough* (formerly *Rutupium.*) Harold, in 1052, sailed up this channel, and till the year 1500 it was navigable for boats.

The pier at *Ramsgate* extends 800 feet into the sea, and has cost £300,000. A mighty work, now threatened by the accumulation of mud. *Deal* is famous as the landing-place of *Cæsar*, and still more so as the modern rendezvous of British commerce. The dangerous *Godwin Sands* (about four or five miles from the coast) form a protection against the eastern gales, and in this anchorage (called the

Downs) the largeſt fleets ride in ſecurity. The fabled origin of the *Godwin Sands* is completely exploded by Mr. Pennant. He deſcribes the famous ſmall-craft of *Deal* with a minuteneſs well merited by intrinſic excellence and utility.

Dover has been ever a feaſt to the antiquarian; the importance of its caſtle was felt while England was expoſed to foreign invaſion, and petty warfare; now that our navy precludes this danger, the vicinity of *Dover* to the continent inſures its permanent importance. Henry VIII. attempted a magnificent pier there in vain, and the port remains acceſſible only to the packets and other ſmall veſſels.

Near *Folkſtone* a remarkable ſubſidence of the cliff is noticed, and clearly accounted for. *Hythe* is the famous *Portus Lemannus* of the Romans. At preſent it is of little importance. Paſſing by *Old* and *New Romney* (of decayed importance) our author croſſed the famous *Romney* marſh into Suſſex.—*Rye* is now ſuffering (what moſt of the ports of this coaſt have in turn ſuffered) a gradual choaking up of its harbour; but the induſtry of modern times has projected a reſource by endeavouring to form a new harbour. The next town, *Winchelſea*, has ſuffered *doubly*, from oppoſite effects of the caprice of the ſea. In the reign of Edward I. the Old Town of *Winchelſea* was in ſix or ſeven years *abſorbed* by that invading element. The *New Winchelſea* has ſince been *deſerted* by the ſea, and with its port, its former conſequence is vaniſhed.

Off *Farleigh-head* the tide from the Atlantic meets that from the German Ocean, with much rippling, which extends acroſs the channel to *Bologne*. *Haſtings* is memorable for the battle which transferred the crown of England from the Saxons to the Norman Conqueror. William, marching thither from *Pevenſey*, where he landed, defeated and ſlew Harold, his competitor. *Battle Abbey* was founded in conſequence of that event. Between *Pevenſey* and *Eaſt-Bourne* was ſituate the *Anderida* of the Romans. Its remains have been traced, and aſcertained by Dr. Tabor, of Lewes.

To the weſtward is *Beachy-head*, a promontory known to all ſailors, and called by the French, *Le Cap Breviſier*. The *Seven Cliffs* ſucceed in order. Theſe are terminations of the *Suſſex South Downs*; on which the wells are frequently 300 feet deep. The tide raiſes the water in thoſe near the ſea; but does not affect the taſte of the ſprings.

Brighthelmſtone is the next place of note; where faſhionable reſort bids defiance to the expoſure of the open ſea. In a commercial view this town (without a harbour) is nothing; but the fiſhery is very extenſive and very productive. About ſeventy boats are employed in queſt of mackarel and herrings, which are moſtly diſpatched to London by land. *Shoreham* has a tolerable tide-harbour, and ſome ſhipbuilding is carried on there. *Arundel* is famous for its caſtle and its mullets.

Chicheſter Cathedral is dilated on with pleaſure; Mr. P. hazards a very reaſonable conjecture, that the *Lavant* was once navigable to the town, which was called *Mantantonis* by the Romans; who too well underſtood the advantage of a port, to fix their abode above a mile from the water. Frequent examples of the retreat of the ſea on this coaſt confirm Mr. P's. conjecture.

Through *Emſworth* and *Havant* our author aſcends *Portſdown*. He felt diſappointed in the proſpect from it. *Portſmouth* and its ex-

tenſive dock-yard are amply deſcribed; and as they deſerve, with ſome exultation of Mr. P's Engliſh heart. The more antient town was on the ſcite of *Portcheſter Caſtle*. This is ſaid (probably with truth) to have been the *Portus magnus* of the Romans; though in vol 1. p. 203, it is called *Portus Adurnus*. A manifeſt error, ſince the preſent name of the River *Adur* (vol. 2. p. 87) fixes the *Portus Adurnus* at *Shoreham*. Neither is it likely that the ſea has at all receded from *Porcheſter*; when the tranſports of the conqueror averaged at 66 men per veſſel, no deeper port could be deſired; and it was a convenient peninſula for fortification. It is curious, that the ſame ſtate of ſociety at the Trojan war, and at the Norman conqueſt, produced ſhips of the ſame ſize. *Agamemnon's* fleet averaged about the ſame number per veſſel. The *three* ſhips of *Hengiſt*, containing 1700 men, are fabulous; as may be known from many other Saxon-fleets ſoon after: they ſeldom brought 100 men each veſſel.

Our author having ſurveyed *Goſport* and *Haſlar-Hoſpital* (worthy of a great nation) paſſes over into the Iſle of Wight. A ridge of lofty downs runs 23 miles from eaſt to weſt, maintaining 30,000 ſheep. The pardonable vanity of the natives affirms, that the iſland produces ſeven times as much corn as is conſumed in it. It is indeed a diſtrict ſtrictly agricultural, and ſufficiently fertile; but 18,000 inhabitants muſt conſume the produce of as many acres; and the total of arable land is not more than 70,000. *Newport* is the principal town (a central metropolis of the iſland) and in neatneſs and pleaſantneſs is ſurpaſſed by few country towns. The picturesque rock-ſcenery of the iſland, and the magnificence of *Appeldurcoombe* are minutely deſcribed. The iſland is not infeſted by foxes. In barbarous times it had no lawyers; this was the preventative: "No ſooner did an attorney appear in the iſle, but he was "hunted out of the iſland, with a pound of candles hanging at his breech "lighted, and bells about his legs." An indication of ridiculous prejudice againſt a profeſſion, on whoſe ſkill the ſecurity of all property depends.

Theſe volumes are a ſplendid ſpecimen of typography, from the preſs of Wilſon and Co. The plates (almoſt fifty in number) eminently beautiful. Reverence to the deceaſed author has left ſome chaſms, which we think would appear better filled up, where a ſimple enquiry might do ſo with undoubted accuracy. In a production not left finiſhed for the preſs, ſuch additions are allowable, and, indeed, meritorious.

II. *View of the Agriculture of Middleſex, &c. by* JOHN MIDDLETON, *Eſq. Nicol.* 1798. 9s.—In every view Middleſex is the moſt important county in Great Britain; the famous metropolis of the empire gives it a conſequence not to be equalled by any circumſtance of mines, fertility, extent, or cultivation. This county is computed by Mr. M. to contain 179,000 acres. The river Thames (ſo called by the antient Britons) borders the ſouth ſide of the county, and various ſmall ſtreams form its limits on the eaſt and weſt. The tide flows about fifteen miles above London, and ſo copiouſly, that at ſpring-tides it riſes full fourteen feet at London Bridge. Hence the alternate ſtream up and down is ſufficiently powerful to float river-craft to any deſtination, without any labour, but that of directing their motion. The climate is ſufficiently temperate. The air is ſenſibly warmed for an extent of ſome miles, by the fires of London, in which are conſumed annually above 600,000 chaldron of Newcaſtle coal. The ſoil has the uſual variety of clay,

ſand, and their mixture; but the ſurface is almoſt totally covered by a rich earth, created by repeated dreſſings of town dung, and of courſe is highly productive. Few counties are more happily ſupplied with ſtreams proper for irrigation; but the diviſions of property prevent any from availing themſelves of this capability. Spring-water (near the Thames) is obtained at a great depth: at Chelſea a well was ſunk 400 feet, before its purpoſe was anſwered.

The antient farm houſes are timber-framed, lathed, and plaiſtered; and of a conſtruction ſo irregular, that they muſt have been erected piece-meal for immediate purpoſes. The more modern farm-houſes are all of brick, and tiled; ſtraw near London is too valuable to be applied to thatching. Cottages are chiefly ſituate in villages, and of brick; there are ſome wretched huts on the borders of various commons, whoſe inhabitants too often ſubſiſt by petty pilfering, and are rather a nuiſance than a benefit to ſociety. But till prejudice has permitted the incloſure of all commons, no amendment of this evil is to be expected. Cottage gardens are not very uſual; a defect ſo important, that a compulſory annexation of the adjoining grounds would be quite juſtifiable. When the legiſlature ſees that the landed intereſt muſt be eſſentially benefited by the conſequent diminution of poor rates, we may hope to ſee this ſalutary meaſure.

The uſual ſize of farms in Middleſex is rather ſmall; they do not average at 100 acres. The character of the occupiers more various than uſual. Nurſery-men, retired tradeſmen, and ſpeculators in agriculture are almoſt as numerous as the hereditary farmers. All theſe ſuffer much pilfering, occaſioned by the vicinity of London. The rental of this ſmall county is about 4½ millions; the poor rates rather high; about 200,000l. in the year 1784. The numerous annuitants in the various offices of the metropolis leave a vaſt burden on the pariſhes by their deaths.

The benefit of leaſes is extended over moſt part of this county; though not in ſo judicious a manner as Mr. M. could wiſh. The profits of farming ſeem rather high on the graſs land; the facility of procuring town dung by back carriage, and the conſtant high price of hay in London, are advantages which well bear a high rent.

The plough and harrows are of the worſt kind; ſo clumſy that four horſes are required to all ſoils. Mr. M. is of opinion that with an excellent ploughman, the light north country ſwing-plough is preferable to all others: But that under the rational expectation of imperfection in ſkill, and the certainty of ſometimes wanting a good Herefordſhire wheel-plough in a tough ſtrong fallow, it is on the whole adviſeable to adopt that implement. The harrows and carts are very clumſy; the light ſingle horſe cart of Cumberland is deſervedly praiſed for cheapneſs of carriage, and not injuring the roads. The threſhing mill is becoming a neceſſary implement in this county, from the lazineſs and roguery of the labourers.

The waſte lands in Middleſex are not (comparatively ſpeaking) very extenſive; about 17,000 acres; but even theſe with the reſources of improvement drawn from London, would ſupport 50,000 ſouls. The author calculates the agricultural population at one ſoul to ſix acres; the neceſſary artizans and tradeſmen for their convenience, as many more. This in England and Wales gives a population of about five millions—the landlords and others ſupported by taxes on land, &c. another million.

Hence alſo are fed about two millions more, who are engaged in all kinds of exportable manufactures, in the ſhipping, army, &c.

The common fields are in extent about 20,000 acres, and are badly cultivated by antient preſcription. The old faſhioned farmer here appears in all his glory, as he can even put an effectual negative on the improvements of his more intelligent neighbour.

Under this unhappy predicament lies almoſt all the arable of this county; near a metropolis the moſt bulky commodity has ſuch an advantage, that graſs land is almoſt univerſal. Where wheat is ſown, the only peculiarity appears to be the mode of reaping it, called *bagging*. This is done by *chopping down* the corn with a heavy reap-hook; by which means it is ſeparated nearer the ground, and gives more ſtraw than uſual, without any additional expence. Many peas are gathered in the fields for the London market. This is called *podding*, and anſwers well to the farmer, who reaps and threſhes the remainder. The turnips are bought and conſumed by the cow-keepers in the vicinity of London.

The graſs land in this county is full 70,000 acres (beſides meadows) and all this improved from a barren yellow clay, and now let at no leſs than 3l. per acre, producing on an average above two tons of excellent hay annually. This ſuperior quality ariſes from the mode of hay-making; an art no where better underſtood than in this diſtrict. Five hay-makers are engaged for one mower; and they are conſtantly buſy in tedding or cocking till the hay is carried. Grazing cattle (except occaſionally the overplus of a market) is never practiſed: ſeed is too valuable here.

The gardens of Middleſex cover 3000 acres in the moſt profitable manner. In the winter ſeaſon about five perſons, in the fruiting ſeaſon perhaps thirty more are employed (directly and indirectly) per acre. The money produced is not leſs than 100l. per acre annually, to the gardner: to the public the price is more than doubled by the retailers. The Neat-houſe gardens (betwixt Weſtminſter and Chelſea) produce more than 220l. per acre to the gardner! This aſtoniſhing fertility is the reſult of a temperate climate, excellent ſoil, plenty of dung, and an unceaſing cultivation. It is conſoling to ſee in this inſtance how far productive agriculture may hereafter be carried. Every acre of ground may well maintain ten perſons in food by labour: at this rate our agricultural population cannot be eſteemed too great, till it exceeds 400 millions! This explains the population of China without trade.

The *whole* vegetable ſupply of London is drawn from about 2000 acres of garden ground, cultivated by the ſpade; 8000 by the plough. The aggregate annual produce upwards of one million ſterling. Nurſery grounds are alſo very extenſive and profitable; as are the Oſier beds on the Thames. We take this opportunity to inform our readers, that when land appears too moiſt for any other produce, a very high profit (at leaſt 10l. per annum) may be obtained by a careful cultivation of the Oſier.

[*To be concluded in our next.*]

III. *An Eſtimate of the Number of Inhabitants in Great Britain and Ireland, by Sir* F. M. Eden, *Bart. Wright.* 1801. 2s. 6d. —With conſiderable magnanimity Sir F. Eden has publiſhed this eſtimate at a moment, when its accuracy is ſoon to be determined. This confidence gives an additional pledge of his firm conviction of the truth of his opinions.

The moſt violent contradictions have exiſted among former calculators; chiefly from the previous exiſtence of ſome favourite hypotheſis in

the mind of the enquirer. Thus Dr. Price having formed an opinion that population was *decreaſed* ſince the Revolution, deduced from all facts the loweſt poſſible reſult, and affirmed in 1779, that England and Wales contained no more than five millions. His opponents doubled the number with a much greater probability of truth. Theſe gueſſes have been founded on the number of taxed-houſes, on the conſumption of certain articles (as indicated by the exciſe) or on the baptiſms and burials. On a combination of the firſt and laſt of theſe modes, Sir F. Eden has formed his eſtimate. The reſult appears fairly deduced, and informs us, that England and Wales contain 10,710,000; Scotland, 1,500,000; Ireland, 3,800,000; maritime and military population, 500,000; total population of the Britiſh Iſles, 16,510,000. We are the more inclined to accredit this ſtatement from its proximity to that inſerted in our ſecond volume*. Such a near coincidence (from ſlender *Data*) certainly amounts to a reſpectable confirmation. However, we ſuſpect conſiderable error in the ſuppoſed *Ratio* of increaſe, which is founded on the compariſon of baptiſms and burials. So many Diſſenters do not *baptize*, who neceſſarily *bury* with the eſtabliſhed church, that ſuch calculation is quite inconcluſive. We alſo obſerve an inaccuracy in adding diſtinctly the volunteer-corps, and ſea-fencibles; even ſea-faring men uſually are born and die *on ſhore*, and the volunteers cannot with a ſhadow of reaſon be reckoned ſeparately. We doubt whether *any* troops (of the number uſually ſtationed at home,) ought to have added to the eſtimate.

We wiſh Sir F. Eden had peruſed the laborious reſult of Sir R. Sutton's reſearches in Nottinghamſhire. They are the beſt extant. We learn (incidentally) that the population of France was (in 1790) 26,000,000; of Spain (1787) 10,409,879; of Holland (in 1796) 1800,000. Yet Holland does much, and Spain very little; population is of little value without induſtry.

IV. *A Maximum; or the Riſe and Progreſs of Famine, addreſſed to the Britiſh People, by a* RESIDENT IN FRANCE, *during the Famine there. Wright.* 1801. *Price* 1s. 6d.—We have peruſed this Pamphlet with a lively pleaſure from a conviction of its extreme utility at the preſent moment. We ourſelves have taken every opportunity to inculcate the dreadful conſequences of a *Maximum*, and in the preſent number have inſerted a *Theoretical* paper on the ſubject. The peruſal of this publication will furniſh very ample *practical* knowledge; and we requeſt from the *juſtice* of thoſe of our readers, who have not yet diſmiſſed their dangerous errors on this point, that they will look into this Pamphlet, for conviction.

In 1793, bread was dear in France, and the clamour of the populace obtained from the ignorance of the Legiſlature that fatal decree which eſtabliſhed a *Maximum on price* of grain. The whole military deſpotiſm of the unrelenting *Robeſpierre* was exerted in vain to enforce it. The farmers, enraged by vexation, waſted their corn, rather than ſubmit to this tyranny; and every houſe in France was ſoon ſubjected to the ſtricteſt ſearch, (called in the revolutionary jargon) domiciliary viſits, to detect the *crime of poſſeſſing corn*. "One would have imagined that it was the greateſt of crimes to plough, ſow, and culti-

* See Vol. II. p. 391.

vate the land;" and almoſt all the farmers in France were guillotined or impriſoned. Hence in 1794, the ſcarcity was enhanced ten-fold; under the ſeverities of the *Maximum*, no wheat had been ſown, and none could be expected from abroad. The government was forced to turn merchant in the corn-trade, and was (of courſe) ſhamefully cheated by its 10,000 agents.

The next ſtep was naturally a *Maximum* on *all* commodities; which ſtopped all the trade and manufactures of France at a ſingle blow. "Struck by the Maximum," induſtry ceaſed at once: and the poor people thrown out of employ, and even unable to procure food for *Money*, had recourſe by thouſands to the *laſt direful expedient* for relief:—Suicide!

We ſhall conclude with a ſentiment feelingly expreſſed by its Author (in the convention) "If you aboliſh the Maximum, you may *poſſibly* pay dear for what you get; but if it continue in force, you will *certainly* be ſtarved!" To the example of the paſt miſery of France, perhaps we owe the ſalvation of Britain at the preſent moment. The remaining advocates of a *Maximum*, will be ſtruck with horror at their own deſigns, on the peruſal of this moſt intereſting Pamphlet.

V. *Foreign Agriculture; an Eſſay of the comparative Advantages of Oxen and Horſes in Tillage. By* I. T. Dillon, *Eſq. Nicol.* 1796.—This Pamphlet is chiefly tranſlated from the French of M. Prou de Monroy, who has been attentive to agricultural purſuits in the neighbourhood of Rochelle. His opinions and calculations are brought in ſupport of that opinion which prefers the Ox to the Horſe for tillage. There is not much method, or cloſe reaſoning produced in this work; it is the mere converſation of a Country Gentleman. At p. 32, indeed is a comparative ſtatement, which loſes its importance from the want of reducing the French money and meaſures to our own. In p. 49, is a recipe, reſembling Daffy's Elixir. The Author concludes that the labour of the horſe to that of the ox is as three to two. But the expence of the horſe as nine to five.

The notes are valuable as communicating foreign anecdotes of ox-labour; but as to practical uſe, the great colliſion of opinion on that ſubject in England, has lately produced very ſuperior information. We now ſee the legiſlature hold out an indirect bounty on ox-tillage, by taxing horſes. We muſt deem this an improper interference, in the preſent unſettled ſtate of the queſtion. If the ſpeed of the Eaſt-Indian cattle could be infuſed into ours, we ſhould give full aſſent to the fitneſs of ox-tillage: but to *compel* the uſe of our ſluggiſh aukward breed, ſeems very premature. At leaſt the advocates of Ox-tillage ſhould produce better ſpecimens of ſpeed, than have yet appeared, before they puſh a raſh theory, which (it is acknowledged) practice more and more diſapproves. For we have not heard it denied, that the actual quantity of ox-labour has been decreaſing during the laſt century.

A novelty is always worthy of examination; becauſe it may excel the old practice, though difficult to introduce: but the revival of a practice rejected by experience, promiſes little national benefit, except to the mind of a warm Theoriſt.

VI. *Auxiliary Remarks on the above Eſſay. In a Letter to Sir J. T. Dillon. By* W. Tatham. *Scott.* 1801.—We are never ſo well pleaſed with this gentleman's productions, as when he communi-

cates Trans-Atlantic information. He always evinces himſelf a man of acute obſervation on the manners and cuſtoms of America.

The inſtinctive appetite for ſalt which the ox-kind conſtantly evince, is there indulged at ſmall expence, and probably conduces to the health of the animal. In England, the tax on ſalt prevents this application of it. At the Havannah (in the iſland of Cuba) Mr. T. was eye-witneſs of the habitual exertion of oxen there. Two of them drew a cargo of American flour from the quay, carrying 11 barrels (2,200lb.) at a time in a ſmall cart. It is obſerved that in prolonged exertion, the cleft of the hoof opens more and more. To this, more than to wearing away of the hoofs, is the fatigue of the ox to be attributed. It ſeems clear, that where oxen can be maintained for a trifle, it is good policy to employ them. But this circumſtance can ſcarcely happen, except in a half-ſettled country, and in circumſtances of the rudeſt agriculture. In England, there are luckily few ſpots where theſe motives for keeping Oxen exiſt. The quantity of hay devoured by one ox, more than countervails both the hay and corn conſumed by one horſe, while hay is at the relative price to oats, which has been lately uniform. If then it be true, that after much trouble in the education of an ox-team, they do leſs work, by *one-third*, and conſume food to the *ſame* amount as horſes, no difference of prime coſt, or final ſale, can balance ſuch a vaſt diſparity. And after all the advocates of ox-labour concede, that for hard roads the animal is unfit.

An extract of a letter from G. Sharp, Eſq. cloſes this pamphlet. He is an advocate for ſingle-horſe carts. We do not perceive that he has been mindful to meet the difficulty of the augmented number of human attendants on theſe carts, which would infallibly inſure a great improvement in all roads. We are, indeed, ſufficiently convinced, that every farmer would find a light ſtrong cart a convenient addition to his implements of huſbandry.

VII. *The Britiſh Mariner's Vocabulary. By* J. J. Moore. *Hurſt.* 1801. 4s. 6d.—This publication is a uſeful abbreviation of Falconer's Dictionary, and has an unuſual merit in adding many familiar explications to that uſeful compilation. To thoſe who from deſtination in life, or from the love of general ſcience, wiſh to acquire a competent knowledge of naval phraſeology, no book (of the ſame ſize) has yet appeared, equally uſeful; the plates are remarkably perſpicuous. In a nation, which ſo much depends on naval knowledge, as does Great Britain, few publications can be more important. We have never ſeen more information conveyed in leſs bulk; and without ocular demonſtration ſhould have diſtruſted the poſſibility of ſuch judicious compreſſion. No young ſailor will not reap great advantage from the poſſeſſion of this book, the attentive peruſal of which, may *almoſt* exempt them from the uſual raillery beſtowed on *landſmen* and *lubbers*, on their firſt entrance into the naval occupation.

We have received a ſmall poem entitled, The Vale of Trent. It does not enter into our plan to review any publications except thoſe on Commerce, Agriculture, and Political Œconomy. On theſe ſubjects a ſpeedy review will always be inſured by ſending a copy of the work.

HISTORY.

National Transactions,

CIVIL AND MILITARY.

EAST INDIES.—From hence we learn that Doondeah, the celebrated Indian Chief, whose force had given much uneasiness, has been totally defeated by Col. Wellesly. Various reports have reached us of success in the East Indies, in an expedition against Batavia, but little credit can be given to them, as we know the troops said to have been detached on that service, were countermanded. The troops said to have been embarked for the expedition to Egypt, in order to co-operate with General Abercrombie, do not appear to have sailed, and are also said to have been countermanded. The India Company now begin to find that their military establishment is more than their finances will bear, and we have no scruple in foretelling that the very extended line of conquests of the Company in that country, will in the end prove their destruction.

TURKEY and EGYPT.—The Turkish Empire seems now drawing near the crisis of its fate. The English troops landed in Natolia almost precisely at the time the Russian Envoy had declared to the Porte that the Grand Signor permitting the English to land in his dominions, would be regarded as hostile. There can be no doubt but that the politics of the Court of Constantinople is about to undergo a great change, and which will most probably involve it in ruin. The enmity of Russia or England she is now almost certain of experiencing, and either of them will be sufficient to secure a dismemberment of the enemy. General Abercrombie, with part of the English force, is, we learn, by private letters, landed in Natolia, not in a very healthy state; but we are told by administration that they are preparing for the expedition.

NAPLES, SICILY, and MALTA.—The kingdom of Naples is now completely at the mercy of the French. Had Sir R. Abercrombie and his troops been landed there, instead of being detached on the mad expedition to Egypt, a noble stand might have been made against the enemy in Italy. At present the influence of the Emperor of Russia alone can save the King of the Two Sicilies from destruction: for if Naples is once in possession of the French arms, an attack on Sicily follows of course, and cannot without great difficulty be avoided. Malta is now in the joint possession of the English and Neapolitan troops, and perhaps a contest may arise between these two nations, about the possession of that island. For the King of Naples being acknowleged by us Lord Paramount, and having no other way to extricate himself from his difficulties than by courting the assistance of the Emperor of Russia, will most probably cede his title to Malta to that monarch, and it follows that he must use every endeavour to put him in possession of it. Peace is signed between France and Naples.

FRANCE.—The definitive treaty of peace between this country and the Empire does now appear to have been ratified, the preliminary treaty has been acted under, and there is little appearance that any new circumstance will arise to obstruct it, as Baron Thugut is certainly dismissed, and the Emperor's Officers have surrendered the fortress of Mantua to the French. In the internal part of the republic peace seems to reign, and although the French people can by no means be pleased with the usurpation of Buonaparte, yet the ease and prosperity they enjoy, induces them quietly to submit to it. Having compelled all their enemies on the Continent to make peace, and having converted the most inveterate of them into a

friend, the only object the Conſul has now in view is to compel this country alſo to a peace.

SPAIN and PORTUGAL.—Spain again appears to menace Portugal, and it ſeems now evident that to ſave herſelf from an invaſion, the latter kingdom muſt conſent to ſhut her ports againſt the Engliſh, or meet the joint forces of France and Spain. Thus it appears that the change in the Spaniſh Miniſtry has by no means operated a change in the Councils; and the Prince of peace ſeems on as good terms with the Conſul's brother, Buonaparte, and as ready to co-operate in any thing to aſſiſt France as his predeceſſor. Portugal, although ſhe has not yet ſhut her ports againſt England, has however opened them to the French cruizers, and has even permitted them to bring Engliſh ſhips taken by French cruizers into the port of Liſbon. The Engliſh Factory are ſo much alarmed at this, that they are ſhipping off their effects as faſt as they can. By later accounts we learn, that Portugal has determined to meet the enmity of Spain, and that war is declared between them.

THE NORTHERN POWERS.—The politics of theſe ſtates are now, by the folly of the late Britiſh Miniſter, ſo completely concentered into one point of view, and that view ſo congenial to the intereſts of every one of them, that there can be little doubt of their adhering firmly together. Some faint hopes were entertained that Pruſſia would not enter cordially into the coalition, but the very ſpirited reply of the Miniſter of that Monarch, ſhews that he knows his own intereſt too well to reſiſt. The great object of the Confederacy now forming is moſt unqueſtionably to ſhut Great Britain out of the ports of the Continent, a meaſure which will moſt aſſuredly tend more to haſten a peace than the moſt brilliant victory. The King of Pruſſia's deſigns are ſuppoſed to be againſt Hamburgh and Hanover; by the former he will have it in his power to become a great naval ſtate, and by the latter he will gain an acquiſition which will in a great degree compenſate him for the increaſe of territory which the Houſe of Auſtria has acquired by the peace. As the conteſt between Britain and the Northern Powers muſt very ſoon be reduced to naval operations, thoſe Powers are exerting every nerve to ſend a powerful fleet to ſea. Of the Members of the Coalition the only one of them the leaſt vulnerable from naval operations, is Denmark, and ſhe is making every exertion to place her capital and dependencies in a proper poſture of defence. Accounts from Hamburgh ſay, that theſe preparations will not be confined to offenſive operations.

The following is a Copy of the Convention for the Re-eſtabliſhment of an armed Neutrality between the King of Sweden and the Emperor of Ruſſia:

ART. I. His Majeſty the King of Sweden, and his Majeſty the Emperor of the Ruſſias, declare, that they will ſtrictly forbid all their ſubjects from engaging in any contraband trade.

II. States what ſhall be conſidered as contraband goods, viz. cannons, mortars, muſkets, piſtols, bombs, granadoes, balls, flints, gunpowder, ſaltpetre, cutlaſſes, pikes, ſwords, ſword-belts, ſaddles and bridles, excepting ſuch quantity of certain of theſe as may be neceſſary for the defence of the ſhip and crew. All other articles not ſpecified ſhall not be conſidered as warlike ammunition, and not be ſubject to confiſcation. It is agreed, however, that the preſent Article ſhall not prejudice any particular ſtipulations entered into by former treaties with the Belligerent Powers, relative to any articles of a ſimilar kind, which may by them be reſerved, prohibited, or permitted.

III. Stipulates that all other trade ſhall be free—and that no port ſhall be conſidered as blockaded againſt a neutral veſſel, unleſs there be a ſufficient number of ſhips of war ſtationed ſo near it as to render the entrance into it dangerous. Neutral veſſels ſhall only be detained for juſt and evident reaſons; and in caſe of improper detention, not only ſhall be completely in-

demnified for the damages they have ſuſtained, but a full ſatisfaction ſhall be made for the inſult offered to the flag of their Majeſties.

The declaration of the Commander of a ſhip of war, which ſails as convoy to any merchantmen, that they have no contraband goods on board, ſhall be ſufficient, without any ſearch. The contracting Powers engage at the ſame time to iſſue the ſtricteſt orders to all their Captains and Commanders to ſuffer no contraband goods to be brought on board theſe ſhips, or concealed in any manner, under the ſevereſt penalties.

IV. Their Majeſties engage to fit out mutually a number of ſhips of war and frigates, to enforce and defend theſe regulations.

V. To prevent deception, it is reſolved, that for a ſhip to be conſidered as belonging to the country whoſe flag it carries, the Commander and one half of the crew at leaſt muſt be of that country; and ſhe muſt be provided with paſſes of good and proper form.

VI. Ships of war of one of the Contracting Powers to aſſiſt and afford protection to the merchant ſhips of the other, when they are at a diſtance from, or have not any convoy of their own.

VII. This Convention to have no retroactive effect.

VIII. If the ſhips of either of the Contracting Powers notwithſtanding they obſerve the ſtricteſt neutrality, according to the principles of this Convention, ſhall be taken by the ſhips or privateers of any of the Powers at war, the other Contracting Powers ſhall join in the remonſtrances of that Power, and if theſe are diſregarded, employ its force to make repriſals.

IX. If either Power ſhall be attacked on account of this Convention, both ſhall make a common cauſe, and join in their mutual defence; and to co-operate with each other to obtain a full and complete ſatisfaction for the inſult offered to their flag, and the injury done to their ſubjects.

X. The principles and regulations of the preſent Convention ſhall be conſidered as perpetual and applicable to all wars by which Europe may be hereafter diſturbed.

XI. As the end and principal object of this Convention is the liberty and ſecurity of trade and navigation in general, his Majeſty the King of Sweden, and his Imperial Majeſty of all the Ruſſias, agree and engage to give their conſent that other neutral Powers may accede to it, they accept its principles, and will ſhare its obligations and advantages.

XII. That the Powers engaged in war may not allege ignorance of the arrangements made by their ſaid Majeſties, it is agreed that a notification ſhall be made to the Belligerent Powers of the meaſures they mean to take, which can be the leſs conſidered as hoſtile to others, as they are not directed to the detriment of any other country, but ſolely to the ſecurity of the commerce and navigation of their own ſubjects.

XIII. The preſent Convention ſhall be ratified by the two Contracting Powers, and the ratifications exchanged in due form within ſix weeks or ſooner if poſſible, from the day of their being ſigned.

Done at St. Peterſburgh, 4th (12) of December.

(Signed) Count VON STEDINGE.
Count VON KOSTOPFIN.

[Here follows the ratification of their Swediſh and Imperial Majeſties, counterſigned by Joh. Chriſt. de Toll, and Count Roltopſchin.

There is alſo the regulations referred to in the Convention, it conſiſts of 15 Articles. It is dated St. Peterſburgh, the 23d of December, 1800.]

The EMPEROR and EMPIRE.—The Emperor having, at the peace of Campo-Formeo, agreed that the affairs of the Empire ſhould be adjuſted at a Congreſs, baſely took every meaſure to prevent the treaty between the Empire and France from taking effect, and by that means gained time to recruit his ſtrength, and again try his efforts in arms. The event been ſuch as the vile perfidy of his conduct deſerved. But the preſent rulers of France have taken more effectual meaſures to ſecure a peace, and have com-

pelled him to agree to certain terms, with which he undertakes that the eſtates of the empire ſhall comply. As ſeveral Princes, who have been ſtripped of their territories, are to receive an indemnification from the empire, it ſeems evident that theſe articles, will be found in the eccleſiaſtical ſtates, which will of courſe be ſecuralized. Of the arrangements, we at preſent only know, that the Briſgaw is to be ceded to the Duke of Modena, in lieu of that duchy in Italy. What the Grand Duke of Tuſcany is to receive for ceding that duchy to the Duke of Parma, does not yet appear. The Stadtholder of Holland, who is the only ſurviving Prince of Naſſau, by the friendſhip of the King of Pruſſia, gains a very pretty addition to his principality, and we think this not only a more probable mode of reſtoring to the Stadtholder an equivalent, but a much ſafer one than that lately reported, the ſeating him as Grand Conſul of Holland.

AMERICA.—The politics of this country are likely to undergo a great change, from the excluſion of Mr. Adams, the friend of England, and the elevation of Meſſ. Jefferſon and Burr, the avowed advocates of France. The treaty of peace between France and America has been ratified by the ſanction of the latter country, except in one article, and an Ambaſſador is coming from America to ſettle that affair. Meantime we are ſorry to hear loud complaints of the conduct of the Engliſh cruizers in the American ſeas, which we fear, will, in the preſent ſtate, lead to a rupture. The American Congreſs are ſitting, and in order to complete the public buildings in the city of Waſhington, and furniſh the Preſident-houſe, a ſum of money is to be borrowed, on the ſecurity of the public lands there. The debt is to be paid off by annual inſtalments of 100,000 dollars.

There is alſo publiſhed the following expences of the government of the United States of America for the preſent year, as ſubmitted by the Secretary of the Treaſury :—

	Dollars.	*Cts.*
Civil liſt, including the departments,	591,701	37
Payment of annuities and grants -	1,753	33
Support of the mint - -	13,300	0
Ditto Foreign Miniſters -	85,000	0
Expences incident to treaties -	361,364	0
Supporting the claims of Americans abroad,	64,000	0
Ditto ſeamen ditto, - -	30,000	0
For valuation of houſes, lands, &c.	40,000	0
Military department, generally,	1,400,000	0
Military penſions, - -	93,000	0
Naval departments, generally, -	3,342,352	95
Fabrication of cannon, arms, &c.	400,000	0
Support of light houſes, &c. -	38,622	70
For the ſecond enumeration, -	60,000	0
For ſatisfying miſcellaneous claims,	5,600	0
Total	5,529,695	35

Recent accounts ſtate, that after thirty-one ballots Mr. Jefferſon had been elected Preſident, and Mr. Burr, Vice Preſident.

IMPERIAL PARLIAMENT.

HOUSE OF LORDS.—MONDAY Feb. 23.—After a converſation of ſome length, Lord Darnley's motion for an Inquiry into the State of the Nation was poſtponed till the 2d of March; for which day their Lordſhips were ſummoned.

——— 24.—The Royal Aſſent was given, by commiſſion, to the Brown Bread Act Repeal Bill. The Commiſſioners were the Lord Chancellor, the Archbiſhop of Canterbury, and Lord Walſingham. Adjourned to the 28th.

———March 2.—Lord Darnley, in conſideration of the illneſs of his Majeſty, which muſt neceſſarily embarraſs the Miniſtry, and render the preſent

moment improper and unfit for the diſcuſſion he wiſhed to inſtitute, withdrew, for the preſent, his motion for a call of the Houſe in his propoſed Inquiry into the State of the Nation.

HOUSE OF COMMONS.

MONDAY, FEB. 23.—Several writs were ordered to be iſſued. Reports Bills were received, and forwarded in their reſpective ſtages.

——— 24.—The Speaker called the attention of the Houſe to a Bill (the Duke of Bedford's), which had been tranſmitted from the Upper Houſe, for the Regulation of the Poor Rates, and to extend the Means of Parochial Relief; but as it interfered in money matters, and trenched upon the privileges of the Houſe, it was of courſe rejected.

——— 25.—Lord William Ruſſel moved for leave to bring in a Bill to enable Magiſtrates in certain caſes to exempt perſons from the payment of the poor rates; that the perſon applying for exemption ſhould ſwear to his incapability to pay the rates; and that the Magiſtrates ſhould only be allowed to grant the exemption to perſons rated under 5l.—After ſome ſhort debate, the Houſe divided, when there appeared for the motion 49, *contra* 3; majority 46. Leave was accordingly given to bring in the Bill.

——— 26.—Mr. Jones, in compliance with the wiſhes of Miniſters, poſtponed his motion on the ſubject of the violation of the treaty of El Ariſh. The Houſe in a Committee on a Bill for raiſing the ſalary of the Maſter of the Rolls in Ireland, from 2500l. to 3500l. a year, and giving to him certain power in affairs of bankruptcy and other matters, at preſent veſted in the Lord Chancellor, who it is intended to releaſe from much of the buſineſs of his office.—Agreed to reſolutions on the ſubject.

March 2.—Mr. Sheridan adverting to Mr. Nicholls's motion for an inquiry into the cauſe and extent of his Majeſty's illneſs, in a ſpeech of peculiar candour and feeling, deprecated all preſent diſcuſſion on the ſubject; he felt aſſured, that ſhould, unhappily, the King's confirmed and continued illneſs render communication neceſſary, his Majeſty's Miniſters would not be deficient in their duty. He therefore moved an adjournment till Monday.—Mr. Pitt ſeconded the motion, and complimenting Mr. Sheridan on his honourable, loyal, and affectionate declaration, he obſerved, that ſhould his Majeſty's illneſs continue contrary to the well founded hopes of thoſe immediately about his perſon, and the country at large, his Majeſty's Miniſters, under whatever circumſtances, would feel it their duty to bring the ſubject before the conſideration of the Houſe, and propoſe ſuch meaſures as may tend to prevent any obſtruction to the neceſſary diſpatch of public buſineſs. He truſted that all difference on public opinions would ſubſide till the period ſhould arrive for diſcuſſing them. After ſome ſhort obſervations from Mr. Nicholls, the queſtion of adjournment was carried.

In the Houſe of Lords, Wedneſday, March 4, Lord Suffolk imputed the preſent dearneſs of proviſions to the unlimited circulation of paper currency; and thought of propoſing that no other paper than that of the National Bank ſhould paſs.—The Duke of Athol, and Lord Romney, Members of the Proviſion Committee, in reply to his Lordſhip, obſerved, that the Committee was proceeding on the ſubject with all poſſible attention.

Thurſday, March 5, the Loan, Exchequer, and Iriſh Militia Staff Bills, went through a Committee.

In the Houſe of Commons, Monday, March 2, the Houſe in a Committee on the ſecond report of the Proviſion Committee, Mr. Ryder moved the firſt reſolution for granting the bounties on the culture of potatoes, as particularized in our laſt.—Mr. Wilberforce conſidered the propoſed bounties to be neceſſary from the preſent high price of ſeed, &c. The whole expence, he obſerved, would not exceed 30,000l.; and he anticipated, from the adoption of the meaſure, a large ſupply and conſequent reduction in price of excellent food; that the cottagers would acquire habits of induſtry from it;

and that large tracts of waſte lands would be brought into cultivation.---Mr. Buxton thought the ſuggeſtion pregnant with miſchief, and without promiſe of advantage.—Mr. Horne Tooke contended that government, by unwiſe endeavours to remedy the evil, aggravated its conſequences. He thought the price of labour ſhould be raiſed, and that the national debt, which oppreſſed millions for the benefit of a few, ſhould be wiped off. He, however, declared himſelf an enemy to innovation; that he never ſo much queſtioned the right or fitneſs of any inſtitution as whither it was eſtabliſhed, and that this latter conſideration had ever influenced him.---Mr. Hobhouſe was of opinion that the preſent price operated as a ſufficient bounty, and that the meaſure, by encouraging the breaking up of land, would operate in violation of leaſes. He moved that the Chairman ſhould leave the chair, when the Houſe divided, ayes 39, noes 44. The ſeveral reſolutions were then put, and carried---Gen. Walpole moved an addreſs to his Majeſty, praying for a return of all the Members of that Houſe holding places at pleaſure under the Crown in Ireland, to aſcertain that the number of this deſcription ſtipulated by the Act of Union be not exceeded.---After ſome obſervations by Lord Caſtlereagh as to the difficulty of making ſuch returns, the addreſs was agreed to.

Tueſday, March 3, the call of the Houſe was poſtponed to the 10th; and Mr. Jones's motion on the ſubject of Egypt was poſtponed to the 12th.

Wedneſday, March 4, the Houſe, in a Committee, went through the Bills for increaſing the poſtage on letters, impoſing a duty of 4s on horſes uſed in agriculture, and the increaſed ſtamp duties. The bills of country bankers re-iſſued after the firſt of May are liable to this additional charge. The propoſition for giving a bounty on the culture of potatoes induced a long converſation; but there not being forty Members preſent, the Houſe was counted out.

Thurſday, March 5, Meſſrs. Jolliffe, Curwen, Tooke, and the Solicitor General oppoſed the ſecond reading of the Poor Bill, on the ground that it would diſturb a ſyſtem at preſent beneficial to the poor, and diſfranchiſe the lower order of freeholders in the country, who might take the benefit of it. Meſſrs. Roſe, Buxton, Arkwright, and Wilberforce, Sir W. Elford, Sir C. Bunbury, and Lord W. Ruſſel, were in favour of its being committed; and on a diviſion for the ſecond reading, the numbers were, ayes 55, noes 29. On the motion for taking into conſideration the report of the Proviſion Committee, the Members left the Houſe ſo faſt, that on its being counted, there were only 35 preſent, and the Speaker of courſe adjourned.

Friday, March 6, the reports of the Tax Bills were received. On the motion of Lord Temple, the Notary and Regiſter of the Dioceſe of Saliſbury, and the Clerk of the Chapelry of Brentford, were ordered to attend at the bar on the 10th, to prove Mr. H. Tooke to have been in Prieſt's orders. Mr. Tooke admitted the fact, but complained of the conduct of the Noble Lord. After a converſation of ſome length, the motion for taking into conſideration the ſecond report of the Committee on the High Price of Proviſions, it was loſt by a majority of ſeven, the numbers being, ayes 30, noes 37.

Nothing of importance occurred in the Houſe of Lords until Thurſday, March 15, when in a Committee on Taylor's Divorce Bill, the Marquis of Buckingham introduced a clauſe to prohibit the adulterer and adultereſs from marrying.---Lords Auckland, Grenville, the Chancellor, the Biſhops of Durham, Rocheſter, and London, ſupported the clauſe, wiſhing to eſtabliſh in the preſent flagrant caſe a precedent for the introduction of a ſimilar clauſe in all Bills of the kind in future.—The Duke of Clarence, Lords Kinnoul, Radnor, Mulgrave, Clare, and Fitzwilliam, oppoſed the clauſe, as grafting a public law upon a private bill, and being inconſiſtent with the principles of equity and morality it was intended to promote. The arguments on each ſide were thoſe before urged on a ſimilar occaſion. On a divi-

ſion, the numbers were for the clauſe 27, againſt it 21; and the report ordered to be received on Thurſday.

March 6.—Lord Darnley made his promiſed motion for a committee to conſider the ſtate of the nation. In a ſpeech of much length and argument, he depicted in animated colours, the domeſtic ſtate of the empire generally, and the political condition of Ireland in particular. He reviewed the expeditions to St. Domingo, Ferrol, Cadiz, &c. and dwelt on each with appropriate condemnation: he cenſured the conduct of Miniſters in the breach of the convention of Egypt. The conduct of Miniſters in regard to Auſtria, he regarded as moſt criminal; by promiſes of co-operation which they never realized, they urged the Emperor to a proſecution of a war to which they muſt have known his means were inadequate, and in view of momentary advantage ſacrificing the conſideration of future and more important benefits. In regard to Ruſſia, our conduct he contended was tardy and imbecile; in reference to Sweden and Denmark it was precipitate and arrogant. He reproved the ſyſtem by which the militia had been reduced, and adverting to the deficiency of nearly two millions in the public revenue, declared the general ſituation of the country was ſuch that the Houſe ſhould interpoſe for its ſalvation, and no longer ſubmit to that blind and implicit confidence which had created all our calamities—The Duke of Montroſe oppoſed the motion, on the ground that the propoſed inquiry would engage the attention of Miniſters and others, more neceſſarily employed, and that the circumſtances of the caſe were not ſuch as to warrant a meaſure calculated to excite alarm.—Lord Holland, Carliſle, Fife, Suffolk, Moira, Caernarvon, Fitzwilliam, the Marquiſſes of Buckingham and Lanſdown, and the Duke of Bedford, ſupported the motion, urging the neceſſity of inquiry, and conſidering that the greateſt deſpondency was that which ſhunned the contemplation of danger; and that the blind enthuſiaſtic confidence heretofore repoſed in Miniſters, was the ſyſtem from which moſt danger was to be apprehended—Lords Weſtmoreland, Grenville, Camden, Eldon, Auckland, Spencer, Hobart, and the Chancellor, oppoſed the motion, under impreſſion that it was calculated to do much harm, and could not be productive of any advantage—For the motion 25; againſt it 107. Majority, 82.

In the Houſe of Commons, Monday, March 16, ſeveral motions were poſtponed. The Houſe in a Committee on the Bill for impoſing a tax on horſes uſed in agriculture, agreed to exempt from the additional duty farms of under 30l. per ann. rent—The Maſter of the Rolls in Ireland, and the Paper Duty Bills likewiſe paſſed Committees.—The Committee on the Poor Rates Bill was again poſtponed, there not being a ſufficient number of Members preſent to form a Houſe.

——— 18.—Sir H. Mildmay obtained leave to bring in a Bill to allow the Clergy to grant leaſes of their tythes for a limited time, and under certain reſtrictions.—The Houſe in a Committee agreed to grant bounties on the importation of all kinds of grain into Ireland.—Lord Temple's motion for examining witneſſes to prove that Mr. J. H. Tooke had been in Prieſt's orders, induced a warm and irregular debate—Mr. Fox's motion for an adjournment having been negatived, (150 to 76), the Regiſter of the dioceſe of Saliſbury was called to the bar, and proved, by the Regiſtry, that J. Horne was ordained in 1760; and the clerk of the chapel at Brentford proved that Mr. Horne, (now Horne Tooke) officiated as Miniſter there in 1761. The following Members were then appointed as a ſelect Committee, to examine precedents and Parliamentary Records on the eligibility of perſons in holy orders to ſit in the Houſe of Commons: Chancellor of the Exchequer (Mr. Pitt), the Attorney-General, the Solicitor-General, Sir W. Scott, Maſter of the Rolls, Earl Temple, Mr. Abbot, Mr. Bragge, Sir W. Young, Mr. Simeon, Mr. T. Grenville, Mr. S. Bernard, Mr. Bond, Mr. Beresford, Mr. C. W. Wynne, Mr. Shaw Lefevre, Mr. Martin, (Galway),

Mr. W. M. Pitt, Mr. Blackburn, Mr. Sheridan, Mr. Grey, Mr. Tierney, Sir F. Burdett, Mr. M. A. Taylor, Mr. Erſkine, Mr. Dickens, Mr. Nicholls.

March 18.—A clauſe was added to the Mutiny Bill, for including in its operations the artillery corps.—Mr. Manning obtained leave to bring in a Bill to empower the Corporation of London to eſtabliſh an open market for the ſale of coals, the Coal Exchange being at preſent a cloſe ſubſcription-room and private property: for conſolidating the ſeveral acts relative to the coal trade, and for compelling the vender to ſend a meaſure along with the coals, in order that the purchaſer, ſhould he think proper, might at a ſmall charge have them remeaſured. He thought, and Mr. Wallace concurred in the opinion, the limitation of the vends at the pits contributed to keep up the price. Mr. Burdon, Sir M. W. Ridley, and Mr. M. A. Taylor, approved the latter practice, as neceſſary to the exiſtence of the ſmall pits, by reſtricting the ſale of the large one.

——— 19.—On the motion of Mr. Pitt it was ordered, that the duties payable in Ireland to the 25th inſt. be continued.—Sir J. Parnel objected to this method of conſolidating taxes, which it had been the practice to canvas annually, in order that ſuch as were unproductive or oppreſſive might be repealed. He noticed ſome contradiction in the duties impoſed by the Act of Union relative to cabinet work, ſtamps, ſail-cloth, &c. that required amendment.—Mr. Pitt replied, that his motion went to continue for a ſhort time only the duties impoſed by the Iriſh Parliament, and that in the courſe of the ſeſſion he truſted the ſubject would again be brought into diſcuſſion.—The Houſe ordered that no private petition be received after the 20th inſt. The Tea and Port Duties Bills were paſſed; thoſe on Paper and Horſes were poſtponed till Monday, with a view to afford relief to news-paper proprietors and hackney coachmen.—Lord Caſtlereagh, preparatory to his motion for continuing Martial Law in Ireland, moved that the Act of the 39th of his Majeſty for ſuppreſſing the rebellion in Ireland be read. After a long debate leave was given to bring in a bill.

——— 20.—After a diviſion, in which the Ayes and Noes were each 37, the caſtlng voice of the Speaker referred the Poor Bill to a Committee, in which it received ſeveral amendments. The Mutiny Bills were paſſed, and leave was given to Lord Caſtlereagh to bring in a Bill to ſuſpend the Habeas Corpus Act in Ireland.

——— 21.—Several new writs ordered. The Bill for granting a Bounty on the Importation of Flour was read a third time, and paſſed. The Houſe in a Commiteee, made ſeveral amendments in the Horſe Duty Bill: by theſe, perſons holding rack rent farms not exceeding 30l. a year, and not keeping more than two horſes, as alſo hackney coach-maſters, are exempt the new duty.—Leave given to Lord Caſtlereagh to ſuſpend the diſtilleries or malt-making in Ireland for a given time. The Bill for continuing Martial Law in Ireland was read a ſecond time. After a debate of ſome length, in which Sir L. Parſons, Mr. W. B. Ponſonby, Mr. Courtney, and Sir F. Burdett Jones contended, that the ſituation of Ireland was not ſuch as to require the propoſed Bill. Meſſrs. M. A. Taylor, Grey and Sheridan oppoſed the ſecond reading of the Bill for increaſing the ſalary, &c. of the Maſter of the Rolls in Ireland.—Mr. Sheridan adverted, with much point, to the circumſtance of the two Noblemen who lately held the office, having been compenſated for the loſs of it by annuities of 1,500l. each on the ground of being ſuperannuated, and yet one of them employed as Ambaſſador to Berlin.—Mr. Pitt and Lord Caſtlereagh defended the principles of the Bill, and on a diviſion, the numbers were for it 59, againſt it 23.—The call of the Houſe took place, and it was ordered that the names of the Engliſh Members abſent be read over on Tueſday fortnight, and thoſe of Ireland on Tueſday month.

March 22.—Mr. Pierrepoint complained that the public buſineſs was frequently interrupted by the inſufficient attendance of Members; and with a view to remedy the evil, moved that ſixty Members be neceſſary to conſtitute a Houſe.—Mr. Martin ſeconded the motion; and Mr. Jones enumerated inſtances where Bills of the higheſt national importance had been paſſed by nine or ten Members—Mr. Bragge thought the means propoſed would increaſe rather than remedy the inconvenience; and on a diviſion, the numbers were ayes 19, noes 151.—Mr. G. Dundas obtained leave to bring in a Bill for encouraging the cultivation of potatoes in open and common lands.—After a debate of ſome length, in which the various arguments before urged were renewed, the Bills for impoſing Martial Law and for ſuſpending the Habeas Corpus Act in Ireland, as alſo the Iriſh Money Bills, ſeverally paſſed Committees.—The Bill for exempting poor Houſekeepers from the Payment of Poor Rates was thrown out by a majority of 38 to 8.

——— 23 —On the motion for the third reading of the Bill for Regulating the Office of the Maſter of the Rolls in Ireland, a debate of much length enſued; its advocates contended that the meaſure had originated with the Iriſh Parliament, to which alone ſhould attach any odium which the Bill might create; that it was connected and interwoven with the arrangements of the Union, and could not be abandoned without a violent breach of faith. But on a diviſion it was carried, the ayes being 62, noes 41 —A motion was made that the Chancellor ſhould, from the emolument of his office, (in addition to which he enjoys a penſion of 4000l. a year, in lieu of his ſituation as Speaker of the Iriſh Houſe of Lords), pay the ſalary of his deputy; but it was negatived, and the Bill paſſed, and ordered to the Lords.—The Houſe concurred in a reſolution preſented by Mr. Ryder, that Lord Hawkeſbury, by accepting the office of Third Secretary of State, had not affected his eligibility to ſit in that Houſe.

——— 24.—The Iriſh Habeas Corpus Suſpenſion Bill, and the Iriſh Martial Law Bill were paſſed after a long and warm debate on the latter, in which the ſeveral arguments before urged, were again preſſed.

Commercial Affairs.

IT was ſtated, in 1796, that the balance of trade in favour of Great Britain, on an average of four years, amounted to ten millions and a half annually, including four millions as the profits of our Eaſt and Weſt India trade, on a ſuppoſition that the Britiſh manufactures exceeded the Cuſtom-houſe value about 30 per cent. but it has been aſcertained, by the entries under the Convoy Act, that 40 per cent may be farther adedd to this valuation, and that the probable balance of trade in our favour, on an average of the laſt four years, amount to 15,000,000l. per annum.

Annual average of the real value of Imports in four years, 1795 to 1798, inclusive -	£.42,261,000	
Do. in 4 years, 1789 to 1792, inclusive -	37,784,000	
Balance in favour of the 4 years during war		£.4,477,000
Annual average of real value of exports of Britiſh manufactures, 4 years 1795 to 1798, inclusive	30,648,000	
Ditto, 4 years, 1789 to 1792, inclusive -	27,135,000	
Balance in favour of the 4 years of war -		3,513,000
Annual average of real value of foreign merchandize exported 4 years, 1795 to 1798, inclusive	12,393,000	
Ditto, 4 years, 1789 to 1792, inclusive -	7,770,000	
Balance in favour of 4 years of war -		4,623,000
Annual average of real value of foreign and Britiſh		

manufactures exported, 4 years, 1795 to 1798, inclusive - - 43,042,000
Ditto, 4 years, 1789 to 1792, inclusive - 34,905,000
Balance in favour of 4 years of war - ——— 3,137,000

Real value, in 1798, of Imports into Great Britain, 46,963,000l.; of British manufactures exported, 33,612,000l.; of foreign goods exported, 14,387,000l.; of British and foreign goods exported, 48,000,000l.

Excess of 1798 above the average of the four most flourishing years of peace, of imports into Great Britain, 9,179,000l.; of British manufactures exported, 6,477,000l.; of foreign goods exported, 6,617,000l.; of British and foreign goods exported, 13,095,000l.

The exports during the year 1800, as far as can be ascertained, amounted to 41,000,000l.; 24 millions of which consisted of British manufactures: a sum unprecedented in any year of peace, and which establishes to demonstration, that under the pressure and embarrassments of war, our resources are increasing, and our manufactures improving. This latter assertion, although not consistent with the stated situation of some of our manufacturing towns, is yet warranted by the simple fact, that the greatest quantity of British manufactures ever exported in a period of peace was in the year 1791, when they amounted to 16,810,000l. and that they now exceed 24 millions.

From America we learn, that the Directors of the Bank of the United States have declared a dividend of four per cent. for the last half year, and an extra dividend of two per cent. arising from the surplus profits of the last three years.

The fleet which lately arrived in America from Batavia, under charge of the United States frigate Essex, had on board 61,514 bags of coffee, 1,077 canisters of sugar, 13,270 bags of ditto, and 18,519 bags of pepper; supposed in all to be worth two millions of dollars.

The prices of raw and refined sugars experienced during the last week a considerable reduction. Inferior sorts of green tea are dearer.

In consequence of the rupture with Russia the company at Runnich in Scotland are busily employed in cutting oak, and floating it down the Tay; they are erecting saw mills at Newburg to work with steam.

It has been recently discovered, that the Norfolk sheep yield a wool, about their neck and shoulders, equal to the best from Spain, and is in price to the rest of the fleece at 20s. to 7s. The Norfolk wool, however, is not adapted to the manufactures of that county, and is sent into Yorkshire for carding and cloths, while the Lincolnshire and Leicestershire wools are received back for combing and spinning.

An account of the amount of duties on British and foreign spirits imposed before 1792; paid into the Exchequer in the years ending Jan. 5th, 1800, and Jan. 5th, 1801; distinguishing each year:

	British Spirits.	*Foreign Spirits.*	*Total of both.*
1800 ———	£.728,454 ——	£.934,158 ——	£.1,632,642
1801 ———	603,193 ——	927,595 ——	1,530,788

An account of the amount of the payments into the Exchequer, in the years ending Jan. 5th, 1800, and Jan. 5th, 1801, on the duties on Beer, and on the duty on Malt, which was permanent, till made annual by the Act of 38th Geo. III. chap. 60.

	Beer.	*Malt.*
1800 ———	£.2,252,801 ———	£.772,212
1801 ———	1,909,353 ———	153,462

We understand that a great quantity of molasses has been purchased in America, and is coming to England for the use of the Distillers.

Fine flour at Baltimore, in Maryland, is selling at that place at 11 and 12 dollars the barrel.

General Toussaint, Governor of St. Domingo, has ordered a duty of twenty per cent. to be laid on all imports and exports.

It is ſtated that Norfolk annually exports, what are termed the Norwich manufactures, to the value of 1,200,000l.— namely, to Rotterdam 150,000l. to London (ten tons weekly at an average of 600l. per ton) 312,000l. and to Oſtend, Hamburgh, the Baltic, Spain, and Italy, 738,000l. The raw materials are eſtimated to coſt a tenth part of the total manufacture, or 120,000l. leaving for labour and profit 1,080,000l. The profit of the maſter manufacturer, intereſt for capital, &c. is calculated at 14 per cent. and deducting this accordingly, it reduces the earnings of the 72,000 perſons to about eleven guineas a year for each.

At Frome, and ſome other provincial fairs, cheeſe has fallen within the laſt three weeks twenty per cent.

Amount of the annual charge of the Public Debt created in the years undermentioned; and the produce of the ſeveral duties granted for defraying the ſame, in the year ended 5th January, 1801:

Years	*Charge*	*Produce*	*Surplus*
1793	252,812 10 0	294,260 7 6¼	41,447 17 6¼
1794	773,324 0 9½	922,638 16 5¾	149,314 15 8¼
1795	1,227,415 3 11	1,452,691 11 3½	225,276 7 4½
1796	1,850,373 3 3	1,315,421 9 6¾	
1797	3,241,348 1 1	2,893,341 0 2¾	
1798	585,941 18 6½	730,207 19 3½	144,266 0 9
1799	333,682 3 3	171,543 12 0	
1800	317,532 10 0	284,052 13 4	
	8,582,429 10 10	8,064,157 9 8½	560,305 1 4
Deficiencies in 1796	534,951 13 8¾		
——— in 1797	348,007 0 10¼		
——— in 1799	162,138 11 3		
——— in 1800	33,479 16 8	—1,078,577 2 5½	
	Surplus	560,305 1 4	
Deficiency on the whole of the duties in the year ended Jan. 5, 1801 -		£. 518,272 1 1½	

The above deficiency ariſes to a conſiderable extent in the ſeveral duties on ſpirits in England, and ſpirit Licences in Scotland, owing to the ſtopping the diſtilleries; and in the ſeveral duties on ſugar, owing to their being bonded under the authority of an Act of the 39th and 40th of his Majeſty.

The produce of the ſeveral duties, granted by the under-mentioned Acts, for defraying the increaſed annual charge of the public debt, created in the year 1800.

Britiſh Spirits	———	£. 52,227 0 0
Foreign Spirits	———	120,555 13 4
Tea	———	111,270 0 0
		284,052 13 4
By the deficiency of this fund in the year ended Jan. 5, 1801,	—	33,479 16 8
		£. 317,532 10 0

It is ſtated that the price of mahogany at Honduras has fallen from 32l. 10s. to 20l. in conſequence of Americans being prohibited to trade thither in their own ſhips.

The immenſe importation of Weſt India produce from the United States, and other neutral countries, ſhews clearly the great advantage derived by the commercial world from the Privy Council, by whom permiſſion to make ſuch importation is granted, contrary to our Navigation act, which they have found it adviſeable to relax. As we conceive that the advantages might be greatly extended, were the circumſtances more generally known, and as we, from the importance of the ſubject, have been led to make particular inquiries into the matter, we ſhall be happy to give our numerous commercial

friends any information on this and other points of trade that may be required.

The price of ſilver roſe a few days ſince 2d. per ounce, which increaſes this valuable article to 6s. 4d. per ounce.

The importation of Weſt India produce has not borne proportion to our increaſe of territory. The following is an abſtract from the liſt of imports of ſugar and rum into London, between the years 1750 and 1800:

1750 -	630,840 cwt. of Sugar.	607,074 gallons of Rum.
1760 -	1,047,796 -	669,358
1770 -	1,377,109 -	997,136
1780 -	1,176,371 -	1,236,579
1790 -	1,236,647 -	1,521,051
1792 -	1,345,559 -	1,631,020
1793 -	1,469,469 -	2,209,722
1794 -	1,809,908 -	1,911,646
1795 -	1,409,584 -	1,087,685
1796 -	1,581,565 -	1,935,347
1797 -	1,393,952 -	925,457
1798 -	1,737,939 -	2,392,015

Sugar imported into all ports of England:

From 1700 to 1715, average each year,	34,832 Hhds.
1715 to 1730 ——	60,450
1731 to 1742 ——	62,128
1743 to 1757 ——	76,336
1764 to 1790 ——	145,669
1700 to 1799 ——	192,429

Agriculture.

Monthly Report of Agriculture, for March 1801.

THE fine mild weather this ſpring, has been as favourable for ſowing all kinds of grain, as any ſeaſon in the memory of man; and notwithſtanding the high price of ſeed, a great breadth of land is already ſown with beans, peaſe, barley, and oats, in the fineſt condition, in all the high land diſtricts.

The fens are in an amazing fine dry ſtate, and ſowing fen-oats is likely to commence earlier this year than uſual. Many fen-farmers have ſown wheat this ſpring, and the yonng plants look amazingly well on all the ſoils in every diſtrict, except the moſt rich, where the plants are too luxuriant.

Both the natural and artificial graſſes are more early this ſpring, than ever remembered, which makes fat ſtock more plentiful; nevertheleſs, as it enables farmers and graziers to keep their ſtock longer from market than they could if it were a backward ſpring, it helps to increaſe the exceſſive high price of butchers-meet. And this early ſpring alſo cauſes hay and ſtraw, as well as graſs, to be more plentiful, and conſequently all ſtore ſtock, except inferior horſes, are very dear.

Every exertion ſhould be uſed to promote planting potatoes this ſping; eſpecially on fallows deſigned to be ſown with wheat at autumn.

Grain had lowered in price for two or three weeks in many country markets, and in the London markets likewiſe; but as it has riſen again rapidly in London, the country markets will riſe again. This alarming, and, we fear, increaſing evil calls for every legal exertion to check it.

Chatteries, March 25. J. SCOTT.

Sir J Williams, at his ſeat in Flintſhire, has three oxen of the Welch breed:—one of 15 hands 2 inches high, and 9 feet 6 inches round; another

the ſame height, and 9 feet ſeven inches round, and the third 16 hands high, and 10 feet in the girth.

The bread fruit-tree flouriſhes well at Surinam.

A great deal of live ſtock was drove home unſold from Aſhford market on Tueſday laſt, the graziers requiring ſuch high prices, that the butchers would not venture to buy; ſuch as did, gave 10½d. per lb. for mutton, and from 16s. to 17s. per ſcore for beef—much more was demanded.

The Committee appointed to conſider of the preſent High Price of Proviſions and to report the ſame, with their opinion thereupon, from time to time, to the Houſe of Commons——

Having received from the Board of Agriculture a report, made in compliance with the requeſt of the Committee which ſat during the laſt Seſſion, reſpecting the beſt means of encouraging the growth of potatoes, have taken the ſame into conſideration; and as your Committee concur in general with the Board in the principles laid down therein, and (with a few alterations) in the mode of encouragement propoſed, they beg leave to lay the report before the Houſe, as containing the grounds of their reſolutions; and they further ſubmit, that the advanced ſtate of the ſeaſon makes it deſirable that as little delay as poſſible ſhould occur in carrying them into effect, in caſe the wiſdom of the Houſe ſhould think it proper to adopt them. The ſaid Reſolutions are as follow, viz.

Reſolved—That it is the opinion of this Committee, that that part of the United Kingdom called Great Britain be divided into twelve diſtricts; and that premiums, not exceeding in the whole the ſum of 12,000l. be offered for the cultivation of potatoes by proprietors and occupiers of land, not being cottagers.

Reſolved—That it is the opinion of this Committee, that the following premiums be granted in each diſtrict, viz. to the perſon who ſhall in the preſent year cultivate on the land now in his occupation, which has not been uſed as potatoe or hop-ground, or yielded any arable crop during the laſt ſeven years, the greateſt number of ſtatute acres of potatoes, producing on an average not leſs than 200 buſhels per acre (each buſhel weighing not leſs than 60lb.

The number of acres not being leſs than thirty -	£. 300
For the next greateſt number, not being leſs than twenty acres	200
For the next greater number, not being leſs than ten acres	100
For the next greater number, not being leſs than ſeven acres	70
For the next greateſt number, not being leſs than ſix acres	60
For the next greateſt number, not being leſs than four acres	40
For the next greateſt number, not being leſs than three acres	30
To the next ten greateſt numbers, not being leſs than two acres each, 20l. each, making ——	200

Reſolved—That it is the opinion of this Committee, that premiums to the amount of 13,000l. be offered for the encouragement of the culture of potatoes by cottagers in England and Wales, to be diſtributed in ſums not exceeding 20l. for each diſtrict diviſion, in which the magiſtrates act at their petty ſeſſions in their ſeveral counties; and that ſuch day labourer, artificer, or manufacturer, being a cottager in each of the ſaid diſtricts or diviſions, who ſhall raiſe on land, in his occupation, in the preſent year, the largeſt average crop of potatoes per perch:

In not leſs than twelve ſquare perch of land -	£. 10
To the ſecond largeſt crop on ditto -	6
To the third largeſt crop on ditto -	4

Reſolved—That it is the opinion of this Committee, that a ſum not exceeding 3000l. be granted for encouraging the cultivation of potatoes by cottagers, in that part of the united kingdom called Scotland, in ſuch ſums and under ſuch conditions as may be approved by the Board of Agriculture.

Reſolved—That it is the opinion of this Committee, that a ſum not exceeding 2000l. be granted to the Board of Agriculture for the purpoſe of being diſtributed by them in honorary premiums to ſuch owners or occupiers of land as ſhall allot the greateſt quantity of land among cottagers, this year, to be planted with potatoes, in portions of not more than three-fourths, nor leſs than one-fourth of a ſtatute rood.

Several ſpecies of ſpice plants have lately been introduced into Madras from the Molucca Iſlands, and great hopes are entertained of their being brought to a ſtate of perfection. They have all been diſpoſed of in places ſuitable to their growth.

His Grace the Duke of Argyle having, in conformity to his conſtant patriotic attention to rural improvements, given thirty pounds ſterling to be diſpoſed of by the Farmer Society of Kintyre, in addition to their premiums this year for agricultural operations within the diſtrict, the Society reſolved, that ſo much thereof ſhould be given as premiums to the beſt ploughmen. Accordingly eighteen ploughs, with two horſes in each, and without a driver, were ſet to work this day (Feb. 18) on two different fields. The firſt prize, for the north diviſion, was adjudged to William M'Millan, ſon to Donald M'Millan, farmer, in Kilmichael.—The ſecond to John M'Ilreavy, ſervant to Lieutenant Colonel Porter, of Knockby—The third to John Johnſton, farmer, at Langa. For the ſouth diviſion, the firſt prize was adjudged to Donald M'Ilreavy, ſervant to Charles M'Vicar, Eſq. of Killellan. The ſecond to Malcomb Blue, ſervant to Hector M'Neal, Eſq. of Ugadale. And the third to Daniel Arnoy, ſon of Duncan Arnor, farmer, in Auchincorvey. The ploughing in general was ſo well executed, particularly in the north diviſion, that the judges were for a long time difficulted in determining to whom of the ploughmen the preference was due. The match has raiſed ſuch emulation in the young men of the diſtrict, that there is good reaſon to hope they will, in a ſhort time, rival the beſt ploughmen of the neighbouring counties.

Manufactures and Useful Arts.

A Perſon has lately obtained a patent for bending ſteel by heat, although the method he propoſes has been employed at Sheffield for time immemorial.

In Norfolk there are 12,000 looms for the manufacture of ſhawls, crapes, bombazines, and camblets; each loom employs ſix perſons, and in the aggregate 72,000. The earnings of the manufacturers are various: dyers and hotpreſſers about 15s. a week; combers about 12s.; ſome of the beſt weavers from 14s. to a guinea; weavers in general, on an average, not more than 6s.; but then many women can earn as much, and children by ſpinning, pipe-filling, and tyre-drawing, earn from 9d. to 2s. 6d. per week. When theſe earnings are compared with the price of proviſions, we cannot marvel at the extenſion of poor rates, or the wretchedneſs of the people.

The canal at St. Quintin, which Bonaparte has been lately viſiting, will, when completed, run to a very conſiderable extent. It is computed that the carriage of goods by it will be from Amſterdam to Paris, three francs and a half, and from Amſterdam to Marſeilles and Toulon, ſeven francs and a half per quintal.

The Society of Arts, Commerce and Manufactures, in the Adelphi, have this year beſtowed a medal to the Duke of Bridgewater, as a token of reſpect for his underground inclined plane in his collieries near Wentz, in Lancaſhire. Fifty guineas to Mr. Jones, of Fiſh-ſtreet-hill, for the greateſt quantity of opium from poppies grown in England. One hundred pounds to the widow of Mr. Bowes, of Staffordſhire, for the diſcovery of a quarry of mill ſtones, equal to the French furrs.

Commercial Law Cases,

Harman *v* Tapperden. The plaintiff was member of the oyſter company of fiſhermen at Feverſham, and improperly disfranchiſed, and has ſued for damages. Lord Kenyon thought nominal damages was ſufficient, and the jury accordingly gave one ſhilling.

Weldon *v* Gould and another. The plaintiff delivered goods to Pearce to be printed, who ſent them to the defendants, who are callico-printers. Pearce became a bankrupt, and the defendants detained the goods for a debt due to them. Verdict was given for the defendant.

Dean *v* Aylett. Action to recover back money loſt by a wager; but an agreement in writing being produced, the plaintiff was nonſuited.

Goodwin *v* Hind. Action to recover back 678l. paid for the leaſe of the Paul's Head Tavern. The auctioneer had ſtated the ball room to be an hundred and ten feet long, when it was only eighty. Lord Kenyon being of opinion, that although the auctioneer made a verbal declaration of the miſtake, yet, as he could not ſhew the plaintiff was informed of it, he directed a verdict for the plaintiff.

Bird *v* Gwillin. This was an action of the ſame kind, for a falſe ſtatement of the trade of a public houſe; when a verdict was likewiſe given for the plaintiff.

Langhemicks *v* Dade. Action to recover the freight of a cargo of barley conſigned to the defendant, which was ſpoiled from the length of the voyage: but as no proof was brought that this aroſe from the neglect of the defendant, the verdict was given for the plaintiff.

Pizey *v* Cawthorne. Action to recover damages for having given a falſe character; but the plaintiff not being able to make good his caſe, he was nonſuited.

Pattiſon *v* Adams. This was an action on a bill of exchange for 34l. brougbt by the plaintiff as the indorſee. It appeared the defendant had purchaſed a houſe, which had been ſold by public auction, by Mr. Iſaacſon, in Eſſex, for which he had given this note as the depoſit money; but a clear title not being made out, he refuſed to pay. Mr. Iſaacſon was called, but had no recollection of the time when he indorſed this note over, but ſaid he did not indorſe it to Mr. Berney, an attorney. Mr. Berney was then called, and aſked who the plaintiff was, and where he reſided, but was unable to ſatisfy his lordſhip and the jury: in fact, he acknowledged he did not know any ſuch perſon as Clement Pattinſon, the plaintiff on the record; but that he had the note from Mr. Iſaacſon. His lordſhip ſeemed to think, that it was brought home to Mr. Iſaacſon as the real plaintiff. He reprobated the conduct of the parties very much, and directed a nonſuit.—Plaintiff nonſuited.

Schluteer *v* Giles and Co. This was an action of demurrage. It was brought to recover the ſum of twenty-five guineas, for five days demurrage, at five guineas per day. The defendants had neglected to clear a veſſel of a quantity of wheat within the preſcribed time, that time being ten days after her arrival, and they had not began to clear until ſhe had been entered at the Cuſtom Houſe fifteen days.—The jury gave a verdict for the plaintiff, 26l. 5s.

Sendon *v* Scott. Sendon was an Army Taylor, the defendant a Captain in the Hampſhire Militia, the latter ordered ſome pantaloons, and to be ſent by a certain time, which they were not, and the defendant refuſed to take them. Verdict for the defendant.

Sharp *v* Aſkew. The defendant, a ſheriff's officer, had taken from the plaintiff, when in cuſtody, 11 14s. 6d. which was one guinea more than the law allows. Verdict was therefore given for the plaintiff in treble damages, 3l. 3s.

Piger *v* Vaughan. This was an action on a policy of inſurance. This queſtion was reſpecting the mode of ſtatement, the defendant having paid into

court per proportion of the real loſs, and the claim of the plaintiff was ſtated on the price of the market. Verdict for defendant.

Brickwood *v* Dunkin. Action for an aſſault. The plaintiff and defendant are reſpectable merchants in the City, They had a diſpute reſpecting the price of corn; in the courſe of which the plaintiff queſtioned the defendant's veracity. The latter wiſhed to know if he gave the lie; the former making no immediate reply, he ſtruck him a violent blow on his eye; in conſequence of which he was confined for ſome time to his houſe. The jury found a verdict for plaintiff—damages one hundred pounds.

Fletcher *v* Atkinſon. This action was brought on a bill of exchange for 239l. 13s. the balance of freight, on a cargo of timber from Memel to Liverpool. A veſſel called the Telamon was chartered on account of the defendant, by Mr. Hippius of Liverpool, the freight to be paid by three inſtalments; bills were drawn for the amount, and all paid except the one in queſtion, which was drawn by Hippius, and made payable at the houſe of the defendant. Before this bill became due, Hippius ſtopped payment. The charter-party expreſsly ſtipulated that the defendant ſhould be reſponſible.

Lord Kenyon obſerved, that this caſe was as clear as any that had come before the court: the plaintiffs were entitled to recover.—Verdict for plaintiffs, 239l 13s.

The King *v* Chippendale. This was an indictment for perjury. It was alledged the defendant had perjured himſelf in an affidavit, in order to obtain liberation from common bail; that he had been appointed by Mr. Shivers to act as clerk on his eſtates at Martino, at a ſalary of 20l. a year. After he got there, he took poſſeſſion of all his employer's property, and would render no account when called on for that purpoſe. In conſequence of this conduct, Mr. Shivers was ruined. The affidavit upon which the indictment proceeded, ſtated, that the defendant was not indebted to any perſon in the ſum of 100l. It was proved that he was indebted to one perſon in the ſum of 1300l. but it appearing in the affidavit of this debt, that an eraſure had taken place with reſpect to the ſum, Lord Kenyon was of opinion, that it could not be admitted as legal evidence, it being evidently an eraſure after the affidavit had been ſworn—on that account the defendant was found not guilty.

M'Clewer v. Sir W. Dunkin. The defendant had given a bond for the ſum of 700l. to the plaintiff, while reſident in Ireland, in the year 1777; ſince that time he had gone to the Eaſt Indies, and was but lately returned over to this country. This action was therefore brought to recover the amount of that bond, with intereſt from the time it became due.

Lord Kenyon ſaid, he would adviſe the jury to find a verdict for the plaintiff for the principal: with regard to the intereſt, that muſt be ſubject to the opinion of the court on a future day. The jury accordingly found a verdict for the plaintiff, on the terms propoſed by his lordſhip.

Flaſhman *v* Watt. The plaintiff is an attorney, and was employed by a Mr. Evans, to adjuſt the balance of an account between the defendant and him. It ſeems there was a difference between the plaintiff and defendant, reſpecting ſome part of the account, which, the latter ſaid, Mr. Evans had promiſed to deduct. This, the plaintiff ſaid, could not be the caſe, as Mr. Evans had not ſaid any thing to him about it. The defendant replied rather warmly, and the plaintiff ſaid, he ſurely could as ſoon take Mr. Evans's word as the defendant's. The defendant immediately put his fiſt in the plaintiff's face, who called him a ſcoundrel, and deſired him to leave the houſe. The defendant brandiſhed a ſtick, and ſaid, if he was not in his own houſe, he would beat him; and that the firſt time he met him in the ſtreet he would ſurely do it.

Lord Eldon was of opinion the jury ought to give the plaintiff ſomething more than nominal damages, as the defendant had behaved in a very groſs manner. Verdict for the plaintiff—damages ten pounds.

Chapman v Leigh and another. Action to recover 240l. for aſſiſting in ſaving a ſhip which ran aſhore. The jury gave verdict for 60l.

LONDON, PRICES of GRAIN for *March* 1801.

MARK-LANE, *Monday, March* 2.

The ſupply of Wheat was rather ſhort. Fine ſamples ſtill continue to advance in price. Some very fine were ſold as high as 9l. while inferior runs have a very heavy ſale.

Peaſe and Beans were rather a large ſupply, and the ſales heavy, but not cheaper.

Barleys, both coarſe and fine, have advanced in price conſiderably ſince this day week.

Oats remain pretty ſteady in price, but rather heavy in ſale.

Price of Grain, on board Ship, as under:

Wheat	115s to 135s	Malt	60s to 70s	Horſe Beans	70s to 76s
Fine	136s to 170s	Fine	72s to 86s	Ticks	68s to 72s
Superfine	172s to 178s	Hog Peaſe	70s to 75s	Oats -	40s to 44s
Rye	90s to 105s	Boilers -	95s to 100s	Fine -	45s to 48s
Coarſe Barley	60s to 70s	Suffolks	105s to 114s	Polands	49s to 52s
Fine do.	70s to 86s	Pearl Peas	118s		

Monday, March 9.

In conſepuence of a good ſupply of Grain in general, prices have declined; and ſhould the veſſels which are adviſed come in in the courſe of the week, a further reduction may be expected.—This obſervation will apply to Wheat, Barley, Oats, &c. the prices of which, from the beſt information, will be found as under: a more copious report is intended in future.

Price of Grain, on board Ship, as under:

Wheat	110s to 140s	Malt	76s to 84s	Horſe Beans	70s to 74s
Fine	150s to 168s	Fine	88s to 100s	Ticks	60s to 64s
Superfine	170s to 180s	Hog Peas	66s to 78s	Oats	40s to 44s
Rye	56s to 140s	Boilers	100s to 110s	Fine ditto -	46s to 50s
Coarſe Barley	65s to 76s	Suffolks	105s to 112s	Polands	50s to 55s
Fine do.	80s to 92s	Pearl Peas	114s		

Monday, March 16.

We had no great ſupply of any Grain this morning, yet the Wheat trade was extremely heavy, and full 10s. per quarter lower, owing to the arrivals of American Flour.

Barley and Malt were cheaper, and dull of ſale; but fine Peaſe of both ſorts, ſold readily; and good freſh Oats maintained Friday's prices, though lower than laſt Monday; and Beans are declining in value, being plentiful.

Price of Grain on board Ship, as under:

Wheat	100s to 140s	Superfine white 0s to 90s		Small Beans	60s to 66s
Fine	150s to 165s	Malt	60s to 70s	Fine and Hard	72s
Superfine	0s to 168s	Fine -	82s to 92s	Ticks	50s to 60s
Rye	90s to 100s	Hog Peas	68s to 74s	Oats	28s to 36s
Barley	50s to 56s	Boilers	100s to 110s	Fine	to 45s
Fine ditto	65s to 80s	Suffolk Pearls	114s	Polands	to 48s

Monday, March 23.

We had but few freſh arrivals this day of any kind, owing to the late blowing weather. Fine Wheat went off readily at an advance of 10s. per quarter: what little fine appeared from Eſſex and Suffolk, reached from 175s. to 176s.; a prime picked ſample 178s.

Rye is briſk in ſale, at laſt week's prices.

Barley and Malt is dull in ſale, but not cheaper.

Oats are full 2s. per quarter higher than this day ſe'nnight.

Tick and ſmall Beans are full 1s. per quarter lower.

In White and Grey Peaſe, little or no alteration.

Price of Grain, on board Ship, as under:

Wheat	100s to 160s	Fine ditto	89s	Short ſmall Oats	36s to 44s
Fine	176s to 178s	Norfolk Barley	45s to 63s	Fine ditto	47s to 49s
Dantzic	159s to 165s	Fine	88s to —s	Poland ditto	39s to 43s
Rye	70s to 84s	Malt	76s to 95s	Pine	48s to 50s
Prime -	100s	White Peas	98s to 112s	Small Beans	60s to 62s
Suffolk Barley	45s to 68s	Grey Peas	60s to 74s	Fine	to 72s
		Tick ditto	52s to 56s		

Return of Wheat in Mark-lane, from Feb. 16th to Feb. 21st inclusive.

Total, 11,725 quarters.—— Average, 145s. 10¼d.—4s. 0d: higher than last return.

Return of the Prices of Flour, from Feb. 14th to Feb. 20th inclusive.

Total, 5940 sacks.——Average, 119s. 10d.——0s. 0½d. higher than last return.

Hence results the Price of BREAD.

Eighty Quartern loaves at 1s 7¼d———Against the Baker 2d.

Imports of Grain last Week.

Wheat 6,450 qrs —Barley 920 qrs.—Rye 260—Peaſe 1,170 qrs.—Oats 2,530 qrs. Beans 200—Flour 2,200 cwt. Clover Seed 872—Muſtard Seed 200—Indian Wheat 1,400—Indian Corn (barrels) 2,800.

Price of Hops.

	Bags.		Pockets.
Kent —	13l —s to 14l 14s	Kent —	13l —s to 16l 0s.
Suſſex —	13l —s to 14l 0s	Suſſex —	12l 12s to 15l 15s.
Eſſex —	12l —s to 13l 10s	Farnham —	12l —s to 15l 5s.

Seeds.

Red Clover (per cwt.)	20s to 147s	Cinque Foil, ditto	75s to 88s
White Clover, ditto	20s to 140s	White Muſtard Seed (p. b.)	10s to 15s
Trefoil, ditto	10s to 58s	Brown do. do.	12s to 16s
Turnip, (per buſhel)	26s to 42s	Canary Seed do. do.	12s to 14s
Rye Graſs, (per quarter)	30s to 56s	Rape Seed, (per laſt)	48l to 52l

Meat. Smithfield, Monday, March 2d. (To ſink the offal. per ſtone of 8lb.

Beef —	4s 4d to 6s 6d	Veal —	6s 0d to 7s 6d
Mutton —	5s 6d to 7s 0d	Pork —	6s 4d to 7s 4d

Head of Cattle this day)—Beaſts about 1,900—Sheep 7,000.

Raw Hides.

Hides (per ſtone)	3s 0d to 3s 2d	Heavy Calf —	11s 0d each
Middling —	2s 6d to 0s 0d	Light Calf —	7d lb.
Ordinary —	2s 0d to 2s 2d	Sheep Skins —	3s 0d to 6s 0d

Price of Tallow.

St. James's Market —	4s 8d	Ruſſia ditto (Soap) —	74 to 0s
Clare Market —	4s 7½	Melting Stuff —	62s to 0s
Whitechapel Market —	4s 6d	Ditto rough —	42s to 0s
Per ſtone of 8lb.—Average	4s 7d	Graves — —	16s
Town Tallow —	78s 0s	Good Dregs	18s
Ruſſia ditto (Candles) —	76s 78s	YellowSoap,86s--Mottled,94s.--Curd,98s	

Candles per dozen, 12s—Molds, 13s.

Newbury, Feb. 25.

Wheat —— ——	120s to 198s
Barley —— ——	68s to 88s
Oats —— ——	32s to 60s
Beans —— ——	76s to 88s

Henley, Feb. 28.

Wheat —— ——	140s to 195s
Barley - - -	58s to 100s
Oats - - -	34s to 54s
Beans - - -	75s to 83s
Peaſe - - -	76s to 84s

Reading, Feb. 28.

Wheat — —	120s to 192s
Barley — —	56s to 96s
Oats — —	30s to 51s
Beans — —	76s to 84s
Peaſe — —	80s to 84s

Northampton, Feb. 28.

Wheat — —	132s to 152s
Rye — —	80s to 96s
Barley — —	60s to 100s
Oats — —	28s to 42s
Beans — —	44s to 80s

Prices of Hay and Straw on Saturday, Feb. 28.

St. James'—Hay	5l 5s to 6l 10s	Average	5l 17s 6d
Straw	2l 2s to 3l 3s	——	2l 12s 6d
Whitech.—Hay	4l 10s to 6l 6s	——	5l 8s 0d
Clover	6l 10s to 7l 7s	——	6l 18s 6d
Straw	2l 10s to 3l 0s	——	2l 15s 0d

Return of Wheat in Mark-lane, from 23d of Feb. to Feb. 28. inclusive.
Total 18,695 Quarters—Average 146s 4d.— 0s 5¼d higher than last return.

Return of the Prices of Flour, from Feb. 21, to Feb. 27, inclusive.
Total 26676 Sacks——Average 137s 8¼d.——17s 10¼d higher than last return.

Hence results the Price of BREAD.
Quartern loaf 1s 10½d————In favour of the Baker 3¾d.

Imports of Grain last Week.
Wheat 2,680qrs.—Flour 10850 cwt.—Clover Seed 1234

Price of Hops.

	Bags.		Pockets.	
Kent —	12l —s to 14l 0s	Kent —	14l —s to 16l 16s	
Suſſex	12l —s to 13l 10s	Suſſex —	13l —s to 14l 14s	
Eſſex —	12l —s to 13l 10s	Farnham	10l —s to 22l —s	

Seeds.

Red Clover, (per cwt.)	20s to 140s	Cinque Foil, (per quarter)	40s to 88s
White Clover, ditto	30s to 140s	White Muſtard-ſeed, p. bu.	10s to 15s
Trefoil, ditto	5s to 56s	Brown, ditto do.	12s to 16s
Turnip, (per buſhel)	20s to 42s	Canary ſeed do.	12s to 14s
Rye Graſs (per quarter)	20s to 48s	Rapeſeed, per laſt	48l to 52l

Meat. Smithfield. Monday, March 9. (To ſink the offal. per ſtone of 8lb.

Beef	5s 0d to 6s 4d	Veal . .	6s 0d to 7s 6d
Mutton	6s 0d to 7s 6d	Pork . .	6s 0d to 7s 4d

Head of Cattle this day)——Beaſts about 2000—Sheep 7000.

Price of Leather.

Butts, 50 to 60lb.	18d to 19½d	Calf Skins. 30 to 50lb. *p.* doz.	20d to 25d
Ditto, 60 to 66lb.	21d to 23d	Ditto, 50 to 70lb. do.	23d to 28d
Merchants' Backs	18d to 19d	Ditto, 70 to 90lb. do.	23d to 27d
Dreſſing Hides	15d to 17d	Sm. Seals (Greenland)	30d to 44d *p.* lb.
Fine Coach Hides	17½ to 18½d	Large do	120s to 140s *p.* doz.
Crop Hides for cutting	16d to 19d	Tanned Horſe Hides	15s to 27s *p.* hide.
Flat Ordinary . .	14½ to 15½d	Goat Skins	21s to 66s *p.* doz.

Price of Bark, per load, 20l. 0s. to 21l. 0s.

Price of Tallow.

St. James's Market —	4s 6d	Ruſſia ditto (Soap) .	74s —s
Clare Market — —	0s 0d	Melting ſtuff . .	63s —s
Whitechapel Market —	4s 6d	Ditto rough . .	42s 45s
Per ſtone of 8lb.—Average	4s 6d	Graves . .	17s
Town Tallow . .	76s 6d	Good Dregs . .	13s
Ruſſia ditto (Candles)	76s 77s	Yellow Soap, 86s-Mottled 94s—Curd	98s

Candles, per dozen, 12s—Molds, 13s

Prices of Hay and Straw on Saturday March 7.

St. James's—Hay	5l 4s to 6l 10s	Average	5l 17s 0d
Straw	2l 11s to 3l 4s 0d	———	2l 17s 6d
Whitechap.—Hay	4l 10s to 6l 6s 0d	———	5l 8s
Clover	6l 10s to 7l 4s 0d	———	6l 17s 6d
Straw	2l 14s to 3l 3s	———	2l 18s

Newbury, March 5.		*Warminſter, March 7.*	
Wheat - -	100s to 196s	Wheat -	146s to 184s
Barley - -	74s to 96s	Barley -	77s to 97s
Oats - -	32s to 58s	Oats -	42s to 48s
Beans - -	78s to 86	Beans -	84s to 96s

Return of Wheat in Mark-lane, from 2d of March, to the 7th of March, inclusive,

Total 11777 Quarters——Average 148s. 6d.——2s. 2d. higher than last return.

Return of the Price of Flour, from 28th Feb. to 6th March, inclusive:

Total 14519 Sacks.———Average 139s 2½d.—1s 6d higher than last return.

Hence results the Price of BREAD.

Eighty Quartern loaves 1s 10½———In favour of the Baker 1½d.

Imports of Grain last Week.

Wheat 1060 qrs.——Barley 1620—Peafe 450—Oats 780 qrs.—Clover feed 1003 Flour 1530 cwt.

Price of Hops.

	Bags		Pockets
Kent —	12l —s to 15l —s	Kent —	14l —s to 16l 16s
Suffex —	12l —s to 14l 10s	Suffex —	14l —s to 16l os
Eflex —	12l —s to 14l —s	Farnham —	18l —s to 21l —s

Seeds.

Red Clover, (per cwt.)	40s to 152s	Cinque Foil, ditto	70s to 86s
White Clover, ditto	40s to 140s	White Muftard Seed, p. bu.	12s to 16s
Trefoil, ditto	10s to 63s	Brown, ditto do.	12s to 16s 6d
Turnip, (per bufhel)	18s to 40s	Canary Seed, do.	12s to 14s
Rye Grafs, (per quarter)	30s to 56s	Rape Seed, (per laft)	46l to 52l

Meat. Smithfield. Monday, March 16. (To fink the offal, per ftone of 8lb.)

Beef —	5s od to 7s od	Veal —	6s od to 8s od
Mutton —	6s od to 7s 6d	Pork —	7s od to 7s 8d

Head of Cattle this day)——Beafts about 2,000—Sheep 6000.

Price of Leather.

Butts, 50 to 60lb. each	17d to 18d	Calf Skins, 30to 50lb. *p.* doz.	20d to 25d
Ditto, 60 to 66lb. each	21d to 23d	Ditto, 50 to 70lb. do.	23d to 28d
Merchants Backs	17d to 18d	Ditto, 70 to 90lb. do.	23d to 27d
Dreffing Hides —	14d to 16d	Sm. Seals (Greenland)	30d to 34d
Fine Coach Hides	16½d to 17½d	Large ditto	110s to 140s doz.
Crop Hides for cutting	16d to 18d	Tanned Horfe Hides	15s to 27s *p.* hide.
Flat Ordinary —	14d to 15d	Goat Skins	21s to 66s *p.* doz.

Price of Bark, per Load, 20l. os. to 21l. os.

Price of Tallow.

St. James's Market —	4s 7d	Ruffia ditto (Soap) —	75s to 76s
Clare Market —	4s 7d	Melting Stuff —	63s —
Whitechapel Market —	4s 6d	Ditto rough —	42s to 45s
Per ftone of 8lb.—Average	4s 6d½	Graves —	17s —
Town Tallow —	77s 6d	Good Dregs —	13s —
Ruffia ditto (Candles)	77s to 78s od	Yellow Soap, 86s-Mottled	94s--Curd 98s

Candles, *p.* doz. 12s—Molds, 13s.

Prices of Hay and Straw on Saturday, March 14.

St. James's— Hay	4l 14s 6d to 6l 6s	Average 5l 10s 3d
Straw	2l 8s od to 3l 3s	——— 2l 15s 6d
White-ch.— Hay	4l 10s to 6l 8s	——— 5l 9s od
Clover	6l 10s to 7l 0s	——— 6l 15s od
Straw	2l 16s to 3l 3s	——— 2l 19s 6d

Newbury. March 17.		*Reading, March 14.*		*Henley, March 14.*	
Wheat	80s to 194s	Wheat	120s to 181s	Wheat	132s to 194s
Barley	76s to 97s	Barley	56s to 91s	Barley	54s to 100s
Oats	34s to 56s	Oats	30s to 54s	Oats	33s to 56s
Beans	76s to 84s	Beans	42s to 82s	Beans	75s to 84s
		Peafe	79s to 86s	Peafe	78s to 84s

Return of Wheat in Mark-lane, from the 9th March to 14th inclusive.
Total 11425 Quarters——Average 152s. 4¼d.——3s 10¼d. higher than last return.

Return of the Prices of Flour, from 7th March to 13th, inclusive.
Total 10281 Sacks——Average 138s 6¼d——0s 8d lower than last return.

Hence results the Price of BREAD.
Quartern loaf 1s 10½d.—In favour of the baker—0 6¼d.

Imports of Grain last Week.

Wheat	140 qrs.	Flour	5900 cwt.
Rye	140	Hops	3000
Peas	220	Clover-seed	165

Price of Hops.

	Bags.		Pockets
Kent	12l 0s to 14l 14s	Kent —	13l 13s to 16l 5s
Suſſex	12l 0s to 14l 0s	Suſſex	13l —s to 16l 0s
Eſſex	12l 0s to 14l 0s	Farnham ——	17l —s to 20l 0

Seeds.

Red Clover, (per cwt.)	20s to 152s	Cinque Foil, ditto	70s to 84s
White Clover, ditto	20s to 132s	White Muſtard Seed, p. bu.	12s to 14s 6d
Trefoil ditto	10s to 63s	Brown, ditto do.	12s to 15s
Turnip, (per buſhel)	18s to 42s	Canary Seed do.	12s to 13s
Rye Graſs, (per quarter)	28s to 56s	Rape-ſeed, (per laſt)	46l to 50l

Meat. Smithfield, Monday, March 23, (To ſink the offal—per ſtone of 8lb.)

Beef ——	5s 0d to 7s 0d	Veal ——	6s 0d to 8s 6d
Mutton ——	6s 6d to 8s 0d	Pork ——	7s 4d to 8s 0d

Head of Cattle this day—Beaſts about 2,000—Sheep 6,500.

Raw Hides.

Hides (per ſtone)	2s 10d to 3s 0d	Heavy Calf —	10s 6d each
Middling —	2s 4d to 2s 6d	Light Calf —	7d per lb.
Ordinary —	2s 0d to 2s 2d		

Sheep Skins — 3s. to 6s.

Price of Leather.

Butts, 50 to 56lb. each	16½d to 18½d	Calf Skins, 30 to 50lb. *p.* doz.	20d to 25d
Ditto, 60 to 66lb. each	21d to 23d	Ditto, 50 to 70lb. do.	23d to 28d
Merchants Backs	16½d to 17½d	Ditto, 70 to 90lb. do.	23d to 27d
Dreſſing Hides	14d to 15½d	Sm. Seals (Greenland)	30d to 34d *p.* lb.
Vine Coach Hides	15½d to 17d	Large do.	110s to 140s doz.
Cop Hides for cutting	15d to 18d	Tanned Horſe Hides	15s to 27s *p.* hide.
Fat Ordinary	14d to 15½d	Goat Skins	2l to 63s *p.* doz.

Price of Bark, per Load, 2 1l. 0s. to —l. —s.

Price of Tallow.

St. James's Market —	4s 9d	Ruſſia ditto (Soap) —	77s to —s
Clare Market —	4s 9d	Melting Stuff	64s 66s
Whitechapel Market —	4s 8d	Ditto rough ——	46s 48s
Per ſto. of 8lb —Average	4s 8½d	Graves	19s to—s
Town Tallow —	80s 0d	Good Dregs —	13s
Ruſſia ditto (Candles)	78s to 79s	Yellow Soap 86s Mottled 94s Curd 98s	

Candles per Doz. 12s.—Molds, 13s

Newbury, March 19.

Wheat	105s to 178s	Beans	80s to 86s
Barley	68s to 88s	Oats	38s 0d to 56s

AVERAGE PRICES OF CORN, by the quarter of eight Winchester bushels: And of OATMEAL, per boll, of 140 pounds avoirdupois.

From the Returns received in the Week, ending MARCH 14, 1801.

COUNTIES INLAND.

COUNTIES.	Wheat.		Rye.		Barley.		Oats.		Beans.		Peaſe.		Oatmeal.	
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
Middleſex	168	10	102	0	75	5	50	5	70	11	80	1		
Surry	167	2			77	8	46	8	73	6	75	0		
Hertford	148	10			74	0	45	6	71	1	72	9		
Bedford	150	4	120	9	82	8	41	6	74	5	68	11		
Huntingdon	160	0			87	8	39	0	71	7	70	4		
Northampton	140	0			82	8	37	4	67	0	71	0		
Rutland	138	6			84	6	40	0	80	0			76	4
Leiceſter	148	1			95	9	47	2	83	2			79	6
Nottingham	138	8	108	0	86	2	52	8	90	0	84	0		
Derby	145	4			83	6	49	4	88	8	87	0	74	9
Stafford	162	9			94	8	57	4	90	8			79	1
Salop	174	4	121	2	113	2	55	0			108	6	110	3
Hereford	170	7	108	8	102	4	47	1	91	8	93	10	113	11
Worceſter	184	8			108	6	53	1	97	10	97	10		
Warwick	178	1			111	6	57	2	93	9	110	8	100	2
Wilts	166	4			87	6	47	4	87	8	88	0		
Berks	171	6			81	9	46	0	78	4	81	8		
Oxford	171	6			87	1	49	5	79	2	82	8		
Bucks	156	0			81	0	44	2	72	3	70	9		
Brecon	166	4	128	0	116	10	43	4			89	8	95	5
Montgomery	155	2			97	10	52	1			94	5	89	1
Radnor	149	0			101	0	40	3			96	0	110	8

Maritime Counties.

Eſſex	159	0	77	0	73	8	43	8	67	6	67	0		
Kent	161	10			76	0	43	9	66	9	92	6		
Suſſex	164	0			72	8	45	0	73	0	83	0		
Suffolk	160	1	80	0	62	2	42	4	71	1	80	1	89	8
Cambridge	151	5			67	2	33	5	66	3	80	0		
Norfolk	144	0	126	0	62	10	46	5	70	0	75	11		
Lincoln	124	11			79	5	40	2	80	8				
York	133	2	110	9	72	1	44	8	86	8	104	5	86	5
Durham	140	9	108	0	83	10	44	7						
Northumberland	136	8	112	0	73	6					90	0	43	0
Cumberland	145	3	113	0	93	5	60	5					42	6
Weſtmorland	150	2	121	8	99	8	63	6					55	1
Lancaſter	157	0			95	6	61	7	91	2			50	0
Cheſter	156	0			104	1	63	6			129	0	48	4
Flint														
Denbigh	153	5			107	5	56	0	108	6	96	0	96	9
Angleſea														
Carnarvon	156	8			93	0	45	0			96	0	90	
Merioneth	147	1			112	0	48	0			100	0	84	
Cardigan	128	6			82	0	32	1						
Pembroke	127	6			78	8	37	10						
Carmarthen	133	0			96	0	37	7						
Glamorgan	153	11			106	8	44	6						
Glouceſter	187	1			98	0	49	1	92	4	93	9		
Somerſet	176	11			106	1	41	6						
Monmouth	179	3			104	2								
Devon	159	2			91	4	39	10	94	0			63	7
Cornwall	137	5			85	2	38	2						
Dorſet	172	9			100	1	52	0	96	0	88	0		
Hants	173	5	100	0	81	8	46	6	79	2				

BANKRUPTCIES AND DIVIDENDS,

Announced between the 20th of Feb. and the 20th of March 1801.

BANKRUPTCIES.

ALLEN, W. Birmingham, druggist. (Mole and Palmer, Birmingham.
Ashworth, J. Southmolton-street, warehouseman. (Dixon, Nassau-street.
Burket, M. Gray's Thurrock, and London, soap manufacturer. (Pearce, Swithin's lane.
Butler, A. Blackburn, factor. (Wilson, Castle street, Holborn.
Blackburn, R, Belton with Harowgate, mercer. (Foss, Knaresbro'.
Beatham, J. jun. Lancaster, liquor merchant. (Baldwin and Dowbiggin, Lancaster.
Beaumont, R. and S. Vickerman, Healy Butts, clothiers (Battye, Chancery lane.
Butler, W. Whitecross street, brazier. (Hudson, Winckworth buildings.
Baker, C. jun. Prescott, tanner. (Shepherd and Addington, Gray's Inn.
Baron, R. Liverpool, money-scrivener. (Garnett, Basinghall street.
Brown, G. Old Cavendish street, taylor. (Dawson, Warwick street.
Clark, J. Staunton, vintner. (Pewtriss, Gray's inn.
Durrant, R. North Tawton, butcher. (Allen and Exley, Furnival's inn.
Delamain, J. Kingston upon Hull, merchant. (Picard, Hull.
Dow, J. Newcastle upon Tyne, haberdasher. (Morton, Furnivall's inn.
Elgin, L. Coleman street, merchant. (Vandercomb and Co. Bush lane, Cannon street.
Emett, W. Manchester, plumber and glazier. (Ellis, Curstor street.
Eldridge, C. Chiltenham. (Vizard, Gray's inn.
Eadon, M. Manchester, merchant. (Ellis, Curstor street.
Fielding, J. Halifax, inn keeper. (Coulthurst, Bedford row.
Farr, R. Aldersgate-street, victualler. Wells, Union court.
Fisher, F. W. Barbican, jeweller. (Wild, Warwick-square.
Friend, J. Bermondsey street, fellmonger. (Collins, and Reynolds, Spital square.
Field, S. and A. Southwark, woolstaplers. (Ellison and Co. Fleet street.
Fiddy, J. Coltishall, Norfolk, corn merchant. (Swain and Co. Old Jewry.
Golding, J. Bridport, twine maker. (Jenkins and James, New inn.
Goodsmith, R. New Bond street, embroiderer. (Lodington, Temple.
Groves, J. Liverpool, mariner. (Blackstock, Temple.
Graveby, W. S. Limehouse. (Long, Prescot street.
Hughes, T. Liverpool, taylor. (Windle, Bartlett's buildings.
Hewit, J. and F. Weldon, Whitecross place, dealer. (Rutherford, Bartholemew close.
Hanmer, T. Bristol, grocer. (Edmunds, Lincoln's inn.
Hutchinson, J. Birmingham, factor. (Lowe and Rayenhurst, Bordelly.
Higgot, J. Birmingham, tea-man. (A. Digbeth, Mole.
Holman J. C. Mount street, money scrivener. (Brace, Essex court.
Hinton, W. West Harding street, engraver. (Mawley, Tottenham street.
Hunt, H. Bristol, tea dealer. (Jenkins and James, New inn.
Judge, J. King street, Surry, currier. (Wilson and Broad, Union street, Borough.
Ireland, Calvert, Overend, and Tomlinson, Lancaster, merchants. (Bleasdale and Co. New inn.
Kyle, J. Kidderminster, builder. (Bigg and Robbins, Hatton Garden.
Knibbs, W. Maidenhead Bridge, inn keeper. (Hutchinson and Poole, Brewer's Hall.
Kidd, L. Newcastle upon Tyne, flax dresser. (Hall, Carey street.
Lilley, D. Manchester, manufacturer. (Cheshire and Walker, Manchester.
Lane, J. Stratford, Essex, cornchandler. (Collins and Co. Spital square.
Loft, J. C. and T. Friday street, warehousemen. (Brown, Little Friday street.
Long, G. Manchester, cotton manufacturer. (Edge, Inner Temple.
Lascelles, R. South Audley street, taylor. Mayhew's New square.
Moses, M. H. Birmingham, factor. (Swain and Stevens, Old Jewry.
Martin, T. Old Change, warehouseman. (Hollship, Bride lane.
Moscropp, S. Little Bolton, cotton manufacturer. (J. Crofs, Bolton le Moors.
Morley, S. Fleet street, taylor. Saggers, Great St. Helen's.
Morrit, T. Gloucester, salesman. (Nott, Gloucester
Neale, E. Grantham, mercer. (Harvey and Robinson, Lincoln's inn.
Norris, T. jun. Lincoln's inn fields, cabinet maker. (Allen, London street.
Overs, R. Shipley, clothier. (Willis, Warnford court.
Paterson, S. Manchester, dealer. (Foulker, Hart street, Bloomsbury.
Pistor, H. Abchurch lane, merchant. (Kibblewhite, Gray's inn place.
Pugh and Davis, Old Fish street, chemists and druggists.
Popple, W. Kingston upon Hull, brewer. (Lyon and Co. Bedford row.
Rees, T. Llandadarn Trefeglwys, shopkeeper. (Meredith, Knighton.
Rouse, J. Sudbury, linen draper. (Debary and Cope Temple.
Robinson, T. Liverpool, timber merchant. (Blackstock, Temple.
Ricketts, J. Bristol, toy maker. (Tarrant, Chancery lane.
Rayner, A. Manchester, merchant. (Sharpe and Eccles, Manchester.
Rich, J. Bristol, breeches maker. (Kibblewhite, Gray's inn place.
Roberts and Williams, Great Distaff lane, warehousemen. (Mitchell, Union street.
Stagg, J. Great Yarmouth, grocer. (Holmes, Mark-lane.
Scholefield, E. Nat Bank, fustian manufacturer. (Meadowcroft, Gray's inn.
Sadir, J. Birmingham, grocer. (M. Digbeth, Birmingham.
Spier, T. Gloucester, mercer. (Jenkins and James, New inn.
Shalders, W. Bethnel Green, victualler. (Rivers, Nicholas lane.
Sheldrick, W. late of Witham, Essex, coachmaster. (Fellingham, Union street, Whitechapel.
Sellers, W. Bristol, spinning machine maker. (Young, Bernard's inn.
Sayce, J. Lower Thames street, sack maker. (Ellison and Co. Crane court
Sims, R. Walworth, grocer. (Beaurain, Union street.
Sandwell, F. C A. Devizes, clothier. (Netherfole, Essex street.
Sharples, R. Anderton, Lancashire. (Threlfall, Little Bolton.
Smith, W. Oxendon street, taylor. (White and Co. Gough square.
Smith, W. Mile End, Insurance broker. (Dann, and Co. Threadneedle street.
Sharples J. & J. Anderton, Lancashire, manufacturers.
Twemlow, J. Stockport, hat manufacturer,. (Leake, Sackville street.
Thompson, R. Wood street, silk manufacturer. (Wells, Union-court.
Turner, G. Strand, shoemaker. (Brace, Temple.
Whittaker, J. Salford, cotton manufacturer. (Robinson Manchester.
Williams, E. Liverpool, baker. (Irvin, Liverpool.
Wallace, J and M. Hawes, Hanwell, soap makers. (Maugnall, Warwick square.
Wraith, R. Great Bolton, cotton spinner. (Meddowcroft, Gray's inn.
Wadman, J. Bridport, linen draper. (Shepherd, Bath.
Willmot, H. and S. Beminster, Dorset. (Pearson and son, Temple.
Weft, D. Windsor, coal merchant. (Saxon, Temple.
Williams, G. Saffron hill, shoemaker.
Walker, J King street, Southwark, shoemaker. (Smith, Robert street, Adelphi.
Waring, J. Durham place, Lambeth road, merchant. (Noy and Co Mincing lane.

DIVIDENDS ANNOUNCED.

Allen, A. C. Ironmonger lane, merchant, April 21
Barber, M. Lothbury, merchant, March 14
Barber J. Nottingham, hosier, March 18
Bailler. J. R. Smalley, and W. Smalley, Blackburn, bankers, April 14
Rowland, J. K. Colchester, merchant, March 28
Blake, M. H. London, cutler, May 2
Birkett, W. Liverpool, house-builder, April 6
Bowen, P. Bristol, broker, April 13
Bate, J. Southbridge, draper, April 8
Brown, W. Grafton street, taylor, April 28
Brice, J. Trowbridge, clothier, April 6
Barry, G. Red-lion passage, haberdasher, April 21
Browne, T. Chesterfield, merchant, April 10
Bishop, M. Sherborne, baker, April 4
Bayley, J. Manchester, merchant, April 11
Cook, B. Chesthunt, maltter, March 28
Coutts, J. Liverpool, merchant, April 6
Chadwick, J. Captain Fold, cotton manufacturer, April 7
Court, J. Woodford row, mariner, March 24
Cheap, and Loughman, New court, Swithin's lane, merchants, March 31
Cutler, M. Bedford street, Covent Garden, woollen-draper, April 11
Cockle, J. Lincoln, farmer, April 7
Davis, T. Bristol, cheesemonger, March 23
Enchmarch, T. and T. H. Ruth, George street, Minories, merchants, March 28
Ewer, J. Queen Ann street, east, stay maker, April 11
Fitzhenry, F. Bristol, merchant. April 10
Fisher, R. and H. Bragg. Whitehaven, merchants, March 31
Fisher, J. W. Rusholme, and J. Manghall, Bolton, merchants, April 10
Field, G. Minories, linen draper, April 14
Fulcher, J. Sudbury, taylor, &c. April 4

Foſter, C. Poultry, Bookſeller, April 21
Froſt, J. Hedon, Yorkſhire, tanner, April 20
Glover and Williams, Bangor, dealers, April 28
Gould, M. New Bond ſtreet, confectioner, March 21
Griffiths, J. Llanelly, turner, May 9
Grigg, W. Wickham Market, linen draper, March 31
Goldſmith, L. Thavies Inn, merchant, April 21
Greſſwell, J. Wiſbeach, grocer, April 14
Gedge, R. C. Cheapſide, draper May 2.
Goodeve, T. Greek ſtreet, Soho, carpenter, April 18
Harvey, S. Birmingham, ſword cutler, April 7
Havill, W. Middle row, Holborn, hoſier, March 21
Hicks, C. Merthyr, grocer, April 13
Hoggaſteſh, G. and R. Phipps Gutter lane, ribbon manufacturers, April 11
Harriſon, Kidder and Kidder, Croydon, calico printers, April 21
Hart, R. Coppull, Lancaſhire, muſlin manufacturer, April 16
Jeffreys, N. Albemarle ſtreet, ſilverſmith, April 25
Jenkins, T. Abchurch lane, dealer, April 21
Jerrat J. jun. Water lane, merchant, April 11
Jackſon, G. ſen. Piccadilly, plumber, April 14
Jacobs, S. Southampton, merchant, April 7
Kitchen, R. Great Queen ſtreet, coach maker, April 11
Lewis, L. Cleveland ſtreet, ſtable keeper, March 28
Lunn, J. Bedale, ſhopkeeper. March 24
Low, W. Standiſh, Lancaſhire, April 10
Lane, N. Fareham, yeoman, March 30
Miller, J. Catharine court, merchant, March 14
Mew, S. Tewkſbury, ſtaymaker, April 4
Mallam, J. Fleet ſtreet, merchant, March 28
Mew, T. Kidderminſter, baker, April 4
Milnes, R. Crowneſt, Malſter, March 25
Mure, H. R. and W. Fenchurch ſtreet, merchants, March 31
Moore, W. Richmond, ſtable keeper, April 25.
M'c Lean, C. Cloth fair, woollen draper, April 21
Manley, W. Cheſterfield, money ſcrivener, April 9
Moore, J. Camberwell, mariner, April 21
M'c Mikine, J. Hallifax, dealer, April 13
Nevil, T. Birmingham, button maker, April 6
Parr, J. O. London, inſurance broker, April 14
Pearſon, W. Sunderland, glazier, March 31
Pomeroy, J. & S. Moneypenny, Falmouth, grocers, April 27
Pearce, J. Bread ſtreet, warehouſeman, March 24
Potter, G. Charing croſs, Haberdaſher, April 11
Payn, J. Kidderminſter, inn keeper, April 2
Pitteathley, R. Taviſtock ſtreet, bookſeller, April 11
Peach, T. Louthborough, hoſier, April 1
Rex, S. Whitechapel, Diſtiller, March 24.
Rawlinſon, W Saint John's ſtreet, Staffordſhire, wareman, March 28
Simpſon, J. Great Coggeſhall, ſhopkeeper, March 24
Stapley, C. Speldhurſt butcher, April 18
Sutherland, J. Ogle court, glazier, March 24
Smith, J. Fore ſtreet, gold beater, March 28
Smith, G. Lovel's court, wine merchant, April 11
Sandys, S. Briſtol, lace and fringe manufacturer, May 2
Salt and Beckman, Birmingham, wine merchants, April 4
Turton, B. Coleman, Street, druggiſt, April 21
Tupper, J. Chicheſter, merchants, March 30
Vickers, J. New ſtreet ſquare, ſpermaceti refiner, March 28
Van Spangen, N. Wells, ſtreet, Goodman's fields, merchant, March 21
Webſter, H. Fleet ſtreet, ſtationer, March 28
Whiteſide, R. M. Cheſhunt, grocer, April 11
Willis, W. Oxford ſtreet, grocer, March 28
Whitaker, J. Doncaſter, wine merchant, March 31
White, H. Witham, taylor, April 25
Wilſon, T. Cheſhunt, Maltſter, &c. April 14
Whiffin, T. Stroud, Kent, ſhopkeeper, April 18
Yates, E. J. Biſhopſgate ſtreet, drug broker, April 22

A TABLE of the Prices of STOCKS for *March*, 1801.

Days	Bank Stock.	3per Ct. Red.	3per Ct. Conſols.	4per Ct. Conſol.	5 per Ct. Navy.	5perCt. Loyalty.	Long Ann	Short Ann.	Irish 5. Cent.	English Omnium.
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T. BISH, STOCK-BROKER, *Old State Lottery Office, No. 4, Cornhill, London.*