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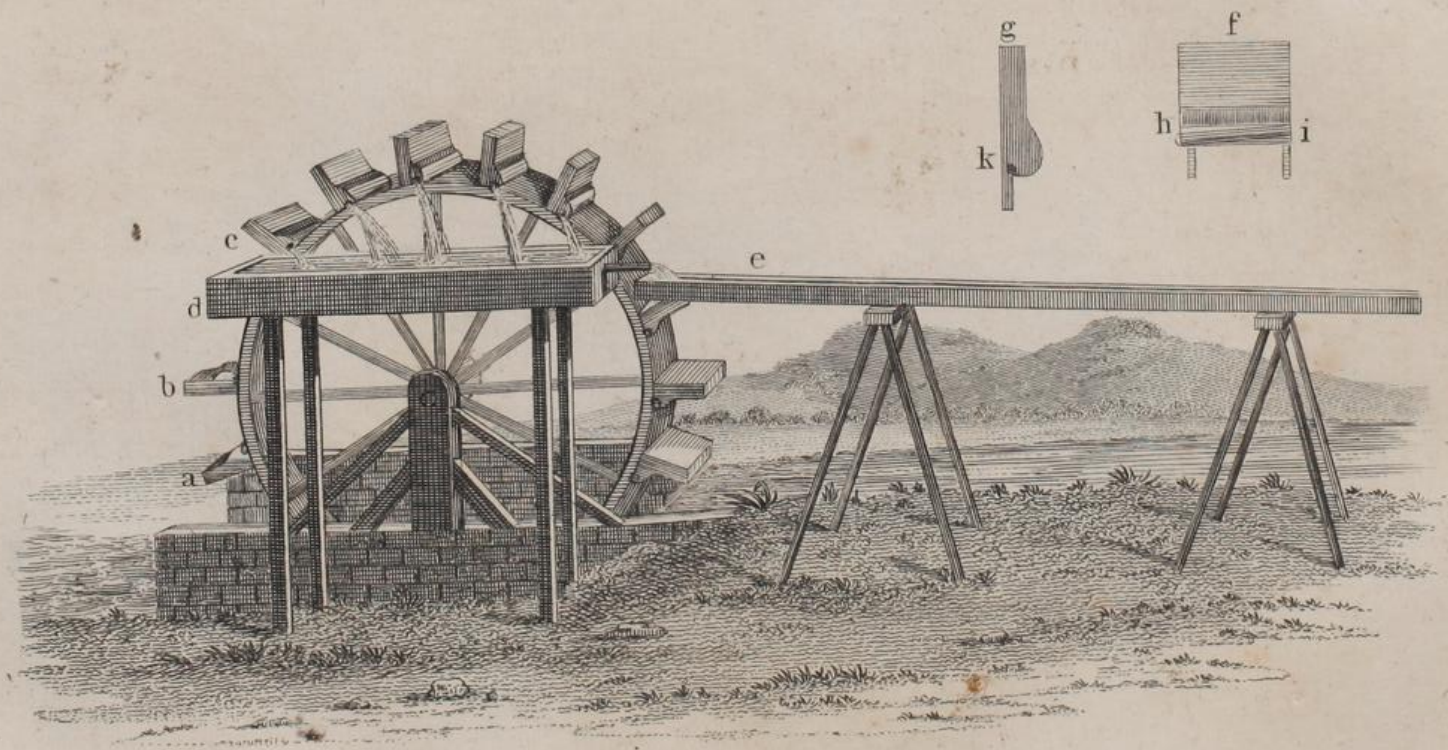
The Persian Wheel, for Floating Meadows.



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THE PERSIAN WHEEL FOR FLOATING MEADOWS.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

AS your correſpondent P. S. has referred to ſome Machinery on the ſubject of Watering Meadows, I have ſent you a ſketch of the wheels he mentions; but whether any are now in exiſtence, I know not; neither do I find the modern writers recommend them. Your correſpondent calls this the Perſian Wheel: but I have ſeen them repreſented with ſwing buckets, emptied by a ſpring; but it ſeems more complicated, and liable to be out of order than this. The Chineſe have an excellent wheel for this purpoſe, repreſented in Sir George Stanton's Embaſſy, which this might be rendered ſomewhat like, by introducing an inner-circle, and fixing the buckets to it.

This wheel may be made like any common under-ſhot wheel; and each float might be a bucket (if there is a ſufficient force of water) if not, a part only ſhould be uſed. The water coming againſt the back of the buckets keep it in motion; and as they riſe, the hollow part takes up the water, and retains it, as (a) in the plate. The line there marks the level of the water. The float (b), being horizontal, can loſe none: and the next, though it begins to flow toward the centre of the wheel, does not yet loſe any, as the aperture for the diſcharge of it is above its then level: but when it comes to (c), the water runs out into the reſervoir (d), and continues ſo to do, as long as any remains in the bucket. From this reſervoir, troughs, on treſſels, as (e) may convey it to any part near the height of the reſervoir.

At (f g) the front and ſide of the bucket, in the former, is ſhewn. The opening (h), takes in the water as the wheel goes round, which, when ſufficiently elevated, diſcharges it at the lip (k) into the reſervoir; and placing the board (i) a little ſlanting, the water will all run out before the float has paſſed the reſervoir.

The ſame old author recommends wind-mills, where a current of water cannot be procured; or where any other objection to water-wheels exiſts.

J. W.

ON THE BREAD LAWS.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

HAVING lately been called to London upon buſineſs, I have obſerved, with ſome ſurpriſe, the preſent arrangements about Bread and Bakers. While in the country, the law for eating ſtale bread, appeared very rational; inaſmuch, as it imitated the uſual œconomy of the beſt houſewifes, whoſe rule preſcribes, that bread ſhall not be touched till the next baking is in the oven. Hence, (ſuppoſing a weekly baking) ſome of the bread muſt be a fortnight old, when eaten. It ſeemed, therefore, a very moderate coercion in the preſent ſcarcity, to reſtrain the public from eating bread, till twenty-four hours after baking. But, alas, Mr. Editor, the manufactured (I might, perhaps, properly enough ſay, medicated) white-bread in London, is only adapted to immediate conſumption; and is ſo completely hard and ſtale, on the ſecond or third day, that I am perſuaded, as much is thrown away on that account as ſaved. Nor will this fact appear very unlikely to any one, who conſiders, how great a part of the population of London conſiſts of opulent families, whoſe pantry is entirely at the diſpoſal of their ſervants; a race of people infinitely more faſtidious in the articles of food than their maſters. A piece of ſtale bread would particularly trench upon the dignitaries of the kitchen, and the common ſewer be the immediate receptacle of ſuch an unſightly incumbrance.—In the mean time, I am ready to own, that, certainly, the unpleaſant taſte of dry bread muſt diminiſh its conſumption in ſome other claſſes of the community. I am willing, on this account, to ſubtract as much from the conſumption, as was added on the former conſideration; and infer from the equiponderance of theſe cauſes, that the ſame quantity of bread is conſumed in London as before, and that the late law is merely, in effect, a law for compelling his Majeſty's liege ſubjects of this metropolis, to eat dry bread at the hazard of being choaked.—However, the law was well-intentioned; and it is ſometimes neceſſary, to every legiſlature, to make laws for *pleaſing* the public, as well as for its *benefit*; for the belief of a benefit is as ſalutary in politics, as the imagination has been lately proved to be in bodily diſtempers: whence Meſmerites, Galvaniſm, and Metallic Tractors have, beyond all diſpute, effected many cures.—Thus, by a droll coincidence, the men whoſe reaſon detects the fallacy of thoſe impoſitions, are compelled to leave to the excluſive uſe of ſilly dupes, thoſe very tricks, which themſelves confeſs may be uſeful, with the addition of the grand ingredient, *faith in the doctor*. Thus, the imagination of the public, ſuffering under

the preſent ſcarcity, was conſoled by this new law; and after repeated diſappointments, ſtill fancies, that reſtrictions and regulations on millers, bakers, &c. tend directly to cheapen the commodity. In other trades, the competition of dealers for cuſtomers is allowed to keep their goods at a proper price, and the fear of tempting ſome young tradeſman to ſet up a cheap ſhop, ſufficiently deters from any violent impoſition on the public. Thoſe people who have ever ſeen "*Cheap Bread Shops*," may thence (if they lay aſide their prejudices) ſee that *without* an aſſize of bread, the public would always have their bread as cheap as poſſible, becauſe the other bakers muſt ſell at the loweſt price, or be ruined for want of cuſtomers.

However, the aſſize of bread is not very *injurious*, and its continuance pleaſes the people; and to give pleaſure, is to do good.—But the particular arrangements ſeem ſtrangely complex in an every-day matter, which ought to be quite ſimple.—The two-penny and three-penny loaves infer (of courſe) a variation of weight, with every variation of the corn-market, and their weight is therefore ſeldom known to the public; and if known, always contains drachms, or ſmaller fractions.—Certainly, the weight ſhould be *fixed*, and the price *alter*, as in the quartern loaf, to whoſe preſent weight there is nothing to object, but the fractional quantity which needleſsly has reference to the meaſure of flour ſuppoſed to be uſed in making it. In London, at preſent, there is alſo conſiderable inconvenience from the cuſtom (for I believe it is not law) of making no intermediate ſize between the quartern and three-penny loaf; though one is now ſix times as large as the other.—Thus in a ſmall family (of two or three, for inſtance) the bread of three days, muſt be bought at once, or two or three three-penny loaves ſent for. In both caſes, it muſt be very ſtale; for the ſmall ſize of the three-penny loaf ſuffers its moiſture to evaporate in a few hours. Certain it is, that in both caſes, it is not uſual to weigh the loaf.—The mode of remedying all impoſition in bread, is this: Let the aſſize of bread (ſince there muſt be an aſſize) be ſet at ſo much per pound, and the whole bread laws be compriſed in this; that bakers ſhall not make any loaves but ſuch as weigh a certain number of pounds, at their option; but, to admit of no fraction, except *under* the one pound loaf, ſuppoſe half, and a quarter of a pound for rolls, &c. Indeed, under a pound, no great damage would accrue, by ſuffering a *fixed* price and *uncertain* weight.—None but the opulent need to eat them, and it is to the poor only, bread is of conſequence.

In the propoſed arrangement, bread would appear only in one, two, three pound loaves, &c. and the only compulſion requiſite on the baker is, that he conſtantly have a pair of ſcales on his counter, and proper weights.—And to the public, the only caution neceſſary is, that ſervants be ordered to buy no loaf without weighing it.—In fact, it is an extraordinary cuſtom

(to be accounted for only by the fractional weight) that bread ſhould be exempted from that rational ſcrutiny, which is conſtant in leſs important articles of conſumption, meat, cheeſe, butter, and even tea and ſugar. Theſe things are always weighed of courſe: indeed, the general falſehood in the weights and meaſures of ſhops is a diſgraceful feature in the police of England. The puniſhment is not ſufficiently heavy, nor have the legal examiners any motive of activity.—Not to augment penal ſtatutes (though this ſpecies of cheating, as affecting moſt people, calls moſt loudly for the exemplary diſcipline of the pillory) let us advert to an eaſy improvement in the ſcrutiny of falſe weights and meaſures.

If, inſtead of a parochial, or municipal officer (without ſalary) a few officers were appointed, whoſe allowance ſhould be proportioned to their exertions, ten perſons would keep all the dealers of London and Weſtminſter honeſt in this article. If a halfpenny per ſhop were allowed for examination, and a reward beſide, on conviction, (to be levied on the offender) each man would examine fifty ſhops *per diem*; of theſe he muſt bring a liſt, when he came for payment.—Some limits to his numerous or vexatious examinations might be appointed; *e. g.* that he ſhould not examine above four times per month in the ſame ſhop.

Beſides this, if all ſhop-keepers, porter-ſhops, &c. were forced to keep *all* their weights and meaſures in a *conſpicuous ſituation* in their houſes, with a ſuitable inſcription, this diſgraceful peculation would ſoon be at an end.

I have addreſſed this letter to you, Mr. Editor, becauſe, I ſee that you admit the profitable conflict of opinion in your Magazine, and aſſure you that no diſtance ſhall prevent my noticing any plauſible or ſerious objections to this haſty letter.

I hope in time it will be acknowledged, that the moſt common things ought to be under the moſt ſimple arrangements. Theſe only can be effectual.

I remain, &c.

RUSTICUS.

May 3d, 1800.

P. S. If the bakers of London uſed tin-moulds for their bread, the weight would be more eaſily made accurate; and certainly the elegance of that faſhion would inſure ſuperior buſineſs to the ſhops which firſt adopted it.

ON OILS.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

THE following information, reſpecting the *Oil of Olives*, or the liquid fat, extracted from the fruit of the olive-tree, chiefly collected during my reſidence in the ſouth of Europe,

will, I truſt, prove acceptable to the readers of your intereſting miſcellany.

There are three different ſorts of this oil; the one is naturally white—another is bleached by art, ſo as to obtain a fine yellow colour—and the third is the common green, or yellow oil. All theſe different ſorts are again divided into *fine*, or *ſalad-oil*, of a fine freſh-flavour, and *common oil*, which can only be uſed by manufacturers. The fine yellow oil, produced in the environs of *Aix*, in *Provence*, in the county of Nice, and in the vicinity of *Florence*, is, in point of purity and flavour, generally preferred to all the other ſorts which are gained in the other diſtricts of *Provence*, in the territory of *Genoa*, and *Lucca*, in *Apulia*, or the caſtle of *Garda*, in *Spain*, *Portugal*, &c. &c. The *Provence*-oil is exported from *Marſeilles*, *Toulon*, *Antibes*, and *Tour de Bone*, and the oil of *Languedoc* from *Agde* and *Cette*. The former is divided into *extra fine oil of Aix*, which is from 10 to 15 per cent. dearer than the real *extra fine Provence oil* and *half-fine Provence oil*.

The Genoeſe produce four ſorts of olive-oil, which they characterize by the appellation of *fine oil*, *middle-fine oil*, *common ſalad-oil*, and *oil for manufactures*. The fine oil is of a yellow ſtraw-colour; all white oil belongs to middle-fine or half-fine ſorts. The Genoeſe oil is chiefly exported from *Porto Maurizio* in caſks, which contain from 1,400 to 1,500lb.

The kingdoms of Naples and Sicily produce vaſt quantities of olive-oil, eſpecially the provinces of *Calabria* and *Apulia*, and the *Valle di Demona* and *Valle di Noto*. The oil of the *Terra di Lavaro* is of an excellent flavour; that of *Vaſto* and *Monte Gargano* is alſo of a ſuperior quality. The *Terra d'Otranto* produces much oil, which, however, is not much eſteemed. The common oil of Apulia, Calabria, and other Neapolitan provinces, do not, in general, keep longer than a twelvemonth; in the vicinity of *Gallipoli* only, there are ſome diſtricts, the produce of which keeps from two to three years. The trade with this oil is entirely engroſſed by the merchants of Naples and Gallipoli, who purchaſe the oil even before the olives are gathered, advance a part of the price, and thus buy it 10 or 12 per cent. cheaper than they would otherwiſe be able to do. They preſerve the oil in ciſterns, lined with ſlate, in which it keeps better than in caſks.

The county of Nice produces likewiſe large quantities of oil, the beſt of which is, at preſent, preferred to the fineſt Provence. It is exported partly from Nice, and partly from Marſeilles. The produce of this article in *Tuſcany* is alſo very conſiderable, and amounts annually to upwards of 120,000 barrels. The fineſt ſort is that produced in the vicinity of *Florence*, and on the hills of *Piſa*, which, in point of purity and flavour, is equal to that of Provence, and is known under the name of *fine*

Florence oil; it is exported from *Leghorn*. Fine *Lucca oil*, (*oglio vorgine di Lucca*,) is exported either from *Leghorn*, or *Viareggio*, in ſtone bottles, packed up in cheſts, or in firkins, or *caſatelli*. *Spain* exports alſo large quantities of olive oil, chiefly from *Cadiz*, where the ſhipment of the laſt year's produce begins in the month of February. *Alicant* alſo carries on a conſiderable export-trade in this article, and has, likewiſe, orders for *Majorca* oil, which is chiefly exported to *Holland*, in pipes or half-pipes, and is ſold by 108 *quartanos*. *Levant* oil, as it is called, from *Morea*, or the iſlands of *Candia*, *Leſbos*, *Mytilene*, &c. &c. is the worſt of any, and merely fit for manufactories of ſoap and woollens. The oil of olives is ſold in the kingdom of *Naples*, by *ſalme*, a meaſure which weighs at *Naples*, 350lb.—at *Bari*, 112lb.—and at *Gallipoli*, of 291lb. In the city of *Naples* the oil is alſo ſometimes ſold by *ſtari*, of 10 1-third *rottoli*; and at *Gallipoli* and *Lecce*, by *botti di mane*, containing 3 *ſome*, or 48 *ſtara*. At *Leghorn*, the *Tuſcan* oil is ſold by barrels, weighing net 85lb.—the *Gallipoli* oil by *ſalme*, and the *Genoeſe* by barrels of 170lb. At *Cadiz* and *Malaga*, this article is ſold by pipes of 34 *arrobas*, weighing 25lb. Spaniſh weight; at *Liſbon* and *Oporto*, by pipes of 26 *almudas*, containing each 12 *canados*, or 40lb.—and at *Trieſt*, by *Orne*, of 107lb. Vienna weight.

In regard to the purchaſe of olive-oil, great care ſhould be taken that it is not of unpleaſant flavour or ſmell, not old, rancid, or impure. All ſorts of oil, eſpecially the common ſorts, ſhould not be kept long without being diſpoſed of, leſt they ſhould grow rancid. The oil of *Aix* and *Nice* is, as yet, the only ſort which does not contract a rancid taſte by being kept long, nor is it any way injured by paſſing the equator. All fine ſorts of oils ſhould, at the end of each ſummer, be gently poured into other clean veſſels, which is the beſt means of preſerving them unhurt.

I am, Sir, your very humble ſervant,

C. B.

Devonſhire-ſquare, April 18, 1800.

For the Commercial and Agricultural Magazine.

THE BRITISH MERCHANT.

NUMBER V.

Hiſtory of Commerce continued, from the Age of Alexander to that of Auguſtus.

THE conqueſts of Alexander proved highly advantageous to the extenſion of Grecian commerce. Diffuſed over Aſia, as its ſovereigns, the Greeks wanted from their native country many of its manufactures and productions which their habitual manners had rendered neceſſary to their ordinary comfort of ſubſiſtence. Grecian merchants had, henceforth, ſafer acceſs to the harbours on the coaſts of the Perſian dominions, and to the

great trading towns throughout the Perſian empire. The models of Grecian art were, every where, preferred to thoſe which had been before common in Aſia. Now began that union of Grecian elegance, with Aſiatic pomp and ſumptuouſneſs, which ſo much captivated and corrupted the Romans when they became afterwards conquerors of Aſia. The Greeks, while they loſt, individually, much of that political importance which had anciently exalted their characters, applied themſelves for this, ſo much the more, to cultivate thoſe commercial advantages which the diffuſion of their language, manners, and dominion, could not but afford; and this, beyond all that had preceded it, was the moſt flouriſhing age of both the traffic and the arts of the Greeks *.

The intercourſe which was opened between India and Europe, by the Indian conqueſts of Alexander, brought within the ſphere of Grecian trade, a new quantity of commodities peculiarly dear to luxury and refinement, as on account of their rarity and precioufneſs, more capable of eaſy conveyance than more bulky and leſs valuable goods. Alexander explored the courſe of the river Indus, and was ambitious to open eaſy acceſs to Hindoſtan, as well by ſea as by land. The Greeks were, at this time, the moſt daring travellers, and the beſt mariners in the world: they for a while, availed themſelves, fully, of all theſe benefits of the Macedonian conqueſts. In Bactria, in Syria, in Egypt, ſucceeded races of Grecian kings, whoſe ſubjects were enriched by the commerce of the eaſt. The wealth which they introduced, and the arts they practiſed, were communicated to a conſiderable diſtance over the north-weſt; and, on this ſide, the limits of civilization appear to have been, now, widely enlarged.

Tyre was, indeed, overthrown by Alexander; but he founded a new city, in a ſituation more advantageous to navigation and commerce, that was deſtined to become more powerful and flouriſhing, as a trading city, than Tyre had ever been. Alexandria, which became the ſeat of the empire of the Ptolemies, was alſo happily fitted to become the grand emporium of the eaſtern trade of the Mediterranean ſea. Into it was imported from Carthage, Italy, and Greece, whatever productions of the weſt might be now wanted for the uſe of the inhabitants of the ſouth-weſt and middle parts of Aſia, or for the accommodation of the people of the north-eaſt of Africa. From Alexandria were exported to the regions of the weſt, the corn of Egypt, the ſpices, the linens, the purple and woollens, the vaſes of glaſs, the precious ſtones, the metals, and at length, the ſilks of the eaſt. The commerce of this great city continued to flouriſh and increaſe from the days of Alexander to thoſe of Julius Cæſar. Its proſperity was deſtined to experience no ſerious check till it

* Plin. Hiſt. Nat.—Arrian.---Ariſtot. Hiſt. Nat.---Joſephi Hiſt.—Calimachi Opera, paſſim.---Theocriti Idyll. &c.

ſhould be ruined by the conqueſt of the Saracens, and the barbarous tyranny of the Mamelukes.

Cyprus, in the mean time, attained to no ſmall importance: its ſituation was advantageouſly contiguous to the coaſts of Egypt and Syria; it was fertile, and afforded many valuable natural productions; it had harbours ſufficiently acceſſible and ſecure for ſhipping. By the Phœnicians and Egyptians it had been, at a very early period, viſited and colonized: it became an object and a ſcene of the adventures and enterprizes of the Greeks. In the period which ſucceeded the conqueſts of Alexander, while the race of the Ptolemies reigned in Egypt, and the Romans were extending their dominion eaſtward, Cyprus roſe into conſideration: its ſhips viſited many of the ſurrounding ports, both eaſtern and weſtern; both the ſale of its native commodities, and the transference of thoſe of other countries, yielded to its merchants an ample income of commercial profits.

Rhodes was another of the iſles in the Mediterranean Sea, which roſe to great commercial importance, in the time between the Grecian and the Roman conqueſts of Aſia: it had been, long before, eminently diſtinguiſhed among the iſles; its merchants appeared to have engroſſed, during this latter period, a very large proportion of the commerce between Greece and the north-eaſt coaſts of the Mediterranean: its maritime laws were, at length, adopted into the ſyſtem of Roman juriſprudence. The Romans, when they firſt began to extend their conqueſts into Upper Aſia, derived much advantage from the naval aid of the Rhodians. Under the Roman empire, Rhodes long continued a buſy and opulent ſcene of traffic. Luxury and refinement of manners naturally accompanied the ſucceſs of its navigation and commerce. Artiſts, orators, and rhetoricians of illuſtrious fame, long flouriſhed in Rhodes: it was here that Cicero, at a mature age, for ſome time, ſtudied. Tiberius Cæſar paſſed here thoſe years, during which the jealouſy or diſlike of Auguſtus, obliged him to live at a diſtance from Rome.

Corinth alſo roſe to great diſtinction, as a commercial city, during the ſame ages: its ſituation, on one ſide of a narrow iſthmus, dividing the Egean from the Ionian Archipelago, naturally contributed to make it an emporium of the trade between the eaſt and the weſt. The paſſage round the coaſts of the Peloponneſus was long and dangerous. The land-carriage between the one ſide of the Corinthian iſthmus, and the other, was very ſhort: hence, after the fall of the political greatneſs of Athens, much of the Athenian trade ſeems to have been gradually tranſferred to Corinth. It was the parent-ſtate of ſome of the moſt flouriſhing weſtern colonies of the Greeks; and its natural intercourſe with theſe could not but contribute to advance its commercial proſperity: it continued to flouriſh till, in the Roman conqueſt of Greece, its opulence, its political greatneſs, and its

obſtinate reſiſtance to their arms, provoked them to raze it to the ground: its ſpoils firſt taught Rome to admire the elegance of Grecian art.

Athens, even after it ceaſed to be free, continued ſtill to retain a part of its ancient trade and manufacturing induſtry. The fame of its philoſophers, rhetoricians, and artiſts, could not periſh; and the concourſe of mankind to ſtudy in this illuſtrious city, could not but ſtill introduce wealth to foſter its manufactures, and continue and renew its commercial intercourſe with all parties of the world. The Romans venerating its eloquence, philoſophy, and arts, ever inclined to treat it as a favourite city.

Carthage was, in the mean time, riſing to the moſt ſplendid ſuperiority of commercial greatneſs. The fall of Tyre was uſeful to Carthage. While the commerce of Aſia was injured by the progreſs of the victories of Alexander, many of the Tyrian merchants cautiouſly transferred their wealth to Carthage: their mercantile ſagacity and experience accompanied the transference of their capital. In conſequence of theſe events, Carthage was enabled to ſhare with Alexandria that commerce which had been before engroſſed by the Tyrians alone. No longer content with merely intercourſe with the countries with which they had been accuſtomed to trade, the Carthaginians now aſpired to cruſh their commercial rivals by military force, and to ſubjugate the barbarous natives, not of one or two only, but of every country in which they found any precious natural productions. They before poſſeſſed extenſive territories; and theſe they ſtill enlarged: their ſway was extended over a wide tract in Africa; they reduced the greater part of the native inhabitants of Spain under their dominion. Sicily, and Sardinia, were made tributary to their commercial and political greatneſs. They, for a time, more than divided with the Greeks, the advantages of the trade between the eaſtern and the weſtern world; they retained their primary Tyrian character of merchants. Even at the height of their greatneſs, they were but like our Weſt-India planters, a handful of merchants among myriads of ſlaves, and of mercenary ſoldiers. Barbarians they might have eaſily withſtood, or even a civilized and diſciplined people that ſhould have fought and laboured, chiefly or ſolely by the hands of ſlaves. But their ambition, and indeed the eſſential intereſts of their commerce, quickly brought their power into colliſion with that of the Romans. The Carthaginians aſpired, juſt as the Europeans have been ſeen to do, in modern times, to reduce all the weſtern countries into ſuch a ſubjection to their power, that they might become ſubſervient to the intereſts of their commerce. Oppoſed by diſciplined armies, who were neither mercenaries nor ſlaves, they could not conquer. On land the Romans alone, and unaided, were able to maſter

their greateſt efforts. To form a naval force to the Romans, all the ſmaller maritime and commercial powers, readily combined againſt the imperious Carthaginians, the maſters of the ſea. Carthage could not, for ever, withſtand the armies of Rome, and the fleets of all the powers around the Mediterranean ſea. Carthage fell. Its fall proved uſeful to the trade and navigation of Alexandria, Greece, and Italy. The wealth and civilization which the Carthaginians had introduced into Africa, were, however, long to endure, and were to make the African province, one of the moſt flouriſhing parts of the whole Roman Empire.

Sicily and Italy contained maritime cities, which, from the age of Alexander to that of Auguſtus, became, continually, wealthier and more flouriſhing. The union of all the ſtates of Italy under the Roman yoke, making them mutually more peaceable, contributed much to increaſe their induſtry, and augment their wealth. When the conqueſts of Rome extended over the reſt of the world; the commercial adventures of the Italians were extended with them. The balance of trade, in favour of Italy, and againſt the reſt of the world, was, at one time, prodigious. It continued ſuch, till the ſtrength of the Roman Empire ceaſed to be confined to Italy, and was diffuſed over all the faireſt provinces, and over thoſe which were expoſed the moſt to hoſtile attacks.

Spain gained conſiderably by the fall of Carthage. Its gold, wool, and other commodities were highly valued in traffic. Commercial cities of great opulence quickly aroſe throughout this Roman province. The maſters of Spaniſh ſhips, and merchants in the Spaniſh trade, are mentioned in the writings of Horace and other claſſical writers, as perſons who acquired money in great abundance, which they often ſpent profuſely and criminally.

Gaul, too, while it was gradually ſubdued by the Roman arms, became a much more commercial country than it had hitherto been. It is ever agreeable to merchants to form connexions with ſoldiers, if thoſe ſoldiers do not pillage them; for, when ſoldiers have money, they are the beſt of cuſtomers. The merchants of Marſeilles, accordingly, were among the firſt and the ſteadieſt friends whom the Romans found in Gaul. And theſe merchants were undoubtedly, enriched by the gains which they, in conſequence of this, acquired by means of the Romans. When Gaul was entirely ſubdued, many other trading cities aroſe in it.

[*To be continued.*]

ON THE FURRIER's TRADE.

For the Commercial and Agricultural Magazine.

MR. EDITOR.

I OFFER you the following account of the Furrying Buſineſs, partly from Cit. Monge, part from my own obſervations, and a ſmall part from the Encyclopœdias; this buſineſs being equally incorrectly ſtated in thoſe that have noticed the ſubject. The ſkins of the beaver, hare, and rabbit, are covered with two kinds of hair, the one long, ſtiff, gloſſy, and rather thin ſet; the other ſhort, thick and ſoft, which alone is uſed in hats; to tear off the long hair from the beaver and rabbit ſkins, the people employed, make uſe of a knife like thoſe the ſhoemakers uſe; and, to cut off the fine, a ſmaller one, not unlike a vine knife; for hare ſkins, the ſtrong hair is cut off with a pair of ſmall ſhears—many who are ſtrangers to this buſineſs, ſay, why are not the ſkins ſoftened with water as lamb ſkins are, to get the wool from them, and the ſtuff pulled, as ſkinners do the lamb wool? The reaſon appears to be, that the bulb or root of the hair, which renders the end that was fixed in the ſkin, thick or obtuſe, would, conſequently, be leſs diſpoſed to introduce itſelf amongſt the contiguous hair, and to contribute, by its progreſſive motion, in ſettling to the contexture of the maſs.

After the ſkin is opened, and the ſtrong hair taken off, a certain number, ſay for example, a dozen, are laid under a heavy weight to flatten them, for twenty-four hours; after which, they are cut by the above mentioned knife, croſſing the ſkin in parallel lines at about the one ſixteenth part of an inch diſtance from each other; after being cut off, it is "locked," i. e. made up into ſmall balls,—it is then ready for the hatmaker. As the Furrying Buſineſs is at preſent conducted, it might be a proper object for introduction into the Houſes of Induſtry already eſtabliſhed in this kingdom. I wonder, that active aſſiſtant at the Shrewſbury houſe, Mr. Wood, has not already adopted it: Forcings (that is the pullings of the rabbits' ſkins, and the ſhearings of the hare ſkins) are ſold to ſtuff common beds with, and the pelts are boug t by the glue makers; ſo that in this buſineſs, "nothing," literally ſpeaking, "is loſt."

The mode practiſed by the London glue-maker, many in this part of the country would wiſh to ſee *accurately* diſplayed. Can any of your correſpondents inform me, if there are any engines for cutting ſkins for the furriers? or any for dreſſing flax? I ſhould think, that Mr. Cartwright's machine for combing wool, might, with a little variation, effect that purpoſe. It would give me peculiar pleaſure to ſee any of thoſe manufactures

further noticed by any of your correſpondents; and you will believe me to be, with every wiſh for the ſucceſs of your undertaking,

Yours with reſpect,

J. C.

We are called on by Mr. J. C. to correct the following Errata in the firſt article of the laſt Number, concerning Hat-making.

Page 223, for bowk-pin, *read* bow-pin.—p. 224, eighth line from bottom, for bJacking, *read* blocking.—Next line, for clean, *read* frees.—ſecond line from bottom, for new, *read* now.—p. 225, line 10, for hand, *read* hood.—p. 226, line 22, for Cranford, *read* Cromford.—p. 227, line 8, for, when it has, *read* where it had.—p. 225, laſt line, for flax, *read* flocks.

The reader is alſo requeſted to accept the following amendments. The ſix diviſions of the manufacture are technically deſcribed thus.—1 Wool-men,—2 Plaiters,—3 Stuff-men,—4 Dyers,—5 Stiffeners,—6 Finiſhers.—Page 224, from "this is then," line 13, to "placed," line 16, *read* thus; "After the inlayer is placed on one of the bats, and the edges of that turned over upwards, theſe (which are the thinneſt parts in each bat *made purpoſely ſo*) meet, and are ſettled into each other, by this means, taking the appearance of a flannel bag (Manica Hippocratis) and the maſs becomes of an uniform thickneſs."—p. 225, from "having," line 10, from bottom, to ſtuff-maker—line 8, from bottom, *read* thus; "Having been ſo minute in the mode of making wool-hats, it will be ſufficient to point out the variations from this practice by the plaiters and ſtuff-men.—p. 227, line 3, for (a great deal weaker than dyers uſe) *read* (a little weaker than joiners uſe.)

E.

ON THE PUBLIC BREWERY.

(Concluded from p. 203 of our laſt Magazine.)

XXIV. THE conſumers of malt-liquor may be divided into two claſſes: thoſe who make beer, and thoſe who buy it ready-made. As the utenſils neceſſary in the ſmalleſt brewery are bulky, it is not poſſible for any perſon living in a ſmall houſe to make his own beer. Indeed the coſt of theſe utenſils, as well as of the ingredients implies a quantity of capital or credit by no means uſual in a poor man: ſince that capital or that credit would naturally be diverted to lift himſelf a degree higher in ſociety. Private brewery then implies a power which cannot exiſt but in a higher order; it cannot exiſt probably in any man whoſe income does not exceed (*p*) a hundred pounds a year.

(*p*) Except in the caſe of inferior farmers, whoſe labourers are partly paid in ale, I queſtion whether private brewery extends ſo low as this ſtatement.

We ſhall now examine the comparative rate of taxation on the two claſſes of the conſumers, as diſtinguiſhed above.

XXV. A public brewer is ſuppoſed to make three barrels of (*q*) ale (equal to 108 gallons) from a quarter of malt. This malt pays a duty of 8s. 4d; the beer produced from it 1l. 4s. Each gallon of this beer conſequently pays more than three pence halfpenny (3d. 6-10ths) to the exciſe. The brewer for advancing this duty muſt charge enough to complete the exaction up to 4d. per gallon. The private brewery is only liable to the above malt-duty; wherefore on the ſame beer (privately brewed) the duty amounts to 100d. on 108 gallons. But as a large quantity together can be more profitably brewed, we may reduce the produce of the quarter of malt to 100 gallons. In that caſe 8s. 4d. per quarter amounts to exactly one penny per gallon.

XXVI. Now, as no line can more exactly diſcriminate the rich from the poor than the power of brewing at home, this law virtually enacts that the rich, (in conſideration of his ſuperior ability to pay it,) ſhall be (*r*) exonerated from three-fourths of a burden impoſed on the poor; that the rich man who has abundant choice of other exhilarating liquors ſhall be lightly taxed, while the labourer whoſe exhauſtion requires every recruit, ſhall, in this ſecond neceſſary of life, in his beſt ſolace of poverty, pay a (*s*) treble proportion to the public revenue.

XXVII. The exciſe of beer has yet other features of unjuſt partiality in its detail. Firſt, it virtually annihilates ſmall beer, by limiting its deſcription to 10s. 6d. per hogſhead: of this the duty is 1s. 4d. Hence it appears that legal ſmall beer is at 2d. per gallon! A mere mockery of the unfortunates who only can wiſh to drink it! Secondly, in the caſe of the ſtrongeſt beer, it abſurdly alleviates the duty. Thus, in the country, a brewer uſually makes two barrels, (equal to 72 gallons,) of ſtrong beer

(*q*) Technically ſpeaking, the barrel of porter is no more than 32 gallons, but as the exciſe is in proportion, to the preſent purpoſe it is indifferent: Thoſe authors who have profeſſed to develope the ſecrets of the porter-brewery, have eſtimated the produce of a quarter of malt at five of theſe ſmall barrels. But as theſe authors write with the uſual ſpleen concerning public brewers, and as the profits in that caſe are wholly incredible, I ſhall ſuppoſe a quarter to produce four barrels, equal to 128 gallons.

(*r*) It was conſiſtent with my ſubject to deſcribe the operation of this law at ſome length. A modern writer has done it more ſtrikingly in fewer words: "The Parliament, (ſays he,) granted to King William an exciſe on all beer brewed for ſale.—N. B. The members of this Parliament all brewed their own beer." He might have added, their conſtituents alſo.

(*s*) To thoſe gloomy people who talk of the vice and depravity of the preſent age, it may afford ſome conſolation to compare the conduct of Parliaments a century ago with that of our preſent legiſlature. To ſurmiſe the impoſition of ſuch a tax as this on beer by modern Parliaments, could only ſound like an affectation of ſuſpicion. Certainly we approach, (though ſlowly,) to the golden age!

from a quarter of malt. By a calculation, ſimilar to that above, (§. 25,) it reſults, that a quarter of malt, in the laſt caſe, pays but 1l. 4s. 4d.; whereas in ale, it appeared to pay 1l. 12s. 6d.; a premium this of 8s. 2d. per quarter, to encourage its conſumption in ſtrong beer inſtead of ale; for preferring a ſmaller quantity of an intoxicating liquor to a larger quantity of that which can only nouriſh the body and invigorate the mind.

XXVIII. There is another conſideration which ought to have prevented this enormous exciſe on the beer of the poor; they who buy in ſmall quantities of the publican, are forced to remunerate his perſonal trouble and houſe-rent, by a farther advance of 4d. per gallon. Thus, the pint of ale, for which the labourer pays 2d. is exciſed by government a (*t*) halfpenny; the publican's advance is a (*u*) halfpenny more; and the monopoly, (explained in the former part of theſe obſervations,) doubtleſs impoſes another advance: if that amount to a farthing on the pint, five farthings of the eight are already gone,—an impoſition ſcarcely paralleled in the moſt luxurious articles of importation! while the richer man, on his pint of ale, is exciſed a ſingle half-farthing—one-tenth of the exactions on his poorer neighbour!

XXIX. Thus have I endeavoured to explain, at ſome length, the two evils which are moſt prominent in the Britiſh brewery: the monopoly, and the unequal preſſure of the duty. In applying a remedy to the latter evil, we may, perhaps, find a compenſation to the brewer for the diſſolution of his monopoly. It may, perhaps, appear in the ſequel, that an EQUALIZATION OF THE DUTY on all beer-drinkers, will indiſputably benefit the public revenue, indemnify the brewer for throwing the trade open, and more than all, do an act of ſolid juſtice neceſſary to vindicate the legiſlative morality of "the high court of Parliament."

XXX. An equalization of duty may obviouſly be effected by impoſing a ſufficient duty on the malt, to make up the ſame total as at preſent reſults from the malt and beer duties together. In the account preſented to Parliament for the year 1794, the net amount of the two malt-duties is 1,146,790l.—of the beer-duty, 1,970,378l. Total of the duties, 3,117,168l. In the malt-duty of 8s. 4d. per quarter, the 4d. may be ſuppoſed ſubtracted from the net-amount for the expence of collection, if that expence be taken at (*v*) 4 per cent. This raiſes the groſs amount to (*w*) 1,194,729l. As an augmentation of the rate of duty would

(*t*) See before, §. 25.

(*u*) He uſually pays the brewer 1s. per gall. and retails ale at 1s. 4d.

(*v*) In Mr. Roſe's laſt ſeptennial pamphlet it appears, that the expence of collecting the exciſe is diminiſhed from 4l. 12s. 1d. (1797,) to 3l. 14s. 6d. per c. (1798.) But as this diminution chiefly reſults from heavier duties impoſed on ſome articles, the ſaving is on them. Therefore, 4 per cent. on malt is a very reaſonable ſuppoſition.

(*w*) Four-pence is a 24th part of 8s.—therefore add 1-24th to 1,146,790l, the total is 1,194,729l.

not increaſe the expence of collection, it is evident that if the beer-duty were aboliſhed, and the malt-duty raiſed to 22s. 1d. per quarter, the (*x*) ſame ſum would arrive at the Exchequer. It is true, that the diſtillery expends ſome of this malt, and would expect a drawback of the added duty. It is difficult, (perhaps impoſſible,) to aſcertain the conſumption of the diſtillery. But to make up this deficiency, ſuppoſe 9d. per quarter added to 22s. 1d. the extra produce of this farther addition would amount to (*y*) 107,525l. allowing a drawback of 14s. 6d. on 148,310 quarters. It now remains to examine how this propoſed enhancement of the malt-duty to 22s. 10d. would affect all the parties concerned; the public revenue, the common brewer, the private brewer, and above all, the national wealth.

XXX. The exciſe on beer is one of the oldeſt on the ſtatutes, and few duties have remained ſo long at the ſame rate of taxation. As the commiſſioners of the exciſe have not been able to relax any of their vigilance in the public brewery, it may be preſumed that it is not one of thoſe articles in the late diminution of the expence of collection, has been moſt prominent. However, as the amount is increaſing, and the unexampled magnitude of ſome breweries cannot require additional inſpection in the ſame proportion, ſome reduction muſt be allowed. In 1774, the collection of the exciſe coſt 5 per cent.—at preſent no more than (*z*) 3l. 14s. 6d. But if the beer-exciſe be allowed to coſt the average rate of 1797, the expence of collection on (*a*) 1,970,378l. at 4l. 12s. per cent. amounts to 57,397l. This ſaving, (though not very ſplendid,) is enough to countervail ſome preſent trouble of government, in the propoſed ſimplification of the malt produce. Indeed, any aberration from routine in ſo complicated a machine, is troubleſome for the time; but the preſent miniſtry have not ſhrunk from a more laborious taſk in new-modelling the ſalt-collection, and therefore are more likely to pay attention to another proſpect of ſimplification and conſequent œconomy. At all events, this gain to the revenue is a very ſubordinate incentive compared to the acceſſion of reputation reſulting to the Parliament, for aboliſhing, in the beer-exciſe, the only tax impoſed *excluſively* on the poor.

XXXII. The gain of government is intereſting to the community, inaſmuch as it delays the neceſſity, and alleviates the preſſure of future burdens. There is another ſort of gain to a

(*x*) Thus:—If 1,194,729l. reſult from a duty of 8s. 4d.—from a duty of 1l. 2s. 1d. reſults 3,166,031l. Subtract the 4 per cent. on the old duty, 47,937l. remains 3,118,092l. ſomewhat exceeding the preſent net-produce.

(*y*) The groſs produce 1,194,729l. ſuppoſes 2,867,349 quarters of malt made per annum. Nine-pence per quarter, therefore, amounts to 107,525l. which ſuffices to refund 14s. 6d. per quarter on 148,310 quarters.

(*z*) Mr. Roſe's pamphlet.

(*a*) In future calculations, I ſhall take the groſs amount at 2,000,000l.—ſomewhat too low.

community, which may reſult from any improvement in a manufacture, ſo as to produce the ſame article with leſs expence of materials. The conſumption of malt in the diſtillery is ſo conſiderable, that our ſpeculations would remain imperfect if we omitted a particular conſideration of the effect which every duty on raw malt muſt have on the diſtillery. The collection of the duty on Britiſh ſpirits is more complicated than that on beer, as it is levied diſtinctly on the malt, the waſh, and the rectified ſpirit. The ſimplification of this would be a ſaving to government, and a convenience to the diſtiller; and beyond theſe objects may, perhaps, be capable of an arrangement conducive to aggrandiſement of national wealth. This arrangement would be nearly the reverſe of that ſuggeſted in the malt-duty; that by levying the whole duty on the material; this wholly on its produce.

XXX. It is uſually computed, that only one third of the grain uſed in the diſtillery is previouſly malted. It is not to be inferred from this circumſtance, that an equal (*b*) quantity of ſpirit can be extracted from unmalted grain: the caſe is, that the addition of ſpirit would not quite balance the malt-duty, which muſt then be paid. I am not prepared to ſtate, nor perhaps can the diſtiller himſelf, (from the univerſality of the contrary proceſs,) very accurately eſtimate the extra-quantity of grain thus conſumed; it is, however, very conſiderable, and in ſo large a concern riſes into an object of much importance. For it may be perceived that this procedure, (made neceſſary by the malt-duty,) poſitively waſtes the extra-grain as much as if it were thrown into the ſea. It is always deſirable to ſtate the magnitude of any object of ſpeculation; but, in the preſent caſe, ſo many (*c*) data are wanting that I can venture at no calculation. The general evidence, (for the preſent,) muſt be admitted without detail.

XXXIV. To ſtop this channel of uſeleſs conſumption, it would ſuffice to grant a drawback of the entire duty on all malt conſumed in the diſtillery, impoſing equivalent duties on the article in ſome poſterior ſtage of its manufacture. The many frauds which have been diſcovered in this branch of the revenue, have made many ſucceſſive precautions and vigilant inſpection abſolutely neceſſary; and the prevention of future fraud is probably complete. If this be ſo, the total revenue might be efficiently collected at the moſt acceſſible ſtage of the manufacture, and ſome part of the hoſt of exciſemen diſbanded. If the exciſe-

(*b*) I ſuſpect that alſo the ſuperior quality of foreign geneva is imputable to this management. In other caſes it is not uſual for any Engliſh manufacture to be ſurpaſſed in quality. If this ſuſpicion be well founded, ſmuggling geneva would ceaſe in conſequence of the propoſed alteration of collection.

(*c*) The computation requires the following aſſiſtance: No. of gall. of waſh made per annum; quantity of malt and unmalted grain per gallon; and different produce of malted and unmalted grain.

duty on Britiſh ſpirits be not already at its *maximum*, the proper attention to public morals would juſtify ſome increaſe in caſe of the adoption of the propoſed alleviation in the price of ale and porter; ſince the excuſe for having recourſe to thoſe fiery poiſons would be leſs admiſſible in proportion as beer became cheaper, and conſequently more faſhionable.

XXXV. After this digreſſion on the diſtillery, let us conſider of a remedy for the preſent monopoly of the brewer. It is evident enough, that it can be applied only in one way; by permitting all perſons of good character to take out licences for ſelling ale. It is not probable that licences in greater number would be applied for, ſince the vocation of the retailer is not remarkably lucrative, and would not bear many additional competitors. At all events, the increaſed conſumption of brewer's beer (conſequent on its reduced price) would not ſuffer buſineſs to flag on the preſent hands. But the general power of taking out a licence would completely check the preſent monopoly; ſince if beer were any where ſold higher than its real value, the certainty of immediate competition would guarantee the public intereſts. In the mean time the preſent brewer, poſſeſſing a prior eſtabliſhment, would be enabled to increaſe his buſineſs with the general increaſe of the trade, (which would be nearly doubled), and be thus fully indemnified for loſing his old monopoly. Moderate profits, on a more extenſive buſineſs, would probably leave him a larger gain at the year's end.

XXXVI. Probably the brewer would not deny ſome acceſſion of comfort and independence in eſcaping the attentions of the exciſeman. At leaſt the clamour that has accompanied every extention of the exciſe, is proof enough that its officers are no where very welcome viſitants. Whatever be the value of his added comfort, the brewer ought to throw into the ſcale of the propoſed arrangement.

XXXVII. I hope it has not been inferred from any thing that has been ſaid, that I am an advocate for the repeal of thoſe laws, which confer a ſalutary power on the juſtices to interfere and ſhut up diſorderly ale-houſes. I only wiſh, that on the licenſing day, no juſtice ſhall preſume on the *future* demerits of any applicant, and that a licence ſhould be granted of courſe on paying the duty. The duty, indeed, I think, might be ſo modified as to diſcourage the conſumption of very ſtrong beer. Suppoſe on a licence to ſell beer up to a penny per pint, the licence were charged 5s; to three-halfpence, 1l 10s; to two-pence, 2l; to two-pence-halfpenny, 2l 10s; to three-pence, 3l. This arrangement, in its effect, would amount to a premium on the conſumption of beer of a moderate and wholeſome ſtrength.

XXXVIII. The high duty impoſed on brewer's beer is certainly a great inducement to brew at home. Thus an unnatural

diverſion of the manufacture is effected, as in the caſe of a bounty, ſometimes granted by government to a favourite production. Thus the queſtion, Whether it be cheaper to make beer, or to buy it ready made? is not left to an impartial deciſion founded on a calculation of profit and loſs, but is determined by the unnatural interference of a bounty on the home production. In general we are taught, that the great extent of a manufacture, and the conſequent ſubdiviſion of labour, is the grand organ by which only a nation of wealthy capitaliſts is enabled to underſell its poorer neighbours. Hence the more complex a manufacture, the more it is adapted to an extenſive eſtabliſhment, and the leſs practicable in private families.

XXXIX. Indeed the act of brewing is not a very complex operation; but ſimple as it is, in its extent, it may be found to divert a large quantity of national capital and efficient induſtry. In large families it is uſual to have a building appropriated as a brew-houſe; and in ſmall families the apartment which is the ſcene of brewing would uſually be much leſs, but in contemplation of that occaſional uſe. Indeed as brewing veſſels are never kept out of doors, ſome additional ſpace is neceſſary for their reception. I ſhall eſtimate the additional building at an average to amount to 10l. The copper, the maſh-tub, and the cooler, are requiſite in the ſmalleſt brewery; and thoſe caſks, which exceed two for each ſort of beer, would never have been made had no private brewery exiſted. Ten pounds more cannot be thought too much for theſe articles. Eſtimating (*d*) 300,000 families to brew at home, the capital thus ſunk is ſix millions. It is true that moſt of this cannot be reconverted into caſh; however the old copper is worth ſomething; the extra caſks would fetch their value, and the ſtaves of the maſh-tub are convertible in the public brewery. This might recal a quarter (5l) of the capital ſunk, and refund a million and a half to the national ſtock. It is alſo to be obſerved, that brewing utenſils (except the copper) are not preſerved the longer by unfrequent uſe, wherefore an annual expence of at leaſt 5 per cent. for repairs of brewhouſe, and renewal of caſks, &c. is incurred; this, when the private brewery is demoliſhed, promiſes an annual ſaving of 300,000l.

XL. Neither is ſo much beer produced from an equal quantity of malt in the private brewery. Indeed the loſs cannot be very exactly aſcertained; taking it at 10 per cent. the loſs on a (*e*)

(*d*) If farms average at 150 acres, there are 200,000 farmers in England. Theſe all brew at home. I ſuppoſe it is not too much to add 100,000 other families.

(*e*) If the beer exciſe produce two millions (groſs amount) the number of barrels is five millions. This, at three barrels per quarter, ſuppoſes 1,666,000 quarters conſumed in the public brewery. If 200,000 quarters are conſumed in the diſtillery, about a million remains for the private brewery.

million quarters of malt is 100,000 quarters. It is true the grains remain better for the food of cattle; but, if we ſubtract half the loſs, it ſtill remains conſiderable.

XLI. Malt always coſts the private conſumer more than the public brewer. The difference is from 1s to 6d per buſhel. Take 9d the average. If this 9d were clear gain to the malter, the public wealth would not (by ſuch transfer) be leſſened. But the trouble of retail accounts, the chance of bad debts, and above all, the expence of carrying out the malt, fully *(f)* countervails the additional 9d per buſhel. On a million quarters here is 300,000l. ſunk in diverted induſtry.

XLII. Much labour is alſo waſted in the act of brewing. The proceſs is never completed under two days attendance; it is true, it does not form the whole occupation of two days, but not leſs than one day may be fairly reckoned. If a day's labour be valued at 1s *(g)*; and ſix brewings per annum reckoned to each private brewery, the amount is 90,000l. Of this at leaſt eight-ninths is clear loſs; ſince the convenient apparatus, and dexterity of habit in a public brewery, muſt enable the ſame labour to produce nine times the beer in any given ſpace of time.

XLIII. The fuel is another article from which much ſubtraction would be made; and as wood is as generally uſed in the private as coal is in the public brewery, the additional coal would ſomewhat augment the revenue; while the wood ſaved would ſomewhat lower that article in thoſe inland ſituations, where it is almoſt a neceſſary of life.

XLIV. If we add together the national loſs on the private brewery, the account will ſtand thus:—Four millions and a half of fixtures irrecoverable. Intereſt of 1,500,000l *(h)* recovered, at 5 per cent., 75,000l. Annual repairs, 300,000l. Waſte of malt, 50,000 quarters, at *(i)* 35s, 87,500l. Additional price charged to private brewer, 300,000l. Waſte labour in brewing, 80,000l. If additional fuel be charged at 2¼d per brewing, the amount is above *(k)* 20,000l. The total amount is no leſs than 863,000l, which the demolition of the private brewery would *(l)* add to the national income. This aggregate ſum may perhaps appear ſomewhat enormous, but a little conſideration may perhaps prove the eſtimate too low.

XLV. It is certain that from ſome cauſe, the private brewery cannot be ſo profitable, as the exemption from a heavy duty ſeems

(*f*) Since the malter's trade is not uncommonly profitable.
(*g*) I ſuppoſe the private brewery in general woman's labour.
(*h*) This article would not have its full effect for ſome time. It would only be a transfer of dead ſtock, till the decay of old utenſils brought theſe all into activity.
(*i*) Without the duty: which is not waſted capital.
(*k*) 1,800,000 brewings at 2¼d is 20,600l.
(*l*) "A penny ſaved is a penny got." Net. Prob.

to promiſe. It is continually on the decreaſe. In the year 1774, duty was levied on 3,123,070 quarters of malt. Of this, the amount of the beer duty informs us, that 1,312,561 quarters were conſumed in the public brewery. Conſequently 1,810,509 quarters were conſumed in the private brewery and diſtillery. In 1794, duty was levied 2,863,200 quarters, public brewery conſumed 1,666,000.; conſequently private brewery and diſtillery, 1,197,200 quarters. Therefore, even if the diſtillery were ſtationary, the private brewery was diminiſhed as (*m*) 119 to 181; about 2 to 3, at the end of that period of twenty years. On the contrary, the public brewery increaſed as 166 to 131; about as 4 to 3 in the ſame period. This decreaſe of the private brewery certainly indicates that ſome cauſe counteracts the exemption from duty, and that beer from the public brewery comes nearly as cheap to the conſumer. We have ſuppoſed the duty on beer to average at 24s per quarter of malt; the expences of the private brewery on 1,000,000 quarters to amount to 863,000l, equal to 17s 3d per quarter. Therefore, if it be granted that individuals are good judges of their profit and loſs, clearly our eſtimate is too low; for if the expences were not higher, the private brewery could not go ſo faſt to decay. Thus the beer duty which is impoſed on the poor, does not redound to the advantage of the rich; and (*n*) 1,200,000l is loſt to the nation, without profit to a ſingle individual.

XLVI. Some, no doubt, under any arrangement, would, from habit or caprice, ſtill continue to brew at home: but the whim would ſoon be extinct, when it became notorious, that beer might be bought cheaper and better. To thoſe who continued the practice, malt would coſt 1s 10d per buſhel dearer than before; and their beer, conſequently, as 7s 10d to (*o*) 6s; about a quarter part higher than at preſent. A much lighter tax than is at preſent excluſively laid on the conſumer of ready made beer.

XLVII. The late riſe in the price of porter made under the preſſure of the increaſing price of malt, is ſo enormous, that the public are in little danger of ſuffering by its long continuance. At 2d per gallon it amounts to 5s 4d per barrel. Even if before this advance, it were poſſible to ſuppoſe that the porter brewer gained *nothing* by his trade, the preſent profit muſt be (*p*) too

(*m*) Some part of this diminution is to be attributed to the increaſe of the duties on malt. Within this period 3½d per buſhel was impoſed.

(*n*) If theſe arguments are allowed to have proved that the real expence of the private brewery muſt be equal to the duty on the public brewery, we muſt reckon at 24s per quarter, equal to 1,200,000l.

(*o*) Suppoſing 6s the uſual price of malt to the private conſumer for ſome years; the other ingredients, remaining at the old price, would leſſen this difference, perhaps to a fifth.

(*p*) I confeſs that this is rather a hazardous aſſertion; ſince the brewers, who may be ſuppoſed well acquainted with their own concerns, have calculated

high to continue, unleſs under a more violent monopoly than at preſent exiſts. Suppoſing the brewer to receive from the publican 32s for the barrel; in this ſum, 5s 4d is about 17 per cent. The returns in the trade are not ſlow; about every two months, ſix times 17 per cent. amounts to 102 per cent. per annum; which repreſents the preſent profit on the circulating ſtock of a porter brewery.

XLVIII. If the propoſed equalization of duty took place, it would cheapen porter (*q*) ſeven farthings per gallon. If the old price were charged, even this would evidently make too great a profit. If the brewers have calculated the ſtrength of their monopoly with any accuracy, about 14 per cent. more will be taken off the price when the monopoly is aboliſhed (*r*). This is nine farthings farther reduction. Sixteen farthings per gallon is a halfpenny per pint cheaper than at preſent; thus, in caſe of the propoſed meaſure, porter will be bought at three-halfpence per pint.

XLIX. But a much greater benefit which might be expected, would be the eſtabliſhment of table-beer breweries, where all might chuſe their beverage according to their taſte. At preſent, the operation of the duty, (explained before §. 27,) compels all to drink porter, or to abſtain from malt-liquor. There is no doubt but that a beverage, ſufficiently ſtrong, may be made for one penny per pint; allowing the retailer a profit of one penny on ſeven-pence per gallon. When all private brewery was done away, every country town, almoſt every village, would enſure ſufficient trade for a ſmall brewery, and the peaſant's family might exchange their fallacious (*s*) tea for an invigorating beverage. Thoſe who at preſent brew at home, by reſerving a few of their caſks, might renew their ſtock oftener, and at leſs expence, (*t*) and, with the precaution of taking in their new beer immediately after fermentation was completed, might avoid the conſtant flatneſs of the bottom of racked beer. Thus alſo a large quantity of

culated more highly on the ſtrength of their monopoly. Be it as it may, it cannot be impregnable to the meaſure of granting licences to all proper applicants.

(*q*) On four barrels of porter, the preſent duty is 36s 9d; the propoſed malt duty would be 22s 10d; a ſubtraction of 3s 6d per barrel, equal to 5¼ farthings per gallon. And as the brewer would not then have the duty to advance, I ſuppoſe that circumſtance might lower it to ſeven farthings.

(*r*) Leaving them the uſual profits of moſt trades; 3 per cent. every two months is 18 per cent. per annum on their circulating ſtock; their fixed ſtock might reduce their annual profits to 12 per cent.

(*s*) The ſuppoſed good qualities of tea are, in reality, merely ſimilar to thoſe of tobacco: by neutralizing the gaſtric liquor, it dulls the cravings of the appetite, and deludes the ſtomach with an artificial ſatiety.

(*t*) It is rendered doubtful in S. 45, whether the private brewery is at all profitable: if not, evidently the alleviation of duty which would make brewer's beer *abſolutely* cheaper, muſt alſo render it *relatively* cheaper than is at preſent home-brewed-beer.

beer, which is, every ſummer, thrown away, becauſe it is ſour, would be ſaved; for the temptation of ſaving trouble influences the private brewer to make more at a time than is conſiſtent with the ſummer ſeaſon.

L. It ſeems proper to conclude with a ſummary of the propoſitions diſcuſſed in the preceding pages. Firſt, it is argued that an efficient monopoly is eſtabliſhed in the brewing trade, by the reſtricted number of ale-houſes. Secondly, that the exciſe duty on beer is almoſt an excluſive tax on the poor. Thirdly, that this tax might be *commuted* by an augmented duty on malt; whence would reſult an indemnification to the brewer for his loſt monopoly, and a ſaving to the public revenue. Fourthly, that the private brewery is an abſolute loſs to the nation, and no gain to the individual. Laſtly, that the new arrangement of the beer-trade conſequent on the propoſed alterations, would create an additional felicity to the many, and convenience and comfort to all.

LI. If theſe propoſitions are true they are ſurely important; and, I may add, ſeldom ſo practicable as at the preſent time. The public mind already expects ſome new arrangement in the brewery; and the firm eſtabliſhment of the preſent adminiſtration gives them unuſual power to benefit the public without reſpect of perſons. This opportunity is alſo perceived and improved to the utmoſt: witneſs, the diminution of the drawback on exported ſugar, againſt the mighty influence of the whole Weſt-India intereſt; witneſs, the more recent meaſure of converting to efficient purpoſes, a militia, in moſt inſtances, commanded by members of Parliament, hoſtile to the alteration. I interfere not with the queſtions of temporary politics; but I maintain that while human nature remains in its preſent imperfect ſtate, the improvement of internal arrangements cannot be attempted by a young and tottering adminiſtration; and that when the future hiſtorian ſhall heſitate on the policy or juſtice of wars and treaties, he ſhall be unable to withhold the legitimate and undiſputed eulogy which muſt eternally be granted to the ſimplified order of an extenſive empire.

ON PRESERVING POSTS.

For the Commercial and Agricultural Magazine.

Darlington, April 10th, 1800.

MR. EDITOR.

As many incloſures are likely to be made, in a ſhort time, in different parts of the kingdom, the following method of preſerving the Poſts that will be uſed in dividing the land, is worthy of being mentioned, I think, in your uſeful Magazine. The invention, I believe, was firſt communicated to the Darlington Agricultural Society, and to the farmers of

Durham, by the Hon. and Rev. James Cochrane, as follows.

I am your humble ſervant,

W. T.

IT is generally known that wood firſt decays juſt above and below the ſurface of the ground. Neither ſurface-painting, burning, or pitch, will preſerve it ſo well as the following method, of indenting or puncturing it with an inſtrument ſhaped like a caulking-iron with one, two, or three rows of teeth.

In the preſent method of uſing paint, tar, or pitch, as a preſervative of wood, they have only ſurface hold of it, whereas in that here propoſed, ſuch paint, tar, or pitch may be let into the grain of the wood to any depth, by indenting it at right angles to its plane. The ſtrength of timber, by this operation is by no means diminiſhed, but completely fortified againſt injury from alternate wet or dry. The puncturing irons here mentioned are manufactured and ſold by Mr. Gill, gunſmith at Richmond in Yorkſhire. They may be uſed to great advantage in ſhip building, with coal-tar or pitch, and are well calculated to preſerve the flood-gates of canals, lining of docks, water wheels, and poſts upon highways. When theſe inſtruments are uſed, the wood ought to be well ſeaſoned. It muſt be firſt punctured, then warmed, and laſtly done over with coal pitch or paint, ſo as to fill up the punctures.

Was the wood to be pitched cold, the air in the puncture, will prevent the admiſſion of the pitch or paint. In all new incloſures where ſtake fences are uſed, the plan here propoſed, will make them laſt until the quick-ſet hedge has grown up ſufficiently.

Manſfield, Jan. 19th, 1795. J. C.

ON THE COAL TRADE.

For the Commercial and Agricultural Magazine.

MR. EDITOR.

DOUBTLESS your obſervation of the frequency of vulgar errors, muſt have informed you, how great a benefit is conferred on the public, by thoſe who try to eradicate ſuch as are too frequently injurious to the intereſts of the community. Even national reputation is augmented with national information; and in no ſubjects are general errors ſo frequent, as in thoſe of frequent uſe, and therefore moſt frequently diſcuſſed by ignorant pretenders, or taken for granted, without *any* diſcuſſion.

A general error in the eſtimation of the fuel of Lo: 'on, of Newcaſtle coal, is what local information enables me to develope without heſitation or diffidence. In the London market, coal is known to be divided into *beſt*, *ſecond* and *inferior* coal. Betwixt the prices of theſe different deſcriptions, there is uſually five or ſix ſhillings difference in price. Paradoxical as it may appear,

I am about to aſſert, that of real fuel, of actual carbon, moſt exiſts in the inferior coal. The coal, termed *beſt coal* in London, ought rather to be called *round coal*, from the larger lumps which find their way to London, after all the ſhiftings and toſſings they experience in the pit, the coal-waggon, the ſteath, the Tyne keels, the ſhipping, the Thames lighter, the wharf, and the final loading and ſhooting. Of the formation of coal, I am not competent to give a chemical account, nor do I accurately know its analyſis: I have learnt, however, from caſual information, that the philoſophers of the day have ſettled, that coal is formed in the earth from ſtrata of decayed timber, left there in ſome ancient deluge of our planet. So that peat may be reckoned inceptive coal, which wants only circumſtance to its perfection.—This circumſtance, is probably, a bitumenous ſpring; ſuch a one as has been actually diſcovered, and now furniſhes tar from under the coal ſtratum in Colebrook dale.

But ſubterraneous ſprings convey very various matter, and the very rocks and ſtones, indicate by their fiſſures and petrifactions, that they were once in a fluid ſtate.—Thus, when the bitumenous matter (ex-ſuding from the ſubterraneous ſtratum of fallen pines) was mixed in its progreſs with pure water, the moiſtened timber in its decay could imbibe and retain bitumen only; when the water chanced to be *ſilicious*, inſtead of pure coal, either ſlate, or at leaſt, harſh untractable coal was eſtabliſhed in the earth; and the weighable coal of Scotland and Staffordſhire was thus formed. All the gradations betwixt coal and ſlate muſt be familiar to thoſe who have been accuſtomed to a coal-fire,—from the ſlate, which a moderate torrefaction leaves white, hard and heavy; to the pure ſmall coal from Newcaſtle, which, forming cinders (by an imperfect fuſion) burns with laſting heat, and leaves ſcarce any remnant except the ſoot in the chimney. Of this ſort, is made the coke which conveys the carbonic principle to the iron ore in the foundery; and only *management* is required to make it as convenient as the round coal, even for houſe conſumption. This management conſiſts, in remembering to take off ſome well-caked cinders overnight, for the purpoſe of lighting the fire in the morning, and alſo, in never letting the fire down very low in the day time; leſt the throwing ſmall coal on a weak fire ſhould ſtop the paſſage of air, and ſo extinguiſh the fire. This ſmall coal (in the language of the collieries) is called culm, and is there held of no value; becauſe it cannot be exported. If *all* the coal was not ſent from the pit in lumps, it would be *all* duſt before it arrived in London.

The moſt ſimple rule of diſtinguiſhing good, ſtrong, laſting coal, is its *fragility*; that is, the eaſe with which it breaks when ſtruck. Hence it may be ſeen, that (generally ſpeaking) the largeſt coal muſt be the worſt; becauſe, after taking the ſame toſſing and ſhifting, more of it remains unbroken. However

other local reaſons may cauſe coal of the *ſame* intrinſic goodneſs, of the *ſame* proportion of bitumen in its compoſition, to come larger to London. This circumſtance reſults from the height of the ſeam, that is, the thickneſs of the ſtratum, which, of courſe, admits larger lumps to be ſent up from the pit; and in that caſe, coal of *equal* fragility, muſt arrive *larger* at the London market.*

I may alſo add, that as ſlate is at leaſt a third heavier (in ſpecific gravity) than pure coal, the comparative levity of any coal is a direct proof, that it will produce a hot, laſting fire. A coal which makes a white aſh, has indubitably much ſlate in its compoſition,—white-aſh being indeed only powdered ſlate, depoſited by the combuſtion of the intermediate bitumen, in which it was previouſly ſuſpended.

The richeſt coal of any falls ſo much into *ſmall*, under the pitman's tools, that it is never exported for houſe-uſe; founderies and ſmitheries, however, know its real value, and for them ſolely it is in demand †.

If the inhabitants of London would conſent to barter *care* againſt *profit*, the precautions given about burning ſecond coal, would be *immediately* advantageous to the individual, and to the general market *finally*; becauſe the beſt coal is at preſent ſo much and ſo excluſively in demand, that many colliers lie ſix weeks for a lading of beſt coal (before it is their turn to be ſerved) rather than load with ſecond coal immediately.—Thus, the beſt coal is enhanced by this waiting for a lading (a ſpecies of demurrage) and the collier is prevented from bringing ſo many cargoes per annum, as otherwiſe ſhe would expedite to the London market. If the ſecond coal was in requeſt, as it rationally deſerves, the collier veſſels would (of courſe) all load immediately and indifferently.

At Newcaſtle, it is known, that the beſt and worſt coal do not differ 3s. per Newcaſtle chaldron in value,—not quite 1s. & 8d. on the London chaldron. But the freight of the beſt coal is higher, from the tedious waiting alluded to, ſo that the public pays at leaſt 5s. per London Chaldron difference.

I fill up my paper, by obſerving (for the information of the public) that government hired ſo many colliers for the Dutch expedition, that freight of coal immediately roſe 10s. per chaldron; and the ſtock in hand became ſo low, that the ſhipmaſters have been able to obtain the ſame freight to this day; ſo that ſome part of the late dearneſs of coal in London muſt be attributed to that interference, which conſtituted a very ſevere and partial tax on London and its neighbourhood.

Newcaſtle on Tyne, I remain, Sir, &c.
May 3d, 1800. R C.

* This is the caſe in the collieries on the high Main Seam; Walker, Willington, Biggs Main, Walls-end, Heaton and Hebburn.

† The Whitefield colliery is in this predicament.

For the Commercial and Agricultural Magazine.

PREMIUMS

OFFERED BY THE BOARD OF AGRICULTURE—FOR 1800.

No I. TO the perſon who ſhall draw up and produce to the Board, the beſt, ſimpleſt, and moſt practicable plan for ameliorating the condition of the labouring poor in this kingdom, by alterations in the poor laws, of eaſy execution, and without materially increaſing poor-rates—*The Gold Medal.*——To be produced to the Board on or before the firſt Tueſday in March, 1801.

No. II. To the perſon who ſhall build on his eſtate the moſt cottages for labouring families, and aſſign to each a proper portion of land, for the ſupport of not leſs than a cow, a hog, and a ſufficient garden—*The Gold Medal.*——Accounts of the expences of building, land aſſigned, culture, if any, live ſtock, and ſtate of the families, with the rent paid, verified by certificates, to be produced to the Board on or before the third Tueſday in April, 1802.

No. III. Doubts having been expreſſed by ſome perſons concerning the expediency of cottagers keeping cows, except on rich ſoils, the Board will give to the perſon who ſhall produce the moſt ſatisfactory account, verified by experiments, of the beſt means of ſupporting cows on poor land, in a method applicable to cottagers—*The Gold Medal.*——Accounts to be produced of the ſoil, articles cultivated, produce, ſtock kept, and every material circumſtance, verified by certificates, on or before the firſt Tueſday in May, 1801.

No. IV. To the perſon who ſhall make the moſt ſatisfactory experiments tending to the improvement of the culture of each of the following plants reſpectively, viz. wheat, rye, barley, oats, peaſe, beans, tares, buck-wheat, turnips, cabbages, rutabaga, potatoes, carrots, parſnips, clover, lucerne, ſainfoine, chicary, hemp, flax, hops—*The Silver Medal.*——Accounts, verified by certificates, to be produced on or before the ſecond Tueſday in May, 1802. The ſame premium for 1803.

No. V. To the perſon who ſhall draw up, and lay before the Board, the beſt Memoir on the Means of obviating the Objections which have been made to a General Incloſure Act, in ſuch manner as to facilitate ſuch a meaſure whenever it may be had recourſe to—*The Gold Medal.*——To be produced on or before the third Tueſday in January, 1801.

No. VI. To the perſon who ſhall draw up and produce to the Board, the moſt ſatisfactory Memoir on the beſt Means of preventing future Scarcities—*The Gold Medal.*——To be produced on or before the ſecond Tueſday in March, 1801.

No. VII. To the perſon who ſhall build and deſcribe to the Board, the cheapeſt cottage, being at the ſame time durable and comfortable—*The Gold Medal.*——A plan, elevation, and account of materials and expence, verified by certificates, to be produced on or before the firſt Tueſday in May, 1801.

No. VIII. To the perſon who ſhall invent and execute, in a manner applicable to common uſe, the beſt and cheapeſt ſubſtitute for leather in the ſhoes of the labouring poor, being an improvement on any that may at preſent be in uſe—*The Gold Medal.*——A pair of ſhoes, with an account of the materials and expence, to be produced on or before the firſt Tueſday in December, 1800.

No. IX. To the perſon who ſhall, through the entire ſummer of 1800, keep the greateſt number of cattle in ſtalls, houſes, or confined yards, and fed entirely, in the ſoiling method, with green food—*The Gold Medal.*——Certificates of the number of cattle, and acres of food, and ſorts eaten, the quantity of dung made, with other circumſtances of the experiment, and of the cultivation, expences, and produce, to be laid before the Board on or before the firſt Tueſday in December, 1800. The ſame premium for 1801.

No. X. To the perſon who ſhall improve, and bring to the annual value of not leſs than 10s. an acre, the greateſt number of acres heretofore waſte, not leſs than fifty—*The Gold Medal.*——Accounts of the improvement verified by certificates, including the ſtate of the land before the experiment, and of the cultivation, expences, and produce, to be laid before the Board on or before the firſt Tueſday in March, 1803. Notice of the intended improvement to be ſent to the Board.

No. XI. To the perſon who ſhall lay before the Board the moſt ſatisfactory account of one of Mr. Elkington's Drainages—*The Silver Medal.*——The ſoil and ſtate of the land before draining, the method and expence of the improvement, with a plan and reſult of the operation, to be produced on or before the ſecond Tueſday in December, 1800.

No. XII. To the perſon who ſhall, by a ſeries of the moſt ſatisfactory experiments, aſcertain the comparative advantages and diſadvantages of folding ſheep—*The Gold Medal.*——Accounts verified by certificates, to be produced on or before the firſt Tueſday in April, 1803.

No. XIII. To the perſon who ſhall, in a country where irrigation is not generally in practice, water the greateſt number of acres, and in the compleateſt manner—*The Gold Medal.*——Accounts of the old and new ſtate of the land and value, the method, expence and produce, verified by certificates, to be laid before the Board on or before the third Tueſday in January, 1802.

No. XIV. To the perſon who ſhall make and report to the

Board the moſt ſatisfactory experiments on the compariſon of horſes and oxen, in the general buſineſs of a farm—*The Gold Medal.*——The account verified by certificates, to be produced on or before the laſt Tueſday in April, 1803.

No. XV. To the perſon who ſhall, from authentic documents, and actual enumeration, report to the Board the moſt ſatisfactory account of the houſes, and the preſent and paſt population of any hundred, diſtrict, wapetſtake, or diviſion of the country in Great Britain, containing not leſs than ten contiguous pariſhes—*The Silver Medal.*——To be produced on or before the laſt Tueſday in April, 1801.

No. XVI. To the perſon who ſhall give the moſt ſatisfactory account, verified by experiments, of the effect of ploughing in green crops for manure—*The Gold Medal.*——Accounts, with certificates, to be produced on or before the firſt Tueſday in March, 1802.

No. XVII. Potatoes and wheat in conſtant ſucceſſion, being the courſe of crops which affords the moſt abundant food for man, the Board will give to the perſon who ſhall make and report the moſt ſatisfactory experiments on not leſs than five acres cultivated in that courſe, during four years—*The Gold Medal.*——Accounts of the ſoil, culture, produce, application, or price, verified by certificates, to be produced on or before the firſt Tueſday in May, 1804. The ſame premium will be given, (but not to the ſame perſon,) for the ſame account of ſix years. Accounts to be produced in May, 1806.

No. XVIII. To the perſon who ſhall lay before the Board the moſt ſatisfactory account, verified by chemical experiments, or other ſufficient authorities, of the nature of manures, and the principles of vegetation—*The Gold Medal.*——To be produced on or before the firſt Tueſday in December, 1800.

No. XIX. To the perſon who ſhall lay before the Board the moſt ſatisfactory account of the application and effect of manures, verified by practical experiments, on not leſs than one acre for each ſort of manure—*The Gold Medal.*——To be produced on or before the firſt Tueſday in December, 1802.

No. XX. To the perſon who ſhall lay before the Board the moſt ſatisfactory paper on the means of aſcertaining the probable ſtate of the weather, ſo as to furniſh uſeful information to the huſbandman—*The Silver Medal.*——To be produced on or before the third Tueſday in May, 1801.

No. XXI. To the perſon who ſhall give the beſt account, with drawings, of the various inſtruments of huſbandry—*The Gold Medal.*——To be produced on or before the firſt Tueſday in April, 1801.

No. XXII. To the perſon who ſhall conſent to his tenant applying the greateſt quantity of old paſture land for the cultivation of early potatoes, (and the land ſo applied,) which ſhall be

brought to market, and ſold before the end of July, not leſs than 50 acres—*The Gold Medal.*——Accounts, verified by certificates, to be produced on or before the firſt Tueſday in November, 1800.

No. XXIII. The Board having received information that the labouring poor, on the eſtates of ſeveral perſons in Rutland and Lincolnſhire, having land for one or two cows, and a ſufficiency of potatoes, have not applied, in the preſent ſcarcity, for any parochial relief; and, it appearing to be a great national object to ſpread ſo beneficial a ſyſtem, the Board will give to the perſon who ſhall explain, in the moſt ſatisfactory manner, the beſt means of rendering this practice as general through the kingdom as circumſtances will admit—*The Gold Medal.*——To be ſent to the Board on or before the firſt Tueſday in November, 1800.

GENERAL CONDITIONS.

1. THE Board reſerves to itſelf the power of withholding any Premium when the communication or communications are not deemed ſufficiently important to merit the reward.

2. The MSS. &c. ſent in claim of Premiums, to remain the property of the Board.

3. All Memoirs, &c. ſent in claim of Premiums, to be without names, with a mark or number; and accompanied by a ſealed letter, on which is written the ſame mark or number, and containing the name and addreſs of the claimant; not to be opened, unleſs the Premium is adjudged to that mark or number.

THEORY OF THE TIDES.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

You are at liberty to inſert in your Magazine, the following ſhort Tract on the Tides: any addition to Nautical Knowledge muſt be extremely pertinent in a Commercial Magazine; and if your publication of theſe ſheets ſhould influence the Board of Longitude to a little exertion on the ſubject, you will render a ſolid benefit to all future navigators. I remain, Sir,

R.

IT is marvellous, that the modern progreſs of navigation towards perfection, has produced no authentic ſummary of the various phœnomena of the Tides around the iſlands of Great Britain and Ireland. An accurate knowledge of the time of high-water in every port, is of manifeſt importance to every veſſel for making her harbour; and yet the uſual computation is tolerated, which is known to vary from truth frequently two hours. The correction of this error is an object well worthy the attention of the Board of Longitude. At Liverpool, indeed,

an annual Tide-Table for the enſuing year, is publiſhed. To make this of general uſe, nothing is wanting but a liſt of Ports with the time affixed, by which their reſpective tides precede, or ſucceed, thoſe of Liverpool. An order to the collector of each port, to have the high water of any given tide obſerved, would ſuffice to the completion of this national benefit. To explain the general reaſons which influence the time and height of each high water, it was neceſſary to enter into a brief view of Sir Iſaac Newton's Theory of the Tides. It is only to be added, that if oppoſite cauſes exiſt at one time, one muſt be ſubtracted from the other in any calculation;—if cauſes of the ſame operation coincide, they muſt of courſe be added, to find the joint effect.

THE general exiſtence of the Tide is a truth, which muſt always have forced itſelf on the knowledge of the inhabitants of the coaſts of the ocean. This can need no evidence; inaſmuch, as we conſtantly find, that even the minuter phœnomena of the Tide are perfectly known by men, whoſe opportunity of information is confined to experience only,—and that ſource of knowledge has always been equally open in all ages of the world.—It has, therefore, been always known, that the tides depend chiefly on the moon,—that the higheſt tides happen at the new and full moons, and the loweſt at the quarter moons.—But the courſe of the moon is ſubject to very many irregularities; inſomuch, that the aſtronomical glory of the great Newton, is chiefly illuſtrious from the detection of thoſe irregularities, and the conſequent power of forming complete tables of the place of the moon in the heavens.—From this intimate knowledge of the moon, and his general principle of the mutual gravitation of all matter, he has formed a Theory of the Tides in all reſpects worthy of its author. But (as might be expected from a man of his habits of aſtronomical knowledge) his language and figures are ſcarcely intelligible to every reader. To dilate his brevity into a more familiar form, is the only pretenſion of the following explanations.

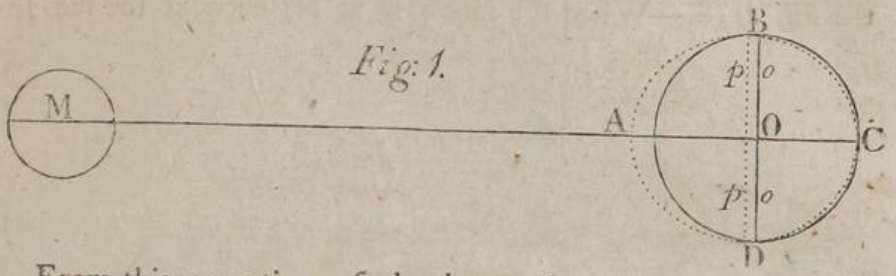
1. That *two* tides happen in *one* lunar day.

To repeat thoſe arguments which prove the reciprocal gravitation of matter is needleſs; and we naturally aſcribe the riſe of the tide to the attraction of the moon, when either upon, or at ſome known diſtance paſt the meridian of the place.—But this attraction accounts for but *one* tide in the * lunar day, whereas, it is notorious, that there are *two* tides in that ſpace of time; whence it follows, that the waters muſt be *twice* affected in that ſpace of time.—To illuſtrate the cauſe of this phœnomenon, ſuppoſe the entire earth to be fluid, and in the following figure, denoted by the letters A, B, C, D; the moon,

* A lunar day (from one riſing to the next) is about 24 hours, 50 minutes.

M, acting on the earth in the line M, A, C.—If the parts, A, O, C, were *equally* attracted by the moon, they would move *equally* towards it, their *mutual* diſtances remaining the ſame; but, as attraction exiſts in proportion of the diſtance of the gravitating matter, it is evident, that the neareſt part A, is more attracted, and conſequently will move farther towards the moon than O, and that O will move farther than C.

Fig. 1.



From this operation of the laws of gravity, the fluid parts of the earth muſt aſſume an oval form, which muſt depreſs the waters at B, and D, as much as they riſe at A, and C; ſince a limited quantity of fluid cannot riſe at one place, without proportionally ſinking at ſome other.—From a conſideration of this figure, it is evident, that the ſame effect is cauſed at C, by the axis of the earth o, O, o, moving from it to p, p, as is cauſed at A, by the gravitation of A to the moon, exceeding the gravitation of the more diſtant part O.—Finally, that A, and C, will remain at the ſame mutual diſtance from O; and that, therefore, when at any given place, high water reſults from the * *paſſage of the moon over the meridian of the place*, there will alſo high water reſult on the oppoſite meridian †.

* Vulgarly called the ſouthing of the moon.

† It has lately been ſaid, that one tide ſhould be called the Attractive Tide, as reſulting from the attraction of the moon; the other the Centrifugal Tide, as if cauſed by the centrifugal force of the monthly revolution of the earth round the common centre of gravity between the moon and the earth. But the effect of this centrifugal force (if it exiſted) would never account for the irregularities of the ſpring and neap tides, which are equally evident in *every* tide. This ſuppoſed force acting uniformly, muſt cauſe a uniform tide, which is notoriouſly untrue.—The ſuppoſed cauſe is as inadequate as might be expected from this evident contradiction of fact. To the generation of centrifugal force it is neceſſary, that the velocity be conſiderable, and the orbit ſmall. For as all motion is generated in a ſtraight line, and the leſs the the orbit the more it differs from a ſtraight line, the more centrifugal force will be produced. But the velocity of this revolution round the common centre of gravity is very moderate, and the orbit very conſiderable. Such an orbit of 33,000 miles circle, gives about 90 miles per hour. A mere nothing compared to the other motions of our planet.—If centrifugal force reſulted from velocity alone, this new-faſhioned tide, would be always found oppoſite the ſun, that is, in the night, and would claſh or combine with the attractive moon tide in direful diſorder. For the annual orbit of 600,000,000 miles, ſuppoſes about 70,000 miles per hour. But in ſo ſmall an arc of ſo large a circumference, there is no perceptible difference from a ſtraight line, wherefore no centrifugal effects are exhibited *every night*. It muſt be perceived, that

2°. Of the cauſe of Spring and Neap Tides.

The comparative nearneſs of the moon is reaſon enough why ſhe ſhould act with *ſuperior* power on the water; but the greater bulk of the more diſtant luminary, the ſun, has a *ſenſible* effect, which cauſes the remarkable inequality of Spring and Neap Tides.—In the following figure, the earth is repreſented A, B, C, D, the orbit of the moon F, Q, N, Q, the ſun at S.—When the moon is at N, betwixt the ſun and

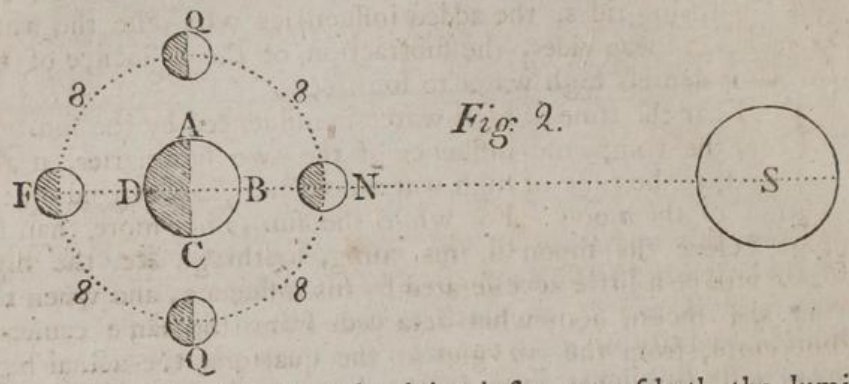
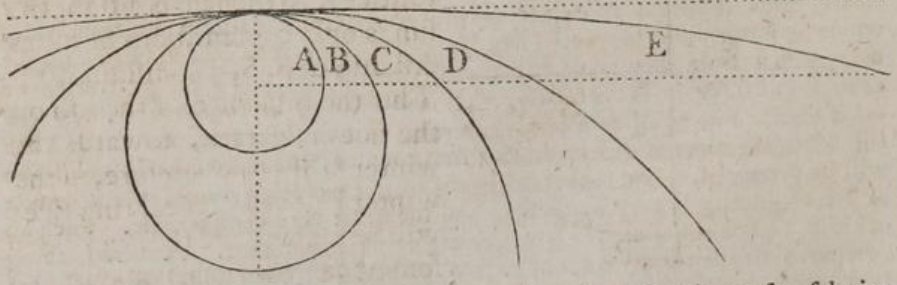


Fig. 2.

the earth, it is plain that the joint influence of both the luminaries, pulls the water towards the ſame place B, of the earth's ſurface, and, conſequently, to predict the height of the tide at new moon, the known influence of the ſun muſt be added to that of the moon.—But in our laſt figure it was proved there muſt always be an equal tide on the oppoſite ſide of the earth at D.—If the luminaries be in oppoſition (at full moon) as F, and S, as both then alſo act in a ſtraight line—an equally high tide muſt reſult at both theſe periods*. At Q, Q, the moon is in her quadratures †: here the influence of the moon inclines the fluid to

a little parade about tangent lines would demonſtrate the error of this intended amendment of the Newtonian Theory of the Tide.—In the ſubjoined fig. it may be ſeen, why centrifugal force weakens as the orbit enlarges; the arcs A, B, C, D, E, approach nearer the ſtraight line, as their preſumed circumference is dilated.



Let the puny aſtronomers of the day reſt contented with profit, ſalaries, and mechanical apparatus, and not preſume to diſturb the aſhes of the great Newton, with their crude futilities.

* Called Zyzygies, Συν-ζυγία, a joint yoke, they pull *together*.

† Quarters, vulgarly; becauſe the moon is then a *quarter* of a circle diſtant from her zyzygies. See F, Q, N, Q.

riſe at A, C, but the ſun ſtill exerts his influence to raiſe it at D, B; in this ſituation, the weaker influence (the ſun's) muſt be ſubtracted from the more powerful (the moon's) and the diminiſhed tide becomes what is called, a neap tide,—and as the moon in her circuit approaches nearer to her ſyzygies, or quadratures, the tides partake of the effects of theſe poſitions.* If the influence of the moon be ſuppoſed at any place ſufficient to raiſe the waters five feet, and the influence of the ſun one foot, in ſpring tides, the added influencies will raiſe the water ſix feet; in neap tides, the ſubtraction of the influence of the ſun muſt depreſs high water to four feet.

3°. That the time of high water is influenced by the ſun.

From the compound influence of the two luminaries, it alſo reſults, that the time of high water does not *ſolely* depend on the poſition of the moon. For while the ſun is not more than ſix hours before the moon in his riſing, ſouthing, &c. the high water will be a little accellerated by his influence; and when behind the moon, ſomewhat retarded from the ſame cauſe.—Therefore, from the ſyzygies to the quarters, the actual high water will ſomewhat precede the lunar high water; and from the quarters to the ſyzygies will be a little later than the lunar high water,—this effect being greateſt, when the moon is at the greateſt diſtance from theſe poſitions,—that is, at her octants, marked 8, 8, 8, 8, in the laſt figure.

4°. That the difference of tides is greateſt in winter.

As the gravitation of the water towards the ſun and moon is in inverſe proportion to their diſtances, it is evident, that when thoſe diſtances are leſs, the tides will be greater.—The earth moving round the ſun, not in a perfect circle, but in an † ellipſe, of which the ſun occupies the place marked S; it is evident, that the ſun is nearer the earth during the half year marked W, S, (winter ſolſtice) than the oppoſite ſide marked S, S, (ſummer ſolſtice). In the firſt poſition, the ſun is only 93 ½ millions of miles diſtant; at S, S, it is diſtant 96 ½. Thus the influence of the ſun on the tides is greateſt towards the winter ſolſtice, wherefore, in the winter half year, the ſpring tides will be higher, and the neap tides ſomewhat lower, than may be expected in the ſummer half year.

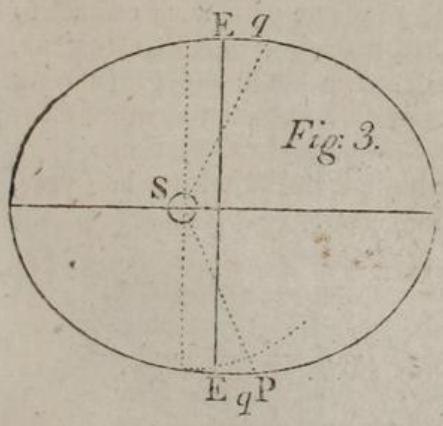


Fig. 3.

* This ſuppoſition is only illuſtrative of the general truth; many compound conſiderations muſt be included in the prediction of the height of any one tide. See after.

† Ellipſe, an oval,—a figure formed from two centers, called foci.

5°. That two ſucceſſive ſpring tides are not unuſually high.

The courſe of the moon round the earth is alſo elliptick,—inſomuch, that at her perigee *, ſhe is diſtant 32,000 miles leſs than when in apogee.—She performs her (periodical †) month in about 27 days, 7 hours; which evidently differs about two days from her ſynodical month.—If, therefore, from the coincidence of her perigee with a full or new moon, the tide ſhould be unuſually high, the next ſpring tides being on the oppoſite ſide of the orbit, muſt fall within two days of her apogee; and therefore, be unuſually low.—Thus from the ſame reaſon that the ſun cauſes the winter tides to exceed the ſummer tides, it reſults from the ſame law, that no *ſucceſſive* ſpring tides will be remarkably high, but rather alternately.

6°. That tides are high at the Equinoxes.

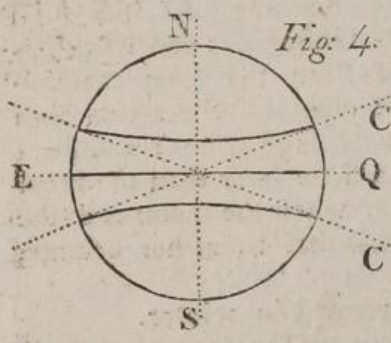


Fig. 4.

If the ſun and moon were moved to to the place of the north ſtar N, it is evident, that no tides whatever could exiſt,—a great quantity of water would indeed accumulate at the poles (N, S,) but as the *ſame* point of the earth would remain under the luminaries, the riſe and fall of water, which conſtitutes the tide, could not take place.—If the luminaries at the poles would cauſe no tide at all, it is evident, that they will cauſe the greateſt when they act fartheſt from that direction;—this is evidently at the equinoxes (E, Q,) and that their influence muſt be leſs as their line of action varies towards C, C, which is the caſe at the ſolſtices.—It is to be underſtood, that, for the ſake of illuſtration, I have here conſidered the ſun and moon as moving round the ſame path with reſpect to a beholder from the earth.—This indeed, is not ſtrictly true, but as the path of the moon at moſt varies but five deg. (uſually much leſs) from that of the ſun, the difference is too minute for notice, except in the more exact aſtronomical calculations.

7°. That the morning tides are higheſt in the winter half year, the evening tides in the ſummer half year.

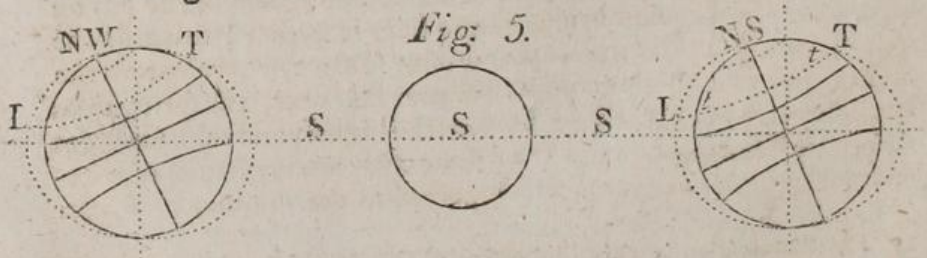


Fig. 5.

* Perigee, the point of her orbit neareſt the earth, Περι-γης, near the earth: apogee, the oppoſite point, Απο-γης, from the earth.

† A periodical month is the circuit of the moon round the zodiack. A ſynodical month is longer, becauſe ſhe muſt add ſomething to overtake the ſun, moved forward in the interval.

Let S, S, S, repreſent the line of action of the ſun and moon, N, W, the poſition of the earth at the winter ſolſtice, N, S, its poſition at the ſummer ſolſtice,—the ſhape of the tides is marked around each poſition of the earth.—Take the ſpotted lines L, T, L, T, for our parallel of latitude.—L, and T, being at oppoſite ſides of the globe, muſt repreſent the tides which happen twelve hours apart.—It is evident, from inſpection, that theſe tides are by no means equal, and that the hemiſphere on which the ſun ſhines moſt vertically has the higheſt *alternate* tide in the day—the loweſt in the night—and that in the other hemiſphere of courſe, this order is inverted.—But it is to be conſidered, that if high water (at any place) does not happen till nine hours after the ſouthing of the moon; and at new moon (the ſun and moon being then together) the ſouthing takes place at noon: this anſwers to the evening tide of ſummer at nine o'clock. This evening tide muſt conſiderably exceed the morning tide of the ſame day, which happening from the midnight influence of the luminaries on the oppoſite hemiſphere, muſt be leſs as T, t, is to L, l.—If what has been here ſaid, be thoroughly underſtood, it muſt be ſeen, that this *alternate* inequality of the tide muſt be greater with the greater diſtance of any place from the equator, and at the near approach of the two ſolſtices.—The effect within the arctic circle is ſo great, that at the ſolſtices they can have but *one* tide in the twenty-four hours, which tide at our pole will be the ſame with *our* higheſt tide of the two *.

8°. That high water happens not till after the ſouthing of the the moon.

As the effects of gravitation on a fluid cannot be inſtantaneous (becauſe the fluid muſt ſpend ſome time in collecting from the non-attracted parts) it is evident, that high water cannot happen till ſome time *after* the ſouthing of the moon.—In the wideſt oceans, where her influence muſt be earlieſt impreſſed on the fluid, no place has been obſerved to have high water *nearer* than three hours after the ſouthing of the moon.—In the channel, the tide, which arrives at the weſtern coaſt of Ireland at the third hour after the moon's ſouthing, is at the Lizard at 4 hours and a half, at Falmouth about 5 and a half, at Poole about 9 hours, at Portſmouth almoſt 12; whence it travels onward gradually, ſo that high water at London bridge does not happen till 15 hours after that ſouthing of the moon which cauſes the tide there.—Hence reſults an error in the computation of high water at that place, becauſe they reckon three hours from the laſt ſouthing of the moon, inſtead of 15 hours from the laſt ſouthing but one.

9°. An obſervation on the equinoctial tides.

* As all the phenomena of the tides happen *ſome time after* their cauſe, the greateſt difference of the alternate tides is *after* the ſolſtices, in February and Auguſt.

In N°6. it was ſaid, that tides were higheſt at the equinoxes, which is true; but a reference to fig. 3 will prove that this unuſual height is much more towards the winter, than the ſummer ſide of the equinoxes.—If E, q, E, q, be the equinoxes, the ends of the ſpotted ſtraight line paſſing through the ſun, will repreſent the poſition of the earth ſoon *after* the autumnal, and a little *before* the vernal equinox.—Here the ſun is as near, and conſequently, his influence as powerful as at the equinox, while at the ſame diſtance on the ſummer ſide of the equinoxes, his diſtance is increaſed from P, to the outer ellipſe; therefore, on the winter ſide of the equinoxes, the tides ſhall be found higheſt.

10°. Of the relative influence of the ſun and moon.

From what has been ſaid of the ever varying diſtances of the ſun and moon, accuracy in this reſpect is impoſſible, except by a calculation adapted to the deſired moment; but, on an average, Sir Iſaac Newton has deduced the influence of the moon is as 48 inches, while that of the ſun is only 9 inches.—It is true, that tides in general are locally much higher than this calculation. But a regular motion once impreſſed on a fluid, continues to increaſe by its own force of reciprocation to a certain height.—Thus, in ſwaying a boat half full of water, the ſame motion which at the firſt impulſe moved the water but little, will by the aid of its ſelf-continued reciprocation, in a few efforts, ſurmount the edge of the boat. Beſides, when the ſea approaches a ſhore, it is heaped up by the impetus of the following fluid, and when it enters a bay, or any confined ſpace, a given quantity of water muſt augment unequally a large and a ſmall reſervoir. Theſe conſiderations, locally, will be found to account for the various increment of the tide in various places on the ſame coaſt.

11°. That ſpring tides are not till *after* the new and full moons.

The ſame reaſon which in 8°. applied to the time of high water with reſpect to the ſouthing of the moon, alſo cauſes the higheſt ſpring tide not to happen at the full moon, but a certain number of tides after it.—And on the contrary, the neap or loweſt tide to fall on the ſame number of tides after the quadratures. This cauſe is uſually termed the *vis inſita*; becauſe it is already *in* the fluid from the reciprocating influence of paſt cauſes.

FROM the manifeſt irregularity of the moon, and from the cauſes here recited, it appears, that to foretel the time and height of high water, is a matter of abſtruſe calculations, whoſe reſult muſt be extremely different from the vulgar eſtimation. A table formed laſt year on theſe principles, was not ever perceived to vary more than five minutes from the truth; which confirmed the obſervation, that the *height* rather than the *time* of high water is influenced by the winds.—Now that lunar tables of ſuch accuracy are ready calculated, it is ſcandalous that the prediction

of the tides does not form a part of the nautical ephemeris,—ſo would the ſpeculations of our countryman, Sir Iſaac Newton, beſtow one more practical benefit on mankind.

THE WILTSHIRE LAMB.

For the Commercial and Agricultural Magazine.

MR. EDITOR, *Piccadilly*, May 15th, 1800.

I AM in duty bound to thank you for your ready compliance with my requeſt, in favouring us with an engraving of Mr. Round's extraordinary lamb; but, the obligation would have operated far more forcibly upon my feelings, if the repreſentation given in the plate had corroberated, and not *contradicted* my, verbal deſcription. My wiſh was, that you ſhould, by means of a print, ſet forth, in a more ſtriking light than I was capable of conveying by words, the extreme delicacy of of features, the fineneſs of bone, and the ſoft luxuriance of wool of this animal; but ſo far is this from being effected thereby, that the figure in your plate exhibits a full grown ſheep, maſculine in every feature, ſtrong in bone, and harſh and ſcanty in fleece; that is, a compleat Wiltſhire ram.

I cannot help thinking, Mr. Editor, that ſome ſuch ſtatement as this, ſhould be inſerted in your next Number, as well to do juſtice to the ſubject of this paper, as to remove every thing that looks like an impeachment of the veracity of

Your humble ſervant,

T. WESTON.

*** The only apology we can make to Mr. Weſton, is the ſhort notice given us, previous to the killing of the lamb, and the difficulty of obtaining an accurate likeneſs by candle light in a ſtable; however, if it be poſſible to correct the plate, when the ſkin is ſtuffed, we ſhall preſent it once more to our readers as an extra plate in ſome future number. E.

For the Commercial and Agricultural Magazine.

EXTRACT FROM A PAMPHLET BY T. WRIGHT, ON THE ART OF FLOATING LAND.

As the improvement to be derived from floating Land, can ſeldom be completed without conſiderable expence, we are glad to give our readers a ſtatement, which proves the ample remuneration of the adventurous innovator. The neceſſary minutiæ of detail in this beneficial practice, will be found ſuccinctly elucidated in the pamphlet, to which we ſafely refer our agricultural readers. E.

SPECIMEN OF THE ADVANTAGES OF FLOATING.

ON the advantages of floating, I hope it is no longer neceſſary to expatiate; but I have lately met with ſo pregnant an inſtance of its ſuperior excellence, that I ſhould by no means do juſtice to the ſubject if I withheld it from the public. It is an inſtance, which tends to place the moſt engaging fea-

ture of this practice in a ſtriking point of view, and gives to the production of early green food its proper weight and worth. Indeed the moſt valuable, and I had almoſt ſaid, the only improvements of magnitude that have of late years been made, here, in agriculture, have been in the various proviſions of green food, afforded for the neceſſity of winter, and for the more preſſing wants of the two firſt months of ſpring. In this ſeries of improvements, I beg leave to claſs this relative art, which, though it cannot, in every ſituation, be ſo widely extended as the cultivation of turnips, rape, cabbage, lucerne, &c. yet, where it can be fully executed, it will in no wiſe diſgrace the relationſhip in which I have placed it, but will afford it abundant aid and ſupport. For floated meadows not only require no manure from the farm yard, but liberally encourage the plough, by affording an annual extra ſupply of manure: and although by this practice, the farmer cannot provide green food for all the months of winter, yet he can, thereby, conſiderably ſhorten the wintry void; for, in March and April, which are the two moſt trying months to the farmer, theſe meadows are covered with graſs enough to receive any kind of ſtock, if the weather will permit.

The ſtrong proof of the great utility of this practice, which, I above allude to, is this. Having heard that the proprietor of an old floated meadow, in the village which I have had occaſion to mention before, had diſpoſed of the produce of it, in the year 1795, in a way that was well calculated to aſcertain its real value, I wrote to a perſon who reſides on the ſpot, requeſting him to ſend me a particular account of the product of the meadow, and I received the following ſtatement.

In order to make the moſt of the ſpring feed, the proprietor kept the graſs untouched till the ſecond day of April, from which time, he let it to the neighbouring farmers, to be eaten off in five weeks, by the undermentioned ſtock, at the following rates per head: a ſheep 10d. per week, a cow 3s. 6d. a colt 4s. The quantity of the land is eight acres.

	£	s.	d.
107 Weather ſheep, one week -	4	9	2
8 Cows - - - ditto - - -	1	8	0
4 Colts - - - ditto - - - -	0	16	0
	6	13	2
			5
Total of five weeks	33	5	10
3 Colts, 3 weeks to be added -	1	16	0
Total	35	1	10

After this ſtatement, my correſpondent, ſenſible that it is this ſpring crop which principally claims the attention of the public, and on which I ought to lay peculariar ſtreſs in recommending the practice, diſmiſſes the ſubject with ſaying, that the hay crop was as uſual, about fifteen tons, and was ſix weeks in growing.

The above ſum, it ſhould be obſerved, was made by the owner of this meadow, at a time when other graſs-land is in a dormant ſtate, or exhibits but feeble ſymptoms of vegetation. He had received more than four pounds an acre for his land, when his leſs fortunate neighbours were only looking forward to two future crops, in which expectation he has at leaſt an equal proſpect with them.

But the reader will perhaps ſee the advantages of this art in a ſtill ſtronger light, when he is told that this meadow, which is now in the occupation of a miller, was, a few years ago, in the hands of a farmer, who, being at variance with the miller, was entirely deprived of the uſe of the water for a whole winter, which unfortunately was ſucceeded by a very dry ſpring and ſummer; of courſe the ſpring-feed was loſt, and the whole hay-crop of eight acres was only three tons.

Such a ſpecimen of productiveneſs as the above, one would hope, will carry ſufficient weight with it, to turn the ſcale againſt any objections to the practice, ariſing from a dread of expence, or from an averſion which many entertain to, what they ſtyle cutting their land to pieces; and will prevail upon every one, who poſſibly can, to adopt this mode of improving his land. I truſt, likewiſe, that the above inſtance of fertility will be eſteemed a proof that this is not merely book-farming, but is worthy the attention of real practical farmers; and in confirmation of this, I could adduce ſeveral inſtances of *renters* of land, having profitably expended ſeveral hundred pounds in forming meadows of this kind, without any allowance from their landlords; than which, a more clear demonſtration of the great utility of floating, in my opinion, cannot be given.

For the Commercial and Agricultural Magazine.

On the Rural Œconomy of the District of Innerooden, in the Canton of Appenzell.

THE diſtrict of Innerooden nouriſhes, during the ſummer, upwards of 15,000 head of cattle of every deſcription, but a much ſmaller number during the winter. The meadows do not furniſh a ſufficient quantity of hay to maintain all the cattle in winter, which, during the ſummer, find plenty of food in the paſtures, and on the Alps of this diſtrict. Great numbers of cows, ſheep, goats, and pigs, are, therefore, pur-

chaſed in ſpring, and ſold again in autumn with conſiderable profit.

The rearing of black cattle is by far the moſt conſiderable and moſt important branch of the rural ſyſtem of the inhabitants. During the ſummer, 9,000 cows are grazing on the Alps of Innerooden, of which number 6,000 only remain in the country for the winter. The cow-keepers in Appenzel find it more profitable to ſell their cow-calves to the inhabitants of St. Gall, and other cities, than to rear them. Every ſpring they purchaſe in the markets of *Bregentz*, *Hohenembs*, *Feldkitch*, and *Pludentz*, as many cows as they want, in addition to thoſe which they maintain during the winter, duly to improve their Alps. Independent of their being thus relieved from the care and trouble of bringing up the calves, they alſo gain more in this manner, as during the whole ſummer they enjoy the milk of the cows thus purchaſed; and, on ſelling them again in autumn, they receive as much, nay, frequently more money than they paid for them; for the cows return from the Alps in a better condition than they are brought thither in the month of May. Poor Alp-holders, who are not poſſeſſed of ſufficient money to purchaſe cows, endeavour to farm ſome for the ſummer out of the neighbouring Auſtrian dominions, or the diſtricts of *Sargan*, *Say*, and *Thurgau*; the number of cows thus farmed and paſtured on the Alps of Innerooden amounts to from 900 to 1,000 head, which are comprized under the 3,000 that are every ſpring brought into the country.

The 9,000 cows, which, during twenty-five weeks, find ſufficient paſture on the Alps of Innerooden, yield the moſt important produce of the country, and which, in every point of view, deſerves a more particular notice.

Many cows yield daily from ſeven to nine * gallons of milk, while they are grazing on the Alps; but the average produce is ſix gallons a day: a gallon of milk weighs about five pounds one quarter troy weight. Every cow yields, therefore, upon an average, during the 25 weeks of paſture, 1,050 gallons milk. Experience has ſhewn, that the cow-keepers in general make five pounds fat or cream-cheeſe, out of twenty gallons, or 103 pounds milk; and one pound butter, and two pounds common cheeſe, (each pound containing 20 ounces,) out of ſeven, eight, to nine gallons milk, according to its different quality. Butter fetches from 15 to 24 *kreutzers* a pound; the medium price is 18 *kreutzers*. Common cheeſe coſts 4 *kreutzers*, and cream-cheeſe from 8 to 9 *kreutzers* a pound; 50 pounds cream-cheeſe are, therefore, equal in value to 18 pounds butter, or 32 pounds common cheeſe, and produce from $7\frac{1}{2}$ to $8\frac{1}{2}$ florins. If the price of 50 pounds cream-cheeſe, or of the above quantity of butter and common cheeſe, riſes as high as 10 florins, this is thought

* Theſe foreign gallons meaſure but five pints Engliſh. E.

an uncommon event, which never happens but in times of extraordinary ſcarcity, ſuch as the year 1785.

From theſe data it is evident that the cow-keepers prepare, out of the milk-produce of every cow, during the twenty-five months of paſture, either 262 pounds cream-cheeſe—40 to 50 florins;
or 131 ditto butter, and
262 ditto common cheeſe—57 to 60 florins.

The Appenzell cow-keepers reap, therefore, more benefit from making butter and common cheeſe than from preparing cream-cheeſe out of the milk of their cows: for this reaſon the two former articles are generally manufactured throughout the diſtrict of Innerooden, in preference to the latter. The cow-keepers, on boiling the milk and preparing the cream-cheeſe, obtain, it is true, a ſecond precipitate, that is, a ſort of meager, cheeſy ſubſtance, which the Swiſs call *zieger*; but this is inconſiderable: for, on making 262 pounds cream-cheeſe they obtain about 50 pounds *zieger*, which being ſold for four kreutzers a pound, fetch only $3\frac{1}{2}$ florins, ſo that the profit on butter and common cheeſe exceeds the proceeds of cream-cheeſe by 10 or 11 florins. By our calculation, the produce of 9,000 cows, during the 25 weeks of paſture, conſiſts, therefore, florins:

	florins:
in 10,440 cwt. butter and 20,880 cwt. cheeſe,	452 to 493,000.
Or, if the whole quantity of milk be applied to the manufacturing of cream-cheeſe—	florins;
in 23,400 cwt. cream-cheeſe, - -	350 to 400,860
and 4,500 cwt. *zieger*, - - -	31,500
	381 to 432,360

During the hot ſeaſon, when the milk ſoon turns ſour, the cow-keepers who graze their cattle on the Alps, make cream-cheeſe; the whole quantity of milk is not, therefore, applied to the making of butter, and the profit is, of conſequence, ſomewhat lower than has juſt been ſtated. The cow-keepers who make cream-cheeſe, very ſeldom ſell the *zieger* which they obtain, but ſmoke and conſume it, whereby a conſiderable ſaving is made in regard to bread and other proviſions. From theſe conſiderations we incline to think, that the average amount of the produce of 9,000 cows, during the ſummer, with the neareſt approximation to truth, may be ſtated at 450,000 to 460,000 florins, or about 4,500 to 4,600l. ſterling.

As to the 6,000 cows, which are wintered in the diſtrict of Innerooden, each of them yields daily, upon an average, two gallons milk; and, conſequently, during the 25 weeks they are ſtall-fed, 310 gallons. On reckoning ten gallons milk for one pound butter, on account of the former being leſs fat than in ſummer, each cow yields florins.

31lb. butter, and 62lb. common cheeſe, - -	13 to 1

The winter produce amounts, therefore, florins.
to 1,860 cwt. butter, and 3,720 cwt. common cheese, 80 to 87,830
And the summer produce,
to 10,440 cwt. butter, and 20,880 cwt. common cheese, - - - - 452 to 493,400
The yearly proceeds amount, therefore, in the whole,
to 12,300 cwt. butter, and 24,600 cwt. common cheese, - - - - 532 to 581,230
or above 5,800l. sterling.

When the cow-keepers make cream-cheese or butter, they obtain a large quantity of whey, which is not left unimproved. Every cow-keeper buys, in spring, a number of young pigs, which receive no other drink but whey, which, though it does not make them fat, yet brings them to their full growth, and disposes them to be easily fattened. The profit which accrues to the cow-keepers from the sale of the full-grown pigs, which have not cost him a farthing during the whole summer, ought also to be added to the proceeds of the milk, which, however great they may appear from the above calculation, yet do not constitute the whole profit which the cow-keepers derive from their cows. Several thousand calves, many lean bullocks, two years old, and a considerable number of fattened cows and bullocks, are yearly sold and exported from the district of Innerooden; the price of a calf is from five to eight florins, and of a lean bullock, two years old, from seven to twelve louis-d'ors. The skins of the cows and calves, consumed within the district, and the salt-petre, which the inhabitants know how to prepare by means of the urine of this cattle, are also articles which are exported, and may amount to from 70,000 to 80,000 florins a year. The total amount of the annual proceeds of the cattle, kept and pastured in the district of Innerooden, may, therefore, be estimated at from 602,000 to 660,000 florins. To this sum should be added the produce of the goats and sheep kept by the inhabitants; but, from want of sufficient data on this subject, we are not able to form any just estimate of its amount. Young sheep are bought in spring for about two or three florins a-head, and sold again in autumn for five florins. The goats find plenty of wholesome food on such steep and stony places as are inaccessible to black cattle; and of this milk, large quantities of goat-cheese are made by the inhabitants.

The honey, made by the bees of this pastoral country, is excellent. Common honey is sold for about two florins a gallon; but the best sort, called country-honey, costs from three to four florins: it is of a bright yellow colour, and far exceeds, in flavour, the best honey of this country.

Although the district of Innerooden contains the highest mountains in the Canton of Appenzell, yet it is not sufficiently rich in wood to export any considerable quantity of that article. The

open expoſure of the mountains towards the north may, perhaps, obſtruct the growth of large foreſts of pines and larch-trees; yet every diſtrict, ſuch as the borough of *Appenzell*, *Gonten*, *Haſlen*, *Schevendi*, *Bruelliſau*, &c. poſſeſſes ſome common foreſt, equally uſed by all the houſe-keepers of the diſtrict, under the direction of a foreſter, appointed by the magiſtrates to ſuperintend the uſe, and prevent the deſtruction, of the common wood.

As we are treating here of the articles which the inhabitants of Innerooden ſell to the neighbouring countries, we muſt not omit the ſnails which are fattened in this diſtrict, and exported to Suabia, Bavaria, and Auſtria. On walking, in ſummer, along the banks of the *Sitter*, you meet with ſmall gardens, where ſuch numerous herds of ſnails are kept, that the noiſe made by the denticulated jaws of theſe animals, while they are feeding, may be heard at ſeveral paces diſtance. The young ſnails are ſought after every where, gathered and put in theſe gardens, where they are kept and fed until they take to their ſhells at the approach of winter. In addition to the food which they find on the ground, and on the cherry-trees in the garden, they are fed with ſalad, cabbage, greens, and other leaves, which food renders them very large and fat. At the approach of lent, the ſnail-mongers pack them up in barrels, and proceed with them to the convents in Suabia, Bavaria, and Auſtria; nay, to Vienna, where they ſell them as exquiſite dainties, and frequently amaſs a ſnug fortune by this trade. The capuchin monks in the borough of Appenzell, fatten every year a herd of from 40,000 to 50,000 ſnails for their own uſe.

Cheeſe, butter, all ſorts of cattle, ſkins, ſalt-petre, honey, and ſnails, form, therefore, the exports of this ſmall country, for which the inhabitants receive, in exchange, ſuch articles as they want for their ſubſiſtence. As there exiſt neither cuſtom-houſes nor exciſe-offices in the diſtrict of Innerooden, by the entries in whoſe regiſters the exact amount of the exports and imports might be aſcertained, we muſt content ourſelves with eſtimates, founded on ſuch data as may be obtained from other ſources. From theſe it appears, that adding to the above 600,000 florins the ſum of 300,000 florins, for ſheep, goats, ſnails, ſpun cotton, and linen, the total amount of the Alp-economy, and other induſtrious purſuits of the inhabitants of the diſtrict of Innerooden, may be eſtimated at 900,000 florins, or about 9,000l. ſterling; of which ſum, however, a ſmall part only remains in the country, the reſt going to the neighbouring provinces for ſalt, wine, all ſorts of cloathing, leather, iron, copper, glaſs, coffee, &c. Under theſe circumſtances it muſt be obvious, that the maſs of circulating ſpecie cannot but be very ſmall; and that this is really the caſe will become ſtrikingly evident, from the following comparative view of the value of money, in the two diſtricts of *Inner* and *Outerooden*.

A hypothecary note * for 100 florins, furniſhed with the beſt ſecurity, is negociated and ſold in *Innerooden* for 80 florins in caſh, while, in the diſtrict of *Outerooden*, a ſimilar note, of the ſame amount, cannot be purchaſed under 110 to 115 florins. The inhabitants of *Innerooden* ſupply the deficiency of caſh by the above hypothecary notes, called *hauptmannſzedel*, (captain's notes,) *ſimple notes*, and *flying notes*, which are generally taken in the courſe of trade, yet at a diſcount of 20 per cent.

For the Commercial and Agricultural Magazine.

ENUMERATIONS *of* INVENTIONS *in the* ARTS, *of which the* PROPERTY *has been ſecured to the* INVENTORS *under* LETTERS-PATENT *from the* KING,—*agreeably to* ACT *of* PARLIAMENT. (*Continued from p.* 189.)

1798.

Oct. 10. Mr. John Grenſel, of Dulwich, in the county of Surry, merchant, for a new mode of applying machines in manufacturing copper and tin-plate veſſels of every deſcription.

—— 30. Mr. Samuel Roberts, of Park Grange, Sheffield, in the county of York, ſilverſmith, for an improved method of making nozles of candleſticks, to hold firm candles of different ſizes.

Nov. 8. Mr. William Southwell, of Broad Court, St. Martin's in the Fields, Middleſex, muſical inſtrument maker, for new improvements on the action and conſtruction of pianofortes, and other muſical inſtruments.

— —. Mr. William Chapman, of Newcaſtle-upon-Tyne, gentleman, for a new method of laying, trying, and making ropes and cordage of any number of yarns or ſtrands, or any number of threads, tarred or untarred, for which he obtained former letters patent on 13th September 1797, and 6th March 1798.

———. Mr. Edward Shorter, of Giltſpur Street, London, clockmaker, and William Anthony, of St. John's, Clerkenwell, watch-maker, for a method of equalizing and facilitating the draught of carriages, and eaſing the body of carriages, by hanging the ſame; alſo for the more ſecurely fixing tents and marquées; and which invention is applicable to other purpoſes.

—— 15. Mr. Jethro Hornblower, of Whitehall, in the pariſh of Kenwyne and county of Cornwall, engineer, for a method of making pattens to be worn by women, by altering their compoſition and clumſineſs of make, and preventing their breaking, and uneaſineſs to the feet.

—— 17. Mr. William Pontifex, of Shoe Lane, London, copperſmith, for an improved ſtill head.

———. Mr. John Curr, of Sheffield Park, in the county of York, gentleman, for a method of forming and making a flat rope,

* A bankers' promiſſory note.

intended to be uſed in drawing coals and other minerals, and water, out of pits and mines of any kind.

Nov. 20. Mr. Nathan Smith, of Brighthelmſtone, in the county of Suſſex, gentleman, for a method of conſtructing and making a vapour bath or veſſel, of different ſizes and ſhapes, by uniting thereto, and uſing therewith, a machine called an air-pump or exhauſter, for curing, healing, and relieving perſons afflicted with the gout.

—— 27. Mr. George Dunnage, of the Strand, Weſtminſter, hat-maker, for a new manner of ventilating the crown of hats.

———. Mr. Robert Hindmarſh, of Walworth, in the county of Surry, printer, for a method of applying an elementary or phyſical power to blaſt furnaces, and for all other works when power is required.

———. Mark Noble, of Royal-Row, pariſh of St. Mary, Lambeth, in the county of Surry, engine-maker, for an apparatus to be applied to the working of pumps, engines, and machines in general.

———. Nathaniel Goldbold, of Bloomſbury Square, Eſquire, for a remedy which is of wonderful benefit in the cure of conſumptions, ſcrophula, and gout.

Dec. 8. Mr. Thomas Turner, of Greville Street, in the pariſh of St. Andrew's, Holborn, and county of Middleſex, ironmonger, for improvements in the conſtruction of locks.

———. Mr. John Marks, of Tabernacle Row, Finſbury Square, in the county of Middleſex, taylor, for an improved method of making breeches.

———. Mr. William Raby, of Newbold, Yorkſhire, chemiſt, for a philoſophical furnace and boiler, with an actuating wheel.

—— 12. Mr. Joſeph Collyer, of Weſt Square, pariſh of St. George's, and county of Surry, for a chemical proceſs for freeing fiſh oils from their impurities, and for improving ſtrainers for oils and other liquids, with other inſtruments for aſcertaining their qualities.

—— 17. Mr. William Hart, of the pariſh of St. James's, Weſtminſter, brazier, for an improved method of raiſing beer, ale, ſpirituous liquors, &c. from the cellar to the bar, or any other part of a houſe.

———. Mr. John Randall, Peckham, of the pariſh of St. Mary Magdalen, Bermondſey, and county of Surry, watch-maker, for a method of conſtructing a watch ſo as to unite it to a mariner's compaſs, in ſuch a manner as to anſwer every purpoſe for which either of them may be ſeparately uſed: which is called a *Polar Watch*.

—— 22. Mr. Edmund Thomſon, of Birmingham, in the county of York, button-maker, for improvement in making ſteps for coaches and other carriages.

Dec. 24. Mr. Thomas Ovey, of London, hat-maker, and John Jepſon, of Duke Street, Southwark, hat manufacturer, for a method of making hats.

———. Mr. Joſeph Fuſſel, of Mells, in the county of Somerſet, iron manufacturer, for a balance engine, or apparatus for raiſing and lowering boats, barges, and troughs, at the locks and falls on inland canals.

January 4. 1799. Mr. William Alliſon, of Long Lane, in the pariſh of Bermondſey, and county of Surry, tanner, for manufacturing an article into leather, commonly called Spaniſh or Morocco leather.

——— 5. Mr. John Kent, of Southampton, architect and builder, for a method of applying power to the working of mills, or other machinery, when power is required.

—— 16. Mr. James Edgell, of Frome Selwood, in the county of Somerſet, gent. for the uſe and application of metal of a peculiar quality and great ſtrength, in the place of common iron, in all caſes where common iron has hitherto been uſed.

—— 23. William Fitzgerald, late of the Temple, London, Eſq. for a ſignal trumpet, for increaſing the powers of ſound by ſea and land.

—— 26. Cater Rand, of Lewes, in the county of Suſſex, Eſq. for an improved military and naval teleſcope.

—— 29. Mr. Thomas Cooke, of Red-Lion-ſquare, Holborn, for an apparatus which he calls *Carbo Frugalis*, being an effectual mode of applying fir to boilers, ovens, and other caldronic implements.

———. Mr. Joſeph Barton, of Old-ſtreet, pariſh of St. Luke, Middleſex, chemiſt, for a medicine which he denominates *compound*, *concentrated*, *fluid*, *vital Air*, of great uſe in the cure of putrid diſeaſes; and another preparation, which he calls *Aérated preventive Fluid*, as preventive from putrid infection; and alſo *aérated* liquid balm, for preſerving and beautifying the ſkin.

February 5, 1799. Mr. Hezekiah Beers, Pierpoint, of New-York, in North America, merchant, but now reſiding in Surry-ſtreet, in the Strand, for a new ſort of oil, extracted from certain vegetable ſubſtances, not heretofore uſed in this kingdom for that purpoſe.

—— 5. Mr. Joſeph Watt, of Yeovil, in the county of Somerſet, tanner and glove-manufacturer, for tanning foreign and Engliſh kid, goat, ſheep, and calf-ſkins, into leather fit for gloves and mittens, without lime and tan, in a ſhorter ſpace of time, and with leſs expence and labour, than have ever yet been uſed.

—— 12. Mr. Humphrey Jefferys, of the town and county of Newcaſtle upon Tyne, engineer, for an improvement applicable to bringing coals from the interior part of coal-mines;

alſo for an improvement upon machinery, for raiſing coals, ore, or other minerals, in the pit or ſhaft; alſo for an improvement in the manner of delivering coal, &c. at the mouth of the pit.

Feb. 19. Mr. Joſeph Dale, of St. Mary-le-Bone, in the county of Middleſex, muſic-ſeller, for an improvement of the tambarine.

—— 28. Samuel Sanoz Hickling, of Birmingham, in the county of Warwick, gent. for improving and beautifying certain veſſels and utenſils uſed for chemical, culinary, and other purpoſes.

——— —. Mr. John Luccock, of Morley, near Leeds, in the county of York, wool-ſtapler, for a machine on hydroſtatic principles, to produce a mechanical power applicable to the purpoſes of the ſteam-engine, but without fire, ſteam, or water-wheel.

——— —. Mr. Joſeph Tidmarſh, of the pariſh of St. Luke, Chelſea, glazier and painter, for an article which may be uſed alone, as a ſubſtitute for paint, or mixed with paint.

———. Mr. George Medhurſt, of Battle-bridge, pariſh of St. James, Clerkenwell, and county of Middleſex, engineer, for a condenſing wind-engine, capable of being applied to all purpoſes in which either ſteam, wind, water, or horſes, are uſed.

March 8, 1799. David Hardie, of St. James, Weſtminſter, gent. for an improvement in and upon cranes, for lowering and hoiſting goods.

—— 8. Mr. Michael Logan, of Rotherhithe, engineer, for a centrifugal, or central force, for raiſing water from great depth.

April 6, 1799. Mr. Robert Delap, of Barvelli, near Bambridge, in Ireland, bleacher, for œconomical boilers for various purpoſes.

—— 10. William Brodum, of Chriſt Church, in the county of Surry, M. D. for a medicine called Botanical Sirup, for the cure of ſcorbutic, and other complaints; and alſo for a medicine called Nervous Cordial, for the cure of conſumptions, and other complaints.

—— 11. Mr. Samuel Rehe, of St. Brides, London, merchant, for an engine, or apparatus, for giving motion to water, and other fluids.

——— Mr. George Davis, of Windſor, in the county of Berks, lockſmith, for a double-chambered lock, with cylinders and pins inſtead of wards.

——— —. Mark Iſambard Brunel, of St. Mary, Newington, county of Surry, gent. for a writing and drawing machine, by which two, or more drawings, may be made by the ſame perſon at the ſame time.

April 16. Mr. Henry Wildey, of New Compton-ſtreet, in the pariſh of St. Giles in the Fields, ſmith, for an improved method of applying ſprings to the poles, or ſhafts, of two-wheeled carriages.

—— 20. Mr. Henry Wood, of Sloane-ſtreet, for a machine called a *Time-ſetter*.

—— 23. Mr. Robert Simpſon, of St. John, Clerkenwell, ſurgeon's inſtrument-maker, for an inſtrument for extracting teeth in a perpendicular direction.

—— 27. Mr. John Knowles, of Lambeth, leather-dreſſer, for a new method of dreſſing and preparing ſkins.

—— 30. Mr. William Gilleſpie, of Anderſton, near Glaſgow, calico-printer, for a method of printing and painting linens, cottons, &c.

—— —. Charles Tennant, of Darnley, near Glaſgow, bleacher, for a method of preparing oxygenated muriate of calcareous earths, &c. and employing them to the purpoſes of bleaching.

—— — Mr. John Daniel Balfour, of Elſeneur, in the kingdom of Denmark, for improvement in the method of manufacturing cordage.

May 25, 1779. Mr. Samuel Wilkins, of St. Peter, in the county of Worceſter, for a new-invented compoſition of gum to be uſed in calico-printing.

—— 28. Mr. Henry Browne, of Derby, chemiſt, for a new method of making and preparing zinc.

—— — Mr. John Wilkinſon, of Caſtle-head, in the county of Lancaſter, iron-maſter, for an improvement in boilers, when a ſaving of fuel is the object.

June 6, 1799. Mr. Thomas Chapman, of Bermondſey, ſkinner, for a new method of taking off the wool, or fur, from ſkins.

—— 17. Mr. William King, of Peartree-ſtreet, near Old-ſtreet, tin-plate worker, for a new-invented joint on improved principles.

—— 18. Mr. Francis Brewin, of Bermondſey, tanner, for a new method of tanning hides and ſkins.

—— —. John Hayes, of Workingham, in the county of Wilts, gent. for a new-invented inſtrument for the cultivation and tillage of all kinds of land.

—— — Mr. John Wilkinſon, of Caſtlehead, in the county of Lancaſter, iron-maſter, for a new method of making ceruſe, or white lead.

—— 26. Mr. Amos Whitemore, Banner-ſtreet, Middleſex, wool card-maker, and Mr. Clement Sharp, of the ſame place, merchant, for a new method of making cards for carding cotton, wool, &c.

—— — Mr. Stephen Hooper, of Margate, in Kent, for a machine for clearing rivers, creeks, &c. and for removing ſhoals at ſea, by the power of the tide or current.

(To be continued.)

POETRY.

WE extract from the Annual Anthology for 1800, a few Specimens of various Poetry, which cannot fail to gratify our Readers. For the future, we have it in Intention to confine our poetical Department into narrower Bounds: and, certainly, to insert nothing in it which does not much surpass Mediocrity, in the Power of delighting, or bettering the Reader.

TO A YOUNG LADY,

On her first Appearance after a dangerous Illness.

Written in the Spring, 1799.

WHY need I say, Ophelia dear!
How glad I am to see you here,
A lovely convalescent:
Risen from the bed of pain and fear
And feverish heat incessant!

The breezy air, the sun, the sky,
The little birds that sing on high,
Their vernal loves commencing,
Will better welcome you than I,
With their sweet influencing.

Believe me, while in bed you lay,
Your danger taught us how to pray;
You made us all devouter:
Each eye looked up, and seem'd to say,
"How can we do without her?

Besides (which vex'd us more) we knew
They had no need of such as you,
In the place where you were going.
This world has angels all too few,
And heav'n is overflowing.

LABERIUS.

HISTORY.

THOU Chronicle of Crimes! I read no more—
For I am one who willingly would love
His fellow kind. O gentle Poesy,
Receive me from the court's polluted scenes,
From dungeon-horrors, from the fields of war,
Receive me to your haunts,—that I may nurse
My nature's better feelings; for my soul
Sickens at man's misdeeds!
I spake—when lo!
She stood before me in her majesty,
Clio, the strong-ey'd muse. Upon her brow
Sate a calm anger. 'Go—young man,' she cried,
'Sigh among myrtle bowers, and let thy soul
'Effuse itself in strains so sorrowful sweet,
'That love-sick maids may weep upon thy page
'In most delicious sorrow. Oh shame!
'Was it for this I waken'd thy young mind?
'Was it for this I made thy swelling heart
'Throb at the deeds of Greece, and thy boy's eye
'So kindle when that glorious Spartan died?
'Boy! boy! deceive me not! What if the tale
'Of murder'd millions strike a chilling pang,
'What, if Tiberius in his island stews,
'And * Philip at his beads, alike inspire
'Strong anger, and contempt; hast thou not risen
'With nobler feelings? With a deeper love
'For Freedom? Yes—most righteously thy soul
'Loathes the black history of human crimes
'And human misery! let that spirit fill
'Thy song, and it shall teach thee, boy, to raise
'Strains such as Cato might have deign'd to hear,
'As Sidney in his Hall of Bliss may love.'

ADDRESS TO THE HUSBANDMAN.

extracted from

Dr. Booker's 'HOP GARDEN,'—

A POEM, reviewed with high Commendation in the first Number of our Work.

'MUCH it concerns thee, — *thee*, for whom the muse
Attunes her lay,—to win the favouring smile
Of plenty's sole dispenser. For if HE
That smile withhold, thou vainly seek'st to store,
With choicest seeds, thy cultivated soil:
Vainly thou risest early, and to rest
Dost vainly late retire. A fruitful land
To barrenness His righteous vengeance turns,
When they who, impious, tread its teeming plains,
His hallow'd precepts violate, and toil
In Satan's service, sin, for filthy gain:
But when, obedient to his high behests,
A realm's inhabitants, with zeal unfeign'd,
With holy fervor, aid RELIGION's cause—
The steril desart into fruitful fields
His Fiat changes; and translucent streams.

* Philip II. of Spain.

Winding thro' ſmiling meadows ever green,
He bids to flow, where, parch'd with burning ſuns,
Cheerleſs and bare, wide ſtretch'd the ſultry plain.
His favour, more than life, aſſiduous ſeek,
Rural diſciple of the warning muſe!
His indignation, more than death, avoid,
As thou with pleteous harveſts wou'dſt be bleſs'd,
Or 'ſcape the miniſters of his vengeful ire—
Blaſting, and mildew, and devouring ſtorm.
Then thy glad ſoil ſhall double its increaſe,—
Fields, orchards, and plantations fill thy barns,
And bounty, unexhauſted, bleſs the land."
Book I. p. 26. AGRICOLA.

ODE.

To Mr. PACKWOOD.

COME, Muſe, and ſeize the trump of fame,
To ſing great Packwood's growing name:
No king deſerves it louder:
Then ſwell your deep ſonorous voice,
To him who mortals bids rejoice;
And ſeek his ſtrap and powder!

Oh! hadſt thou flouriſh'd in an age,
When every hero, ſaint, and ſage,
Like modern Pſalmanazor,
Their hairy honours wore at length,
And every beard was gaining ſtrength,
For want of patent razor!

Then Barbaroſſa's fiery chin,
And Blue-Beard's, ſo renowned in ſin,
Had been as ſmooth as ſatin;
And odes, that only now are ſung
To praiſe thee in thy mother-tongue,
Had then been made in Latin.

No more ſhall love-lorn Damon ſeek
The dimples of his Chloe's cheek,
With beard like Neb'hadnezzar—
Since once he's had the lucky hap
On Packwood's wondrous chemic ſtrap
To whet his dulleſt razor.

No more ſhall he with anguiſh grin;
No more ſhall ſmart his mangled chin;
Thanks to thy ſtrap ſo famous!
A ſtrap that gives the face ſuch eaſe,
Might e'en a mighty monarch pleaſe,
When ſhav'd by Billy Ramus!

Couldſt thou in France thy razors grind,
Thy talents there would ſurely find,
'Mongſt lawgivers a ſtation.
Smooth as a ſtrap their chins would feel—
Thou'dſt ſharpen for the public weal
The razor of the nation!

Oh! couldſt thou by a lucky hit,
Find out a ſtrap to ſharpen wit!
(Tho' high thy preſent ſtate is)
Then wouldſt thou make a monarch ſmile,
The ruler of a ſea-girt iſle,
And get a patent *gratis*.

Thus would the ſpreading voice of fame,
With Paracelſus rank thy name,
And other great gold-finders—
The long-ſought philoſophic ſtone,
Become, without diſpute, thy own,
Thou prince of razor grinders!

J. W. T.

To an UNFORTUNATE WOMAN,

Whom the Author knew in the Days of her Innocence.

Compoſed at the Theatre.

SUFFERER! that with ſullen brow
Sit'ſt behind thoſe virgins gay,
Like a ſcorch'd and mildew'd bough,
Leafleſs mid the bloom of May;

July, gnawing thy diſtreſſes,
Mock thoſe ſtarts of wanton glee;
And thy inmoſt ſoul confeſſes
Chaſte affliction's majeſty.

Loathing thy polluted lot,
Hie thee, ſufferer! hie thee hence!
Seek thy weeping mother's cot,
With a wiſer innocence!

Mute the ſky-lark, and forlorn,
While ſhe moults thoſe firſtling plumes
That had ſkimm'd the tender corn,
Or the bean-field's odorous blooms:

Soon with renovated wing
Shall ſhe dare a loftier flight;
Upwards to the day-ſtar ſing,
And embathe in heavenly light.

EPIGRAMS.

On a Reader of his own Verſes.

HOARSE Mævius reads his hobbling verſe
To all, and at all times;
And deems them both divinely ſmooth,
His voice, as well as rhimes.

But folks ſay, Mævius is no aſs!
But Mævius makes it clear,
That he's a monſter of an aſs,
An aſs without an ear.

On a very ugly Woman.

HOW happy for us mortals 'twere
Had Eve been ſuch a woman!
The devil ne'er had tempted her,
And ſhe had tempted no man.

CRITICAL CATALOGUE.

I. THE *New Farmer's Calendar; or Monthly Remembrancer for all kinds of Country Buſineſs: By a Farmer and Breeder. Symonds*, 1800.—This Book which has excited conſiderable expectation, we announce as no ſmall acquiſition, to that part of the public who intereſt themſelves in the agricultural proſperity of the Country. Seldom do we meet with ſo much and ſuch various information in ſo ſmall a compaſs, and we are confident that an analyſis of ſuch a production muſt be profitable and acceptable to our readers.—The Preface aſſerts briefly, (but with ſuch unanſwerable argument) the benefit of reading agricultural books, that the practical Farmer who reads the preface will be convinced he ought to go through the remainder of the Book. The calendar-part which immediately follows, is properly conciſe, referring for more detailed information of the particulars to the final part of the volume. We were ſoon feelingly aware of an omiſſion in the title-page; the omiſſion of the name and reſidence of the author. Of the reaſons which influence to concealment, we imagine few can attach to the Agricultural Writer; if diffidence and modeſty be the only motives, theſe ſhould ſuccumb to the more weighty reaſons for an open avowal. A reſpectable farmer's life implies no frequent change of reſidence; whence his perſonal knowledge muſt be local; and as his opinions are chiefly valuable from the effect of them in his own cultivation, it ſeems almoſt indiſpenſable to enable the public to proceed with full confidence on the directions of a man, that he give his name as a pledge of authenticity to mankind and to poſterity. If the author would reckon up how often he has talked of "*myſelf*"—"my own experience," "my neighbourhood;"—he would not heſitate on the propriety of anſwering the queſtions thence ariſing;—"*Whoſe* experience are we to reſt on?" "*What* neighbourhood is intended?"

P. 20. A very large quantity of ſeed is recommended in ſowing clover; not leſs than twenty pounds. The preference giving to rolling it in *after* the corn is up, is doubtleſs juſt.—If that practice were univerſal, clover would never fail.—P. 41. Experiments on Buck-wheat are here recorded, which juſtify the low opinion of that grain expreſſed by the author. His idea of eſtimating the value of a grain from its produce in the diſtillery, is probably well founded, and may in time afford a ſcale of the quantity of nutriment in all vegetable ſubſtances—Such a ſcale would be very valuable.—P. 92. Some ſtriking obſervations on Hay-making occur in June: we the rather quote the paſſage, as it is ſo appropriate to the preſent ſeaſon: "We muſt ſtill balance according to our convenience, between the two eſtabliſhed modes of tedding or drying in the ſwathes: the latter, paſt all queſtion, being far the moſt advantageous both in regard to the weight and nutritious quality of the hay, granting it received no rain." We are of opinion that tedding is too common a practice in England; it ſhould only be adapted as a reſource in ſettled weather.—P. 117. "Good ſmutty wheat," wants explanation. 137. The calendar concludes with an excellent piece of advice: a

recommendation to the farmers of ſettling a correct General Stock Book annually. Why cuſtom ſhould exempt the occupation of the farmer *only* from this rational care, it is difficult to determine; poſſibly becauſe farmers *could* not write a century ago, it is preſumed they may go on very well without writing at preſent. Perhaps our author goes too far in propoſing Italian book-keeping; but he has alſo ſhewn eaſy expedients for diminiſhing the trouble of that method without any eſſential omiſſions. The very obvious propriety of eſtimating the profit or loſs of an extenſive concern will immediately determine the rational farmer; and our author's demonſtration of the facility of ſuch examination will (we hope) give effect to his concluſive arguments.

The ſecond part opens with conſiderations on Hiring and Stocking Farms. In this part, his ideas would ſeem, to the ordinary cultivator, to verge towards the *Ferme ornee*; but we are well convinced that in the lapſe of a few years, our improving country will almoſt attain our author's ſtandard of a farming eſtabliſhment. He is particularly intelligent in ſtating the rational obligations of a Leaſe; a ſerious benefit to the Community would ariſe from a general peruſal of this article by all Landlords. He ſtates the expence of ſtocking a farm from three to fifteen pounds per acre. It gives us pleaſure to have the countenance of ſo good a Judge in our opinion, that under the operation of the New Huſbandry, ſuch an augmentation of uſual capital may be profitably employed on the ſoil. This is a benefit equal to doubling our land, and ſurpaſſes even an effectual general incloſure Bill in utility. When ſhall we learn to colonize at home?—P. 165. A good general account of manures comes next. He has not adopted any of the quackery extant on this head: nor has he countenanced any modern chemical opinions, which have pronounced on the pabulum and ſubſtance of plants with little trouble of experiment.—The chemiſts ſhould be content to do one thing at a time; the vegetable world is not to be pronounced on from light and indirect obſervations.—On hog-dung, the author diſplays his vivacity without deciſion. Of human excrement he ſpeaks freely and without prejudice: of courſe he recommends more care and attention to this valuable ſtinking manure. On chalk he is not ſo preciſe as becomes a didactic writer.—202. The account of warping is intereſting and concluſive; as giving information of a valuable novelty, this article will excite much attention.—205. "A certain ſpot was warped to the depth of ten inches in eight hours." If this be not an erratum of the preſs, it wants explanation.—207. The advantages of draining are happily diſplayed, and thence the author paſſes to a favourite topic, his farm-yard. We ſhould have examined every nook of the frontiſpiece with a perſonal intereſt, had it been diſtinctly ſtated as the author's *own Farm-yard*. It had ſeemed ſomewhat like an introduction to the premiſes of a uſeful, entertaining acquaintance. Perhaps the next Edition may give us that gratification.—237. The author has dropped luminous ideas on the general extirpation of virmin. We think he might put the enormous detriment from rats in a ſtronger light, by a rough calculation of national damage. It is highly probable that they devour twice as much corn annually

as the utmoſt known import of Great Britain. On the modern improvements of the implements of huſbandry, the author triumphs over the old ſchool without fear of contradiction. Some ſevere obſervations on bigotted purſe-proud farmers are appoſitely introduced inp. 246. The author ſeems to ſpeak of the Thraſhing-machine as having paſſed the ordeal of experiment with ſucceſs. We eagerly *wiſh* his opinion may be well-founded; *we* have ſeen nothing ſo deciſive as to do away all doubt.—281. Of fences the detail is ample; no deciſion is given, but much information of the beſt authority.—315. The author has got over the good old Engliſh prejudice of growing our own timber; however, a compromiſe in this caſe would not be difficult—Baniſh timber from the hedges, and plant it in the numerous waſtes. The arguments againſt the practice of fallowing are fully diſplayed, and the poſſibilty of uſing every farm as a ſtock-farm aſſerted with ſucceſs. The dung of the cattle is *as* efficacious as the fallow, and the uſual profits on ſtock a clear *addition* to the arable produce.—P. 329. On drilling (as might be expected) we have an ample diſcuſſion. It gratified us much to find TULL ſo honourably mentioned as the father of that practice. His name ſeems to have been ſtudiouſly ſlighted by the numerous Drilling Patentees of later times. Though we have purſued Tull's Work as often as it merits, we were not aware that he laboured under any pecuniary difficulties; and it is with regret that we find we muſt add his name to the illuſtrious catalogue of thoſe who have benefited an ungrateful world to their own detriment. Our own opinion of Drill Huſbandry would have been recited in few words. That conſidered ſimply as planting corn in lines, it is frivolous. With the aſſiſtance of hand-hoeing, ſomething better: but on the original Tullian plan, with the full benefit of horſe-hoeing, the moſt important diſcovery ſince the time of Ceres and Triptolemus. Our eſtimation of Tull is ſo high that in huſbandry we ſhonld deſcribe him as formerly his name-ſake Cicero was ſpoken of in literature; "*Inde ſe profeciſſe ſciat, cui Tullius valde placebit.*" We wiſh to ſee a new edition of his work, with a more copious index.

P. 381. The author ridicules dibbling with juſtice and ſucceſs.—P. 406. The pedantry of a long courſe of crops is properly noticed. Till improvement is at a ſtand, and the weather of future years has been ſettled, ſuch an affectation of preſcience is abſurd.—P. 409. Steeping corn is not approved of. On this topic the author diſplays his powers of raillery.—P. 412. We are ſorry the author has inadvertently expoſed himſelf to cenſure in aſſerting the equivocal generation of inſects. We thought this unphiloſophical opinion had been quite exterminated. Why ſhould an inſect be generated from putrefaction any more than a man, a dog, or a Tom-tit? Doubtleſs, the fitneſs of the *nidus* tempts the depoſition of eggs, and thus cauſes the millions of animalculæ, which await there the ſeaſon of their winged metamorphoſis. This is quite enough to account for the phœnomenon. The experiments of Leuenhoëck and Malphigi ought to be repeated without ſucceſs, before a man ſhould oppoſe theſe great men, on a ſubject to which ſo much time and argument was once devoted.—P. 418. On the change of ſpecies by culture, the deciſion is not made: we know not how an author, who calls the Cole-

ſeed Plant improved Charlock, and Chicory Dandelion, could expreſs himſelf doubtfully on this ſubject.—476. The various readings on the Exhauſting Nature of Potatoes are happily introduced and appoſite.—P. 499. The treatment of cattle appears judicious: it is certainly humane. Shelter in the winter, and plenty of food, are the ſpecifics for profitable returns from market. This part of the volume is very valuable.

We obſerved, in reading this work, that the care about words and phraſes has been a little neglected. Provincial expreſſions are too often met with; drouth and drougth, for drought; deceptious; thrift (the act of thriving); hayſell; ſhack; fog; to ſoil (to feed with green meat); crone (an old ewe); and ſome others are exceptionable. But we are moſt ſurpriſed at finding Tull's *Drill-huſbandry* transformed into *Row-culture*. We do not ſee the benefit of this innovation in phraſe: perhaps it ſtrikes us *more*, as ſeeming diſreſpectful to ſo great a man. But the next edition may rectify theſe trifling errors. If, however, new words are neceſſary in an improving ſcience, ſurely we ſhould be furniſhed with a Gloſſary at the end.

We have reviewed this article at ſome length, becauſe it well deſerved notice; as a manual of arguments for the new Husbandry, it may have important effects on agriculture. It is ſeldom that an Epitome is written with an agreeable vivacity. But this work is a complete exception to that rule. A competent knowledge of the huſbandry of Flanders and the continent is diſplayed throughout; and we pronounce, without heſitation, that ſo much valuable argument and information on agriculture was never offered to the public in ſo ſmall a bulk. It will doubtleſs be appreciated as it deſerves.

II. *The Queſtion of Scarcity plainly ſtated, and Remedies conſidered. by* ARTHUR YOUNG, ESQ. *Secretary of the Board of Agriculture.* London, 1800, Price 2s.—From a ſcarcity, conſtantly reſults the ſubordinate evil of numerous, ſilly publications on the ſubject. Every oracle of a little circle, in the habit of deciding peremptorily without diſcuſſion, gives his opinion in a loud tone, and ſometimes proceeds to augment the ſcarcity (of paper at leaſt) by printing his crudities. Such a man is ignorant of the various, the minute knowledge requiſite to the taſk; and, if he has not ſubmitted to anxious detail and profound meditation on the ſubject, may reſt aſſured, that nothing but cautious ſilence can ſecure him from groſs error, and public injuſtice. Different from ſuch an empty pretender appears before us the author of this work, a man of habits of reſearch and reflection on all the extenſive hiſtory of corn. Yet this gentleman, rather chuſes to produce *facts* than *opinions*, and propoſes the police of corn as a *future ſcience*, when the undigeſted materials on hand, ſhall have been congeſted in a goodly uniform fabric.

The author firſt explains the frequency of error in eſtimating a crop, from the very partial obſervation which can come before the eye of a ſtationary cultivator, and narrates the effect of extenſive travels. Hence, thirty years ſince he eſtimated the average crop of England at twenty-three buſhels of wheat. The reports from the counties to the Board of Agriculture have confirmed the ſtatement; and farther evi-

dence is added, which makes it more certainly accurate than could have been expected. The deficiency is then examined, and the authorities on which it is here eſtimated at one third, are very ample. The information produced by the circular letter, alſo corroborates the extreme variations of the beſt individual opinions. The ſtock in hand is next examined, and is ſufficiently proved to have been very ſcanty at laſt harveſt, and the author combats the vulgar prejudices of monopoly, &c. with much ability.—The proportion of the price (full double) to the deficiency (a third) is ſlightly diſcuſſed,—it requires mature deliberation and fundamental principles.—The remedies of the ſcarcity propoſed by the author are theſe. 1. A premium on potatoe-planting—a doubtful meaſure.—2. A prohibition of corn-food to pleaſure horſes—an excellent expedient, and practicable; it is wonderful that Parliament did not adopt it.—The childiſh delight of ſleek coach-horſes could not ſurely influence their grave deliberation? 3. Permiſſion to the poor to plant potatoes on waſte ſpots, is approved of; but the breaking up commons for one year, is ſcouted as ſuch an ignorant abſurdity deſerved. The author then propoſes in order, "1ſt. To aſcertain the price of corn,"—this we think *not requiſite* on his own principles.—"2d. General Incloſure."—A ſolid remedy, but we fear *diſtant*.—"3d. Give land to cottagers,"—copied from Mr. Pitt's abſurd poor-bill of 1795. We wonder a practical man ſhould think of furniſhing cows for certain ſtarvation.—"4th, Parochial relief to be *always* in future adminiſtered in rice, &c." A good idea for the contemplation of the legiſlature.—"5th. Number the people."—A meaſure, very neceſſary.—Even the aſſumptions of this treatiſe at eight millions, are perhaps, little more than half the real number. We ſhall diſcuſs this momentous enquiry more at length in our next.—"6th. Return of acres ſown annually."—A uſeful auxiliary meaſure. Thus far we ſee little which is not commendable; and eſpecially, we praiſe an official man for ſuffering ſo little of party-politics to enter his pages. A pious admonition cloſes the pamphlet. It is common-place declamation, and implies too great an aſſumption and knowledge in the counſels of the Almighty.—If abundance be the oppoſite of ſcarcity, the author muſt (in conſiſtency) infer altered ſentiments in the Deity every two or three years. Silence on ſuch an occaſion, is the only true reverence; and a high authority has informed us that "God cauſeth his ſun to ſhine on the juſt, and on the unjuſt."

This publication contains much information, much ſound argument, and much originality of reſource. We have avoided (for brevity's ſake) any notice of ſome difference of opinion which we feel, and conſider ourſelves, and the public much obliged to the reſearch and calculations of Mr. A. Young in this pamphlet. It is not conſpicuous for careful methodical arrangement, but will be purchaſed by all who wiſh to think and ſpeak moderately and properly on the preſent untoward ſituation of a diſtreſſed people.

III. *The State of the Hop-Plantations.* By W. RANDALL. London, 1800. Price 2s. 6d.—The apparent magnitude of an object in optics, depends on its propinquity.—Thus, hop-planters, and hop-merchants always ſeem to fancy that their concerns are as important to the public as to themſelves. At preſent, Mr. Waddington's extenſive purchaſe

occupies the notice of these men; and the author stands forward to clear the question. According to him, the hop-planter is the party injured by too low a price, and whose grievances call for Parliamentary redress. The illegality of the use of quassia is narrated, and its unwholesomeness, because it may be *old* when mixed with *new* malt. Therefore it poisoneth!—We have a reverence for quassia, because it prevents the hop from being a necessary of life, and thereby secures us against a famine of sound beer. As the pamphlet all through neglects the settled laws of the price of every commodity, it is not easy to follow its confused ratiocination, andwe shall relate its contents succinctly. It is said, that since 1764, the *long tailed fly* has devoured the hop every alternate year; but, from the author's table at the end, it has not been the case since 1780. He then says, hops are sold by the planter immediately after drying, and sometimes sooner. If the planters lost by this practice, they would discontinue it.—Their poverty is not so urgent. The author then proceeds to a statement, which if accurate, would be valuable—as it would establish the price of hops *to the planter*. But though the expences per acre, are very moderately estimated, the *number* of acres is taken at random at 45,000. This assumed as the multiple of the expence per acre, displays a tremendous balance against the planter at the price of the last five years. We rather infer from this apparent balance, that the number of acres is much less than 45,000. Perhaps by half, perhaps by a third. But our guesses are as futile as the author's. In page 35, he says, the temptation of planting hops is the possibility of sudden acquisition of fortune, as in the lottery.—This is true. Page 37. "The London dealers *should* offer a generous price."—How childish! They (like all people) buy every commodity as cheap as they can. Page 92. "Some people think the hop-plantation a national loss."—It must be so indeed, according to our author's statement; yet no hop-grounds are grubbed up. After this, dropping his subject, he proceeds to lay down many political axioms about taxation, population, war, peace, &c. Of these things, he knows still less than of the hop-trade. He talks of the size of farms, but leaves the question undecided, after his vague rambling manner. He proposes, that tenants have a permanent property in any improvement.—That has formerly been done in Flanders by mutual agreement, and in that way only can take place any where. Who would recognize the rustic labourer in this description? "Their youth are brought under less control, and imbibe an unruly restless disposition. The husbandry business is also the grand receptacle of the unfortunate, unable, improvident, and *depraved* of the whole human race." The author concludes with a ludicrous solemnity, adjuring the London dealers and Mr. Waddington to regard their mutual interests in the present altercation. The different parties concerned in the hop-trade (and among them the planters) will gain by the trade or quit it. Of this the author may rest assured, and repose peaceful on his pillow.

The most valuable part of this confused production, is the last half sheet, which, probably contains an authentic statement of the produce of the hop-duty, from 1711 to 1799. From this, it is evident, that hop-plantations *increase*, and consequently, that they are *lucrative* to the planter. Indeed, the accretion of wealth at Farnham has this only source.

HISTORY.

National Tranſactions,

CIVIL AND MILITARY.

EAST INDIES. From India we learn, that a Court of Inquiry has been held at Madraſs, on the conduct of the contractors for ſupplying the army during the late ſiege of Seringapatam. It appears, that a ſcarcity prevailed in the Britiſh camp, which if the ſiege had not terminated ſo ſpeedily, muſt have been productive of fatal conſequences. The court found that this ſcarcity aroſe from a concurrence of unforeſeen circumſtances, and therefore the contractors were honourably acquitted.

The governor-general of India was preparing to eſtabliſh an effectual marine to cruize near the Ganges and protect the trade from the depredations of the enemy.

Late accounts from India mention that tranquillity prevails in all the company's ſettlements. That Zemaun Shaw ſtill kept his poſſeſſion near Lahore, and had poſted troops at Maultan. His intention ſeems to be, to keep poſſeſſion of the Panjab, or the Delta of the Indus. The Seeks have taken a number of cattle from the detachments ſent by the Shaw to ſcour the Panjab.

From Seringapatam they write, that a cheſt of treaſure has been found concealed there, and every effort is made to diſcover treaſure, ſaid to have been hidden before the ſurrender.

Mr. Dundas having reſigned the place of treaſurer of the navy, will now have more time to attend to the very important affairs of India. He has, it is ſaid, many conſiderable reforms in agitation, both reſpecting the revenues which the company enjoy in India, and alſo reſpecting the commerce. It has been in contemplation to lay open the trade, under certain reſtrictions; but we now learn, that the Board have reſolved to increaſe the quantity of tonnage, which individuals are permitted to ſhip to that country. This is now limited to 3000 tons each year.

From Madraſs they write that the Cotiote country is now perfectly tranquil. The cauſe of the diſturbances has been traced to its real ſource. Among the Nairs, the chiefs and warriors of the country, the ſingular cuſtom prevails of the woman being allowed a plurality of huſbands, for which reaſon the right of inheritance, inſtead of following in the male line deſcends to the ſiſters' children; hence the ſovereignty becomes a diſpute between two ſons of different ſiſters. By the interference of government, the rightful prince has been eſtabliſhed.

By another overland diſpatch, which arrived on the 14th May, we learn that every thing was quiet when that diſpatch came away. Commodore Blanket, who had been cruizing in the Straits of Babelmandel, had returned to Bombay, refitted his ſquadron, and was preparing to ſail again to the ſame ſtation.

In the Bombay gazette of the 15th inſtant, there is a letter dated from Canton in China, on the 8th of November, 1799, giving an account that the outward-bound fleet for China had experienced a violent ſtorm on the 20th October, when in latitude 13, 23, which had prevented the fleet from making a direct paſſage, but they had afterwards got ſafe into port.

Egypt and Turkey. When our laſt number went to preſs, we were un-

certain as to the terms on which Egypt was to be ſurrendered to its old maſters by the French. It now appeared that the whole tranſaction was carried on between Sir Sidney Smith and General Kleber by letter, or by delegates on board Sir Sidney Smith's ſhip, the Tyger.

The miſerable government of Turkey has never appeared in a more contemptible light than with reſpect to Egypt. The dilatory conduct of the vizier has permitted two of the late beys, Morad bey and Ibraham bey, to take poſſeſſion of their old governments; and, if they eſtabliſh themſelves firmly, all the beneficial effects of the evacuation of Egypt, by the French, will be loſt to the Turks.

Beſides this, a new rebel has riſen in European Turkey, a deſcendant of the former Khans of the Crimea, who had been liberated from priſon by the mediation of the port, has inſtigated the inhabitants of Romelia to revolt, has raiſed troops to the amount of 15,000 men, pillaged the neighbouring countries, and is preparing to fight the Ottoman forces. He lays claim to the throne of Turkey.

About ſeven thouſand of the convention troops of Egypt, are ſaid to have arrived on the coaſt of France, and are ordered to the iſlands of Hières to perform quarantine, but late accounts render this doubtful.

Naples and Malta. Malta ſtill holds out, and if we are to believe the French Journals, a part of the convoy, which eſcaped when the Genereux was taken, had ſucceeded in getting in. The William Tell, the only ſhip of the Nile fleet which had not been taken or deſtroyed, had been, for ſome time, blocked up at Malta. To eaſe the expenditure of proviſions, the wounded and other uſeleſs perſons had been put on board her, with a view to eſcape to France; but, in this attempt, ſhe fell in with his Majeſty's ſhip Fondroyant, and others of Lord Keith's ſquadron, and, after a ſmart action, was captured.

The diſturbed ſituation of the kingdom of Naples ſtill prevents the monarch of that country from returning to his capital. He and his family remain at Palermo, where they entertain themſelves with fêtes and amuſements, with as much glee as if both his kingdoms were quietly under his dominion.

Several tranſports from Egypt with troops of the convention on board, are ſaid to have been ſtopped by two of Keith's ſquadron, and ſent into the ports of Sicily, where he means to detain them, until he knows the determination of the Britiſh cabinet on that head.

Other Italian ſtates.—In the northern parts of Italy, the campaign has at length opened. Gen. Melas, with a powerful army, on the 6th April, made an attack on the different poſts of Gen. Maſſena's army, which occupied the various paſſes into the Genoeſe territories, and which muſt be forced before any attack could be made upon the city of Genoa. In the firſt attack, on the Bochetta, he failed, and was driven back with conſiderable loſs. In that by the river Bormida, he ſucceeded better; drove the French from the heights of Montenotte, and compelled them to fall back as far as the Borghetto. The Auſtrians took the fort of Vado; but the French had time to throw ſuccour into Savona. This manœuvre ſeparated the right wing and centre of General Maſſena's army from the left wing; and, according to the Auſtrian account, gave them near 2000 priſoners. Maſſena, however, the following days, had his revenge, and, in ſeveral very ſmart actions, drove back all the Auſtrian poſts to the eaſtward, and took a great number of priſoners. General Suchet, who commanded the left wing, recovered ſome of the ground he had loſt, and made 1800 priſoners. General Hohonzollern attacked a ſecond time, and carried the important poſt of the Bochetta on the 9th, a ſucceſs which threw the army of Maſſena into very diſagreeable circumſtances; however, he made good his retreat to the heights of Genoa, which are of great ſtrength, and, if he has proviſions for his army, will enable him to maintain his ground until ſuccours can arrive. General Suchet, who

commands the left wing of Maſſena's army, has had many actions with the enemy, in which, although he has not been able to rejoin Maſſena, or relieve Savona, has yet made many priſoners, among whom are 500 men landed by Lord Keith. He writes word, that Maſſena has carried into Genoa 3000 priſoners more than the Auſtrians made on him. If ſo, this loſs, and the immenſe number of killed and wounded in Melas's army, muſt have weakened it very conſiderably. The Auſtrians, in the Vienna gazette, allow that every poſt was conteſted with aſtoniſhing reſolution, and muſt have coſt them many thouſand men. Forces are marching from many points to relieve Genoa, the particulars of which may be ſeen under the head of France. The poſition of the armies is as under—Maſſena poſſeſſes the heights round Genoa, and Melas's army ſurrounds him, but has on his right flank Suchet's army, ſtrongly poſted at Borghetto. Since writing the above, further accounts have been received from General Melas, by which it appears that another ſevere battle was fought on the 17th May, in which Maſſena was driven within the lines of Genoa; but General Melas ſays, he had driven the country, and carried into the city all the live cattle. A circumſtance which will not only enable Maſſena to hold out, but will alſo diſtreſs Melas's army exceedingly. The latter writes, that his troops had been ſo much fatigued with the many dreadful battles they had fought, that he had been obliged to entrench himſelf, and reſt for ſome days.

SPAIN.—This country ſeems doomed to ill fortune ſince her connexion with France. A convoy of two frigates, and ſeveral merchant ſhips, bound from Cadiz to South America, of great value, had been fallen in with, and the greater part captured by an Engliſh ſquadron, under the command of Admiral Duckworth. The prizes are arrived at Gibraltar, and are valued at 700,000l. On board the two frigates, is an immenſe quantity of quick-ſilver; the loſs of which, excluſive of its real value, will be ſeverely felt in America, as the ſilver dug from the mines there cannot be refined without that uſeful article. The Spaniſh fleet which went into Breſt, ſtill remains there blocked up, together with the French fleet, by the Engliſh under Earl St. Vincent. We are frequently alarmed with accounts of their making preparations for ſailing; but it ſeems to be the policy of the new government of France, to keep this fleet always in that ſtate, and by that means oblige the Engliſh to keep conſtantly at ſea a much more formidable fleet to block them up.

FRANCE.—The government of this country ſtill go on iſſuing proclamatoins, the contents of which prove, that they have ſome difficulty in rouſing the ſpirit of the people. Indeed the army of reſerve at Dijon increaſed but ſlowly, according to their own accounts. The Auſtrians had ſucceeded in ſurprizing Mount Cenis; but it was again recovered by General Thureau, and above half the troops employed in the capture were cut off.

The affairs of Italy have at laſt determined the Grand Conſul to leave Paris, with an intent, as is ſuppoſed, to relieve Maſſena. The camp at Dijon ſeems to have broken up, or at leaſt a very great part of that army have marched from the ground. Twenty five thouſand men have taken the rout of Geneva, under the command of General Berthier, and another part has moved towards the Rhine. The former column, it is ſaid, is to be joined at Geneva by the Grand Conſul and the much celebrated Carnot, both together will undoubtedly exert every effort to raiſe the ſiege of Genoa; and if they ſucceed, Melas cannot fail to be in a very dangerous ſituation. If Maſſena's army ſhould be loſt to France, the Grand Conſul ſeems entitled to all the blame, as his dilatory ſtay at Paris appears to have enabled Melas to make the rapid progreſs he has.

On the Rhine, affairs have gone better for the French. General Moreau, whoſe conduct, as a general, has often been the admiration of Europe, by his opening this campaign, has gained a great acceſſion of military character. His plan for croſſing the Rhine, ſeems to have completely deceived the Auſtrian

general Kray. He began his movements on the 25th April. St. Cyr, who commanded his left wing, paſſed the Rhine at Kehl and Briſac, and drove the enemy before him. This drew Kray's attention, and enabled General Moreau himſelf to paſs at Baſle; Lacombe, with the right wing, to croſs at Schaffhauſen, and, altogether, to attack the Auſtrian's poſt in front and flank, drive them in, and, in the end, form a complete junction of the whole French army, in front of the Auſtrian line at Stockath. The reſult of theſe ſucceſſes gave to the French 1500 priſoners, ſix pieces of cannon, and the fort of Hohenweil, in which is 80 pieces of ordnance. This favourable beginning ſeems to have been only a preſage of the ſucceſs which was to follow, for, on the ſecond and third of May, Moreau attacked the Auſtrians, and, by the account tranſmitted by the telegraph, took 7000 priſoners and nine pieces of canon. The Auſtrian accounts admit, that Kray was obliged to retreat to Moſkirk, where, on the 5th May, another battle ſeems to have been fought, in which, according to another telegraphic diſpatch, the Auſtrians were defeated, and their loſs, in killed, wounded, and priſoners, was immenſe. This account is alſo, in ſome degree, confirmed by the news from Germany, and Mr. Wickham's diſpatches, which admit, that the Auſtrians had again retreated to Retlingen on the Danube.

By theſe accounts, it is evident, that the Auſtrians have been compelled to make a retrograde movement of not leſs than fifty miles. Their preſent poſition is evidently taken to cover their great magazine at Ulm in Suabia; on the preſervation of which, their ability to continue the campaign depends. The Auſtrian troops in the Palatinate, after having garriſoned Phillipſburg, are all marched to reinforce General Kray. As ſoon as this is effected, except this garriſon, there will not be an Auſtrian corps within fifty miles of the Rhine.

HOLLAND.—Both chambers of the legiſlative body of this country, have permitted the importation of raw materials of every ſpecies from Great Britain, provided it is not of the growth of that country, and alſo from Brabant, not being of the growth of Great Britain.

No burgher, or military man, is permitted to go out of Amſterdam without leave. An attempt to break through this rule occaſioned a tumult, and, in the affray, one man loſt his life.

The Dutch admiralty are certainly preparing more ſhips for ſea, Two of their ſhips of war, one of the line, and a frigate, laden with ſtores, but without any guns mounted, attempting to run from one part of Holland to another, but, in their paſſage, fell in with ſome of the Britiſh cruizers, and were captured.

Several couriers extraordinary have lately been received by the Batavian directory, who have had many ſittings, at the concluſion of which couriers have been diſpatched various ways. The troops, both Batavian and French, are in motion. General Cortaux is forming a camp behind the Meuſe, and another is forming on the banks of the Moſelle.

DENMARK.—By the judicious government of the miniſter of this country, Denmark has been kept in peace, and has performed every act of friendſhip to the belligerent powers. But the time ſeems to approach faſt in which ſhe can no longer behold the conteſt with indifference. The treaty which has lately been concluded between Ruſſia and Sweden, with reſpect to the protection of each others flag, cannot fail to induce Denmark to join, in a plan which tends to ſecure the freedom of the Baltic navigation, and to enforce the principles of the armed neutrality to which Denmark was a party during the laſt war.

SWEDEN.—It is with concern we have obſerved, that the ties which bound this country and Sweden in terms of amity, ſeem for ſome time to have been leſſened. The ſeizure of the two Swediſh convoys above a year ago, gave the firſt alrrm to the Swediſh monarch. The condemnation of one of them, by the court of admiralty, furniſhed a greater cauſe of complaint; and the

procraſtination of the Privy Council, in determining the appeal in that cauſe, will, we fear, be productive of more ill-blood. Soon after the ſeizure, the Chevalier Aſp, the Swediſh envoy, went home, and Baron Sylverjelm, whom he left as *chargé des affaires*, is now preparing to return. A perſon, it is true, is coming in his room, but of little or no conſequence; and it is a well known fact, that Mr. Hailes, the Engliſh ambaſſador in Sweden, has not been at court for a long time—has been much diſcountenanced by the King and court, and is now coming home. On the whole, we cannot but lament that policy which has alienated Sweden from this country, and thrown her into the arms of Ruſſia.

RUSSIA.—The Emperor, on a requeſt made by the Britiſh government, has permitted the exportation of barley and wheat from Courland. Yet, notwithſtanding this appearance of friendſhip with England, and his recent connexion with Auſtria, it appears almoſt certain that he has entirely abandoned the cauſe of the coalition. Nor does the cauſe of the Engliſh appear to be in much more favour with him; for we well know, that Sir Charles Whitworth, our ambaſſador, is in ſome ſort of diſgrace; and many letters from the continent aſſert, that the Emperor has reſtricted the Engliſh from leaving Peterſburg until his further pleaſure is known. Among other ſhips which were conveying the French troops from Egypt, were two bearing the Ruſſian flag, which have been ſtopped by Lord Keith, a circumſtance which will not tend to conciliate matters. The ſhips of war belonging to Ruſſia, which have been for ſome time aſſiſting the Britiſh fleets, are, we are informed, ordered to return home, and the troops from Jerſey are believed to have received the ſame order. To what cauſe theſe changes, with reſpect to the connexion of Ruſſia with England, are to be attributed, we are at preſent at a loſs to determine.

AUSTRIA.—The Emperors of Ruſſia and Germany, who have been fighting with ſuch ardour in each others cauſe, are now, moſt certainly, on very precarious terms with each other. Count Cobentzel, the Auſtrian miniſter at Peterſburg, has for ſome time been in ſuch great diſgrace, that even a viſit paid to him, by the ambaſſadors of powers in friendſhip with Auſtria, has given offence. The Count of Wirtemburg, who has been ſent as envoy extraordinary from the court of Vienna to that of Peterſburg, has not been able to procure acceſs. Auſtria is endeavouring to conciliate, but hitherto without effect. Indeed the ſituation of Auſtria now appears extremely critical; and if her arms are not ſucceſsful, both in Italy and Germany, ſhe muſt very ſoon ſubmit to a moſt humiliating peace with France. In the former country, her armies, although ſucceſsful, are in a very precarious ſituation, and, on the Rhine, ſhe ſeems to have experienced a reverſe of fortune, which will not be eaſily retrieved. The report of a peace being negociating between Auſtria and France is again revived.

PRUSSIA.—The monarch of this country ſtill ſteadily maintains his neutrality, and has even carried it ſo far, as to refuſe a paſſage to the King of Sweden's quota of troops, going from him, as Duke of Pomerania, to join the army of the empire. The cabinet of this young monarch ſeems too wiſe to fail taking advantage of the preſent critical ſituation of affairs. In peace with France and Holland, and looked up to as the protector of the north of Germany, he has only to avail himſelf of the Emperor Paul's preſent breach with Auſtria, to form an alliance, which would place him beyond the reach of any attacks from that ambitious power Auſtria. This once effected, the deſcendant of the great Frederic may aſpire to what he could never hope to obtain, the ſovereignty of Germany. It is certain, that of the eight electors, the King of Pruſſia has a great chance of procuring, by friendſhip or coercion, the votes of a majority.

GERMANY.—A part of this country is happily relieved from the horrors of war, by the ſteady conduct of the King of Pruſſia, who maintains its neutrality. The other parts have to dread the ſucceſs of the French, for as

moſt of the princes of theſe parts have joined in the coalition againſt France; in caſe of the armies of this power being ſucceſsful, they can have no hopes of mercy, but will moſt certainly be ſeverely dealt with by the conqueror. Wirtemburg however, ſeems to claim an exemption, as the ſtates of that country have vigorouſly oppoſed their Duke in raiſing troops againſt France. The Prince and Princeſs, we are told, have been compelled to quit their reſidence, and retire farther into Germany.

WEST INDIES.—By advices from St. Domingo, we learn, that Jacomel, a poſt of much conſequence, has been evacuated by Rigaud, the Mulatto general; an event which cannot fail to encreaſe the power and influence of Touſſaint, the black chief.

The planters of Jamaica ſeem to be under great dread of the arrival of ſome black regiments ordered from the Leeward Iſlands to that iſland. The planters and merchants of London have had two or three meetings on the ſubject, and have applied to Mr. Dundas to prevent the meaſure being carried into effect; but without ſucceſs.

Ireland.—The buſineſs of the Union, although carried with ſuch a triumphant majority in the two houſes, ſtill meets with very conſiderable oppoſition without doors. A meeting of the freeholders of the county of Dublin was held, for the expreſs purpoſe of petitioning his Majeſty againſt the meaſure; and a petition from thence has been preſented.

The Iriſh ſtate priſoners, as they are called, having obtained permiſſion to tranſport themſelves to America, are preparing to embark for that country.

The reſolutions of the Iriſh parliament having been accepted by the two houſes of parliament of Great Britain, have been returned to Ireland with ſome amendments.

A loan has been made for this kingdom, for the preſent year, for a large ſum. The terms propoſed were to give a debenture of 100l. bearing 5 per cent. intereſt, and to take the leaſt quantity of Treaſury bills, payable in 1803, and bearing five per cent. intereſt. Mr. White of Dublin was the loweſt bidder, he took 91. 15s. per cent Treaſury bills. Iriſh, five per cents. ſoon after roſe from 87 5-8ths to 91 and a half.

By the laſt mail we learn, that the propoſition reſpecting the union, are now converting into bills, and paſſing through the houſes, with the ſame majority, or rather greater than the original reſolutions.

GREAT BRITAIN.—Parliamentary Affairs.—On the 2d of April the Duke of Portland preſented to the Houſe of Lords a meſſage from the King, ſtating, that he had directed the joint reſolutions of the two houſes of Parliament of Ireland on the ſubject of a propoſed union to be laid before them, when Lord Grenville moved that the papers ſhould be printed and taken into conſideration of the houſe on Monday the 21ſt inſtant. The like meſſage was delivered by the Chancellor of the Exchequer to the Houſe of Commons, and ordered to be taken into conſideration on the 19th March.

On the third, the Commons took into conſideration the bill to prevent the Removal of the Caſual Poor, when, on a motion of Mr. Baker, that the Speaker ſhould leave the chair, the houſe divided; noes 30, ayes 23; majority againſt the bill 7.

The Commons received from the Lords the bill for extending the Time for Bodies Corporate to redeem their Land-tax. To this bill, which was a money bill, the Lords had made ſome amendment; but the Speaker, aſſuring the houſe that the amendments were merely verbal corrections, the houſe agreed to them.

On the ſecond reading of the bill for the more effectual preventing the Crime of Adultery, on the 4th, in the upper houſe, a long debate took place, in which the Duke of Clarence and Lord Mulgrave oppoſed the bill, which was ſupported by Lord Aukland, the Earl of Carnarvon, Lord Eldon, the Biſhop of Rocheſter, &c. when the houſe divided, for the bill 30; againſt it 11. The houſe then adjourned for the holidays.

On Thurſday April 17th, the Houſe of Commons met again, when, on a motion of Mr. Roſe, the conſiderations of the King's meſſage reſpecting the union with Ireland was poſtponed to Monday. On the ſecond reading of the bill to amend the Income Bill, Mr. Tierney objected to it on account of informality, when, after a very long converſation, in which ſome of the clauſes of the bill were very ſeverely reprobated, the houſe divided, on a motion that the bill be read on Friday ſe'n-night; ayes 85; noes 20. The bill was afterwards withdrawn.

In the Houſe of Lords, on Monday the 21ſt of April, Lord Grenville moved to go into a committee on the ſubject of his Majeſty's meſſage relative to a Union with Ireland. This was oppoſed by Lord Holland, who pointed out the inconveniences which appeared to him as likely to ariſe to both countries from the meaſure. His Lordſhip was anſwered by Lord Grenville and the Lord Chancellor, when, on a diviſion, the numbers were, for the queſtion 83, againſt it 3.

In the Houſe of Commons, on the ſame day, Mr. Pitt moved for leave to bring in a bill to enable the Lords of the Treaſury to iſſue Exchequer bills for the amount of the foreign ſubſidies already voted, which, after ſome objections from Mr. Hobhouſe, was agreed to. Mr. Pitt then moved for the houſe to go into a committee on the Union with Ireland, and, after a long ſpeech, in which the Chancellor of the Exchequer enumerated the advantages which would ariſe to both kingdoms by the intended meaſure, he moved that that houſe ſhould agree to the articles voted by the Iriſh Parliament, in which he was ſupported by Mr. Nichol, Sir Gregory Page Turner, General Loftus, and Mr. Dundas, and oppoſed by Mr. Grey, Dr. Laurence, and Mr. Sheridan. After a long debate the houſe divided; againſt the Union 30, for it 236. The three firſt propoſitions were then moved and agreed to.

April 23d. A bill brought into the Houſe of Peers by the Biſhop of London, for the better obſervance of Good Friday, paſſed that houſe, and was ſent to the Houſe of Commons, where Mr. Abbot moved, that a meſſage ſhould be ſent to the Lords, requeſting their Lordſhips to concur with that houſe on ſome mode to preſerve the public records. On the third reading of the bill for granting Exchequer bills to the amount of the foreign ſubſidies, Mr. Tierney objected to the bill, on the ground that remitting ſo much ſpecie abroad would be attended with bad conſequences; he was anſwered by Mr. Manning, Mr. Thornton, Mr. Dent, and Mr. Pitt; but on counting the houſe, and there appearing only thirty-three members, the houſe adjourned.

On the 25th, both houſes proceeded to take into conſideration the fourth article of the propoſed Union between Great Britain and Ireland, which reſpects the number of members to be ſent by Ireland to the Imperial Parliament. The article, on a motion of Lord Grenville's, was poſtponed to Monday. In the Houſe of Commons, after ſome oppoſition from Mr. Grey and Mr. Banks, the motion paſſed without a diviſion. On the 27th, Lord Grenville, in the Houſe of Peers, brought forward the fourth propoſition, which paſſed, after two diviſions, reſpecting the King's privilege of creating Iriſh Peers. The Houſe of Commons debated on the ſame reſolutions: the reſult in both was favourable to the union. In the Houſe of Commons, on the 29th, they proceeded to hear evidence in behalf of the woollen manufacturers.

The next day, in the Houſe of Lords, Lord Holland, after a long ſpeech, moved, "That it be an inſtruction to the committee, to whom the papers reſpecting the Iriſh Union was referred, to conſider the acts which inflict diſabilities on Roman Catholic ſubjects." He was anſwered by Lord Boringdon, and ſupported by Lord Lanſdown, who declared his approbation of every part of the terms of the Union, only wiſhed indulgence to be given to the Roman Catholics. The motion was loſt on the previous queſtion.

In the Houſe of Commons they proceeded to hear evidence brought by the woollen manufacturers. After which, Sir John Sinclair, from the committee to promote the Cultivation of waſte Lands, moved, " That to promote ſuch cultivation, the expences attending incloſure bills ſhould be diminiſhed: That, to diminiſh ſuch expence, the teſtimony of the Juſtices ſhould be admitted, as proof that due notice had been ſerved on the parties concerned: That it would be expedient to make proviſion for taxing the bills of ſolicitors and regulating the conduct of commiſſioners, and for preventing unneceſſary delay: That in caſe the land to be incloſed ſhould not exceed three hundred acres, the fees on the bills ſhould not exceed thoſe on a ſingle bill, and if only one hundred acres, then only half fees.

May 1ſt. The Houſe of Lords heard evidence brought by the manufacturers in wool relative to the clauſe in the Union Bill. In the Houſe of Commons, Mr. Erſkine having pointed out ſome errors in the bill for regulating the ſale of annuities, moved for leave to bring in a bill to amend the ſame. After which the houſe proceeded to debate on the fourth article of Union. Mr. Pitt contended it ought to paſs as it now ſtood, in which he was ſupported by Mr Peele. Mr. Wilberforce pleaded, that an amendment was neceſſary, and moved to omit ſo much of the reſolution as permits the exportation of raw wool to Ireland, in which he was oppoſed by Mr. Pitt and others; and, on a diviſion, his motion was rejected, 53 for; 133 againſt. The houſe then divided on the main queſtion, which paſſed.

The Commons, on the 2d May, proceeded to hear the report of the committee of their whole houſe on the Iriſh Union. Dr. Laurence, in a long ſpeech, oppoſed the bringing up the report, in which he was ſupported by Mr. Banks. On a diviſion, the numbers were, in favour of the report, 208; againſt it, 26.

On Monday, May 8th, the Duke of Richmond's bill for allowing him a Commutation in lieu of the Duty he enjoyed on Coals, was brought in and read. Both houſes were employed on the buſineſs of the Union, and after ſome motions of amendments propoſed being negatived in the Houſe of Commons, the report was brought up, read, and agreed to, and a conference deſired with the Lords. The next day a conference was held, and the reſolutions of the Houſe of Commons delivered to the Lords. Theſe reſolutions, and the amendments, were taken into conſideration by the Lords on the 7th; and the reſolutions paſſed, with ſome few amendments. The article reſpecting the Iriſh Peers, and their privileges, produced a long debate, and an amendment was moved, but rejected by the friends of adminiſtration; on a diviſion, 48 againſt 4. In the Commons a bill was brought in to regulate Hackney Coaches and their Fares, ſo that the fare of a coach, which was before one ſhilling for a mile and a quarter, is hereafter to be one ſhilling for a mile only. On the 8th, in the Lords, Lord Grenville moved to fill up a blank in the Addreſs to the King ſent up from the Houſe of Commons with the Iriſh reſolutions, with the uſual words, *Lords Spiritual and Temporal.* This produced a long debate, in which the general queſtion of the Union was ſupported by Lord Bolton, oppoſed by Lord Fitzwilliam, and warmly ſupported by Lords Cambden, Townſend, and Weſtmoreland. The whole of this buſineſs was cloſed by a diviſion, 75 for the motion, 7 againſt it. In the Commons, Mr. Jones, M. P. for Denbigh, moved an addreſs to his Majeſty, praying to liſten to terms of peace. This motion, after ſome debate, or rather converſation, was negatived by 59 againſt 8.

Thurſday, May 15th. On a motion of Sir John Sinclair, the reſolution of the Commons reſpecting the moſt effectual means of incloſing and cultivating waſte lands, were ſent to the Lords for their concurrence.

Next day, May 16th, both houſes voted addreſſes to his Majeſty on his happy eſcape from the attempt made on his life at the Theatre by Hadfield. The Houſe of Peers then proceeded to take into conſideration the bill reſpecting Divorces, which was ordered to be printed and read a ſecond time

on Monday. The Maſters in Chancery, whoſe duty it was to attend the Houſe of Peers, being abſent, the houſe waited ſome time, and then ſent the meſſage reſpecting the addreſs to the King to the Houſe of Commons by their clerks. This being unuſual, a converſation took place, whether the meſſage ſhould be received? and it was, after ſome debate, agreed by the Commons, that the meſſage, on account of the urgency of the occaſion, ſhould be received.

Monday the 19th, the Commons took into conſideration the Lords ſending a meſſage by their clerk, inſtead of the Maſters in Chancery, and reſolved, that their acquieſcence in receiving ſuch meſſage, ſhould not be drawn into a precedent. Mr. Abbot obtained leave to bring in a bill to charge all public accomptants with the intereſt of money in their hands. Mr. Roſe moved for leave to bring in a bill to amend the Income Act; but the great bill, which was to have been brought in in the room of that withdrawn, was not yet ready.

Five thouſand Dutch troops are now in the Iſle of Wight, in the pay of Britain, and ready to embark under the command, it is ſaid, of the hereditary Prince of Orange.

Commercial Affairs.

SINCE the merchants and bankers have been accuſtomed to ſubſcribe ſo largely to government loans, as they have lately done, the approach of the days on which the inſtalments are to be made, has generally cauſed a diſtreſs for money. The fears of the commercial people are now happily relieved on that head, as the Bank have agreed to make good all the future payments on the loan of the year.

By act of 3d Geo. II. c. 26. ſect. 10, an ancient allowance of one chaldron on every ſcore of coals ſold in the port of London, is confirmed by Parliament, and a penalty of one hundred pounds laid on all perſons ſelling coals without ſuch allowance. Many dealers, under pretence of ſelling cheap, have withheld this allowance, and the London Coal-meter's office have, with great propriety, given public notice of this act, that no perſon may plead ignorance.

We have the pleaſure to inform our friends, that grain is coming in from various parts; in the firſt week in May the following quantities were entered at the port of London. Wheat, 45,757 quarters; oats, 36,138; rye, and other grain, about 6000; total, near 89,000 quarters. Near ſixty cargoes have arrived in the river ſince, and ſixteen at Hull.

Mr. Pitt has communicated to the merchants and planters concerned in the Weſt India trade, his intention with reſpect to the Slave Carrying Trade, It is to ſuſpend that branch of commerce for three or five years. At a general meeting, held at the London Tavern, to hear theſe propoſitions, the planters and merchants reſolved to oppoſe the bill, conceiving that it would materially injure their intereſt; and at the ſame time leave the queſtion.

With reſpect to the abolition of the ſlave trade, we underſtand, from very good authority, that the oppoſition to that meaſure is not near ſo powerful as it was. Since the conqueſt of the Dutch colonies, ſuch immenſe numbers of ſlaves have been imported, as to alarm the planters of our old iſlands, who conceive that cultivation will by that means advance ſo rapidly in the new iſlands, as to enable them to reduce the price of all Weſt India produce: and even the reſpectable part of the merchants of Liverpool, who are not concerned in that trade, now think it would be for the benefit of their town if it was aboliſhed.

It is an extraordinary circumſtance, that in a commercial country like Spain, regular packet boats were not eſtabliſhed to their colonies in America

before 1764. They have now many packets, well armed, diſpatched from Corunna to the Havannah every month, from whence the letters are diſpatched by ſmaller veſſels to their other ſettlements.

The agents of the Engliſh Eaſt India Company are indefatigable in ſeeking out new ſources of commerce. The governor and council of Bengal ſome time ſince ſent Captain Turner, on the eſtabliſhment of that preſidency, on an embaſſy to Bonton and Thibet, countries which occupy that vaſt ſpace of ground between the Company's ſettlements and China. That officer has publiſhed lately an account of his journey, by which we find that a very beneficial commerce may be carried on in time with thoſe extenſive provinces.

The workmen are employed at the Iſle of Dogs in excavating the ground for the wet docks and canal, and make a conſiderable progreſs. The bill for making wet docks at Wapping has, after being five years before the Houſe of Commons, reached the Houſe of Lords. Petitions are preſented againſt it to that houſe, and the petitioners are to be heard by counſel; but the houſe very properly rejected the requeſt of the petitioners to bring evidence, and content themſelves with a copy of the evidence produced at the committee of the Houſe of Commons.

Manufactures and Useful Arts.

AN ingenious gentleman of Scarborough has invented, or rather improved, a veſſel, which he calls a *life boat*; the intention of which is to preſerve the lives of ſhipwrecked mariners in tempeſtuous weather. The deſcription of the boat is too long to inſert here; her ſize is about thirty feet long and ten broad, and is improved in the keel, ſtem, and every part which the conception of the artiſt could think of to render her uſeful. But the great feature in her conſtruction is the vaſt quantity of cork employed to render her more buoyant and fit for the intended purpoſe.

The ſhameful price at which fiſh is kept up by the dealers, has induced the Marine Society to propoſe, that a fund ſhould be raiſed to build veſſels and carry on the fiſhery, and that the boys clothed by that ſociety ſhould be employed in this very uſeful ſcience.

The ingenuity of our countrymen is conſtantly producing ſome new invention, which entitles the inventor to an excluſive patent. Among others is one to Meſſrs Turner of Lane End, in Staffordſhire, for introducing a new material into the compoſition of earthen ware; another to Mr. Yates for multiplying engravings and chaſings in all kinds of metals; another to Meſſrs Douglas and Fuſel, for an apparatus for leſſening friction in raiſing heavy bodies; another to Mr. Stuart for preparing cotton yarn, and to Mr. Harmon for raiſing a knap on woollen cloth.

The grand canal in Peake foreſt was opened laſt month with great ſolemnity.

On an enquiry inſtituted by the government in India, it appears that full ſix millions of people are employed in that country in the cotton manufacture.

The Surgeons' Company, by ſome miſtake, a few years ſince forfeited their charter, ſince which two parties have exiſted among the gentlemen of that profeſſion, one of which were deſirous of procuring a collegiate eſtabliſhment, ſimilar to that of the College of Phyſicians; another wiſhed only a renewal of their charter as a public company. The former have prevailed; and, on the 12th of March, the King granted his royal patent to the members of the late corporation of ſurgeons, and to ſuch perſons as have obtained letters teſtimonial under the ſeal of the ſaid company, authoriſing them to practiſe the art of ſurgery. By this patent the ſurgeons are incorporated by the name of the Royal College of Surgeons in London, and are inveſted with the neceſſary powers to examine all perſons intending to practiſe ſurgery, to ſue and be ſued, &c. Every ſurgeon admitted by the old corporation may become a member of this, provided he ſignified his intention within ſix calendar months from the date of the letters patent, unleſs he ſhall be beyond ſeas, and

then within ſix months after his return. Government have purchaſed for the uſe of the college the Muſeum of the late Mr. John Hunter, for which they are to give, it is ſaid, 15,000l, and for which a grand room is to be built behind the college in Lincoln's Inn Fields.

The committee of the Royal Inſtitution have already entered into the inveſtigation of the following highly important concerns.

On the various proceſſes uſed in making bread, and of the means that can be employed for improving them.

An experimental inveſtigation of the art of procuring a cheap and nutritious ſoup for the poor.

The improvement of cottages, and of cottage fire places.

Improvement in the conſtruction of ſtoves for working, dwelling houſes, and of kitchen fire places, and kitchen utenſils for private families.

Improvements in many uſeful articles of houſehold furniture.

Aſcertaining, by experiments, the effects of various proceſſes of cookery upon the food of cattle.

Improvement in kitchen fire places and utenſils for ſhips, and for improving the apparatus and proceſs uſed for procuring freſh water at ſea.

Improvements in the conſtruction of lime kilns.

Experiments on the advantages of mixing clay with coal or cinders to make fire balls for fuel,

Improvement in the compoſition of mortar or cements.

On the beſt method of building cottages or farm houſes with earth rammed together, as is done in foreign countries.

Improvements in the various proceſſes of procuring iron from its ore, and in working and refining iron and ſteel.

At the anniverſary meeting of the above inſtitution, the Earl of Winchelſea was re-elected preſident. The Earl of Morton, the Earl of Aylesford, and Henry Cavindiſh, Eſq. managers for three years; the Earl Spencer, Sir William Young and Samuel Thornton, Eſq. viſitors for three years, in the room of thoſe who went out by rotation; Sir John Hippiſly Cox was choſen treaſurer in the room of Mr. Barnard, and Dr. Glaſſe re-elected ſecretary.

Agriculture.

Monthly Report of Agriculture, from the Midland Counties, for May 1800.

AN account of the ſtate of agriculture within the ſpace of time and country above ſpecified, may be given in few words. Every where the ſpring ſeeds have been thrown into the ground, under the moſt encouraging probabilities of future plenty,—the ſeaſon for this portion of the huſbandman's labour having been uncommonly fine and favourable. The timely ſhowers of rain which immediately ſucceeded, ſerved the twofold purpoſe of cauſing the newly ſown ſeeds rapidly to vegetate, and the paſtures to be cloathed with luxuriant verdure. We have now only to anticipate, or rather to *ſupplicate*, a propitious harveſt of both hay and grain; which, if realized by a kind Providence, "the complaints of the needy, and the deep ſighing of the poor," occaſioned by the dearth which has long prevailed, will be heard no more, and abundance, like the ſun burſting through clouds of darkneſs, will bleſs the land. So that, nearly in the language of the tuneful Bard of Nature, we may, with pious hope, thus addreſs the ſuffering, yet not deſponding, claſſes of our countrymen:

"Ye good diſtreſs'd!
Ye noble few! who here unbending ſtand
Beneath WANT's preſſure,—yet bear up awhile;
And what your bounded view, which only ſaw
A little part, deem'd evil, is no more:—
The ſtorms of angry Heav'n will quickly paſs,
And plenty, peace, and love encircle all."

Some alloy to theſe ſoothing, theſe enlivening expectations, muſt be permitted to occupy our minds reſpecting the wheat, and alſo the products in the cyder and perry countries. Crops of the former, (though no deciſive opinion can yet be given) it is apprehended will be rather weak; and the bloſſom of apples and pears, in ſome places, does not augur well; in others, a blight, from the long prevalence of the eaſterly winds, has been deſtructive. But a general ſummer may remove many apprehenſions concerning theſe gifts of the Great Creator. The hops are, at preſent, too young to furniſh even ſpace for conjecture. The "gracious rain," however, which, at moſt happy intervals, has been vouchſafed us during this vernal month, are not leſs in *their* favour, than in that of every other production of the vegetable world.

The Duke of Bridgwater, to whom the country is greatly indebted for the eſtabliſhment of navigable canals, has ſhewn a public ſpirit and philanthropy which does him honour, and is worthy to be imitated by other landholders. He allows to each poor perſon in his neighbourhood who can purchaſe a cow, ſuch a portion of land, taken from the farm he keeps in his own hands, as will enable them to feed it; and that, at a very eaſy rent; if they can afford to ſow an acre or two of land, that alſo is allotted them.

At many of the country fairs where cattle are expoſed to ſail, we are ſorry to learn that the ſhew has not been favourable; many lean cattle having been brought in and ſold at high prices.

A large botanical garden has been eſtabliſhed at the Cape of Good Hope for the reception of European, African, American, and Indian planters. It was firſt ſettled under the patronage of LordMacartney.

The Board of Agriculture have directed their ſecretary to take a journey through ſeveral of the counties, with a view to ſurvey the waſte lands, and ſee what is the moſt likely means to render them uſeful.

At Worceſter new meeting there was one of the beſt ſhows of cattle that has been anywhere ſeen; but the prices were ſo high, that a very large part were driven out of the market again unſold.

Wheat has been ſold at Sturbich at one time at 15s. per buſhel.

That patron of agricultural information, the Duke of Bedford, is making very great preparation for his annual ſheep ſheering *fete* at Wooburn. He has erected a building for the convenience of thoſe who attend, to be uſed in caſe of bad weather.

A correſpondent recommends lintſeed to be uſed for horſes during the preſent ſcarcity, in order that oats may be appropriated to the uſe of the poor.

At Bridgnorth, an ox was expoſed to ſale, which brought the ſum of fifty guineas.

At Guilford fair, there was a very extraordinary number of cattle expoſed to ſale, the ſheep and lambs only amounted to 30,000.

In the agricultural reports, formed from the returns made to the Board of Agriculture, are ſome very important facts. Of the county of Kent, the ſquare acres are eſtimated at 896,000, the population at about 200,000, the average rent of land 15s. per acre, producing a rental of 672,000l. and the whole extent of commons about 200,000 acres. Norfolk is ſtated to contain 1,094,400 acres, the population is eſtimated at 220,000, the average rent per acre the ſame as Kent; and the whole rental 770,400; the unimproved commons are ſaid to be 80,000 acres. Staffordſhire contains 780,800 acres, and the whole annual rent about 600,000l; the waſte land 150,000 acres. Middleſex contains 175,200 acres; waſte lands 16,650 acres.

The Farming Society, inſtituted by Sir John Sinclair, has received ſuch conſiderable ſupport, that although they have not yet obtained a charter, they are proceeding with their uſeful plan. A general meeting of the members is to take place in a few days for the election of a committee; and they have likewiſe given notice of their intention to have a farm in the neighbourhood of London. By this means they will have an opportunity of ſelecting

from the many farms which will undoubtedly be offered, that which is most eligible. The names of the subscribers are made public, and are certainly highly respectable.

Natural Phenomena.

MR. WILD of Mulkum in the Brisgau, has discovered and verified, by repeated observations, that the winds have very considerable influence on the barometer, and consequently on the measuring the heights of places with that instrument.

A new simple earth has been discovered in Germany, which possesses various properties that distinguish it from other earths; it is white and insoluble in water, in a fresh state, and, a little moistened, it is ductile; it becomes so hard in the fire as to scratch glass, but remains tasteless and indissoluble in water.

Fine Arts, Science and Literature.

THE Exhibition of the Royal Academy opened the 28th of April; this is the thirty-second year of exhibiting. The artists had, as usual, their anniversary dinner on the Saturday previous, and were honoured with the presence of the Prince of Wales, the Lord Chancellor, the Archbishop of York, the Lord Chamberlain, and many others of the nobility.

The exhibition of the presentyear is judged by the connoisseurs to be superior to any preceding year in the general character and style of the works. There are, however, few grand productions in history, but, on the whole, the exhibition shews that the Arts have advanced in this country. The president has no very large pictures. Hoppner, as usual, excels in his portraits of ladies; he has no less than eight pictures; that of the Princess of Wales is an excellent likeness. Lasseronu has also some excellent portraits; Opie this year, exceeds all his former attempts; two of his paintings, the *Confession* and *Fugitive*, are two as good pictures as were ever painted. Hamilton, Sir William Beachy, Mr. Copley, Notcut, Westal, Smirke, &c. have each exhibited some very good performances.

A new Academy of Architecture has been established at Berlin, the object of which is, to form able land surveyors and architects.

The fine copies of the cartoons of Raphael, painted by Sir James Thornhill, for an ancestor of the duke of Bedford, has, with great generosity, been presented by the present Duke to the Royal Academy; as soon as the present exhibition is over, they will be conveyed to their rooms at Somerset Place.

The King of Sweden has lately directed, that his academy of paintings should have a professor of architecture.

Law.

AT Lincoln assizes, a cause was tried, wherein Sir Joseph Banks Bart. was plaintiff, and a tenant of his defendant; the action was brought for removing manure from the land he rented of Sir Joseph, to some land of his own. The Jury gave a verdict to the amount of two years rent of the premises, and costs of suit.

At Warwick assizes, the clerk of an attorney was tried and found guilty of a paltry fraud, of applying to the postmaster, and procuring returns on letters charged double, on pretence that they should have been charged single only.

Morals and Manners.

THE Lord Mayor being informed by the water bailiff of the city of London, that some fish was exposed to sale at Billinsgate not fit for consumption, his Lordship ordered the fish to be seized and destroyed, and directed the water bailiff and his assistant to take care that no bad fish should be exposed at the London market.

A reformation is about to take place in the University of Oxford, in several very essential points; the examination of students for degrees, is to assume a more serious form; six examining masters are to be elected by the Vice Chancellor and Masters, with proper salaries, who are to investigate the qualifications of the candidates, and decide on their merit, and also to grant honorary marks of distinction on those who excel.

At Doncaster, a man has been severely fined for making up of tobacco in the brewing of beer, which we hope will serve as a caution to others, not to offend in a like manner.

The Duke of Portland is endeavouring to effect a very essential revolution in dress, and which, consequently, draws an inseparable line between the higher and middling orders of people. At his daughter Lady Mary Bentnick's last route, notice was previously given, that all the company would be expected to come in full dress. In consequence of which, the route, instead of bearing the appearance of elegance and ease, had all the stiff formalities of the drawing room. Whether this very absurd fashon will be followed, remains to be seen; but the courtiers think it a matter of such importance, that they have, we are told, actually requested the opinion of two very great personages on the occasion.

At Leicester, a quantity of bad meat was seized in the market, and ordered by the magistrates to be burned. This, although very proper, does not seem a punishment adequate to the crime.

Among the vicissitudes of fashion in the higher classes, none has been more conspicuous or various, than those which have taken place in the height of their carriages. Some little time since the carriages were elevated to an enormous height, now they are built so low that the perch almost trails on the ground.

Some disturbances have happened in several country towns, on account of the high price of provisions. At Dudley the colliers proceeded to some extremities. In the north also much disturbance has been occasioned by the high price of provisions, and riots at Sheffield, Leeds, Newcastle, &c; but, by the military, have easily been quelled.

The very high price of provisions have occasioned riots in various other parts of the country. At Wakefield the mob dislodged the corn-dealers, and scattered many sacks of flour about the streets. By the vigilance of the Magistrates, and Wakefield volunteers, the rioters were dispersed without any further damage.

At Pontefract like disturbances took place; but tranquillity was soon restored by the Mayor. Many of the rioters proceeded to Nottingby, where being joined by many from the neighbouring villages, they seized two boats laden with wheat, and were proceeding to unload them when the volunteers arrived and dispersed them.

In several places where the prices have been so high as to prevent the poor from purchasing the necessaries of life, the farmers of the neighbourhood have generously stepped forward and sold their commodities at a reduced price.

At Birmingham many of the principal inhabitants have come to the very laudable resolution of not permitting any lamb to be eaten in their houses.

On Thursday evening, May 15, their Majesties and the Princesses went to Drury lane Theatre.—Every loyal heart must be filled with grief and indignation on hearing the danger to which his Majesty's life was exposed; and which he so providentially escaped. Just as his Majesty entered his box, and

was bowing to the audience with his usual condescension, a person who sat in the second row from the orchestra, but towards the middle of the Pit, got upon the seat, and levelling a horse-pistol towards the King's Box, fired it. It was so instantaneous as to prevent all the persons near him from seeing his design in time to defeat it, though providentially Mr. Holroyd, of Scotland-yard, had the good fortune to raise the arm of the assassin, so as to direct the contents of the pistol towards the roof of the box.—His Majesty shewed the most perfect composure. After the first moment of stupor, the persons around him and the musicians from the orchestra seized the man, and hurried him over the palisades into the musicians' room. The audience, as may be conceived, after the first confusion had subsided, burst into the most violent emotions.—Terror, dismay, and rage were marked on every countenance, except that of his Majesty, who sat with the utmost serenity; while the Queen, who was just near enough to hear the report and see the flash, collected confidence from his magnanimity. The Princesses were apprized of the event before they entered the box—they melted into tears: Mr. Sheridan, assisted by Mr. Wigstead, the magistrate, proceeded immediately to examine the man in the room into which he had been conducted, and where he had been searched to see if he had any other fire arms, or papers. He had none. Mr. Tamplin, a trumpeter in the band, who assisted in taking him over the orchestra, recognized the man to be a soldier, and pulling open his coat, found that he had on a military waistcoat, with the button of the 15th light dragoons. It had been an officer's waistcoat.—On being questioned by Mr. Sheridan, he said, "he had no objection to tell who he was.—It was not over yet—there was a great deal more and worse to be done.—His name was James Hadfield—he had served his time to a working silversmith, but had inlisted in the 15th light dragoons, and fought for his king and country." At this time the Prince of Wales and Duke of York entered the room, to be present at the examination. He immediately turned to the Duke, and said—"I know your Royal Highness—God bless you. You are a good fellow. I have served with your Highness, and (pointing to a deep cut over his eye, and another long scar on his cheek) said, I got these, and more than these, in fighting by your side. At Lincelles I was left three hours among the dead in a ditch, and was taken prisoner by the French. I had my arm broken by a shot, and eight sabre wounds in my head; but I recovered, and here I am." He then gave the following account of himself, and of his conduct.—He said, that having been discharged from the army on account of his wounds, he had returned to London, and now lived by working at his own trade. Being weary of life, he last week bought a pair of pistols from one W. Wakelin, a hair-dresser and broker, in St. John-street.—He told him they were for his young master, who would give him a blunderbuss in exchange. That he had borrowed a crown from his master that morning, with which he had bought some powder, and had gone to the house of Mrs. Mason, in Red Lion-street, to have some beer; that he went backwards to the yard, and there he tried his pistols. He found one of them good for nothing, and left it behind him. In his own trade he used lead, and he cast himself two slugs, with which he loaded his pistol, and came to the theatre.—At this part of his narrative Sir William Addington, the magistrate, arrived, and took the chair; he went over the examination of the persons who had secured him, and who had seen the pistol levelled at his Majesty. Sir William said, it was most material to ascertain that fact, whether the pistol was levelled at the sacred person of his Majesty, or fired at random, as the one case would be high treason, the other not. He asked Hadfield what had induced him to attempt the life of the best of Sovereigns?—He answered, that "he had not attempted to kill the king. He had fired his pistol over the royal box. He was as good a shot as any in England; but he was himself weary of life—he wished for death, but not to die by his own hands. He was desirous to raise an alarm; and wished that the spectators might fall upn him—He hoped that his life was forfeited."—He was

asked if he belonged to the Corresponding Society. He said "No; he belonged to no Political Society." And being asked if he had any accomplices, he solemnly declared that he had none, and with great energy took God to witness, and laid his hand on his heart. From this time he began to shew manifest signs of mental derangment. He talked in a mysterious way of dreams, and of a great commission he had received in his sleep; that he knew he was to be a martyr, and was to be persecuted like his great master, Jesus Christ. He had been persecuted in France; but he had not yet been sufficiently tried. He knew what he was to endure; but he begged Sir William Addington to remember that Jesus Christ had his trial before he was crucified. He said many other incoherent things in the same style. W. Wakelin, the person from whom he had bought the pistols, being brought to the house, was examined. He said it was true that he had bought a pair of pistols of him, and that he had said they were for his young master, who would give him a blunderbuss for them; but he had not yet got the blunderbuss. He knew very little of Hadfield, but knew where he worked, and had heard a good character of him, but that the least drink affected his head. Several persons from the house of Mrs. Mason, his acquaintance, confirmed this fact; and they said they ascribed this to the very severe wounds he had received in his head. The least drink quite deranged him. Upon this evidence he was committed to Cold Bath Fields for re-examination; and their Royal Highnesses the Dukes of Clarence and Cumberland, and Mr. Sheridan, conducted him thither. His Majesty's Privy Council, however, desiring to examine him forthwith, to discover if he had any accomplices, he was taken to the Duke of Portland's Office, where he underwent another examination. A mark was discovered in the top of the canopy over the royal box, and in the orchestra below, a flattened and irregular piece of lead was found, supposed to have recoiled from the place where it struck. No other slug or ball was found. It was most providential that the royal box is elevated more than 15 feet above the pit: so that from the place where Hadfield levelled his pistol, he was between 30 and 40 feet distant from his Majesty's person. The Royal Family sat out the play of *She Wou'd and She Wou'd Not*, with the farce of the *Humourist*; and enjoyed the happiness of receiving from every individual the warmest testimonies of affection, and of hearing expressions of the most heartfelt satisfaction at his Majesty's safety.—*God save the King* was twice sung amidst the most enthusiastic shouts of loyalty and affection, and thrice repeated at the conclusion of the comedy, followed by *Rule Britannia*.

A variety of other evidence was brought to prove that Hadfield had been insane at times, ever since his recovery from his wounds. At the conclusion of the evidence, the Lords of the Council committed him to take his trial; and since that, a bill of indictment has been found against him for high treason, and the proper notice given him to prepare for trial.

ALPHABETICAL LISTS OF BANKRUPTCIES AND DIVIDENDS,

Announced between the 20th of April, and the 20th of May, 10.

BANKRUPTCIES.

(*The Solicitors' Names are between Parentheſis.*)

ALLEN, Arthur Chicheſter, Ironmonger-lane, London, merchant. (Hay, Mincing-lane).

Bird, J. Wells, Somerſetſhire, white-ſmith. (Gillet, Briſtol, Lewes, Inner Temple).

Burch, W. Clapton, Middleſex, calico printer. (Owen, Bartlett's-buildings).

Burge, W. Southampton, Hants. butcher. (Williams, Sherborne, Illingworth, Temple-lane).

Booth, C. Aſton, Warwick, plater. (Maudſley, Birmingham, Sanderſon, London).

Benjamin, A. Caſtle-ſtreet, Houndſditch, merchant. (Fletcher, Dyer's-buildings).

Burley, J. Wakefield, York, grocer. (Dawſen, Wakefield, Allen and Exley, Furnival's Inn).

Beanlands, W. and B. Beanlands, Bradford, York, wool-ſtaplers. (Hainſtone and Co. Bradford, Rhodes and Co. Clerkenwell).

Bache, P. and A. Bache, Baſinghall-ſtreet, merchants. Mawley, Jealous-row, New-road, St. George's Fields).

Brown, W. Grafton-ſtreet, taylor. (Orrell, Winſley-ſtreet, Oxford-ſtreet).

Blake, M. H. London, cutler. (Bigg, Hatton-garden).

Bradley, J. Shawbank, near Aſhborne, Derby, calico manufacturer. (W. an E. Edge, Manchester).

Bartlett, W. Portpool-lane, tallow chandler. (Platt, Serjeant's Inn).

Bourne, S. Spalding, Lincoln, grocer. (Forſter, Spalding, Hervey and Robinſon, Lincoln's Inn).

Cooper, J. Chorley, Lancaſhire, cotton manufacturer. (Milne, Preſton).

Collins, W. Briſtol, brandy merchant. (Brooke Smith, Briſtol, Tarrant, Chancery-lane).

Clarke, J. C. South Mims, Middleſex, innholder, (Fletcher, Dyer's-buildings, London).

Darwin, W. Haymarket, hackneyman. (Burgeſs, Great Portland-ſtreet).

Dalby, J. Sam's Mill, Bradford, York, dealer. (Croſsley, Bradford, Barber, Gray's Inn ſquare).

Dalby, B. Bradford, York, corn-factor. (Lee, Leeds, Sykes, New Inn, London).
Danfie, S. Ruffel-ſtreet, Covent-garden, tavern-keeper. (Rooke, Armourer's-hall, Coleman-ſtreet).
Ellis, E. Oxford-ſtreet, linen draper. (Jones, Clement's-lane, Lombard-ſtreet).
Edwards, J. Caſtle-court, Lawrence-lane, merchant. (Lowten, Temple.)
Ellis, B. Cheſter, hardwareman. (Humpreys, Cheſter, Garnet, New Baſinghall-ſtreet, London).
Fowler, J. Foſter-lane, London, warehouſeman. (Field, Friday-ſtreet).
Fay, E. Fenchurch-ſtreet, merchant. (Langham, Bartlett's-buildings).
Fagg, B. High Holborn, ſadler. (Darwale, Walſall, Staffordſhire, Swain and Co. Old Jewry).
Froſt, J. Hedon, York, tanner. (Martin, Hull, Roſſer, Kirby-ſtreet, London).
Gearing, W. Water-lane, Fleet-ſtreet, innholder. (B. C. Carter, Staples Inn).
Greaves, J. the elder, Glouceſter-buildings, Walworth, inſurance broker (Crowder, Old Jewry).
Horne, C. Ratcliffe-highway, glaſs maker. [Nind, Preſcot-ſtreet].
Harriſon, T. A. Kidder, and J. Kidder, Croydon, Surry, calico printers. [Corderoy, Eſſex-ſtreet, Strand].
Heap, W. and T. Burton, Manchester, dealers. [Johnſon, Manchester, Ellis, Curſitor-ſtreet.]
Howard, J. Burahon Weſtgate, Norfolk, innholder. [Barber, Norwich, Philpot and Godhard, Red Lion ſquare].
Higſon, J. and T. Taſker, Liverpool, linen drapers. [Knight and Heron, Manchester, Ellis, Curſitor-ſtreet, London].
James, S. Bloomſbury-place, boarding-ſchool miſtreſs. (White, Chancery-lane].
Jettley, W. Armley, Yorkſhire, malſter. [Hailſtone and Maſon, Bradford, and Pyney and Co. Gray's Inn lane].
Jones, T. Charlton, Bedfordſhire, timber merchant. [Barber, Gray's Inn.]
James, J. Old Burlington-ſtreet, taylor. [Dawſon, Warwick-court, Golden-ſquare].
James, W. Briſtol, money ſcrivener. [Pember, Briſtol].
Kirke, G. and J. Ford, Grocer's-hall court, London, merchants. [Ward, Dennet, and Greaves, Henrietta-ſtreet].
Lacey, B. and E. Fay, Fenchurch-ſtreet, merchants. [Williams, Chatham-place Blackfriars].
Matthews, W. Long-lane, Bermondſey, parchment-maker. [Davies, Lothbury, London].
Morton, T. Woodhouſe, Yorkſhire, dealer. [Whiteley, Halifax, Gleadhill, Lothbury, London].
Mears, J. Beer-lane, Tower-ſtreet, flour factor. [Benbow, Lincoln's Inn].
Marriot, S. Cateaton-ſtreet, vintner. [J. and R. Willis, Throgmorton-ſtreet].
Metcalfe, G. Hull, dealer. [Gale, Hull].
Moſſes, F. S. Featherſtone-buildings, merchant. [Birket, Broad-court, London].
Moſes, L. Abergavenny, Monmouthſhire, ironmonger. [Price, Abergavenny].
Merridew, J. Clapham, Surry, grocer. [Willſon, Union court, Southwark].
M'Mekin, J. Halifax, dealer. [Clough, Manchester, Edge, Temple].
Martyn, J. Houghton-ſtreet, Clare-market, whalebone-cutter. [Bower, Clifford's Inn].
Pierce, R. Warminſter, Wilts, clothier. [Davies, Warminſter].
Parkin, P. Farnham, Surry, brandy merchant. [Holteeſt, Farnham, Rhodes, Clerkenwell].
Pickup, T. Caſtleton, Lancaſhire, carrier. [Ferrand, Rochdale, Sykes, New Inn, London].
Penny, J. Ludlow, Salop, ſadler. [Ruſſel, Ludlow, Highmoor, New Inn, London].
Parkin, J. Lad-lane, warehouſeman. [Eton, Birchin-lane].
Richardſon, J. Cheſterfield, Derby, liquor merchant. [Bower, Cheſterfield].
Ralfe, T. and J. Gauntlett, Leadenhall-ſtreet, merchants. [Froſt, Hull, Roſſer, Kirby-ſtreet, Hatton-garden, London].
Reynolds, J. Newington Butts, Surry, brewer. [Gillam, Tooke's court, Chancery-lane].
Roberts, J. Briſtol, ſcrivener. (Morſe, Briſtol, Hellis, Gray's Inn).
Roope, R. H. Dartmouth, Devon, merchant. (Waller and George Prideaux, Dartmouth).
Shorthoſe, J. Sculcoates, Yorkſhire, merchant. (Froſt, Hull, Roſſer, Kirby-ſtreet, London).
Sauſe, J. Liverpool, merchant. (G. and J. Crump, Liverpool).
Simpſon, C. and J. Mills, Pig's Lee, Bury, Lancaſhire, dyers. (Woodcock, Bury, Hodgſon, Chancery-lane).
Sandover, R. Tamerton Folliot, Devon, dealer. (Fridham, Plymouth).
Swinnock, T. Ramſgate, Kent, table-keeper. (Auſten, Margate, Blake and ſon, Cook's court, London).
Tatlock, C. Cateaton-ſtreet, warehouſeman. (Swaine, Old Jewry).
Trotter, R. Mitre-court, Fleet-ſtreet, and R. Hodgſon, Three Crown-court, Borough, taylors. (Jukes, Nicholas-lane, Lombard-ſtreet).
Tate, W. the elder, and Tate, W. the younger, Finden, Suſſex, timber merchants. (Rain and Wrangham, Seething-lane, London).
Thompſon, S. Crumpſall, Lancaſhire, butcher. (Milne and co. Manchester).
Tetley, W. Armley, Yorkſhire, maltſter. (Hailſtone and co. Bradford, Dynely and co. Gray's Inn).
Tongue, W. Birmingham, toy-maker. (Lewis, Birmingham, Sanderſon, Belgrave-place, London).
Tolver, T. Cheſter, merchant. (Clements, Liverpool, Humphreys, Cheſter, Garnet, London).
Ware, R. and P. Francis, Lawrence-lane, Cheapſide, wholeſale glovers. (Eaton, Birchin-lane).
Walters, J. Hammerſmith, victualler. (Marſon, Newington, Surry).
Wells, J. and T. Wells, Holborn-bridge, jewellers. (Hodſon, Winkworth-buildings, City-road).
Wilkes, J. Minchinhampton, Glouceſterſhire, baker. (Reed, Fairford, Greenwoollers, Tooke's court).

DIVIDENDS ANNOUNCED.

Aris, J. Norfolk-ſtreet, Strand, mariner, June 14.
Brown, A. Spitalfields, dyer, June 11.
Ballard, J. Eveſham, Worceſterſhire, victualler, June 5.
Barnicoat, J. and J. Falmouth, Cornwall, grocers, June 28.
Baillie, M. Broad-ſtreet buildings, merchant, May 13.
Biddle, J. Eſher, Surry, mealman, June 17.
Brown, T. and J. Biſhop Stortford, coach-makers, May 31.
Bailey, W. Malmſbury, Wilts, victualler, May 28.
Bates, T. Bedfordbury, man's mercer, June 11.
Cheap, A. and T. Longman, Swithin's lane, London, merchant, May 27.
Clark, J. the elder, Great Totham, Eſſex, wheelwright, May 31.
Clarke, J. Bourdon-lane, Groſvenor-ſquare, tallow-chandler, May 31.
Currie, J. Throgmorton ſtreet, cotton merchant, June 11.
Clibborn, A. Haverfordweſt, merchant, June 9.
Comyn, S. Aldermanbury, merchant, June 17.
Churton, W. Hounel, Salop, ſhopkeeper, June 7.
Clegg, W. Beverly, York, linen draper, June 5.
Carr, W. Haltwhiſtle, Northumberland, dyer, June 17.
Dawkins, J. City-road, Moorfields, ſtable-keeper, May 28.
Doule, W. T. Coade's row, Lambeth, haberdaſher, June 3.
Dickenſon, W. Old Bond-ſtreet, printſeller, June 10.
Dunderdale, David, Holbeck, Leeds, clothier, June 9.
Dalton, William, Deptford, Kent, potter, June 7.
Durham, W. Sedgeford, Norfolk, dealer, June 18.
Entwiſh, J. Manchester, fuſtian manufacturer, May 24.
Enſor, W. the younger, Newcaſtle under Lyne, Staffordſhire, ironmonger, May 31.
Fentham, H. H. Greville-ſtreet, Hatton-garden, merchant, June 7.
Galt, T. Whitehaven, merchant, May 19.
Garner, J. and B. Hattaway, Oxford-ſtreet, glaſs ſellers, May 31.
Gills, J. New Sarum, Wilts, whipmaker, June 7.
Hodges, T. and J. Sainſbury, Milbank, coal merchants, June 14.
Heyes, W. Gainſborough, Lincolnſhire, mercer, May 23.
Haywood, F. and G. Palfrayman, Manchester, calico printers, May 22.
Horſfield, J. Manchester, linen-draper, May 31.
Hardy, W. and J. K. Norris, Lancaſhire, cotton manufacturers, June 14.
Hunt, W. Coleman-ſtreet, ſadler, June 17.
Johnſon, T. Norton Falgate, chemiſt and druggiſt, May 17.
Jolly, T. W. Threadneedle-ſtreet, merchants, May 28.
Jobſon, J. Alemouth, Northumberland, corn factor, June 14.
James, H. Walgorh, Cardigan, cotton merchant, June 6.
Kirk, M. Manchester, and J. W. Fiſher, Rutholk, Lancaſhire, cotton manufacturers, June 20.
Lane, B. Freeman's court, Cornhill, inſurance-broker May 17.
Lear, J. Strand, victualler, June 21.
Minton, J. Briſtol, bookſeller, June 24.
Naimer, F. Snareſbrook, Eſſex, victualler, June 13.
Peakes, D. and J. Powell, Ave Maria-lane, London May 27.
Pirks, J. Great Saredon, Stafford, money ſcrivener, June 10.
Price, R. H. Manchester, grocer, May 27.
Pocklington, R. York, taylor, May 26.
Patterſon, G. Berwick upon Tweed, linen-draper, June 29.
Pritchard, J. and H. Battle-bridge, tile makers, June 14.
Roberts, W. Rochester, Kent, grocer, May 17.
Ruff, H. Worceſter, glover, May 21.
Reynolds, R. and T. Cheſſon, Beadingham Corner, Surry, calico printer, May 20.
Reichard, J. J. F. Duhmer, and J. J. Brune, Angel-court, Throgmorton-ſtreet, merchants, May 17.
Reiner, H. Gathering-court, Tower-hill, merchant, May 27.
Rudderſh, T. St. Paul's Church-yard, ſtay-maker, June 7.
Simpſon, J. C. Sweeting's alley, Cornhill, muſical-inſtrument maker, May 20.
Smith, J. Calken, Stafford, dealer, May 29.
Staples, E. C. Shaw, Moſes Staples, and Henry Guy, Cornhill, bankers, May 24.
Salmon, J. L. Nampwich, Cheſter, cheeſe-factor, June 3.
Sheffield, W. the younger, of Rubrough, York, farmer, May 24.

AVERAGE PRICES OF CORN, by which IMPORTATION and DUTY are to be regulated in the Diſtricts undermentioned, purſuant to Acts of Parliament.

13th	96 4	§57 3	61 7	52 8	85 1	88 2	47 5
14th	92 3	§57 3	57 3	43 8	80 0	80 0	39 10
15th	94 4	§57 3	59 7	49 0	91 1	100 2	44 0
16th	81 10	§57 3	43 3	37 6	61 3	58 10	34 3
17th	96 10	§57 3	59 1	58 11	94 6	97 10	51 6

N. B. The Figures againſt which Sections are placed are the General Average Prices of Scotland.

PRICES OF COALS AT LONDON, FROM APRIL 20. TO MAY 20, 1800.

Names of Coals	Mon. 21ſt.	Wed 23d.	Frida 25th.	Mon. 28th.	Wed 30th	Frida 2d.	Mon. 5th	Wed 7th	Frida 9th	Mon. 12th	Wed 14th	Frid 16th.	Mon 19th
	S. D.	S. D.	S. D.	S. D.	S. D.	S. D.	S. D.	S. D.	S. D.	S. D.	S. D.	S. D.	S. D.
Benton			44 6		44	44	43		41				
Byker	44 6		44 6						41				
Blyth	44 6			44 6	44 6		41 9		40 6	42	44		
Brandling		44							39 3	42			
Bladon Main													
Biggs's Main	47 3	48	47 6		46 9	46	45			44		47 6	
Baker's Main							38						
Benwell													
Greenwich Moor													
Gate's-head Park													
Hartley	44 6				43 3	43 3		40 6	40 6				
Holywell Main	43	42 6	42 6							39 6	43		
Howard's Main													
Montague Main					43	43	41 6		40 6				
Pontop { Windſor's	45						41		41 6				
Pontop { Simpſon's													
Pontop { Silvertop								38 6	38 6				
South Moor	42 6				41	40 9			39 3				
Sheriff Hill													
Pell's Tanf. Moor			45		45			41 6	41 6				
Adair's Main			42			41 9			38 6		43 6		
Bowes's Main						43 6							
Team						41			38			48 6	
Walker	47		46 6		46 6		45		43	44			
Willington	47	47	46 6		46 6				43	44	46 6		
Wall's End	48	48 9	48 3		48	48	46		46	46 6	48 6		
Walbottle Moor						41 9							
Wylam Moor			42			45 6			38 9				
Heaton Main			47						43				
Hebburn Main			47 6		46 6	46	45		43		47 6		
SUNDERLAND													
Boundry						40 3							
Bourn Moor	42	42 9	42 6		41 3	41 3		39		40			
Biddick new Main		41 9				40					40		
Newbott. Bo. Moor					40 6					38	42		
Rectory	40 6										41		
Ruſſell's Main	41 9		42		41 3			38 6	38 3	39			
Wharton Main			40										
Waſhington						40 6							

No COALS Sold.

AVERAGE PRICE OF RICE,

Is 35s. 8d. per cwt. computed from the Returns made for the Week ending the 21ſt Day of May 1800.

AVERAGE PRICE OF CORN IN SCOTLAND, FOR MAY 1800.

By the Quarter of Eight WINCHESTER Buſhels, and of OATMEAL per Boll of 128lbs. SCOTCH TROY, of the Four Weeks immediately preceding the 15th of May 1800.

COUNTIES.	Wheat.	Rye.	Barley.	Oats.	Beans.	Peaſe.	Oatmeal.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Fife,	102 1		61 2	53 3	75 7	75 7	49 5
Kinroſs,	114 5		62 6	46 10	91 6	91 6	48 0
Clackmannan,	91 9		57 6	51 3	86 9	86 9	48 0
Stirling,	93 0		50 0	42 6	70 11	70 11	48 0
Linlithgow,	88 8		66 10	61 4	98 0	98 0	47 8
Haddington,	99 0		67 10	63 2	101 6	103 0	57 3
Berwick,	104 0		72 0	67 4		103 4	49 0
Roxburgh,	109 7		75 7	55 5		100 9	48 0
Selkirk,	No	Return.					
Peebles,							
Dumfries,	96 0		70 6	46 0			47 0
Wigton,			60 0	46 8			48 4
Ayr,	100 0		55 0	44 0	80 0	80 0	42 0
Kirkcudbright,	84 0		56 0	46 0			44 0
Argyle,							36 0
Dumbarton,	82 2		61 8	50 4			32 0
Lanerk,	103 7		64 8	57 6	93 4	100 0	51 10
Renfrew,	100 7		64 0	57 5	102 5	108 1	52 6
Bute,				40 0			
Orkneyand Shetland,	No	Return.					
Caithneſs,	No	Return.					
Sutherland,							
Roſs and Cromarty,				37 6			40 0
Inverneſs,			38 11				30 0
Nairn,	67 4		39 0	40 0			35 8
Elgin,		48 0	36 0	28 8	48 0	48 0	26 8
Banff,	81 9	63 7	42 9	34 3	63 7	63 7	30 4
Aberdeen,	78 2		45 11	45 11	74 3	74 3	40 0
Kincardine,				41 1			38 0
Forfar,							36 0
Perth,	93 7		61 0	54 1			46 11
Edinburgh,	97 2		54 1				
	96 10		61 11	61 3	100 2	103 2	54 3

AVERAGE PRICES by which EXPORTATION and BOUNTY are to be regulated, purſuant to Acts of Parliament.

	Wheat, Per Qr. s d	Rye, Per Qr. s d	Barley, Per Q. s d	Oats Per. Q. s d	Beans, Per Qr. s d	Peaſe, Per Qr. s d	Oatmeal per Boll, s d
1ſt Diſtrict	124 9	*90 3	58 0	42 5	71 3	86 9	*78 0
2d	121 10	*90 3	57 3	37 0	57 10	61 0	86 11
3d	112 11	84 0	53 0	40 4	63 8	74 0	*78 0
4th	104 7	75 4	60 4	44 7	95 0	*76 8	83 9
5th	99 11	83 9	65 9	51 10	76 11	85 4	*78 0
6th	137 7	113 10	98 0	62 10	76 11	*76 8	69 10
7th	130 3	*90 3	77 2	64 2	91 1	128 0	53 6
8th	128 11	98 7	79 6	42 7	94 0	83 4	90 6
9th	116 10	*90 3	69 8	33 1	76 11	*76 8	*78 0
10th	125 6	126 5	57 4	41 11	79 8	*76 8	*78 0
11th	114 7	*90 3	63 5	38 3	76 11	*76 8	* 8 0
12th	124 11	*90 3	51 5	43 9	67 5	*76 8	78 0
13th	100 3	*55 9	64 2	55 1	87 4	91 2	49 2
14th	93 4	*55 9	60 4	45 7	80 0	80 0	41 9
15th	95 5	55 9	63 5	51 3	97 10	104 0	45 5
16th	83 7	55 9	45 4	40 2	61 11	61 11	35 11
17th	96 10	55 9	61 11	61 3	100 2	103 2	54 3

N. B. The Figures againſt which Aſteriſks are placed, are the General Average Prices of England, except in the laſt five diſtricts, which are the General Average Prices of Scotland.

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

Apr.	Bank Stock	3 per Ct. Bs Red.	3 per Ct. Consols.	4 per Ct. Consol.	Old 5 per Ct.	New 5 per Ct.	Long Ann.	Short Ann.	Om-nium	Imp. 3 p C	Imp Ann.	India Stock	Irish. 5 p Ct.	Exch Bills.	Consols for Acct.
26	161½	62⅞ 63⅛	63¾ 64	80⅝ ⅞	97 ⅝ ⅜	95⅜ ½	18½ 9-16	5 9-16⅝	2½				92⅜		64⅛
28		62⅞ 63⅛ 63	63¾ ⅝ 64 63⅞	80⅝ ¾	97 ⅜ ⅞	95½ ¼	18 9-16	⅝	2¼ ½				92⅜		63⅞ 64
29	161¼ ¼	63⅛ 63	63¾ 64 63⅞	80 ¾ ½	97¾ ⅝ ⅞ ¾	95½ ¼	18½ 9-16	5 9-16⅝	2¼						64
30	161¼	63 62¾ ¼	63⅜ ¾ ¼ ⅜	80½ ⅝	97 ⅝ ¾	95⅜	18 7-16½		2½ 2						63⅞ ⅝ ¾ ¼
	Holiday														
2	160¾ 161¼	62¾ ⅞ 63	63⅜ ¾ ½ ¼ ⅜	80¾ ⅝ ¼ ⅞	97 ¼ ½	95¼ ½ ⅜	18 7-16	5	2⅓	61⅜ ⅛	11¾ 13-16				63¾ ⅝ ⅞
3		62⅞ 63	63¾ ⅞ ¾ ⅞ 64	80⅜ ⅝ ⅝	97 ½ ⅝	95⅜ ⅝	18½ 9-16	5 11-16	2¼ ½	61⅜ ⅛ ¼	11 13-16		92		
5		63⅛ ⅜	63⅞ 64	80⅖ 81 8⅗	97 98 97¾	95⅝ ⅞	18 9-16	⅝	2¾ 3	61½ ⅛	11 13-16⅛				
6		63⅛ ¼	64⅛ 64	80⅞ ⅝ ⅝ ¾ ⅝	97¾ ⅞ ⅝	95¾ ½	18 11-16	5⅝ 11-16	2¾ ½				92½		64¼ ⅛
7		63⅛ 63 63¼	63⅞ 64	80¾ ⅝ ⅝ ⅞ ⅞	97⅞ 98	95⅝ 96	18⅝ 11-16	5⅝ 11-16	2¾ ½	62½ ⅝	11 15-16 12		92½	8s P.	
8	162	63⅛ ⅜	64⅛ 64¼ ⅛	80¾ ⅞ ¾ ⅞	97⅞ 98	95⅝ 96	18 11-16⅜	5⅝ 11-16	2¾ ½		11 15-16 12	209¾	92½		
9	162¼	63⅜ ⅛	64¼ 64	80⅝ ¾ ¾ ¾	97¾ 98	95¾ ⅝	18 11-16⅝	5⅝ 11-16	2¾ ¾			210			
10		62⅞ 63 62⅞	63⅞ 64 63¾	80⅝ ¾ ¾ ¾	97¾ 98	95¼ 96		5⅝ 11-16	2¾ ¾		12				64⅛
12	162	63⅛	63⅞ 64	80⅝ ¾ ¾ ⅝ ¾	98⅛ ¼	96 95¾	18⅝ 11-16	5⅝ 11-16	2½		12		92⅜		64 63⅞
13	161½ 162	63⅛	63⅞ 64 63⅞	80¾ ¾ ⅝ ¾	98⅜ ¼	97⅞ 96	18⅝ 11-16	5⅝ 11-16	2¼ ½	61⅜ ½ ⅝	12 11 15-16	210¼			63⅞ 64
14		63⅛	63⅞ 64 63⅞	80¾ ¾ ¾	98⅜ ¼	95⅝ ¾	18⅝ 11-16	5⅝ 11-16	2¼ 2	61½ ⅛	12		92¼⅛		63¾ ⅞
15		63⅛	63⅞ 64 63⅞	80⅝ ¼ ⅝	97⅞ 98	95⅝ ¾	18⅝ 11-16	5⅝ 11-16	2 1¾	61⅜ ⅛	12				
16		62⅞ 63	63¾ ⅝ ⅞ ¾	80½ ⅝	97⅞ 98⅛	95½ ¾									
17	Holiday										12 1-16				64¼ ⅛
19		63⅜ ⅛	64⅛ 64	80¾ 81 80⅞	98⅜ ⅝	95⅝ 96	18 11-16¾	5⅝ 11-16	2½ ¼		12 1-16	209¼	92¾		64⅛ ⅛
20	161	63⅛	63⅞ ¾	80⅞ ⅝ ⅞	98½ ⅜	95⅞	18⅝ 11-16						92¼		64½ ⅛
21		63 62⅞	63¾ ⅝ ¾	80⅝ ¼	98¼ ½ ⅜	95⅞	18 11-16	5⅝ 11-16	2	61⅛ ¼	12⅛ 1-16 ¼				64⅜ ½
22	Holiday											209½			
23	161½	63⅞	63¾ ⅞	80½ ¾	98½ ⅛ ¼ ⅜	95¾ ⅝	18⅝ 11-16		2	61⅜ ½	12⅞		92⅛		
24		63⅛ ¼	63⅞ 64	80 ⅝ ⅞ ⅜	98½	95⅞ 96	18⅝ 11-16		2		12 1-16		92⅝		
25															
26		63⅞ ¼	63⅞ 64	80⅝ ¾	98⅜ ½	95⅞ 96	18 11-16	5⅝	2	61½⅝		210¼	92¼		
27	161¼ ½	63¼	63⅞	80⅜	98½	95⅞	18¾	5 11-16	2	61⅝			92¼		
28	161½	63⅜	64	80⅝	98⅜	96	18 11-16	5 11-16	1¾	61½	12 1-16				

T. BISH, STOCK-BROKER, *Old State Lottery Office, No. 4, Cornhill, London.*