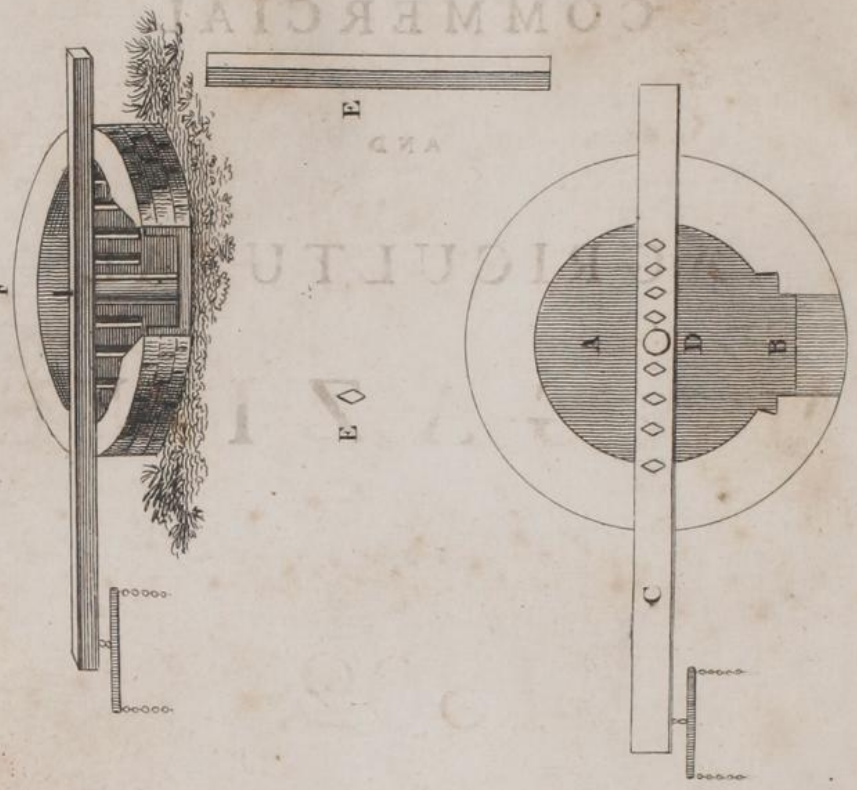
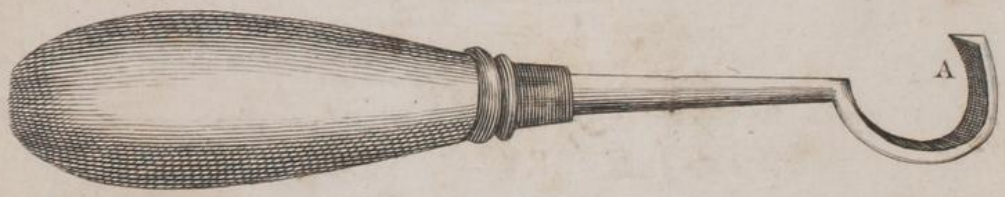
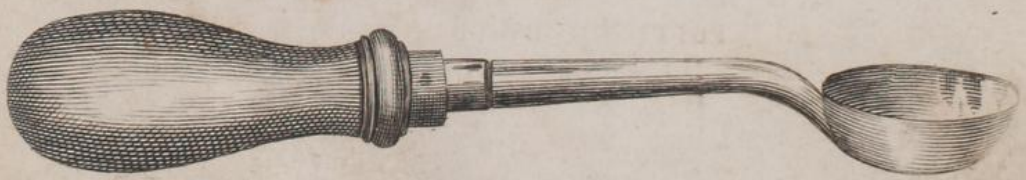
Mr. Sapples Mortar Mill.





Dublin Potatoe Set Scoop.



Mr. Starks Potatoe Set Scoop.

London, Published Febr.y 1.st 1802 by V. Griffiths, Paternoster Row.

THE COMMERCIAL AND AGRICULTURAL MAGAZINE, FOR 1802.

VOL. VI.

FROM JANUARY TO JUNE,

INCLUSIVE.

LONDON:

PRINTED AND PUBLISHED BY VAUGHAN GRIFFITHS,
PATERNOSTER-ROW.

PREFACE.

THE contents of this Volume will be found multifarious, but still in strict conformity with the original Plan of our Work. No extraneous or unimportant matter has, in any one instance, been admitted. Commercial communications, however, it must be confessed, have, as it were, for this last half year kept pace only with Commerce itself, which has, of late, advanced with wary, timid, and slow progression. Under this head, the productions of the Island of Mauritius, our commerce with the American States, particularly in Furs and Hemp, the trade of France from Constantinople before the war, and the various magnificent accommodations constructed and now forming in the port of London, constitute the principal commercial features of this Volume.

In the agricultural department, this Volume can boast of materials as novel, interesting, and instructive, as they are seasonable, various, and numerous. Every branch of husbandry, almost, that is in season here, during the months in which the numbers herein contained, make their appearance, is set forth in succession, and in its most improved state; but many of the communications which we receive still, take their complexion from the pressure of the times; and the long prevailing scarcity of animal food has induced every one to make public whatever means he might suppose would tend to the increase of this article. Accordingly we have received from different parts of the kingdom the particulars of a variety of cheap modes that have been adopted in the fattening of animals, and likewise several papers on improvements in the breeding and management of stock, particularly of sheep. That fundamental article in husbandry, the draining of

land, will here be found amply discussed, and different methods of effecting it pointed out from a truly practical source. The most effectual ways of destroying insects, and vermin, particularly the mole; with directions for making and securing the hay crop, and for harvesting of the corn crop, are fully detailed: and the total management of the flax crop, with the best mode of breaking up grass land, and again restoring it to pasture without injury to the land, are scientifically given in this Volume; together with the discussion of many other subjects of no less moment than those here recited; such as Lord Somerville's Exhibition of Cattle, the Smithfield and Paddington Markets, and the Duke of Bedford's and Mr. Coke's Sheep-Shearing, &c.

The communications which this Volume has to offer to the inspection of the Manufacturer and the Artist, are more calculated to attract by their quality than by their number.

Of the critical department of this, as well as preceding Volumes, we venture to speak with confidence; and we leave the attention which we have paid to such passing occurrences as we profess to recite, to speak for itself.

DIRECTIONS TO THE BINDER, FOR PLACING THE COPPER PLATES. VOL. 6.

THE
Commercial and Agricultural Magazine.

No. XXX.] JANUARY, 1802. [Vol. VI.

For the Commercial and Agricultural Magazine.

DESCRIPTION OF A MORTAR MILL.

(WITH A PLATE.)

Extract from a Letter from Mr. Richard Supple, addreſſed to the Dublin Society; publiſhed in the ſecond volume of their Tranſactions, and printed in 1801.

THE incloſed plan of a Mortar Mill I can recommend, from experience, as a moſt excellent machine, not only in abridging the labour uſually beſtowed in making mortar in the common way, but in making it infinitely better, at a very ſmall expence.

My method is as follows:—I have a pit dug in the ground, which is bricked at the bottom and ſides, into which I put my lime. I have the command of a ſmall ſtream of water, which is conveyed at pleaſure into this pit, and in a few days the lime is ſufficiently ſlacked; I then put the lime and ſand, or gravel, into the mill, which not only mixes both together, but incorporates them in a very effectual manner; and, as the lime is ſufficiently moiſt when taken out of the pit, no more water is required for the mortar. If for preſent uſe, the quantity I make at a time is ſix buſhels, as I find when more is put in, it is apt to ſtrain the cogs, if not made very ſtrong. If the mortar is made with ſand alone, the ſpace between the cogs need not be made ſo wide as three inches. I have a ſecond ſhaft, with cloſer cogs, in order to give the mortar another working; the ſpace between theſe cogs is but two inches; but it does not anſwer well till after the firſt ſhaft has been uſed, nor is it neceſſary, unleſs for very nice work.

I made 200 barrels of lime into mortar laſt ſummer, and have now the like quantity of lime in the pit for the ſame purpoſe. I made ſix barrels of mortar in a day, with eaſe; a boy of ſeven years old drives the horſe, and the moſt indifferent one is good enough for the purpoſe, the draught being ſo eaſy.

PLAN OF THE MORTAR MILL.

A. plan of the boarded floor, raiſed eight inches from the ground, it is four feet two inches in diameter, and ſurrounded by a fourteen-inch wall, whoſe outſide height is two feet.

B. a ſliding door, two feet wide.

C. plan of the ſhaft, with its cogs, or teeth; its length eleven feet eight inches, breadth eight inches, depth five inches.

D. plan of the poſt, or axis, on which the ſhaft turns round; diameter ſeven inches, height twenty inches.

EE. plan and upright of one of the cogs as it ſtands in the mill. The plan is a rhombus, the longeſt diagonal is three inches, the ſhorteſt but two, in order to make the angles of the cogs more acute, by which means they will paſs through the mortar with the greater eaſe.

F. elevation and ſection of the mill in perſpective.

The ſpace between the cogs is three inches, except the firſt to the left of the poſt, which is but half an inch diſtant from it, in order to give the cogs to the left a different direction from thoſe on the right; and by inſpection its uſe will readily appear.

There muſt be a ſpace of two inches between the end of the cogs and the floor, in order to give the gravel a free paſſage, which would otherwiſe ſtrain the cogs, and ſtop the courſe of the mill.

ON THE FOOT-ROT IN SHEEP.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

A Correſpondent who ſigns himſelf a Warwickſhire Grazier, has called the attention of your readers to a very important ſubject of enquiry. The loſs which he has ſuſtained from the foot-rot, has been ſerious indeed. As my own ſheep ſuffered laſt year from the ſame diſorder, though in an inferior degree, I feel myſelf intereſted in the diſcuſſion.

I attribute the diſorder among my flock, to cotinuing in long graſs, which, during a mild winter, muſt have retained a conſtant moiſture, and by keeping the foot wet may be conſidered as a cauſe *predispoſing* to the diſorder, if not actually to have occaſioned the diſeaſe. I have frequently fed ſheep on the ſame land, without diſcovering any ſymptoms of the foot-rot. I have bought ſheep diſordered from other paſtures, which have been cured while feeding in my grounds; the diſorder therefore is not neceſſarily connected with the land, and may have been occaſioned by the particular circumſtance of being kept all winter on the long graſs. Perhaps the beſt preventive is to fold the ſheep. The flocks in this neighbourhood are principally kept by farmers who occupy common field-land, and who conſtantly uſe the fold. Theſe, I am informed, never ſuffer from the diſorder. I have known it prevail in Gentlemens' parks where the ſheep have only turf to tread on.

Suppoſing it to ariſe from relaxation occaſioned by the conſtant application of moiſture to the feet; another query then ariſes, "Is it contagious?" From its rapid progreſs, I believe it is, and the ſtate of the foot which is uncommonly offenſive and putrid, will eaſily give credit to this ſuppoſition. The contagion

is the more readily communicated, by the peculiar habit of ſheep in following the ſame track. Suppoſing the diſorder to ariſe from a relaxed ſtate of the foot and a weak and languid circulation; aſtringents and ſtimulants may be applied to keep up vigour and activity in the part expoſed, ſuch as verdigreaſe in the unguentum Ægyptiacum, or ſimply the application of ſpirit of turpentine. But when the diſorder is formed and has made ſuch progreſs, that the foot becomes offenſive, the part thus diſeaſed muſt be cut away with the knife; and ſtrongly ſtimulant, or rather *cauſtic* applications, may be made uſe of. The diſorder requires conſtant attention. During the buſy ſeaſon of hay-harveſt, it ſpread rapidly through my flock. It affected ſheep reared on the farm equally with thoſe which had been purchaſed. It greatly injured a lot of wethers which were preparing for the butcher. Though above ſixty of my ſheep were affected, yet, almoſt all recovered by the above treatment. About half a dozen ſeemed never to thrive after it, and were therefore killed, and ſold at a reduced price. The diſorder, however, did not prove fatal to above three. Such being the nature of the diſorder; when it firſt diſcovers itſelf, the diſeaſed ſheep ſhould be carefully ſeparated from the reſt. The flock ſhould be folded; and where this is not practicable, perhaps driving them up and down on a hard dry road, to promote heat and circulation in the part, might act as a preventive.

It has been obſerved that ſheep are not ſubject to the rot when grazing in the ſalt-marſhes; but I have not yet heard whether the flocks in theſe marſhes are ſubject to the foot-rot; if not, perhaps waſhing the feet of the ſheep with ſalt and water when the diſorder firſt appears may prevent its further ſpread.

I am, your's, &c.

White Webb Farm, A. WILKINSON, M. D.
Enfield Chace, Jan. 2, 1802.

A NEW METHOD OF FATTENING CATTLE WITH THE WASH FROM THE DISTILLERIES.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

THE manner in which, and the extent to which, the diſtillation of ſpirits from grain bears comparatively upon the general intereſts of this country, is a ſubject which has been fully and fairly diſcuſſed, both in and out of Parliament, by perſons well qualified to judge and decide in this momentous concern. My opinion, therefore, you will allow is not wanted on this general queſtion. There is, however, one advantage at leaſt ariſing from the mode of diſtillation of ſpirits commonly practiſed in England which has not received the notice it deſerves. As no one of your correſpondents has, I believe, as yet mentioned

it, I ſhall undertake to deſcribe it as particularly as I am able; and you are at liberty to inſert the deſcription in the next Number of your Magazine, if you think it worthy, and I preſume to ſay, that, on account of its novelty and real importance, it demands inſertion. I mean the very profitable uſe which is made of the waſh from the diſtilleries in the *fattening* of cattle. This waſh, from which it is impoſſible, even by the nice arts and long proceſs of diſtillation, to extract the whole of the ſpirit, is found to be not only nutritious, but of a peculiarly fattening quality when given, in a certain way, to cattle, as food. It has long been uſed, mixed with grains, for the production of milk by the cow-keepers in the neighbourhood of London, but for the other uſe of it the public is very much indebted to a very ſenſible, indefatigable, and ſpirited Farmer, who reſides at Bromley, near Stratford le Bow. There are in the vicinity of Bromley ſeveral very large diſtilleries, and a few years ago a great part of their waſh was daily thrown away for want of applicants for it. The above Farmer, in the year 1794, (a year which, from a general failure of crops and paſture, ſet many a new enquiry and contrivance to work,) from the obſervations which he had made of the effects of this waſh as food for milch cows, was encouraged to try if he could not, by a little improvement in its quality, and management in the uſe of it, make this waſh ſerviceable in the fattening of bullocks. He accordingly began the trial with a few the firſt year, and found his expectation more than anſwered by the reſult. From this time he has annually been induced to erect new ſtalls and ſheds, and has now accommodation for nearly 1000 head of cattle. He, laſt winter, had at one time 906. Whether he has this winter made any further enlargement to theſe premiſes I am not able to ſay.

To Smithfield this feeder ſoon found it advantageous to repair for the purchaſe of his lean ſtock; for there, to the great injury of the community, beaſts, in no ſmall numbers, are on every market, but particularly when the price of meat is high, expoſed to ſale as *fat* ones, which are totally unworthy of that denomination. Theſe unripe beaſts this farmer purchaſes (ſometimes a hundred in one day) at a higher price than the butchers are willing to give, and undertakes to improve them, be they ever ſo young, or ever ſo old, ever ſo large, or ever ſo unthrifty, and to return them to Smithfield in two months time, (according to his own words) "with each thirty ſtone of additional beef upon his back;" and in the completion of this profeſſion I believe he ſeldom fails. This waſh, after his judicious preparation, by its heating and invigorating, and, at the ſame time, cleanſing powers, for it conſtantly ſcours the animals extremely, will reſtore ſuch beaſts as have been over-driven, or that are ſickly, ſooner than any other ſpecies of food that has hitherto been uſed in the department of the grazier. I have ſeen ſuch animals com-

pletely fattened by him as almoſt any other perſon would have deſpaired, with common food, of making the leaſt improvement in. In the winter before the laſt I ſaw two bulls ſo highly fed by him, almoſt entirely with waſh, as to fetch nearly forty pounds each.

In the courſe of fattening, the beaſts are almoſt conſtantly in a ſtate of perſpiration, and, apparently of intoxication, for they are always thirſty, almoſt always lying down, and diſpoſed to ſleep, except when the ſound of the waſh poured into the troughs rouſes them to gratify their palates with this, the only liquid that is allowed them. After having enjoyed this food for a few weeks, they become as fine and ſhort in their coats, and almoſt as deficient in carcaſe as a high fed racer; but in handling they ſurprize every one who had been led to form an opinion of them from their lank appearance, and when dead, they ſeldom diſappoint the moſt ſanguine butcher.

If theſe things are true, and if they are not, they are expoſed to an eaſy refutation; they ought to be publiſhed at leaſt in every diſtrict where diſtillation of ſpirits is practiſed, in order to induce individuals to try whether more animal food may not be produced by the above uſe of the waſh, than by any other which at preſent prevails. This is certainly a very extenſive and almoſt a clear gain to the community; as far as the waſh is inſtrumental I mean, for there is likewiſe a certain quantity of hay conſumed with it, as I ſhall preſently have occaſion to mention. I do not, however, wiſh to be underſtood as intimating that every grazier, who lives near a diſtillery, may make the adoption of the above mode of feeding equally profitable with the one whom I have mentioned; for there are few ſituations which will afford the ſame opportunities either for the advantageous purchaſe or ſale of ſtock, and there are few men to be found that will conduct the whole buſineſs with the ſame ſagacity and unremitting attention; but I am confident, that far greater profits than thoſe now in general derived from it, are attainable from the waſh of the diſtilleries. Several Gentlemen with whom I have converſed on this ſubject are ſo ſtruck with this new mode of fattening cattle, that they are reſolved to attempt to make a waſh merely to anſwer this purpoſe.

The particulars reſpecting the manner of preparing, and the way of uſing this new food are ſuch as follow:

This grazier, with a large cart, ſo cloſely jointed and well covered as to be proof againſt leakage, fetches from the diſtillers this liquid, which, a few years ago, was given him for the fetching, but which he is now under the neceſſity of both fetching and paying for. When brought home, the waſh is diſcharged from a cock inſerted in the lower part of the cart into a vat or wooden ciſtern, ſunk into the ground, that will contain many tons. As ſoon as this vat is about three parts filled, a quantity of the beſt and ſweeteſt hay that can be provided is immerſed in the

liquid, where it is suffered to remain two or three days, that the wash may be impregnated as much as possible with the flavour of the hay before it is used. The hay, before it is thrown into the vat, is cut or chopped to pieces in a coarse way, by means of a chaff-cutting machine, the more effectually to answer the above purpose. This mixture, wash and hay together, is carried in a bucket into the stalls, and poured into a deep and wide trough, which is placed in common before the cattle, and extends from one end of a stall to the other. The cattle are always tied in their places by a short and slender cord, as near as may be to each other.

There is sometimes considerable difficulty to prevail at first upon some beasts to take this extraordinary food: others, particularly the Holderneſſe, which is a breed remarkable for voracious feeding, immediately drink it up with greediness. The method which is adopted in order to prevail on such of the cattle as shew an aversion to it, is gently to sprinkle the hay that is given to them with the wash, and by this means, and by having the smell of it constantly before them, and by seeing their companions so eager to devour it, it gradually becomes less nauseous to them, and at length extremely palatable.

The manure produced by this species of fattening cattle is an article of no small consequence to a farmer, either with respect to it quality or quantity; and the proprietor is enabled, by selling at a high rate what he does not want for his own land, to defray a considerable part of his necessarily great expences.

The above practice so evidently tends, in almost every point of view, to benefit the community, that one would think it impossible that the promoter and author of it could fall under the lash of either public or private censure: but this, I am sorry to observe, is not the case: for this benefactor is frequently distinguished by the envious part of the London Citizens, by the unmeaning title of Monopolizer: and because he clears Smithfield of lean cattle and returns fat ones in their stead; he is absurdly charged with raising the market. Of the profits of this system of feeding I am as unwilling as unable to speak; but how great so ever they are, I aver that they are most fully merited.

I am, your's,

Piccadilly, Jan. 19, 1802. T. WESTON.

DESCRIPTION OF A MACHINE USED IN THE BLOWING OF VEAL.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

IT is a very common observation, "that this is the age of invention;" and what I have just seen, and am desirous of publishing, because I am persuaded the discovery will gratify your male readers and delight your females, tends strongly to confirm the remark.

This morning, in walking along Whitechapel market, I observed, in the slaughter-house of a carcase or wholesale butcher, two men employed in an extraordinary way in dressing, as it appeared to me, a calf that was suspended by its hooks against a wall. Curiosity led me to them, and I found that they were engaged in the *blowing* of veal, but in a manner to me entirely new, and as pleasing, as the common method is disgusting. One of these men was working a machine, which they called an air-pump, which conveyed that expanding element in an abundant and very powerful manner under or within the skin of the calf. The other man, during this very short operation, continued beating gently, with a strong stick, upon those parts of the carcase, into which it was required that the air should more minutely penetrate and there remain fixed.

This new operation of blowing is performed in a very few seconds of time; and the pipes which convey the air from the machine, are so contrived, as to inflate three carcases at the same time, whenever extraordinary dispatch is requisite, which frequently occurs to the proprietor of this machine, who seldom kills a less number than 140 calves in a week.

The peculiar mechanism of this pump I could not discover, nor did I contrive to make many minute enquiries concerning its construction or principles, as it appeared to be carefully cased over with boards, and was fastened to the ceiling of the slaughter-house. From one side of this machine issues a leaden tube, about an inch and half in diameter; and, after extending about a yard, is divided into three branches, to each of which branches is joined a small leather pipe, which is inflexible and tipped at the end with brass, of length sufficient to reach the three places where the calves are suspended for dressing. In each branch of the leaden tube is fixed a cock, which has the power of confining, or giving vent to the condensed air at pleasure.

The machine, or air-pump, is easily worked, by means of a lever, one end of which is depressed by a considerable weight: the other end is pulled down with rapidity by a small cord affixed to it. When three calves are to be blown at the same time, which I believe generally takes place here on every Tuesday and Wednesday in the year, four men are required, three to beat upon the calves and one to work the machine.

Before this operation takes place, a small incision is made in the skin near the navel, from which a free passage is effected, by means of an iron rod previously inserted, to the inside of the shoulders and to the flanks; then the ends of the conducting pipes, which are made of brass, are thrust into the orifice a few inches under the skin, and there so secured, as to suffer no air to escape, by means of a pair of pinchers fixed on the outside of the skin close round the end of each pipe. This done, the carcase of each animal, now apparently thin and lank, instantaneously

receives an aſtoniſhing extenſion in every part, which might be continued, I was told, even to the burſting of the ſkin of the animal.

This, I am informed, is the only machine of the kind in England, and Mr. Jutſum, wholeſale butcher, No. 65, Whitechapel market, the ſole inventor of it. Mr. Jutſum hearing that machinery had ſometimes been uſed for the above purpoſe in France, was very anxious to introduce here a ſimilar practice, and for ſeveral very cogent reaſons. He ſaw the health of his men daily impaired by the extraordinary and unnatural exertions which they were under the neceſſity of making, particularly when in the act of blowing large calves; he knew, likewiſe, the general deteſtation in which the common method of inflation was held; and he conceived, and, as is now demonſtrated, conceived juſtly, that veal which had been inflated with pure air would continue ſweet much longer in ſummer than that which had been blown by the breath of man. Inſtigated by theſe ſtrong and laudable motives, he began his experiments. His firſt efforts were made with the common bellows of large dimenſions; but the effect did not anſwer his expectations, nor was it equal to what even the human lungs were capable of performing. He then turned his thoughts towards an air-pump, which, with the aſſiſtance of an ingenious artiſt, he applied in the manner which I have attempted to deſcribe.

To the inventor of a machine ſo much wanted, and ſo valuable in its effects, public thanks certainly are due, but are not in my opinion an adequate remuneration. Something more ſubſtantial is merited. A handſome premium, from the Society for the encouragement of Arts, or from the Smithfield Society, or from the Corporation of London, would, I think, be extremely well applied on this occaſion. I may perhaps however here be aſked, why give encouragement to a practice which ought abſolutely to be ſuppreſſed, or why countenance that which is univerſally odious? To which I anſwer, that the blowing of veal has long been practiſed, is now practiſed generally both in town and country, and will ſtill prevail in ſpite of all remonſtrance and oppoſition; and for this ſimple, but irreſiſtible reaſon, becauſe veal becomes thereby more pleaſing to the eye of the purchaſer. It is true, indeed, that every butcher, when aſked whether his veal has been blown, conſtantly denies and reprobates the foul art; but it is as true, that he never loſes an opportunity of thus improving the appearance of his veal. To this new method of inflation, however, no degree of odium can attach.

Mr. Jutſum has uſed his machine about ſix months, and has fully reimburſed himſelf all extraordinary expences attending his improvement, by the ſaving of time, the ſaving the conſtitutions of his men, and by an increaſe in the number of his cuſtomers.

I am, your humble ſervant, A LONDONER.

ON THE FUR TRADE.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

PERCEIVING, that your Magazine is intended as a medium of reciprocal communication among merchants, husbandmen, artisans, and the philosophers and historians whose views are to illustrate and improve the several departments of commercial business, and productive industry; I intreat that I may have the honour to contribute, through so respectable a channel, my mite to augment the common mass of public intelligence.

I have passed the last fifteen years of my life, in the British part of North America. In that time, my attention was particularly drawn upon the importance of the FUR TRADE, and upon that branch of it, which is carried on by British subjects in Canada. The following is a short summary of what information I possess, relative to these topics.

Hair, wool, fur, are the three sorts of natural covering on the skins of quadrupeds. Quadrupeds destined by nature to pass their lives in warm climates, in constant exposure to the rays of the sun, and in dry situations rather than in caves, in morasses, and in the depth of woods, are usually covered with hair alone. Wool and fur seem to lose their peculiar qualities, and to take rather the appearance of hair in excessively hot climates. And yet, it is on the other hand, certain, that the hair on the human body, curls, and assumes even a woolly quality on the heads of the negroes, in very torrid temperatures.—Wool grows, in its best perfection, on the bodies of quadrupeds which naturally bear it in temperatures varying from that which is not more than genially hot to that which is just not so chillingly cold as to destroy animal life and vegetation. Furs cover principally animals occupying the coldest latitudes, or in more temperate regions, living by their native habits, for the greater part in situations in which they are, to a great degree, secluded from the access of heat.

These three species of the natural coverings of quadrupeds, are according to their respective qualities, wrought up by art, into dress and clothing for men. Hair is manufactured into wigs, hair-cloths, &c. The fabrics of woollen cloth are infinitely various, and so valuable, that except to those who have beheld some of the rudest American savages, it is not easy to imagine how human life could, without the use of wool, be even preserved.—Fur is a covering of soft curling hair, so extremely fine as to be unfit to be spun into yarn, but forming either upon the hide on which it naturally grew, or when wrought up by the art of the hat-maker, an article of clothing even more salutary and

agreeably warm than dreſſes of wool; and for this reaſon, as well as on account of its ornamental appearance, in univerſal uſe among the inhabitants of all the frigid and the temperate climates.

Among ſavages who have not yet attained to the ſkill of weaving cloth, fur on the hides, as alſo hides covered with hair and wool, are almoſt the only ſpecies of clothing in uſe; and as ſuch, are the principal article which paſſes from hand to hand, in their bartering traffic. While the art of manufacturing clothing advances; the uſe of furs does not ceaſe, but becomes more choice, and more a matter of mere ornament and luxury. Among the poliſhed nations of antiquity, *furs* were much worn. They were much worn by our anceſtors, in the earlier ages of the progreſs of ſociety in modern Europe. Four or five hundred years ſince, the foreſts of Germany, the mountains of Wales and Scotland, the wilds of Ireland, and the countries on the Baltic and the North Seas, ſupplied furs for the uſe of the richer and more luxurious inhabitants of the Southern kingdoms. It was chiefly in ſearch of thoſe furs, that the merchants of Italy, Flanders, England, and the German Hans Towns, extended their trading enterpriſes to the countries in high Northern latitudes. But, as civilization ſpread its empire ſtill farther to the North; the numbers of the fur-bearing animals, the prey of the hunter, were continually thinned and exterminated before it. Such has been the latter progreſs of this branch of induſtry and traffic, that the Ruſſians, the Tartars, the Anglo-Americans, the Britiſh Hudſon's Bay Company, and the inhabitants of the provinces of North America ſtill remaining under Britiſh juriſdiction, engroſs almoſt the whole Fur-Trade of the world. It is in the high Northern latitudes of Europe, Aſia, and America, that the *furs* for general conſumption, are procured. In Britain, in France, in Turkey, in Perſia, in the vaſt Empire of China, and indeed in every opulent and luxurious country, there is a ready market for this precious commodity.

In CANADA, the firſt Europeans who engaged in the Fur-Trade, were vagabond French coloniſts who choſe rather to ſhoot and roam the woods with the ſavage natives than to apply to any ſettled modes of agricultural induſtry. They were called *Coureurs des Bois.* They bartered European commodities with the natives for furs. They gradually extended their excurſions to a great diſtance backward into the interior country. For 12 or 15 months, a company of thoſe perſons would travel in queſt of furs, ſelling petty wares, and living themſelves partly by the chace, among the Indians. Then returning to Montreal or Quebec, to diſpoſe of their acquiſitions; they would diſſipate in one month's riot, the gains of the whole fifteen, preceding. When this diſſipation was over, they were again ready to return to the woods.

At length, the trade was placed under regulations: and no perſons were permitted to travel up the country, in ſearch of furs, without licences, which were ſold or beſtowed on proper individuals, gratuitouſly by the Government.

The trade, after this, fell into the hands of the French Officers living in retirement on their Canadian lands; and of the miſſionaries who trafficked with the Indians for furs, while they travelled among them, to convert them to the Popiſh form of Chriſtianity.

For ſome time after the ceſſion of Canada to Britain, in 1763, this trade was ſuſpended. In 1766, it was renewed from the ſtation of Michilimakinac. It was for a number of years ſubſequent, proſecuted, much rather with enterpriſe and ſpirit, than with prudence or ſucceſs.

From the year 1775 to almoſt 1798, the moſt perſevering and ſucceſsful adventurer in this trade, was a Mr. Joſeph Frobiſher.

In the winter 1783-84, the merchants of Canada, engaged in it, under the name of the North-Weſt Company. The direction of their buſineſs was committed to Meſſrs. Benjamin and Joſeph Frobiſher, and Simon Mactaviſh. In 1787, that Company was joined by moſt of the other ſeparate traders. In 1788, the groſs amount of the adventure for the year, was, to the value of about 40,000l. ſterling. Since that time, the Company's trade has been uniformly proſecuted with judgment, ſpirit, and vigorous perſeverance. In 1799, the capital employed in it, by that Company only, was not leſs than 120,000l. ſterling. Large dividends had, in the intermediate 11 years been paid on the ſtock: and the whole concern had gone on, in a manner ſufficiently proſperous. In 1798, a ſecond Company was formed: and theſe two now purſue this trade, in rivalſhip with one another.

Nearly 2000 perſons may be employed in proſecuting this trade in the interior country.—The goods which they barter with the Indians for their furs, are of Britiſh manufacture. Theſe are the different ſorts: coarſe woollen cloths of different kinds; milled blankets of various ſizes; arms and ammunition; twiſt and carrot tobacco; Mancheſter goods; linens and coarſe ſheetings; thread, lines, and twine; common hardware; cutlery and ironmongery of different ſorts; kettles of braſs, copper, and ſheet-iron; ſilk and cotton handkerchiefs; hats, ſhoes, and hoſe; calicoes and printed cottons, &c.

In 1798, the produce of the Old Company's adventure, in furs, was as follows: 106,000 beaver-ſkins, 2100 bear-ſkins, 1500 fox-ſkins, 4000 kitt fox-ſkins, 4600 otter-ſkins, 17,000 muſquaſh-ſkins, 32,000 marten-ſkins, 1800 mink-ſkins, 6000 lynx-ſkins, 600 wolverine-ſkins, 1650 fiſher-ſkins, 100 racoon-ſkins, 3800 wolf-ſkins, 700 elk-ſkins, 750 deer-ſkins, 1200 deer-ſkins dreſſed, 500 buffalo-robes, and a quantity of caſtoreum.

Of theſe, a part was exported to China, through the Anglo-American United States. The reſt were ſent to England; and were, then, partly conſumed in this country; in part, re-exported to the Chineſe market.—It is thought that the Anglo-Americans may acquire the whole of the Fur-Trade from North America to China; unleſs Britiſh ſubjects ſhall obtain here, the ſame advantages which are allowed to Foreigners.

It was in the proſecution of this trade, that Mr. ALEXANDER MACKENZIE penetrated acroſs the American continent to the North-Weſt coaſt. The account of his journeys will ſoon be publiſhed in London. You may, in the mean time, if you pleaſe, lay the above information before your readers.

I am, Sir, yours, &c.

W. P.

Lately a Proprietor in the Old Canadian Fur-Company.

London, Oct. 17, 1801.

ROWEN.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

IF there be any one thing more blameable than another, among affectations in writing intended to convey inſtruction; that is the unſeaſonable and unneceſſary uſe of technical terms and hard words, whether theſe be drawn from the books of the learned, or from the obſcure cant of the ignorant. Whenever the uſe of peculiar technical terms is proper; it is ſo, preciſely becauſe none elſe will with equal clearneſs and equal accuracy expreſs what is meant to be communicated. He who teizes us with technical language, when he might with as great advantage, tell his tale in words in common uſe,—is ſo far a fool.

None complain more warmly againſt technical terms and hard words, than Farmers. Their uſe is, indeed, not more unſeaſonable in any thing, than in writing about huſbandry. Yet, I know not, that any one other claſs of men, affect them ſo much, as Farmers themſelves. I have, many times, heard a wiſe neighbour of mine, ſtudiouſly inſult his landlord, when the good Gentleman made enquiries about the buſineſs of the farm, by ſpeaking only in our peaſant-ſlang of the inſtruments and operations of tillage andof the management of animal ſtock, though the ſame knowledge might have been, even by that very perſon, much more eaſily expreſſed in words of general uſe, and intelligible to every one. And, I perceive in many of your correſpondents who appear to be actual Farmers, a conceited propenſity to aſſume the appearance of ſuperior ſkill, by the unneceſſary uſe of cant or provincial terms for the moſt common objects in their buſineſs.

This affectation, at all times highly improper in writing on matters in huſbandry, is more eſpecially ſo, when the technical terms happen to be blunderingly uſed by thoſe who are ſo fond of

them. And, of this I perceive a remarkable inſtance, in one of the late Numbers of your Magazine, in the uſe of the word ROWEN.

I live, Sir, in a part of the country where we do not uſe the word ROWEN nor any particular cant term to ſignify the *ſecond growth of graſs on a field of which the herbage has been already mown for hay*. The word was therefore entirely new to me, when I met with it in your Magazine. I have ſince made ſome enquiries concerning its origin and uſe.

By theſe I find, that ROWEN is not the proper mode of writing the word which your correſpondent meant to uſe. ROUGHINGS is, indeed, a word in uſe in the Southern counties of England to denote "the paſture after the graſs has been mowed." Of this word, it is eaſy to gueſs the origin It is uſed, by contraction, for ROUGHENINGS; and it, naturally enough, ſignifies that growth which roughens the ſmoothneſs to which the graſs had been levelled by the ſcythe. But, when you give me, inſtead of this, the word ROWENS; I know not where you are; there is no analogy by which I can be led to find out your meaning; and you might, juſt as well, adopt, at random, any word to denote the ſame thing, from the vocabulary of the Gypſies. ROUGHINGS was, no doubt, the word your correſpondent had in view, if he had but known how to ſpell it. This word has been in uſe for more than two hundred years to denote the ſame thing, in the South of England: and therefore to its uſe accompanied with due explanation, I ſhould not haſtily object.

ROUGHINGS is not the only merely local and technical term in uſe in England to ſignify the new growth of graſs in meadows between Lammas and Michaelmas. In the Northern counties, AFTER-MATHS is a word common in this ſignification. AVERAGE is a word uſed with ſome varieties of meaning; but with this, among others. EDDISH is another provincial term employed in the North, to ſignify this ſecond growth of meadow-graſs. And GRATTON is, as I have been told, employed in Suſſex, to convey the ſame ſenſe; though, in Eſſex, it be rather ſaid of the ſtubble of corn.

But, though I cannot approve any affectation in the uſe, and particularly in the miſtaken uſe, of provincial words forming in different places, the technical language of huſbandry; yet, I ſhould like much to ſee a GLOSSARY or rather a POLYGLOTT of the language of agriculture and rural economy, ſuch as ſhould exhibit the terms which are at once the moſt conſiſtent with the analogy of claſſical Engliſh ſpeech, the moſt generally in uſe throughout theſe kingdoms, and the moſt definitely expreſſive of their reſpective ſubjects, while it ſhould at the ſame time, give, with thoſe terms, all the provincial ſynonyma by which theſe ſubjects may be any where known.

Sir, I not only wiſh greatly to ſee ſuch a taſk as this, ably executed: but, conceiving, that its accompliſhment would be exceedingly conducive to the improvement of agricultural knowledge,—I ſhould wiſh to ſee it executed through the medium of your moſt uſeful Magazine. Allow me, then, to propoſe the taſk to your co reſpondents, at the ſame time, while I ſuggeſt to them the propriety of avoiding as much as poſſible, the uſe of any thing like an Abracadabra of Agriculture. I am, Sir,

Your obedient Servant,

Dunſe, Dec. 24, 1801. J. DAWSON.

For the Commercial and Agricultural Magazine.

OATS WILL NOT KEEP WELL—THEREFORE DEAREST AT SEED-TIME.

ONE of my neighbours was telling me, he thought oats would be cheapeſt at Chriſtmas, and he would buy them then againſt ſeed-time. I anſwered they would never keep, for Oats, of all grain, keep the worſt, and they would not grow if fuſty; for I knew a great many Farmers would lay up Barley about Chriſtmas for ſeed, in order to kill the oats that might be in it, preſuming the oats, by ſeed-time, would be ſpoiled for growing.

It is manifeſt that oats take heat in a heap; and, by the great wet which comes from them when heated over the kiln for oatmeal, it is plain they have great moiſture in them; otherwiſe one would think their hulls would preſerve them better than any corn. From hence it appears why oats are generally deareſt at ſeed-time.

HOW TO KNOW MUSTY OATS BY THEIR COLOUR.

I HAD an oat-rick which, taking wet before it had been thatched, when it was brought into the barn ſeemed to be in an ill condition: and three weeks threſhing lying on the floor in the chaff, the heap grew very hot, which I had obſerved for two or three days, and before I winnowed them I thought they had been ſpoiled. Yet my Bailiff would perſuade me to ſow them, aſſuring me that he had known heated oats grow very well, though heated much longer after winnowed than theſe had been. I got Mr. B——, of A———, to look at them; he ſaid, immediately when he ſaw them, they would grow very well; for, ſaid he, they have not loſt their colour; whereas oats that have taken heat ſo much as not to grow, will look as red as a fox in their hulls. All who were in the barn ſaid ſo alſo, and that they had ſeen Vetches that had been heated look ſo too.

By inſerting theſe in your next Agricultural Magazine you will oblige Your humble Servant,

January 7, 1802. M. J. F.

GREAT OXEN, UNPROFITABLE.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

I do not abſolutely affirm, " that you ought to be hanged or drowned" for what you have inſerted in your laſt number, reſpecting the late ſhew of overgrown oxen, at Smithfield; but, abſurd prepoſſeſſions muſt have, certainly, ſtifled common ſenſe, in the mind of him who can, for a moment, ſeriouſly maintain " that it is in the qualities of *ſize* and *fatneſs*, that our Engliſh Graziers ought to bend their *principal* endeavours to improve the breed of their cows and oxen." I ſhould hope, that the few plain reaſons following may ſatisfy any perſon, that it is exceedingly injudicious to encourage, by ſhews and prizes, the practice of producing either exceſſively large or enormouſly fat cattle in this country.

1ſt. The real or imaginary value of ſuch prodigious oxen as the Duke of Bedford and Mr. Weſtcar, feed in competition for the annual prize, is great in proportion to their bulk, and to the pains and expence with which they are reared and fattened. But no farmer or grazier who deſires to get rich by prudent frugality and induſtry, not by hazardous ſpeculations, would ever chuſe *to riſk too much upon a ſingle life*. I would, for this reaſon, even if there were no other to recommend this meaſure, much rather rear and fatten *two oxen*, which, when ready for the butcher's knife, ſhould be together worth 100l. than rear and fatten *one ox* that ſhould alone be of the ſame value. The danger of loſs by diſeaſe, accidental injury, miſmanagement in rearing or feeding, ſale to an inſolvent Butcher, theft, &c. &c. is much leſs in the former caſe, than in the latter. And, every ſenſible and honeſt farmer, manufacturer, or merchant, who deſires to get rich, will always avoid every unneceſſary riſk of loſs.

2d. Beſide the imprudence of riſking too much on a ſingle life, when we breed great rather than middle-ſized oxen; it is to be conſidered, that *a* GREAT OX *is, naturally, a leſs healthy animal*, than one of middle ſize. He expoſes a larger ſurface to unlucky influences from without: he carries in himſelf a weight much more burthenſome than that of the ſmall ox, to the principle of life within him: digeſtion, the circulation of the blood, and all the interior vital functions, in ſuch an animal, go on with a powerleſs languor, under which they may be eaſily deranged: he is leſs capable of that exerciſe which is neceſſary to the healthful exiſtence of every animated being, according to its particular nature: there is at one time a fungous ſoftneſs in his fleſh, and at another, a rigidity in his muſcles, which makes his carcaſe leſs valuable for food in proportion to its weight, than that of the ſmaller ox. His life is, in ſhort, more ſubject to

diſeaſe and accidents ; and he is, upon his death, *cæteris paribus*, leſs valuable in proportion to his bulk. It is, in fact, with great oxen, in compariſon with ſmall, preciſely as with great horſes in compariſon with galloways and ſhelties, or as with an Iriſh giant in compariſon with a well-built man of five feet eight inches height.

3d. The very great ox of the family of thoſe which contend for the prize at Smithfield, is leſs fit for labour, than middle-ſized cattle of the ſame ſpecies. It is not for want of force and bulk, but for want of elaſtic activity, of docility, of hardineſs able to endure a courſe of toil without loſs of vigour or extreme decay in fleſh, that oxen in general are ſo much leſs uſeful than horſes, for working in the cart or the plough. But, the very great ox is, confeſſedly, much leſs hardy than thoſe which are of a ſmaller breed: he is, more ſluggiſh and obſtinate: he requires much more food, and that of better quality, without being able to do much more work: on ground, in the ſmalleſt degree rough and unequal, it would be extreme folly ever to think of employing ſuch an animal in the yoke. The great horſe may appear the moſt ſhewy in the team, and may, on a particular occaſion, make a wonderful effort of ſtrength: but, it is the well-built horſe of middle ſize which the farmer will find to ſerve him the longeſt, the beſt, and on the moſt moderate feeding, in the works of huſbandry; and the galloway and the ſhelty, as has been already obſerved, are by much the fitteſt to endure exceſſive toil in riding. Juſt ſo is it with oxen, in reſpect to the endurance of hardſhips and the performance of labour.

4th. In feeding cattle, it is infinitely better to have a herd of middle-ſized oxen, than to keep only ſuch as may be fellows of the great prize-ox and his competitors. To feed a very large ox, ſo that he may thrive; you muſt keep him upon a level field of rich herbage, you muſt houſe him in winter, you muſt nouriſh him on a due mixture of dry with green and juicy forage, you muſt at no time neglect him either as to the general care of his perſon, or as to the times and the nature of his feeding. On the other hand, a ſmaller ox or cow, will get fat even on coarſe ground, and on herbage that is not entirely rich and tender; it is not indiſpenſibly neceſſary that you ſhould houſe him in winter; he does not require you to pay that delicate attention in catering for him, without which you muſt not hope the great ox to thrive: there may be perhaps a thouſand farmers—and not more, in the kingdom, whoſe ſituations and modes of huſbandry and dealing, might enable them to rear great oxen without conſtant loſs: but there is no farmer in any part of Great Britain or Ireland whoſe ſituation may not enable him, if he have any ſkill or diligence in his buſineſs, to feed and fatten with reaſonable profit, cows and oxen of the ſmall or middle ſize.

5th. It has been already ſtated, that the ſmall and middle-ſized oxen are the hardier of the two races. They can, therefore, endure ſcarcity of food, better than the great ox. But, when there is in winter, an abundance of forage and litter for your cattle; it is then of conſequence, that they ſhould prepare in the ſtall and the ſtraw-yard, as much as poſſible of that manure which is compoſed by the mixture of their dung, their litter, and the waſte of their food. Now, it is undeniable, that two ſmall or middle-ſized oxen will, in any given time, make more manure in the ſtall or ſtraw-yard, than can, *cæteris paribus*, be made by one great ox.

6th. Small and middle-ſized cattle are more prolific than thoſe of gigantic bulk. This, even alone, would be one juſt advantage in favour of the former of theſe races. But, when taken into conſideration at the ſame time with all the other advantages already enumerated as belonging to them; it muſt appear to be of the greateſt conſequence. Calves, like all other animals, are liable to accidents and diſeaſes by which they may periſh in the rearing; and it is therefore neceſſary, that the births ſhould be ſufficiently numerous to prevent all danger of the exceſſive diminution of the herd by the death of a few of the calves. Beſides, where a great market is to be ſupplied with veal; two calves of a middle-ſized breed muſt always be preferable to one of a very large-bodied race; for the difference between the calf of a very large bull and cow—and the calf of a ſmaller bull and cow, is much leſs remarkable, during the firſt month of their age, than it afterwards becomes.

7th. I need not to contend, for it is not denied, that cows of the largeſt race are not thoſe which give the greateſt quantity of milk and that of the richeſt quality. Neither can there be any neceſſity, that I ſhould now take much pains to ſhew, that *cæteris paribus*, that race of cattle of which the cows yield the moſt milk, ſhould be the moſt induſtriouſly multiplied and improved throughout Great Britain and Ireland. Viſit the country; and ſee milk there every where moſt beneficially uſed inſtead of beer and tea: compute what quantities of cheeſe and butter are annually uſed among us; and ſerve as two of the moſt ſalutary parts of our food: you ſhall find it very hard to determine whether the milk of our cows, with the articles prepared from it, be not of more uſe as nouriſhment to the community, than the fleſh of all the cattle we ſlaughter. A good milk-cow will very ſoon yield a quantity of milk, more than equal to herſelf in weight.

8th. When a great and a ſmall ox come together to the ſhambles, it will invariably be found, that the very great ox gives much more than that quantity of offal, including entrails, bones, &c. which he ought, in proportion to his ſize to give, in order to

render the loſs upon the large carcaſe exactly the ſame relatively to the weight, as the loſs upon the ſmall carcaſe. Beſides, his fleſh is harder and leſs juicy; it is cooked not without a greater waſte; it is leſs eaſily digeſted; it is leſs nutritious; nor, if you take two perſons in delicate health, and feed the one upon the fleſh of an ox of the ſmall race, the other upon the fleſh of an ox of the great race; ſhall you find the latter to thrive ſo well on the food you give him, as does the former. The fleſh of the great ox approaches much nearer in its qualities to what we diſlike in bull's beef, than does that of the ſmall ox. You ſhall find the fleſh of the ſmall and middle-ſized ox, to be much more capable than that of the great one, of wholeſome preſervation for a long period, in voyages at ſea.

9th. The horns, the hide, the bones, the guts, the tendons of the middle-ſized ox will be found, upon accurate trial, to be fitter for uſe in the arts to which they ſerve as materials, than are the ſame parts of the body of the overgrown ox which is fattened before its death, into a ſtate of lethargic diſeaſe.

10th. All careful houſekeepers will tell you, that there is a much greater waſte in the uſe of exceſſively fat meat, ſuch as that of the great oxen lately exhibited at Smithfield, than in the uſe of meat that is not over-fattened. Fat crumbles down, even cold, and is loſt in great quantities, while the butcher breaks and cuts up the carcaſe to be ſold in meſſes. It is waſted between the ſhambles and the ſpit, the pot, or the ſalting-tub. In the dripping-pan, in pot-liquor, how much of it is loſt? At the table, it is not eaten even by perſons of the leaſt delicate appetites, except in the proportion of a ſmall portion of fat to a large piece of lean fibrous meat. In theſe temperate climates; and eſpecially in a town like London where one has not much bracing exerciſe in the open air; the uſe of any large proportion of fat, never fails to produce ſourneſs and indigeſtion by generating ſebacic acid on the ſtomach, and utterly to undermine the health of the perſons who delight in it.

11th. Beſides, nothing but opinionative obſtinacy could make any perſon perſiſt in maintaining, that the fat of oxen overgorged with oil-cakes, or even the reſt of the carcaſe can be truely wholeſome meat. Do we not obſerve, that men who feed groſsly and live indolently, fall into a bad habit of body, in which their fleſh is apt to break out into ſores, is eaſily hurt, and not without great difficulty to be healed? Is not country-fed pork preferred to that which the butcher fattens on the blood and garbage from the ſlaughter-houſe? Do we not decline to eat the fleſh of carniverous animals, becauſe their living upon animal food, is believed to make that fleſh unwholeſome, and of unpleaſant taſte and flavour? In ſhort, is there not a general tendency to putrid fever, in all animals which are held in a lethargic ſtate, and over-

fed with groſs food? The fineſt beef or mutton we eat, is that which fattens on middling paſture, in conſtant eaſy exerciſe, and in the open air. Oil-cake approaches ſo nearly to the nature of animal-food, that I would juſt as ſoon feed my oxen with tallow or with fiſh-oil as with that. It is no prejudice, but a certain fact, that, when you ſupply an indolent animal with rich food in exceſſive quantity; that food paſſes into chyle, into the maſs of his blood, into the ſolids of his body, without having been reſolved into its firſt principles, and renders the whole frame, a feveriſh maſs of half-corrupted matter. Now this is preciſely what takes place in the fattening of ſuch enormous oxen, as were lately exhibited in competition by his Grace of Bedford and Mr. Weſtcar. Exceſſive fatneſs is, alone, a diſeaſe in any animal, whether human or brute: and under this diſeaſe did thoſe oxen aſſuredly labour. Not only oil-cake, but even ſtall-fattening in general, unleſs with very judicious management, muſt unavoidably produce unwholeſome food.—For this climate, for our common modes of life, for the inhabitants of a great town,—it is only a moderate proportion of animal food, and that of red fibrous fleſh in a tender juicy ſtate, and with a ſmall portion of fat,—that can, with ſafety to the health, be taken in daily uſe at the table.

12th. But, even the great encouragers themſelves of the ſhews at Smithfield, preſume not to alledge, that the expence at which their prize oxen are reared and fattened, would be repaid, if the meat were ſold at the common price. It is ſold at half a crown a pound, as they boaſt; large ſums are drawn from the public for the ſight of the living animals; the value of the prizes is added: and thus, by deluding JOHN BULL's imagination, not by filling his belly with wholeſome food,—they obtain compenſation for the expence which they waſte on ſo fooliſh a purpoſe. An enthuſiaſm is excited among the ignorant and the ſilly in favour of gigantic and over-fattened meat. The attempts of Mr. Weſtcar and the Duke of Bedford are imitated by a few perhaps in every county. Oxen are fed for the ſhambles at an expence at which you might, for the ſame ſpace of time, overgorge as many Aldermen. The proper objects of Britiſh grazing huſbandry are ſlighted. The farmer is ruined by a fooliſh faſhion. And meat unfit for the uſe of thoſe who value health is brought into the market at prices at which none who are not wrong in the head will chuſe to purchaſe it.

Why, Sir, there has not been one of theſe ſhews of over-grown and over-fattened cattle at Smithfield which has not, by teaching grazing induſtry to take an improper direction, coſt the country a dead loſs of at leaſt 50,000l. ſterling. It were much better for their country, if the competitors would conſume their fortunes at the gaming-table. You, Sir, by panegyriſing ſuch ſhews in your Magazine, do great injury to the farming intereſt, your beſt patrons.

Sir, the only competition in this way to be encouraged—is "A competition, who can bring to the market a middle-sized Ox fattened to the *higheſt degree of* HEALTHY *fatneſs*, at the *ſmalleſt expence*, and in the ſhorteſt time?" The Ox ſhould be viewed, both living, and after ſlaughter. The meat ſhould even be tried in ſteaks. A grazier, a butcher, a cook, a gentleman of intelligence and faſhion, ſhould be the judges. The premia to be beſtowed, ought to be very liberal.

I am, Sir, your's, &c.

Coventry, Jan. 10, 1802. THOMAS STONE.

ON THE FOOT-ROT IN SHEEP.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

IN compaſſion to the Warwickſhire grazier and his flock, I am induced to give you the following ſimple and efficacious remedy for the Foot-Rot in Sheep, viz. as far as ever the foot appears diſordered by having gravel or matter under the hoof, it is neceſſary to pare that quite off, dry the part as clean as it will come, and apply oil of vitriol; which is beſt done with a bit of clean ſtick, becauſe by that means more will not be uſed than is neceſſary. It may appear a ſevere remedy, and it is a miſtaken tenderneſs in ſome not to take the hoof off as far as any foul moiſture appears; and the pain, which is not more than the poor animal endures for weeks, yea ſometimes for months, is over in a few minutes.

There is not any thing elſe neceſſary to be done than to keep the foot from the dirt, &c.

I am, Sir, your's, &c.

A BUCKINGHAMSHIRE FARMER.

Will any of your Correſpondents be ſo obliging to give their ideas upon the beſt means of deſtroying the Poppy-weed and Charlock in the common field huſbandry? and, where the land appears ſubject to produce thoſe weeds? which are the beſt ſeaſons for ſowing wheat and ſpring corn, whether wet or dry, early or late, &c. whether immediately after ploughing?

For the Commercial and Agricultural Magazine.

MANUFACTURES, &c. AT COVENTRY.

IN the ſummer of the year 1799, the learned and ingenious Mr. NEMNICH, of Hamburgh, ſo well known as perhaps the firſt linguiſt, and one of the beſt writers in Europe, paid a viſit of liberal curioſity to England. He ſurveyed, during his ſtay in this country, particularly our copper, iron, woollen, and cotton manufactures. On his return to Germany, he publiſhed

a ſenſible, unaffected, and conciſe account of what he had ſeen or otherwiſe ſatisfactorily learned in England, relative to the ſtate of its manufacturing induſtry. His book has recently come into our hands; and affords at once the moſt compendious and the moſt intelligent account we have yet ſeen of almoſt all thoſe ſubjects which the Author undertakes to deſcribe. We cannot doubt but a ſmall volume ſo uſefully inſtructive, muſt ſpeedily find an Engliſh tranſlator. In the mean time, we extract from it for the entertainment of our Readers, the following account of the manufactures, &c. of the city of Coventry.

"From Birmingham," ſays Mr. Nemnich, "I paſſed to COVENTRY in the county of Warwick. It is an ancient city; and was formerly ſurrounded with a wall; which, however, Charles the Second, for certain reaſons, allowed to be demoliſhed, in the year 1661. It has been, for ſome centuries, famous for its manufactures, and for the wealth acquired by them. Before the year 1549, it was reckoned to contain no fewer than 15,000 inhabitants. Its population has ſince that period, ſometimes fallen under this number, ſometimes riſen above it. At preſent, ſome ſay that Coventry contains about 20,000 ſouls: others raiſe the number, in their eſtimate even to 30,000. But in the laſt caſe, I ſhould ſuppoſe, that the inhabitants of a part of the environs are comprehended with thoſe of the city *.

"The inhabitants of Coventry and its vicinity are chiefly ribbon-makers. Several thouſands are here employed in this manufacture. The looms are framed for the weaving of either a ſingle piece of ribbon or ſeveral pieces together, at one time. The former are denominated *ſingle-hand looms*; and are uſed in weaving ribbons of raiſed and figure work: The latter are *engine looms*; and in each of them to the number of 10, 12, or 24 ribbons, more or fewer according to the reſpective breadths, may be woven together. In theſe *engine looms*, plain ribbons alone are made. The ribbons here wrought, are ſent, by the waggon, to London. The prices per yard vary according to the breadths; at the rate frequently of eight pence an inch. Ribbons are made, likewiſe, at *Leek* in *Staffordſhire* and *Congleton* in *Cheſhire*. But, Coventry is the principal ſeat of this manufacture.

"Great quantities of *ſilk laces*, are alſo made here. *Shoe-ſtrings* which wear much longer than thoſe commonly manufactured in other places, are here plaited with the hand.

"The following articles are made in conſiderable quantities in Coventry and its neighbourhood: ſtrong, milled *tamies*; *harrateens*, a kind of woollen mohair for bed-curtains,—of which there is a particularly ſtrong ſort that bears the name of *chenay*; *camelets*; ſewing *thread*; a little *ſhalloon*; and a little of what is called *wildbore*.

* The late enumeration reduces the population of Coventry to the number of only 16,024 perſons; but it is ſaid to have lately ſuffered a diminution of 3000.

"The *pluſh manufacture* is one of the moſt conſiderable which are here carried on. There is not in the kingdom, any other manufacture of the ſame article, of any magnitude. That at Banbury, is in compariſon, ſmall, and furniſhes not near ſo many varieties of pluſh, as are made here. Very little of this article is made in Mancheſter. The only houſe which manufactures it, in Coventry, has been in the buſineſs 40 years, and at preſent continues it under the firm of James Charles and Thomas Harris. They employ about 130 men.

"The pluſh they make, is entirely of woollen yarn, and ſo denominated *worſted ſhag*; or it has the *warp* of woollen yarn, the *weft* of yarn of camel's hair, and takes the name of *hair ſhag*. To make *worſted ſhag*; the manufacturers take a quantity of that which is here named *Jerſey-wool*; moiſten it with oil; comb it; and ſpin it into worſted yarn; twiſt this worſted yarn double; and then commit it to the weaver, to be made into pluſh.

"The pieces made in the loom, are uſually 42 yards long, and 16 inches broad. White worſted ſhag is much worn by ſoldiers, eſpecially thoſe in the cavalry; and it is one of the moſt ſaleable of Engliſh goods in foreign markets. Carriages are occaſionally lined with it. It is dyed of different colours. That which is dark-blue is generally preferred by foreigners.

"Woollen pluſh with figures, or *figured worſted ſhag*, is flowered, checquered, or ſtriped. It is made in pieces of the ſame length and breadth, as the pieces of that which is plain. It is manufactured but in ſmall quantity, and that chiefly for exportation to Germany where it is uſed in lining coaches.

"*Hair ſhag*, the other branch of this manufacture, is made in pieces 42 yards long, and half a yard in breadth. It is of various colours. It is a good deal uſed in England, in breeches to livery-ſervants. Sadlers make uſe of conſiderable quantities of it: and for their ſervice, many pieces go, every year, from this place to Birmingham. There is a large exportation of it to Ruſſia, Spain, and Portugal; but, it is not much that goes to Germany. The Spaniards and Portugueſe prefer theſe Engliſh goods to all of the ſame ſort which are made in any other country. They find, indeed, the prices high; but, this is more than compenſated by the excellent quality of the article.

"This *hair-ſhag* is, alſo, *printed* like calico. Printed hair-ſhag is of various colours; but moſt commonly white, chamois-yellow, and ſcarlet. It is uſed in England for waiſtcoats. Being of very high price; but little of it is exported. The ſuperfine, or *arab-hair ſhag*, is worn in breeches.

"Even perſons of faſhion wear alſo breeches of ſtriped or corded hair-ſhag. This ſtriped ſhag is made by the weaver ſo managing the *weft* of yarn of camel's hair in the loom, that the

worſted warp is left at intervals open, and without any part of the weft falling at thoſe intervals, through it.

" There is alſo of this manufacture, a long-haired pluſh, named *feather-ſhag*. The fineſt *hair-ſhag* has the appellation of *ſilk-ſhag*; and is ſold at from 9 to 11 ſhillings a yard.

" Meſſrs. Harris make, alſo, black *ſammet*, uſually half an ell broad.

" The only eſtabliſhment for weaving cotton-cloths in Coventry, belongs to Meſſrs. Nixon and Brodett. It has been in exiſtence, theſe four years. It employs nearly 500 hands. At the diſtance of ſome miles from the city, is a cotton printfield.

" It is of importance to notice that excellent clocks and watches are made in Coventry. Several hundreds of workmen earn here a comfortable livelihood, in this employment.

" Did you ſee *Peeping Tom?*—is the firſt queſtion put to you, in any other part of England, if you mention that you have been in Coventry. Hereby hangs the following tale.

" Some 800 years ago, there was an Earl of Coventry of the name of Leofrid. The city was enormouſly oppreſſed by the tribute which he exacted, and the ſlavery in which he held its people enthralled. His Counteſs was a beauteous and amiable woman by name Godiva. She was particularly gracious to the inhabitants of the city, and deſirous to alleviate the oppreſſion under which they groaned. For this purpoſe ſhe earneſtly intreated her Lord to give them relief; but had long, nothing but harſh denials from him; by which, however, ſhe was not moved to abandon the poor people's cauſe. At length, Leofrid, to put an end to her requeſts upon that head, told her: "I agree, but on condition, that you ſhall, in preſence of all the people, ride naked on horſeback, from one end of the town to the other."—Contrary to his expectation; the lovely Godiva readily accepted this condition; fixed a day on which ſhe would fulfill it; and when the day came, ſet out naked to paſs on horſeback through the town. Her long hair veiled thoſe charms which female delicacy is the moſt anxious to hide. She rode, thus, without other covering, from one end of the place to the other. Leofrid fulfilled his promiſe, and granted to the townſmen the immunities which ſhe deſired for them.

" Hence, annually, in the month of May or June, is the anniverſary of this event, joyouſly celebrated at Coventry. A young woman, the repreſentation of the Lady Godiva, rides through the city, in a fleſh-coloured garb, and with her hair hanging diſhevelled. Crowds aſſemble, even from a conſiderable diſtance, to view the ſight. Many jokes, not always the moſt delicate, paſs, amid the general merriment on this occaſion.

" The good people of Coventry gaily relate this ſtory with a ludicrous variation. They tell, that Leofrid, indeed, deſired his Lady to ride naked through the town, in the ſight of all the

populace; but that Godiva ſent ſecret orders to the townſmen to keep all within their houſes, to ſhut their doors, and cover up their windows at the appointed hour. Theſe orders, the ſtory proceeds, were implicitly obeyed by all of thoſe good people but one. This was TOM the Taylor, who, was ſo tickled by a liquoriſh curioſity, that he could not, for his life, help thruſting his head out at his window to watch the charming proceſſion. What was the conſequence? Poor Tom's eyes ſtarted from his head, and dropped down upon the ſtreet. Tom's adventure is, to this day, repreſented by a ſlender wooden figure in a window of a ſmall houſe near the White Bear Inn; and is known in the city, and over the country by the name of *Peeping Tom.*

"Such is the hiſtory of Peeping Tom, and the Lady Godiva. There was anciently at Coventry, a ſet of figures carved in wood, to repreſent the whole hiſtory of the Old ond New Teſtaments. On Corpus-Chriſti-day, thoſe figures were brought into action. Their entrances and exits were accompanied with the repetition of ſuitable rhimes. The whole compoſed a play which was famous under the name of *Ludus Corporis Chriſti*, or rather *Ludus Coventriæ.*

"Coventry has, in England, much the ſame ſort of reputation, as Schilda, Schoppenſtedt, and Waſingen have in Germany. It is an old town, having old churches, old, low, mean-looking houſes, narrow and dirty ſtreets. In a private garden, ſtands a great old ſteeple that belonged formerly to a church. The inhabitants are very induſtrious, and, moſt of them, very poor. Great part of what they earn, goes for beer. Of this they drink till they get tipſy, and then, fall to quarrelling. You ſhall ſeldom, in this city, ſee a face wearing that air of *cheerfulneſs* which diſtinguiſhes the looks of the people of Birmingham. The old women, indeed, going about with ſhort tobacco-pipes in their mouths, have ſomewhat of a good-humoured comic look. All elſe ſeems gloomy and diſmal."

OATS SHOOT UP FROM THE ROOT.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

I CAN aſſure both the Gentleman who ſigns his name "A Norfolk Farmer," and "Mr. Maynard," that they labour under a very great miſtake in affirming that what Mr. H. H. aſſerts about the "oats ſpringing, or tillowing up, afreſh from the old root," is not likely to happen, but that the ſecond crop of oats ſprang up from the brittings of the laſt year's crop. I will here inſert a paſſage that I copy word for word out of E. Liſles's "Obſervations in Huſbandry," to prove that what Mr. H. H. or others aſſert, concerning the oat-crop, is liable to happen as

often as the land is not ploughed up, after harveſt, to lie fallow for the next year.

"Farmer W——y, and farmer F——g, (ſays E. Liſles) of the Iſle of Wight, told me, that they, and ſeveral other Farmers in the Iſland, had cut oats this ſummer (anno 1707), which came from the roots of the laſt year's oats, and had ſhot roots, and tillowed up from thence notably, and yielded very good crops; but, that I might not be miſtaken, I aſked them over again, if it was not from the brittings of the laſt year's oats; but I found they were well acquainted with a baſtard crop of oats, and they both ſaid that they had pulled up the ſtubble, and it appeared plain that they were iſſues from the roots of the laſt year's ſtubble."

Mr. Maynard ſeems to intimate that our young farmer H. adviſes farmers to purſue this method of not plowing up the land after harveſt, to obtain a ſecond crop of oats from the ſame land which bore a crop the year before. All I can ſay is, that there is nothing in his letter from which I can conjecture that he adviſes that method. He merely ſeems to me to have written this letter with an intention of ſhewing that the oat, when cut down, will again ſhoot forth new ſtems from its old root, which is a truth.

Be ſo kind as to inſert this letter in your next Agricultural Magazine, and oblige Your humble Servant,

M. J. F.

For the Commercial and Agricultural Magazine.

In the preface to the 18th Volume of the Tranſactions of the London Society for the Encouragement of Arts, Manufactures, and Commerce, it is noticed that "it is a material branch of the Society's inſtitution to elucidate the advantages which Great Britain actually does poſſeſs, or to point out ſuch as ſhe may procure within herſelf, without being dependant upon foreign nations." The Editor, ſenſible of the juſtice of this remark, has here inſerted the principal part of the Society's paper preſented by Mr. John Taylor, on the culture of the Beet Plant, and the preparation of ſugar from its root; this being the object which gave riſe to the above obſervation. Much has been ſaid upon this intereſting ſubject in other publications: but the proceſs here mentioned is not generally known, and as it appears to be ſo advantageous, in various ways, and ſo eaſy to be practiſed by every Farmer and countryman; he hopes it will prove a uſeful communication to his readers.

AN ACCOUNT OF THE CULTURE OF THE BEET PLANT, (BETA VULGARIS OF LINÆUS,) THE APPLICATION OF ITS LEAVES AS FOOD FOR CATTLE, OF ITS ROOT FOR MAKING SUGAR, TREACLE, AND ARDENT SPIRITS; AND OF ITS FARINACEOUS RESIDUUM FOR FEEDING HOGS OR OTHER ANIMALS.

THE ſoil ſhould be a good black earth, not too moiſt; the land ſhould be prepared as for cabbages, namely, dunged

in autumn with ſhort rotten dung, and plowed; turned again in ſpring, and then plowed a third time much deeper than before. The land on which (Kohl) white cabbage has been planted the preceeding year, anſwers well for the culture of the Beet; ſuch land having been generally kept clean from weeds, and well dunged. The ſeeds are uſually placed from twelve to eighteen inches diſtant from each other, and one inch deep in the earth. The finger is uſed for the purpoſe, or an inſtrument reſembling a bean-ſetter, with this difference, that the teeth are an inch long, and the abovementioned diſtance from each other. In each hole one ſeed is laid, and immediately covered with earth. As the field where the Beet-root is ſown is eaſily over-run with weeds, and the Beet plants do not ſpring ſo ſoon as many of the weeds; therefore the ground muſt be weeded in four or five weeks time, and ſome weeks afterwards hoed: and ſince from one ſeed three or four plants frequently grow, or by negligence ſeveral ſeeds are ſometimes thrown into one hole, therefore the extra plants muſt be drawn out to be placed where there are vacancies, and the weeds muſt be frequently deſtroyed. There is this advantage in ſowing the ſeed in the method abovementioned, that the plants remain, and are not checked in their growth by change of ſituation. It is neceſſary, however, to pick out good and ripe ſeed, to prevent vacant places in the field.

Some prefer tranſplanting the roots to ſowing the ſeed on the ground where the plants are intended to remain; and, in ſuch caſe, make uſe of a ſtick to form the hole; the length of the ſtick determining the diſtance at which the plants ſhould be placed from each other. After the plants have been ſome weeks in the ground, the earth ſhould be looſened with a hoe, and the weeds deſtroyed.

The Red Beet is the kind which has been uſually grown in the neighbourhood of Halberſtadt: and the leaves of this, and the others, are eaten, when prepared, as ſpinach for the table; but are principally employed as herbage for cattle, who are fed therewith in the ſtalls.

The roots are pleaſant food when boiled, ſliced, and eaten cold, either alone or in ſallads.

As the method which Profeſſor Goettling has invented, to ſeparate the ſugar from Beet-roots, appears to me the moſt eaſy to be put in general practice, at little expence, and beſt calculated for Great Britain, I ſhall notice it more particularly.

He recommends the Beet-roots to be taken out of the ground about the middle of September, or from that time to the middle of October, in order to have good weather to dry them: they ſhould be waſhed from their adhering earth, as ſpeedily as poſſible, and their ſmall fibres ſhould at the ſame time be cut off; as likewiſe ſuch part of the root as in growing had riſen above the ſurface of the earth.

The roots are to be afterwards wiped with a cloth, and laid upon a dry floor; their heads are to be cut off and given to the cattle: the roots ſhould be then ſliced lengthways down the middle, each half again cut into thin ſlices, and looſely hung on ſtrong thread upon nails, in an airy chamber or place ſecure from the rain. The ſlices ſhould not be placed too near together, leſt they ſpoil, nor too many be put upon one ſtring, leſt it ſhould break; it is adviſeable to turn the ſtrings upſide down, once or twice, to effectuate a ſpeedy drying. In the courſe of ten or twelve days they become ſo dry that the ſtrings may be removed nearer together, in order to allow freſh Beet-roots to be hung up, if there ſhould be a ſcarcity of room.

In the courſe of fourteen days, or three weeks, they will be ſufficiently dry for their ſugar to be extracted. In caſe there may not be ſufficient room to dry them in the houſe, they may be dried in a barn, or any place ſecure from the rain. Inſtead of placing the ſliced roots upon ſtrings, ſtages may be made in out-buildings, or any place ſecure from the rain. The ſliced Beet-roots may be laid on netted frames within them, as in glue manufactories; but as children may be employed to ſtring them, you may dry on ſtrings a greater quantity of Beet-roots in a ſmall compaſs.

If the drying ſeaſon is far advanced, or a froſt expected, the Beet-roots ſhould not then be expoſed to the outward air, but dried in the kitchen or warm rooms on ſtrings, or netted frames, reſembling the flakes uſed in Yorkſhire for drying oat-cakes; as the roots become dry, they may be placed cloſer together. The ſlicing of the Beet-roots, properly forms the evening's occupation: no more ſhould be ſliced at once than can be ſtrung or placed on frames to dry, as it is not adviſeable to let the roots remain in ſlices long in a heap. The roots may be dried in ſtove-rooms by artificial heat; but great care is then required to keep them free from ſmoke, or being burnt, otherwiſe the ſugar will be dark-coloured, and of an unpleaſant taſte. It is better, therefore, not to dry the roots in ſtoves, unleſs in caſes of neceſſity, ſuch as where the froſts may prevent the roots from being dried in the open air.

The roots ſhould be dried throughout, and not partially. If they appear grey outſide, they ſhould yet be inwardly white or red; and, if chewed between the teeth, have an extremely ſweet taſte, free from muſt or acidity.

In large concerns, it would be beſt to ſlice the roots with machines contrived for the purpoſe: ſuch as are uſed in England for ſlicing turnips, would do the buſineſs.

Where opportunity will not permit the Beet-roots to be ſliced ſoon after being taken out of the earth, they ſhould be placed in cellars, and covered with ſtraw, or put into holes in dry ſandy earth, and preſerved till wanted, as potatoes are done in England.

In what degree the freezing, or longer preſervation of the Beet-roots may affect their ſaccharine qualities, is not yet ſufficiently aſcertained. Some trials made at Walterſdorf did not ſeem to occaſion any material alteration.

When the Beet-roots are dry, they are ready for their ſugar to be extracted: you muſt then provide three wood-tubs, wide, but not deep; oak, aſh, or willow will anſwer; but fir, or reſinous wood is not proper for the purpoſe: earthen mugs may ſerve for family uſe. If you employ wood veſſels, there ſhould be cocks or ſpiggots near the bottom of the tubs, and the tubs placed in a cool ſituation between eight and ten degrees of Reaumur's thermometer, or fifty-two degrees of Fahrenheit's, upon a ſtillage, near to each other; and ſo high from the ground, that ſmaller veſſels may ſtand below them, to receive the liquor when drawn off.

There ſhould be good clear water near at hand, ſo as to be pumped into the higher veſſels.

The Beet-roots having been dried, as above directed, muſt be ſifted, to free them from the duſt and looſe fibres; then having half filled one of the higher tubs with clean roots, pour clean cold water thereon, to about one third in height above the roots: let them thus remain for three hours, ſtirring them at different times with a wooden paddle.

After the expiration of three hours, put into the ſecond tub as many clean dried roots as had been placed in the firſt; draw the ſweet liquor from the firſt tub into the veſſel underneath, and pour it upon the roots in the ſecond: then put into the firſt tub more freſh water, ſufficient barely to cover the roots, and ſuffer the tubs to remain three hours more, ſtirring the roots repeatedly as before.

The liquor which had been poured from the firſt to the ſecond tub, will be now much abſorbed by the roots in the ſecond. After ſtanding again for three hours, the ſweet liquor from the ſecond tub muſt be drawn off, which, if the roots were of the red and white ringly ſort, will be of an agreeable red colour: it muſt now be run through a ſieve, or filtered through a flannel, and ſhould be fit for boiling down for ſugar.

After this, draw the liquor from the firſt tub, pour it on the ſecond, and pour on the firſt tub more freſh water, and let it ſtand three hours longer.

Then put into the third tub the uſual quantity of dry roots, and pour thereon the liquor from the ſecond tub: remove the liquor from the firſt tub to the ſecond; and the roots in the firſt tub, being now deprived of their ſaccharine matter, may be uſed for feeding hogs or cattle.

After three hours more, the liquor ſhould be drawn from the third tub, by filtering, as before, and may then be boiled down for ſugar.

Then draw off the second veſſel, and pour the liquor into the third; add freſh water to the ſecond veſſel, and let it remain three hours more, ſtirring the roots from time to time.

During this time, cleanſe out the firſt tub, and add freſh roots, as before. In three hours time, draw the liquor from the third tub, and pour it upon the freſh roots in the firſt; then draw the liquor from the ſecond tub, and pour it on the third: the roots of the ſecond tub will be now exhauſted and may be given to the cattle.

After three hours, draw off the liquor from the firſt tub, filter it and it will be ready to boil down. On the contents of the firſt, pour the liquor of the third, and put freſh water in the third tub; let it remain therein three hours, ſtirring it as uſual: during which time clean out the ſecond tub, and give the roots to the cattle.

In the ſecond tub freſh roots are again to be placed: proceed by extracting the ſaccharine matter, as before, and continue the operation, till all the ready-dried roots have been thus freed from their ſugar.

By this management the liquor becomes more charged with ſaccharine matter than you find the juice is when preſſed out of the roots, and a conſiderable quantity of fuel is ſpared. The roots from which the liquor has been extracted will have ſwelled much in the operation, and have loſt their ſweetneſs: their farinaceous reſiduum will, however, afford good food for cattle or hogs.

It is not adviſeable to have the veſſels made too large for extracting the ſugar, leſt there ſhould be too much liquor to boil down at the laſt. For the ſame reaſon, I think it better not to pour water the third time upon the laſt parcel of dried roots, but rather uſe them immediately for food for cattle, as they will not pay well for boiling down.

Whenever there is a ſufficient quantity of dried roots ready, the proceſs of extracting the ſaccharine liquor ſhould be continued day and night, as it is not proper to let the liquor remain longer than three, or at moſt four hours, before you boil it, leſt a diſſolution of the mucilaginous particles of the roots ſhould take place.

If it is not convenient to boil down all the ſaccharine liquor at once to a ſtate of cryſtallization, yet it ſhould be daily boiled down to the conſiſtence of a ſirup, to prevent its fermentation.

In boiling the liquor, take off the ſcum which ariſes.

ON THE BOILING, CRYSTALLIZATION, &c. OF THE BEET-SUGARS.

Firſt boil the extracted ſaccharine liquors down to the conſiſtence of ſirup; then put it into a wide, ſhallow copper, of which one-third at leaſt is empty, and let it boil away, by a moderate fire, until a vial which holds one ounce of water will contain

eleven drachms of the ſirup, or until the ſirup pours ſomewhat broad from the ladle.

As the froth or ſcum ariſes, it muſt be carefully taken off. When the ſirup is arrived at the point abovementioned, by gentle boiling, the fire muſt be removed from underneath the copper, and the ſirup gradually run through a clean woollen cloth, placed over a wooden or ſtone veſſel.

The ſirup muſt not cool too much before thus filtered, otherwiſe it becomes ropy; when the filtered ſirup is ſomewhat cool, it ſhould be ladled into ſhallow wooden or ſtone veſſels, to cryſtallize: ſhallow earthen veſſels, ſuch as are uſed to produce cream, are proper for the purpoſe. Veſſels made of tin will anſwer.

Theſe veſſels, filled with ſirup, muſt be placed in a room heated from fifteen to eighteen degrees of Reaumur's thermometer, or ſixty-eight of Fahrenheit's; and care muſt be taken to keep them clear from flies and duſt.

If the ſirup has been of a proper conſiſtence, cryſtals will ſoon begin to form at the bottom of the veſſels: and in the ſpace of eighteen or twenty-one days the cryſtallization will be completed. The maſs muſt then be put into a ſtrong linen ſack, well ſecured, and placed under a preſs to ſqueeze out the liquid from the ſugar which remains in the bag; the liquid matter may be ſet to cryſtallize a ſecond or third time, and will yield ſugar of a coarſer quality. A cheeſe-preſs or long lever will ſerve for the purpoſe of preſſure.

The ſugar firſt obtained may be rendered purer by well mixing therewith a ſmall quantity of clear ſpring water, and placing it again under the preſs; the coloured ſirup will then run out, and leave the ſugar in the bag in a much purer ſtate than before: by repeating the operation, it is ſo far improved, that, when dried and rubbed, it becomes a fine white powder-ſugar.

The ſeparated ſirups ſhould be again carefully boiled, and more ſugar will be obtained from them by cryſtallization.

If the ſugar procured by the firſt preſſure be diſſolved in as much clear water as will form a ſirup, and placed again in a warm room to cryſtallize, it will yield a much purer and harder ſugar; the ſirup may then be ſeparated without preſſure from the ſugar, merely by inclining the veſſel, and allowing the ſirup to run off from the cryſtals.

All the ſirups prepared as above directed, are fit for family uſe, and are much ſuperior in taſte to thoſe prepared from the preſſure of the raw or boiled roots.

The remaining thick ſirups may be uſed as treacle or molaſſes, and will ſerve to diſtill for rum or ſpirits.

In dry ſummers the leaves of the beet plant will be found of great ſervice as food for cattle, and do not give any bad taſte to the milk.

AN ACCOUNT OF THE 19TH VOLUME OF THE TRANSACTIONS OF THE SOCIETY FOR THE ENCOURAGEMENT OF ARTS, MANUFACTURES, AND COMMERCE.

THE publiſher of this Magazine, who is a Member of that reſpectable body the Society for the Encouragement of Arts, Manufactures, and Commerce, is happy to announce to the Public that the 19th volume of their Tranſactions is printed, though its delivery has been ſome time delayed owing to the indiſpoſition of Mr. Wilſon Lowry, the Engraver, which prevented his execution of the plates in due time.

The volume is printed upon fine paper; it contains ten copper-plates, and a greater variety of ſubjects than any one preceding it. The certificates to the ſeveral accounts are compreſſed in a ſhorter form than heretofore; and, from every appearance, the volume will be a valuable acquiſition to the Public, and exhibit, in a very favourable point of view, the exertions and ſucceſs of that deſervedly eſteemed Inſtitution.

The articles are arranged as follows: viz.

The Premiums.

An account of 11,600 elms, planted by Henry Vernon, Eſq. of Hilton Park, near Wolverhampton.

Twenty-one acres planted with oſiers, by Mr. Thomas Selby, of Otford Caſtle, Kent.

Six hundred and fifty thouſand timber-trees, planted by Thomas Johnes, Eſq. M.P. at Haſod, in Cardiganſhire.

One hundred and forty-five acres ſown with ſpring wheat, by Mr. Robert Brown, of Markle, in the county of Haddington, in Scotland.

A new method of making clover-hay in wet weather, communicated by Mr. John Taylor, of Mancheſter.

A method of harveſting corn in wet weather, practiſed by Mr. John Palmer, of Maxſtock, in Warwickſhire.

An improvement of fifty acres of waſte moor-land, by Thomas Fogg, Eſq. of Bolton, in Lancaſhire; containing alſo, a method of preventing a waſte of potatoes in the ſets.

A drain plough for wet land, of which a model has been preſented to the Society, by his Grace the Duke of Bridgewater.

A drill machine for ſowing turnip-ſeed, preſented by Thomas Andrew Knight, Eſq. of Elton, near Ludlow; alſo a paper on blight, by the ſame Gentleman.

An inſtrument named a Cultivator, for working rough fallows after other crops, by Mr. William Liſter, of Northampton.

An account of experiments to determine the comparative advantage of the drill or broad-caſt method in the cultivation of turnips, from the Rev. T. C. Munnings, of Eaſt Dereham, in Norfolk.

A method of draining boggy land by an augre, or peat-borer,

preſented by Thomas Eccleſton, Eſq. of Scareſbrick Hall, in Lancaſhire.

An account of 133 acres of barren land planted ſucceſsfully with timber-trees, by Nicholas Aſhton, Eſq. of Woolton Hall, near Liverpool.

A communication on the deſtruction of the grub of the cock-chafer, by Edward Jones, Eſq. of Wepre Hall, in Flintſhire.

A paper on the preparation and application of compoſts for manure, by Mr. John Horridge, of Raikes, near Bolton, in Lancaſhire.

A method of preſerving freſh water ſweet during long voyages, by Samuel Bentham, Eſq. of Queen ſquare, Weſtminſter.

A communication upon the production of opium from lettuces, by the Rev. Edmund Cartwright, of Mary-le-bone.

A paper upon the nature and preparation of drying oils, by Mr. Timothy Sheldrake, of the Strand, London.

An account of paper made from the paut plant, by Mr. Thomas Willmott, of Shoreham, in Kent.

A paper upon the preparation and manufacture of the root of the chicoree plant, uſed extenſively in Germany as a ſubſtitute for coffee, communicated by Mr. John Taylor.

A method of raiſing water to a great height by a ſmall ſtream, as practiſed by Mr. H. Sarjeant, of Whitehaven, in Cumberland.

An account of three whales killed by the gun-harpoon, by Mr. Robert Hays, of Wapping.

A new invented under-ſhot water-wheel, by the late Mr. Beſant, of Weſtminſter.

A new method of driving copper and iron bolts into ſhips, by Mr. Richard Phillips, of Briſtol.

A machine for raiſing ore from mines, invented by Mr. Thomas Arkwright, of Kendal.

A diſcovery of a quarry of burr-ſtone, proper for mill-ſtones, by Mr. Field Evans, of Pool Quay, Montgomeryſhire.

A ſteel mill for grinding hard ſubſtances, by Mr. Garnet Terry, of the City Road, Finſbury-ſquare.

An improved draw-back lock for houſe doors, by Mr. William Bullock, of Portland ſtreet.

A crane for raiſing and delivering heavy bodies, invented by Mr. Thomas Gent, of Homerton.

A copious and very valuable communication by Sir G. O. Paul, Bart. on a method invented and uſed by him for the ventilation of hoſpitals, &c.

An eſcapement for watches, practiſed by Mr. J. Delafons, of London.

A paper on the application of myrabolanos, from the Eaſt Indies, as a ſubſtitute for Aleppo galls, being an article intro-

duced to the Society by the late Dr. Johnſon, of Portland-place.

A communication from Andrew Stephens, Eſq. of Keerpoy, in Bengal, on lake made from freſh ſtick lack, which appears to poſſeſs, in an inferior degree, the properties of cochineal.

To the above are added a number of premiums conferred by the Society for performances in the Polite Arts, and an intereſting account of the additions made lately to the paintings in their Great Room by that eminent artiſt James Barry, Eſq. of Caſtle-ſtreet.

The Editor of this Magazine will occaſionally give a more minute account of ſome of the above articles, and particularly of ſuch of them as he may be deſired by his Correſpondents; whoſe requeſts, in this and other caſes, will meet with attention from him, and with his endeavours to gratify their wiſhes in his publication.

PREMIUMS FOR THE CULTURE OF HEMP IN THE NORTH OF SCOTLAND.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

THE Society for the encouragement of Arts, &c. ever attentive to the intereſts of this kingdom, have lately offered a premium for the Culture of Hemp in the Northern parts of Scotland, which is here inſerted, with a view to encourage the laudable attempt of furniſhing ſo neceſſary an article for the uſe of our navy, without being dependent on foreign countries for ſuch ſupplies. The Society have directed this premium to that part of the kingdom which can produce hemp, but is not proper for the cultivation of corn, in order that no impediment may ariſe to the culture of corn in every poſſible ſituation; it will alſo afford the means of encouraging the manufacturing of hemp amongſt the poor of Scotland.

"Society of Arts, &c. Jan. 16, 1802.

"The Society for the encouragement of Arts, Manufactures, and Commerce, wiſhing to encourage the growth of hemp for the uſe of the navy, in certain parts of Scotland, comprehending the whole county of Argyle, that part of Perthſhire ſituated to the North of the river Tay, and Weſt of the military road (ſee Anſlie's Map of Scotland), leading from Logierait to the county of Inverneſs, and ſuch other parts of Scotland as lie North of Inverneſsſhire, offers to the perſon who ſhall ſow with hemp in drills at leaſt eighteen inches aſunder, the greateſt quantity of land in the abovementioned diſtrict, not leſs than fifty acres ſtatute meaſure, in the year 1802, and ſhall, at the proper ſeaſon,

cauſe to be plucked the ſummer hemp (or male hemp, bearing no ſeed), and continue the winter hemp (or female hemp, bearing ſeed), on the ground until the ſeed is ripe; the gold medal, or fifty guineas.

"To the perſon who ſhall ſow with hemp in drills, at leaſt eighteen inches aſunder, the next greateſt quantity of land in the ſame abovementioned diſtrict, not leſs that twenty-five acres, ſtatute meaſure, in the year 1802, and ſhall, at the proper ſeaſon cauſe the ſame to be plucked as abovementioned; the ſilver medal, or twenty-five guineas.

"Certificates of the number of acres, of the diſtance of the drills, of the plucking of the hemp, with a general account of the ſoil, cultivation, and produce, to be delivered to the Society, along with 14lb. of the hemp, and two quarts of the ſeed, on or before the 2d Tueſday in Jan. 1803, addreſſed to their Secretary Mr. Charles Taylor, at the Adelphi, London."

A RECIPE FOR MAKING INK.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

THE Writing Ink now in general uſe is very different in quality, and in many inſtances, in a ſhort time, becomes ſcarcely legible; this inconvenience is injurious beyond conception to lawyers, merchants, and public-offices.

Having paid much attention to what has been publiſhed by the Engliſh, German, and French chemiſts upon this ſubject. I am convinced none of their receipts are ſuperior to that I have incloſed. Amongſt many papers now before me, written in England, France, and Germany, the writing, from which I copied this receipt, and which was executed above thirty-five years ago, with ink made by the annexed proceſs, is ſo decidedly ſuperior in blackneſs as would be ſcarce credible, if not evident from the fact. This ink is cheap, eaſily made, flows freely from the pen, and in a few hours becomes of an intenſe and permanent black colour.

Recipe for one gallon of Black Writing Ink.

Into a glazed ſtone-ware jar or pitcher, put one pound of Aleppo galls ſlightly bruiſed: then add one gallon of rain-water nearly of a boiling heat: let theſe ſtand together for fourteen days upon the kitchen hearth, or moderatly warm: after that time add four ounces of green copperas or ſulfate of iron, four ounces of logwood chips or ſhavings, one ounce of allum, one ounce of ſugar-candy, and four ounces of gum arabic or Senegal. Let the whole remain ten or twelve days longer in a moderate heat, the mouth of the veſſel ſlightly covered with paper; ſtir the ingredients well with a ſtick twice a day during the whole

time: then ſtrain off the ink through linen or flannel, bottle it, pour a little brandy on the top of the ink in each bottle, then cork your bottles well, and keep them for uſe in a place of a temperate heat.

N. B. The beſt gall nuts for the purpoſe are thoſe which are dark coloured, heavy, and free from grub-holes.

I am, Sir, your's, &c.

Manchester, Jan. 1, 1802. B. Y.

ON THE RETURNS OF THE PRODUCE OF GRAIN.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

THERE is a letter inſerted in your Magazine for October, 1801, p. 233, the contents of which I cannot approve; I therefore beg permiſſion to ſtate my reaſons of diſapprobation in your next Number.

The Letter-writer, whoſe ſignature is R. S. is a warm friend to the meaſure, which has been very much talked of of late, of compelling every farmer to give an account (he does not abſolutely ſay upon oath) of every buſhel of corn which he raiſes. Can any thing be more unreaſonable in a land of liberty, or really more injurious to the whole tenantry of this kingdom? Your correſpondent, no doubt, is himſelf a landlord, or he would think very different to what he appears to think in his letter.

"It is my opinion," ſays he, "that inſtead of the meaſure diſpleaſing us, it ought to be commended; nor do I ſee that any evil will reſult from it; it only proves that Government are cautious."

Government, I affirm, may receive information on this head ſufficiently accurate without having recourſe to a meaſure ſo harſh, and that would prove ſo peculiarly detrimental to perſons ſituated as I am. By what meaſures, pray, did Government obtain an accurate account of the produce of the kingdom, ſo perfectly correct, in the year 1800? By the ſame means might it obtain the ſame information, in any year, without extorting, to their prejudice, the ſecrets of individuals. And I hold it to be a truth that cannot be diſputed, that whatever knowledge Government might gain on this ſubject, that it ought, for the good of the community, to keep it in perfect ſecrecy within itſelf, and act upon it accordingly. For ſurely it cannot be good policy in a ſcarce year to proclaim, from the higheſt authority, to the poſſeſſors of grain, that corn is more valuable than they are aware of. Nor, in an abundant year, can it be wiſe to make any public declaration which might be the cauſe of extreme cheapneſs, to the great diſcouragement of the corn grower, and to the too great converſion of arable land into paſture.

Now I am one of thoſe unfortunate renters who are called tenants at will, and, of courſe, have only poſſeſſion of my land for one year certain. Were my landlord, then, to be made acquainted with every buſhel of corn that I raiſe this year, doubtleſs each buſhel will be taken into his account when he makes a calculation of what he thinks my future rent ought to be. He has never yet let ſlip an opportunity of this kind, and therefore I think it my duty to be conſtantly upon my guard, and to his numerous queſtions I take care to give few and cautious anſwers. He is a London tradeſman, and therefore not at all acquainted with the preſent extraordinary out-goings of a farm. Under apprehenſions of ſome ſuch meaſure as this, I have this year leſſened my tillage; and if this unjuſtifiable act is paſſed, I ſhall immediately lay down to graſs many acres more; and ſo will every tenant that has any regard to his own intereſt, and then neither ſpy nor landlord can learn what we make of our land. How, let me aſk, would my landlord bear a compulſive and general expoſure of the ſecrets of his trade? Would he allow that this was "a meaſure no ways diſpleaſing, but one that ought to be commended; and that no evil could reſult from it?" Would Mr. Garratt, and the other ſelfiſh and ſhort-ſighted Citizens who lately petitioned Parliament to iſſue the harſh mandate alluded to, bear with any degree of temper a petition from us, begging a ſimilar interference and diſcloſure of the private concerns of trade?

I will not believe that Government can condeſcend to proceed further in this impolitic meaſure; for impolitic certainly it is in many ways. I cannot believe that Government will ever compel the Clergy (as ſome men wiſh) to aſk queſtions that muſt be neceſſarily either unfair in the propoſal or odious to both parties. Such a meaſure muſt tend to make them unpopular, and muſt do injury to a better cauſe than even that of providing for temporal wants. Moſt Clergymen, indeed, are intereſted in knowing the exact quantity of grain raiſed by their pariſhioners; with what degree of delicacy or propriety, then, can ſuch demand of a Farmer to declare the preciſe number of buſhels which he raiſes? But it may be ſaid, that they may plead in their excuſe the authority under which they act. This, I ſay, will never be ſufficient to ſhield the Clergy from the odium of impertinent interference, and ſeldom from the imputation of acting from ſelfiſh motives, It appears from your Correſpondent's own words in what light the Clergy already view this buſineſs; for "the Clergyman," ſays he, (citing a particular caſe of this kind) "very imprudently, inſtead of attending to the buſineſs himſelf, employed an illiterate fellow (a conſtable) to do it for him." As if "an illiterate fellow, or a conſtable," was not as proper a perſon to be appointed to ſuch an office as a man of literature, who was evidently aſhamed of his

commiſſion. The Clergy in Hampſhire, I read with ſorrow in the newſpapers, have actually been deputed to make the above improper interrogatories, and have returned for anſwer to their Dioceſan, as might have been expected, that "the Farmers were not willing to give the deſired information." I hope this will be the laſt inſtance of the Clergy being employed on this unpleaſant and unprofitable buſineſs.

If Government has reaſon to be diſſatisfied with, and cannot rely with any degree of confidence on, the ſtatement of the produce of the country, given in by ſuch men as the Secretaries of Agricultural Boards, let it apply for information to men poſſeſſed of leſs credulity and of more diſcernment, to men who reſide conſtantly in the country, and who have an opportunity of ſeeing a large extent of its ſurface. Let Government apply to a few of that very competent claſs of men called Land Valuers, and it will, without trouble or expence, receive, as often as required, a ſtatement of the produce of the whole kingdom, which cannot be doubted or diſputed. Theſe men, from their conſtant habit of traverſing various diſtricts, and being intent upon the mere object of aſcertaining the value of land and its productions, would declare, year by year, the exact quantum of deficiency to be made up by importation.

I am not the only perſon aggrieved in this inſtance, Sir, there are too many, I might ſay hundreds, ſimilarly ſituated with myſelf, and to whom ſuch an Act of Parliament would prove not only harſh, but in ſome caſes abſolutely ruinous.

Your Correſpondent does not treat us with much reſpect, or even with decency, although he ſeems to rank himſelf in the number of Farmers, when he ſays, that "many of the Farmers are very much diſpleaſed with this meaſure, and falſe returns will evidently be made." This groſs imputation I wiſh to ward off, at leaſt from myſelf, by declaring, that although I ſhall reſiſt to the utmoſt all improper interference with my private concerns; yet, when called upon by proper authority, I ſhall give in a full and true ſtatement, whether an oath is adminiſtered or not, and ſo, I aſſert, will Farmers in general.

I would aſk R. S. before I conclude, whether he has derived his ſuſpicions, reſpecting the veracity of Farmers, from what he has obſerved in their conduct, or whether he judges from what he feels in himſelf?

Stow in the Wold,
Jan. 15, 1802.

I am, Sir, your's,
A HILL FARMER.

For the Commercial and Agricultural Magazine.

ACCOUNT OF AN ENGLISH BREWERY,

BY M. FAUJAS ST. FOND.

IT is by facts, more than by any other means, that an exact idea may be formed of what induſtry is capable of effecting

among a people, active and animated with the genius of commerce.

A large brewery, which I viſited, on the ſouth ſide of Blackfriar's-bridge, excited alike my aſtoniſhment and admiration.

The buildings and yards, which are of a vaſt extent, have no other object than utility; every thing is ſolid, every thing is adapted to its purpoſe, but every thing is an abſolute ſtranger to oſtentation.

Seventy large horſes are employed in the ſervice of this brewery. Of a hundred workmen, unceaſingly in motion, ſome prepare the malt and the hops, or are employed about the fires, the coppers, or the coolers; ſome rack off the beer, and others convey it into large vats, which I ſhall preſently deſcribe.

The beer is fermented in vaſt ſquare veſſels, raiſed to the height of the firſt floor; and pumps, diſpoſed with much art, facilitate the ſupply of water.

When the beer is made, it deſcends through pipes, and is diſtributed, by means of funnels, into a number of caſks, placed in an immenſe cellar. The beer becomes of a more perfect quality in thoſe caſks, where it remains, however, but a ſhort time; from them it is drawn off by long ſpouts, and transfuſed into a great reſervoir, whence it is again raiſed, by pumps, into vats of an aſtoniſhing magnitude, which are placed vertically, and the top of which cannot be reached without a ladder: a gallery goes round the places which contain theſe vats.

Four apartments, ſituated on the ground-floor, and of different dimenſions, are appropriated to receive them.

In the firſt, which is the ſmalleſt, there are ſix vats, containing each three hundred hogſheads; a hogſhead contains about two hundred and forty bottles: in the ſecond are twenty-eight vats, of four hundred hogſheads; in the third, fourteen of nine hundred hogſheads; and in the fourth, four of five hundred hogſheads each.

Thus the whole of them is capable of containing thirty-one thouſand ſix hundred hogſheads.

The ordinary quantity ſold, one year with another, is about a hundred and forty thouſand hogſheads. During the laſt war it was much more conſiderable, the proprietor of the brewery having had a contract for ſupplying the navy. One may form an eſtimate of the ſale at that period, from the duties yielded by the beer then made. I was aſſured, that they amounted to ten thouſand pounds ſterling a month.

It was not very long ſince this brewery had been ſold, on the death of the former proprietor; it was put to auction, and knocked down at the price of three millions two hundred and eighty-eight French livres.

It is remarkable that twenty-two bidders contended for it, though it was neceſſary, not only to pay down that ſum, but to be able to

advance as much more as would be requiſite to ſet ſo vaſt an eſtabliſhment in motion.

It is, perhaps, ſuperfluous to obſerve, that almoſt all the beer brewed in this extenſive work, is of the kind called Porter, which is of a ſtrong body, capable of ſuſtaining long ſea voyages, and of being preſerved in bottles for many years; it is, indeed, neceſſary, in order to have it of a good quality, that it ſhould remain ſeveral months in the large vats.

Theſe vats made of wood of the choiceſt quality, are conſtructed with an admirable ſolidity, juſtneſs, and preciſion, and alſo with an appearance of elegance: ſome of them have as many as eighteen hoops of iron; and ſeveral were pointed out to me, which had coſt ten thouſand French livres a-piece.

I have already ſaid, that they were all placed on one end around the walls; but, on aſking what they ſtood upon, my conductor ſhewed me, that they reſted on brick arches of great ſolidity, and ſtrengthened by a number of thick upright pillars of wood. Their bottom was thus protected from the humidity of the ground, and it was more eaſily ſeen whether the beer eſcaped through them.

The top of the vat was carefully covered with thick planks, joined together in the moſt perfect manner, and theſe again were covered with fine ſand, ſix inches deep.

At a ſmall diſtance from this brewery, there is another for making malt-vinegar, fitted up in the ſame manner; but, in the latter, the vats ſtand in the open air, and occupy an immenſe yard. Their height and capacity are ſuch, that on entering the vaſt incloſure filled with theſe gigantic veſſels, ranged in different lines, one is apt to imagine, by an illuſion proceeding from the want of exact compariſon, that one ſees a ſucceſſion of ſhips of the line, lying by the ſide of each other in an harbour.

The vinegar made from ſtrong beer, of a good quality, is better than one would expect; there is no other kind uſed in any part of England, the importation of vinegar, made from wine, being ſeverely prohibited.

ON THE LOSS SUSTAINED BY FATTENING POULTRY WITH CORN.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

ONE of your correſpondents, whoſe ſignature is W. B—w, begs, in the laſt number of your Magazine, p. 389, to be favoured with a ſtatement of the modern methods of breeding, rearing, and fattening poultry.

Now, as the laſt part of the proceſs, or the *fattening*, ſeems to be the chief object of the enquiry, I beg leave, in order to prevent, if poſſible, the future diſcuſſion of the ſubject, to move

the previous queſtion; and ſhall accordingly proceed to ſtate my reaſons for this abrupt procedure.

The above queſtion appears to me extremely unſeaſonable; for the fattening of poultry with corn has never, during the laſt eight years, been a fit ſubject for ſober diſcuſſion; but at the preſent day, when the quartern-loaf cannot, in the metropolis, be purchaſed for a ſhilling, nor a buſhel of the beſt wheat for ten ſhillings, it is an inſult offered to the feelings of the lower claſs even to mention this extravagant conſumption of what was intended as food for man. Indeed, the conſumption of neceſſaries, in the mere producing of luxuries, can never be good policy in an iſland that cannot fully ſupply itſelf with the former. Your correſpondent does not conſider the number of old Cato's balls that would be required to accompliſh his object. He does not conſider, that in every wing of a fowl which he eats he deſtroys a quartern loaf. I hope he will re-conſider the matter and retract or not proſecute his enquiries. There is a paſſage in a ſmall pamphlet, which I ſaw advertized on the wrapper of your Magazine a few months back, entitled, "Large Farms Recommended," which is exactly in uniſon with what I am advancing: I ſhall therefore take the liberty of quoting it. The author, in defence of the conduct of the large farmer's wife, who had been accuſed of neglecting the feeding of poultry, expreſſes himſelf thus: "The farmer's wife who throws away much of her time, and much of her huſband's corn, in feeding of geeſe, fowls, &c. neither conſults her own intereſt, nor the benefit of the community. For it frequently happens that the ſmall farmer's wife, after having 'nouriſhed' a couple of fowls with her four ſhillings worth of corn, may, 'by waiting for the higheſt market price,' ſell them for three ſhillings; and then ſhe 'adds their produce to her huſband's ſtore.' On moſt farms (on a dairy one in particular) the induſtrious wife may find much better employ than in feeding poultry. I am convinced that where more fowls are kept than can be ſupported with what they find at the barn-doors, that ſuch ſtock is unprofitable. It is trifling and unworthy of Mr. W. to lay ſo much ſtreſs upon this unſubſtantial part of proviſions, as if the ſecond courſe was of more conſequence to an Engliſhman than his bread, his beef, and his beer."

This author, you ſee, proceeds much farther in his objections to the favourite purſuit of W. B—w than I have advanced, and yet I believe that his notions are not to be refuted. He condemns poultry as unprofitable ſtock, in every ſituation, excepting the farm-yard.

I hope your correſpondent will drop all further proſecution of his ſcheme, till he can again purchaſe a buſhel of wheat at ſeven ſhillings; then I ſhall be his

Humble ſervant,

Oxford, Jan. 15, 1802. AN OLD ENGLISHMAN.

ON THE CULTURE OF POTATOES.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

THE advantage derived from the uſe of Potatoes, as an article of food, is ſo well known, that it is unneceſſary to make comments upon it.

To point out the means of encouraging their culture, and preventing the needleſs waſte of them, is of material conſequence. With this view I ſend you ſome obſervations upon the moſt economical manner of preparing ſets from potatoes, and on the culture of potatoes from the ſhoots, both of which methods have been ſanctioned by experience. The firſt method is deſcribed in a letter from Mr. W. Stewart to the Dublin Society, in the firſt volume of their Tranſactions for the year 1799, and is to this purport.—With an inſtrument, called by him a Scoop (of which a drawing is annexed), he takes out the ſet, eye, or growing-bud of the potatoe, and plants this, inſtead of cutting the potatoes with a knife. The blade and haft of this inſtrument are made of ſteel; the bottom edge A is ſharp, ſwelling round to the upper edge. (*See the Plate.*)

Laſt year I purchaſed from Mr. Slark, No. 10, Cheapſide, London, an inſtrument for the ſame purpoſe, whoſe ſcoop part reſembles a ſmall ladle with ſharp edges. As I do not know to which of theſe inſtruments to give the preference, and either will perfectly anſwer the purpoſe, and allow a great part of the potatoe from whence the ſet is taken to be preſerved for food, I have ſent you drawings of both.

On opening the holes where potatoes are depoſited during the winter ſeaſon, a number of ſhoots, or what our country people call ſprits, will be found amongſt them; theſe ſhould be preſerved with care, if the ground be not ready to plant them; and, as is proved by letters from the Rev. W. Manſell, and others, to the Dublin Society, they will, when planted, produce luxuriant crops of potatoes.

In a few days I purpoſe to ſend you fuller directions on this intereſting ſubject, for your next month's Magazine: but, in order to prevent the waſte and deſtruction of theſe ſhoots, and alſo of potatoes, I would not delay giving you now the above hints upon the ſubject.

I am, Sir,

Bolton, Lancaſhire, Your's, &c.

Jan. 2, 1802. J. H.

FURTHER INFORMATION RESPECTING THE EAR-COCKLE.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

WHEN I wrote to you on (what Mr. Baniſter calls) Ear-Cockle, I was not aware of having to trouble you a ſecond time on the ſame ſubject; the remarks, however, of Mr. Maynard, and a Norfolk Farmer, have induced me to ſay ſomething in reply.

"If (ſays Mr. Maynard) R. S. had been an experimental Farmer he would have known the difference between Smut-Balls and Cockle; two things which he has evidently confounded." Perhaps Mr. M. thinks it impoſſible for a Farmer (unleſs he be an experimental Farmer) to know black from white. If experimental Farmers are men of ſuch conſummate knowledge, it is a little extraordinary that Mr. Maynard (who I ſuppoſe is an experimental Farmer) ſhould not know the difference between Pepper Kernels and Smut-Balls, and it is evident he does not, for he has treated of them as one.

I find Mr. Maynard is of opinion that the ſmall ſeeds mentioned in my laſt, are Smut-Balls; I do aſſure him he is very much miſtaken, they are no more alike than Smut-Balls are like Cockle. I perfectly agree with Mr. Maynard in what he ſays in the latter part of his letter, that "Cockle is not damaged Wheat," there needs no ſpirit to come from the grave to tell us this.

The Norfolk Farmer very politely tells me, I know nothing of farming. I would recommend to the Norfolk Farmer never to be too forward in poſitive aſſertions, unaccompanied with proof. He believes me to be the 'firſt perſon in the world that ever had the leaſt ſuſpicion that Cockle grows in a Wheat-Ear.' Had that Gentleman attentively peruſed my letter, he would have ſeen that I never did entertain ſuch a ſuſpicion, but directly the reverſe. But to convince him of the exiſtence of ſuch an opinion I refer him to No. XVI. page 369, Commercial Magazine. Had I been aware, Sir, that your readers had overlooked your review of Baniſter's Synopſis of Huſbandry, I ſhould have ſtated to them that it was in conſequence of the ſurprize you there expreſſed, at a ſtatement of Mr. Baniſter's, concerning Ear-Cockle, that I was induced to try to account for ſo ſtrange a phœnomenon.

I did not write to confirm the growth of Ear-Cockle, but to refute it. I no more believe that a Wheat Ear will produce Cockle, than that "a mare ſhould foal a flying fiſh*." For it is

*Mr. BANISTER appears, from a late Number of the Gentleman's Magazine, to have read with ſome offence, the pointedneſs of the remark conveyed in the words above quoted. But, we ſhould with great pleaſure inſert any communication from that Gentleman in favour of his own doctrine.

very certain that however much the Wheat may degenerate, it never can transpose itself to a different species.

Your humble servant,

Colchester, Jan. 24, 1802. R. S.

P. S. I believe the account I sent you of Pepper Kernels is a true one; and from Mr. Banister's account I am inclined to think that they are called Ear-Cockles in Kent.

A PLAN FOR THE PREVENTION OF SCARCITY, &c.

In a LETTER *to the Right Hon.* HENRY ADDINGTON.

(*Continued from p.* 411, *of our last volume.*)

REVIEW the history of commerce, in all ages, and among all nations. Its subjection to restraints by law and government, appears from universal experience, to be a condition inseparable from its very existence. It should seem, that men cannot unite in society, nor submit to the authority of government, without virtually acknowledging some common rules in regard to the mutual transference of property, and committing to government, of considerate design, or even unconsciously, the care of continually enforcing the observance of those rules. Enquire into the history of the rude traffic of those savages of antiquity, with whom the Egyptians, the Phœnicians, the Greeks, and the Romans opened the first commercial intercourse:—They were scarcely in any instance, so extremely rude and savage, as to acknowledge no regulations of their barter imposed by the same authority which held the horde or tribe in union. Examine the history of the savages which the voyages and journies of the civilized inhabitants of modern Europe have, in different parts of the world, discovered; you shall invariably find those poor people, however ignorant and rude, however imperfectly combined into society, to recognize certain rules of common authority, in relation both to the right of property, and to its conveyance in traffic from hand to hand. Even the Esquimaux, though owning, in their little bartering traffic, restrictions so few as scarcely to deserve to be named in comparison with those which perhaps overburthen British commerce, have, however, customs and restraints by which they are guided in their barter among themselves and with strangers, and which must be acknowledged as unequivocally such by every intelligent observer. Among all the *civilized* nations of antiquity, the imposition of suitable regulations upon trade, was one of the first cares of the government. Moses and Herodotus to whom we owe our most authentic information concerning the public economy of the ancient Egyptians, specify many instances of restraints imposed by them upon the transactions of trade. The Phœnicians of Sidon, Tyre, and Carthage, made the regulation and encouragement of trade, the primary business of their governments in these several cities.

There is not a ſingle fragment remaining of the inſtitutions of any of the famous law-givers of Greece, that does not involve ſome injunctions reſpecting the commercial transference of property. Look into the orations of Lyſias, of Iſœus, of Aeſchines, of Demoſthenes; or examine that collection of the Athenian laws which is inſerted in the Grecian Antiquities of the learned Potter; you ſhall perceive, that the Athenian commonwealth, at the time when its trade was the moſt extenſive and proſperous, interpoſed the moſt vigilantly to regulate that trade by acts of the ſupreme Legiſlative and Executive Authority of the ſtate. Every page of the Roman hiſtory, whether you look into Livy or Polybius, or Dionyſius of Halicarnaſſus, or Tacitus, or any of its other writers, ſufficiently beſpeaks, that laws were impoſed to regulate the trade of the empire, and that contributions towards the expenditure of the ſtate were exacted from it. At Rome, the inſpection of the trade in arms, and the care of ſupplying the city with that primary article of ſubſiſtence, were under both the Republican and the Imperial governments, the principal buſineſs of the magiſtrates. To ſuch an height indeed, had the Romans carried their means for providing againſt ſcarcity of grain in their metropolis, on any year on which the uſual ſources of ſupply might fail them; that, when, in the beginning of the reign of Trajan, Egypt being for a ſeaſon, but ſcantily overflowed by the Nile, was ſo far from ſending grain, as on former years to Rome, that the produce was even inſufficient to keep the Egyptians themſelves from ſtarving; Rome then, not only was not diſtreſſed by the failure of the wonted importation from Egypt, but even afforded from her granaries, an abundant ſupply for the relief of the ſtarving Egyptians. *Refundimus Nilo ſuas copias*, ſays Pliny the younger, in his eloquent panegyric on the Emperor Trajan; *recepit frumenta quæ miſerat; deportatas meſſes revexit.* Purſue the hiſtory of commerce down through the dark ages; you ſhall find it conſtantly ſubjected to legal reſtrictions alike by its barbarous oppreſſors, and by thoſe who ſaw its utility to civil life, and ſtrove to encourage and revive it. The renewal of induſtry and civility in modern Europe, was the inſtitution of *Guilds* or Merchant-companies, holding lands by burgage-tenure from the different governments under whoſe protection they lived, or poſſeſſing perhaps themſelves the dignity of an independent ſtate: and it is ſufficiently known, that both the laws, by which the affairs of every ſuch guild were regulated; and the conditions of the charters by which they held their burgage-property and privileges; preſcribe a variety of rules for the conduct of their traffic. Examine the hiſtory of the progreſs of induſtry, trade, and civilization in every country of Europe; you ſhall find that trade has, invariably, flouriſhed more and more; and it drew more and more upon it, the attention

of the governments under which it was carried on. Wherever it has been much neglected by the Government, it has never greatly proſpered. But, there are not wanting inſtances which almoſt lead us to ſuppoſe, that even oppreſſive reſtrictions may at times, ſo ſeaſonably excite its energies, as rather to benefit, than to injure it. And is it poſſible to think, that trade could have thus in all countries, in all times, in all periods of the progreſs of civilization, endured without ruin, the reſtraints and exactions of Government, if ſuch reſtraints and exactions were not, if wiſely impoſed, congenial to its very nature? There is ſomething in this univerſal conſent of mankind, in this ſeemingly unalterable neceſſity of human affairs, that may well impoſe ſilence on all the ſophiſms which may have been urged on the other ſide. If commerce could not flouriſh but in unreſtrained freedom; ſurely it would never have attained to conſtitute the true national ſtrength and the beſt ſource of general opulence to any people. Name me an inſtance—and you may indeed, name thouſands—in which either the exactions or the regulations of a Government, have been injurious to trade: and I ſhall eaſily ſatisfy you, that the injury aroſe, not from any thing unavoidably hurtful in the primary nature of ſuch regulations and exactions in general, but from error or voluntary miſtake in the framing of thoſe regulations and in the levying of thoſe exactions in particular, of which you complain.

I remember to have, ſome years ſince, read a very ingenious eſſay by Mr. Jeremiah Bentham, which is not now in my hands. It is upon the ſubject of the general fixing "the rate of the intereſt of money, by the Legiſlatures and Governments of modern Europe." The author aſſumes the doctrine of the utility of unlimited freedom of trade, as a principle that cannot be reaſonably diſputed. He conſiders the legiſlatures of Europe as ready to give it full effect, as far as they can without too raſhly diſturbing the eſtabliſhed order of things. He, then, ſhews, that there is nothing in the nature of gold and ſilver which ſhould, in reaſon, ſubject the traffic in them to reſtrictions from which all other trade is left more or leſs free. He concludes, with a force of evidence which, if we grant his principles, is certainly invincible, that it is extreme injuſtice in Governments to fix the rate of the intereſt of money to their ſubjects.—Now this train of reaſoning, if any, ought ſurely to awaken men's minds to a perception of the abſurdity of that doctrine which recommends the unlimited freedom of trade. The utility of fixing by law the rate of the intereſt of money has been univerſally experienced and confeſſed. It is not difficult to apprehend, what evils might, at this moment, enſue in Britain, if all the laws by which that rate is eſtabliſhed at its preſent maximum, ſhould now be at once aboliſhed. But, few or no ſubſtantial reaſons can be given for fixing by law, the prices of the uſe of money, which ſhall not

equally imply that, *mutatis mutandis*, as much ought to be done for every other commodity, and every other ſpecies of commercial tranſaction. Mr. Bentham's arguments, ſo far as I now remember them, are all, or almoſt all, good; but they are good, not to prove that the rate of the intereſt of money ſhould not be fixed, but to evince, that all other things ought to be put, in the reſpects of legiſlature, inſpection, and regulation, nearly on the ſame footing as money.

But, I ſhall perhaps be told, "that I fight againſt a man of ſtraw; that the beautiful theories of Hume, Smith, and Queſnai, were not intended to explode all legiſlative regulations relative to commerce—as that would have been, in fact, to reſcind at once the fundamental laws which hold ſociety together—but only, to perſuade Governments not to intermeddle unſeaſonably in the concerns of trade, and to teach even deſpots, that they would loſe much more than they could poſſibly gain, by robbing the merchant; that the advocates for the freedom of trade have never contended for that univerſal, unbounded freedom of trade, of which I would brand them as the patrons; and that their doctrine is approved by ſtateſmen, philoſophers, and orators, whoſe ſlighteſt nod of approbation is infinitely preferable to all my reaſonings."

I reply that the principle of the utility of univerſal and unlimited freedom of trade has been too unequivocally and loudly taught by its authors, too implicitly adopted and profeſſed by their followers, to be now diſavowed. It is not now to be explained away. It is either true or falſe. If it be true; there can, in reaſon and in juſtice, be no legiſlation of commerce, nor can trade be advantageouſly ſubjected to a ſingle reſtriction, however eaſy or general. Is it falſe? There may, then, be a legiſlation of commerce; there may be beneficial commercial impoſts and reſtrictions, as well as hurtful ones. But, the doctrine againſt which I contend cannot be both true and falſe, at the ſame time. It cannot be at once true, that trade ought to be left wholly free, and that its proſperity may be advanced by wiſe regulations. Epicurus taught that all human felicity conſiſted, either directly and immediately, or indirectly and more remotely, in the pleaſures of ſenſation. When, however, the immortality of this doctrine was arraigned; he ſhifted his ground; and endeavoured to ſhew, that virtue alone was ſenſual pleaſure. But Cicero, in his treatiſe *De Finibus*, has ſufficiently demonſtrated, that virtue and ſenſual pleaſure cannot both be at the ſame time, the ſupreme good; that the two parts of this theory thus eked out, are incompatible; and that the attempt to explain ſenſual pleaſure into virtue, ſerved, from Epicurus, only as an awkward method of abandoning his own principles. All the ſkill of the very learned and moſt ingenious Gaſſendi, has failed to reſtore

the ill-founded ſtructure which the eloquent Roman philoſopher had overthrown. The diſciples of the ſchool of Smith and Hume have, with their maſters, acted in defence of their favourite theory, juſt as did Epicurus and his followers in ſupport of their philoſophy of ſenſual pleaſures. There is equally in the one caſe as in the other, an incongruity of the parts, which cannot but prove fatal to the ſyſtem. The two theories agree, alſo, in this, that they have both done infinite miſchief in real life and buſineſs. On the evils produced on the morals of the Greeks and Romans by the philoſophy of Epicurus, I need not here enlarge. The doctrine recommending unlimited freedom of trade has tended exceedingly to encourage *ſmuggling*, which, under the cover of this doctrine, might be alledged to be nothing but a juſt attempt to vindicate that freedom from the oppreſſive impoſts of Governments. It has encouraged monopoly, fore-ſtalling, and gambling commercial ſpeculation by intimidating Governments from the exerciſe of a ſeaſonable controul over mercantile buſineſs, and by teaching merchants to inſiſt that they ought to be left to buy, to ſell, to reſerve in ſtore, or bring to market, at their pleaſure, and without being in the ſmalleſt degree accountable to their country for the relation of their tranſactions to the general good. It has, by exciting a powerful and violent outcry againſt the whole commercial part of the common and ſtatute law of England, contributed, more than any other cauſe, to excite and cheriſh, in this country, a ſpirit of revolutionary reform. It has made the progreſs of Britiſh legiſlation, ſo far as commerce is concerned, to remain abſolutely at ſtand, unleſs where there has ariſen a neceſſity paramount to all theory.

I will not now multiply arguments in proof of a truth which appears to me, to have been already with ſufficient ſtrength of reaſoning, eſtabliſhed. A doctrine which originated in the error and prepoſſeſſion of perſons who ſeeing the lands free and trade burthened, indignantly conceived that trade ought rather to be left free, and every impoſt to be laid on the land;—*which* is denied by the univerſal ſenſe of mankind in the actual practice of every age;—*which* could not be brought into full practical effect, without an abolition of all exiſting laws, and an entire change of every preſent mode of human life and buſineſs;—*which* denies in fact that there can be any general principles of commercial economy capable to be ſo aſcertained that they may be applied, in legiſlation, to regulate the detail of trade;—*which* has proved *radically* the ſource of more than half thoſe revolutionary ills by which Europe has been, during theſe laſt fifteen years, ſo dreadfully afflicted;—*which* its very authors cannot defend without ekeing it out with ſelf-contradictions;—*which* would eſtabliſh, in the greateſt branch of human affairs, a Turkiſh ſubmiſſion to fatality;—*which* has already, ſo far as it has been acted upon, embarraſſed both our Legiſlature and our

Courts of Juſtice, and no leſs, encouraged ſmuggling, foreſtalling, and gambling ſpeculation in trade;—*ſuch a doctrine* cannot poſſibly be true. And ſuch is the doctrine, that unlimited freedom is neceſſary to raiſe commerce to its higheſt proſperity. If, indeed, the wiſdom, the virtue, and the induſtry of all who buy and ſell, were abſolutely perfect; the interpoſition of legiſlation and government, to regulate the concerns of trade would be then unneceſſary. But it is not probable that the perfectibility of human nature will ſpeedily raiſe ſociety to that pitch of improvement.

If the nature of this compoſition could have ſo admitted; I ſhould readily have deſcended, under each of the foregoing heads of argument, into an inductive detail of facts, which might have to ſome perhaps eſtabliſhed ſtill more indiſputably the truth of the ſeveral propoſitions I have endeavoured to maintain. But, the attempt would have extended this letter to a volume. And the reader will, without difficulty, be able to add for himſelf, innumerable facts which, with one conſent powerfully co-operate with thoſe which I have here ſtated.

I conclude, then, with aſſerting a new principle in public economy, directly oppoſite to that which forbids Governments to limit, by any reſtrictions, the univerſal freedom of trade. "*As* COMMERCE *is one of the greateſt departments of human exertion;—as its relations are ſuſceptible of being aſcertained by due obſervation and enquiry, and of being defined in general principles; as private indolence, ignorance, and knavery are capable to do perhaps more miſchief to the public good, in this, than in any other province of affairs: Therefore, the* LEGISLATURE *and* GOVERNMENT *ought to watch the* INTERESTS *of* COMMERCE, eſpecially in ſuch an empire as that of Britain, *with inceſſant vigilance,—ought conſtantly to define by laws, all ſuch of its intereſts as private ſelfiſhneſs or error might otherwiſe counteract,—and ought to enforce thoſe laws by the conſtant exerciſe of a vigorous Executive Authority,*" But, why call this a new principle? It is but the re-aſſertion of that eternal rule of common ſenſe, which, in reſpect to traffic, theorizing and Jacobinical frenzy has too ſucceſsfully laboured to explode.

It was neceſſary to eſtabliſh that principle, by the refutation of Smith's doctrine relative to the freedom of trade, before I ſhould proceed to explain the outlines of the Syſtem of Public Meaſures which I would humbly propoſe for the perpetual and future prevention of enormous dearth and ſcarcity of proviſions in Great Britain and Ireland. For, all thoſe among us who pretend to the deepeſt intelligence in œcumenical ſcience, ſtill affirm, that nothing in this caſe is to be done, but for Government to ſit ſtill, to ſuffer trade to take its uſual courſe, and to allow the buyers and the dealers to contend about the prices—how they may, unleſs when the people are actually ſtarving, or

when infuriated by hunger, they riſe in inſurrection to maſſacre the merchants of proviſions, to plunder the warehouſes, and ſet fire to the granaries. If, in urgent emergencies, theſe perſons be prevailed with, to interpoſe as legiſlators or ſtateſmen, in order to regulate the trade in grain; their interpoſition is intended merely as a ſtate-trick to ſoothe and quiet the people for the moment. Any oſtenſible meaſures which they may take, are meant, not to lead to important legiſlative conſequences, but merely as tubs to amuſe the whale. They laugh, in a proud conceit of their own ſuperior wiſdom, at ſuch as propoſe reſtrictions and meaſures of precaution to prevent the quick return of the famine. And they laugh, not without reaſon: becauſe, while the doctrine of the utility of the freedom of trade, kept its ground as a grand elementary truth in œcumenical ſcience; nothing could be more abſurd than the propoſal to provide againſt ſcarcity by Legiſlative arrangements to which that doctrine could not be reconciled.—I proceed to unfold my plan for the prevention of future ſcarcity, with the conſiderations on which its ſeveral parts are founded.

I. The firſt propoſition of this plan has been already anticipated even by the Legiſlature. If that were of conſequence: I could eaſily prove, that its propoſition was conceived and even ſuggeſted to the public in print by me, ſome time before it was mentioned in any publication of the day, or moved in the Houſe of Commons. But, utility not priority of diſcovery is what I am here principally concerned for. It is, that,—"in order to find means for providing the people with ſufficient food; we muſt, firſt, ASCERTAIN THEIR NUMBERS." No amplification is requrſite to evince the utility of this meaſure. We cannot otherwiſe learn the real extent of our wants.

Many calculators are, I believe, much diſappointed by the reſult of the late enumeration of the inhabitants of Great Britain. About the æra of the conqueſt, the population of England is ſuppoſed to have been about 2,000,000 ſouls *. Scotland might contain about the ſame time, a number of inhabitants not exceeding 500,000. In the year 1560, the beginning of the reign of Queen Elizabeth, the inhabitants of England and Wales, were about 5,526,000. About the year 1680, the ſame population was eſtimated by Sir William Petty, to have increaſed to 7,400,000. In the progreſs of the ſeventeenth century, the proportion of the annual deaths to the whole population was as one to forty; while the proportion of the births to the burials was as ten to nine; upon which Sir William Petty calculated that, in the year 1802, the total population of England and

* For this, ſee Sir W. Petty's Eſſay on the growth of the City of London; Sir Matthew Hale on the origination of mankind; and eſpecially Doomſday Book.

Wales would be exactly 9,825,650 ſouls. In the progreſs of the eighteenth century, however, the ordinary proportion of the deaths to the population has continually diminiſhed, till, in the year 1800, and it may be for 20 years before, only one out of every fifty of the whole population died annually. Yet, to our ſurprize, the late enumeration gives only about 9,500,000 for the whole number of the inhabitants of England and Wales: while the number of ſouls in Scotland amounts to little more than 1,500,000; ſo that 10,000,000 are the ſum of the whole population of Great Britain; and the eſtimate of Sir William Petty for the year 1802, rather exceeds, than falls ſhort of the truth. The population of Ireland eſtimated by Sir William Petty, in the year 1672, at the ſum of 1,100,000 ſouls, is now calculated to exceed even 3,000,000. And the total population of the Britiſh Iſles amounts only to ſomewhat more than 14,000,000 of ſouls. In reſpect to the population of England and Wales, it is farther worthy of obſervation, that the proportion of the births to the burials, is now as eleven to nine. In theſe circumſtances, the increaſe would have been ſurely much more conſiderable; if Sir William Petty's calculation in the ſeventeenth century had not greatly exaggerated the ſum of the people in England at that time. It was on the ſuppoſition of a continual yearly death of one out of every forty,—and of the yearly birth of only ten for every nine who died, that he formed his eſtimate for the year 1802. Had he foreſeen, that the rate of the deaths would be in the eighteenth century, ſo diminiſhed, and that of the births, ſo much augmented; he would have aſſigned a proportionately larger number for the population of this country, in the beginning of the nineteenth century.

I am, indeed, induced to think, that the actual enumeration is under the real number of the inhabitants of Great Britain. The people in general, dreading, always, new taxes to be proportioned to their numbers, incline to give the number of the perſons in every family as leſs than it truely is. The enumeration is every where performed with an indifference and a ſlovenlineſs which make many omiſſions. There is eſpecially in London, and in the other great towns, a fluctuating unſettled population which muſt always elude, more or leſs effectually, every attempt to nubber it. You cannot procure the real income of the people to be honeſtly ſubjected. And it is not more poſſible to attain to the exact knowledge of their full numbers, by a ſingle enumeration. To accompliſh this, it would be requiſite to repeat the actual enumeration annually, even for a courſe of at leaſt ten years.

However theſe thing may be; it were better to ſuppoſe too great than too ſmall a number, when we ſuggeſt means for providing the people of theſe Iſles with conſtant plenty of proviſions. I ſhall, therefore, take 15,000,000 for the preſent num-

ber of perſons to be fed in Great Britain and Ireland: and ſhall ſuppoſe that this number is to be continually increaſed by an annual addition of 7 for every 33.

II. An accurate enumeration of the people, is the *firſt* of the meaſures which I would here recommend. The SECOND is, "to aſcertain exactly, what QUANTITY OF FOOD, and of what ſpecies is requiſite to their plentiful ſubſiſtence."

(To be concluded in our next)

CRITICAL CATALOGUE.

I. *Hiſtory of Ruſſia, from the foundation of the Monarchy by Rurik, to the acceſſion of Catharine the Second. By* W. TOOKE, F. R. S. *Member of the Imperial Academy of Sciences, and of the Free Economical Society at St. Peterſburgh; in two Volumes.* Longman and Rees. 1800.

THE hiſtory of all barbarous ages and countries is involved in obſcurity, more or leſs intermingled with fable, according to the ſtate and ſentiments of the people, repeated in the legendary tales to be found in all languages. Several barbaric nations, however, have, from their vicinity to ingenious and learned ſtates, derived the means of hiſtorical tranſmiſſion. The Thracians and Scythians, within the range of Grecian inſpection, are well known to modern readers; the Gauls, Germans, and Britons, have their acts recorded, and their manners exhibited by the writers of Rome. Ruſſia, far remote from ſcenes of literature and cultivation, was known only through diſtant and uncertain rumour. Illiterate themſelves, they preſerve but ſcanty materials. One early writer, however, with great induſtry, collected the principal facts, and has tranſmitted them with much ſtronger marks of authenticity than could have been expected on ſuch a ſubject; this was Neſtor, the firſt of Ruſſian hiſtorians; from whom our author has derived his earlieſt materials.

The object of the work is, to trace the riſe and progreſs of this mighty empire to its preſent height. For this purpoſe (our author ſays,) "I have endeavoured to repreſent the leading events that have had any influence on the empire at large, or ſome conſiderable diviſions of it, and by their means, on the nation itſelf. The earlier part of the hiſtory will be found much compreſſed, as I thought it better to deliver only what ſtands on credible authority, than to ſwell the book with idle tales, and legendary abſurdities, only for the ſake of refuting them. I entitle it not a hiſtory, much leſs "the hiſtory," but ſimply Hiſtory of Ruſſia, diligently collected from native chronologiſts, and other primitive ſources."

Introductory to the hiſtory there are diſſertations on the ancient population, language, and religion of the country; theſe, occupying about one fourth of the firſt volume, are neceſſarily conjectural. From

the hiſtory it appears that Ruſſia was divided into a number of principalities, conſolidated into one monarchy in the ninth century by Rurik. From this time the Ruſſian Princes became deſirous of extending their influence to foreign countries. They went to war with the Grecian Emperors, and after various viciſſitudes, became cloſely allied and connected with the Byzantine ſovereigns. The intercourſe between the two empires extended the benefit of the Chriſtian religion to Ruſſia under the reign of Vladimer, near the end of the tenth century. Vladimer was a Prince of very conſiderable ability, who, though a ferocious barbarian, contributed greatly to the intellectual and moral improvement of his ſubjects. One meaſure of his policy, however, was extremely unwiſe and hurtful: this was the diviſion of his dominions among his ſons. This partition for ſeveral generations entailed inteſtine war upon Ruſſia. In the thirteenth century, the ſeveral principalities being now in an exhauſted and feeble ſtate, were invaded by hordes of Tartars, who, after a long conteſt, reduced Ruſſia to a ſtate of tributary dependence. This humiliating condition laſted till the following century, when Dmitri leſſened the power of the Tartars over Ruſſia, without, however, entirely extricating her from the Tartarian yoke.

The Ruſſians were now preſſed by other enemies, the Hungarians, Poles, and Swedes, who endeavoured to take advantage of the Ruſſian diſtreſſes, by reſpectively ſeizing the provinces moſt contiguous to their own dominions. About the middle of the fifteenth century, a Prince aſcended the throne of Ruſſia who gave a very great change to the ſituation of affairs. John the Firſt, an able, bold, and enterpriſing Prince, commencing his reign at twenty-three years of age, exerted all his faculties to deliver himſelf from the ignominious yoke of the Tartars, which ſeveral of his predeceſſors had already ſtruggled to ſhake off, to reſtore the authority and domination of the Grand Prince over the reſt of the Princes, to enlarge the borders of his empire, to re-unite with it the parts that had been torn away by the neighbours, and to ſettle the power of the Grand Princes on a firm and laſting foundation. Theſe great purpoſes he effected; and raiſed Ruſſia to a power and ſplendor which ſhe had never before enjoyed. His ſon and ſucceſſor Vaſſilly finiſhed the conſolidation of the Ruſſian empire. The ſon and ſucceſſor of this Prince, John Vaſſilliwitch the Second, though a barbarian and a tyrant, was a very able man, and in many reſpects a beneficial Sovereign. The independence of the empire being now aſcertained, he projected its internal improvement; he reſolved to reform his people, to render them more poliſhed, more ſkilful, and induſtrious; but this he found to be the moſt arduous enterpriſe he could poſſibly have undertaken. He firſt began his attempts in this deſign by the publication of a new code of laws, in which he collected ſuch of the ancient ſtatutes as were ſtill in being; ſome of which he improved, and added to their number many new ones; hoping by this means to introduce more order into his empire, and to improve the proſperity of his ſubjects. But he preſently perceived that the temper of his Ruſſians was not to be altered by laws and negociations, but rather by hard treatment, ſevere puniſhment, and painful corrections. Ivan, who had learnt from the foreigners

he had drawn into his empire, how far better informed, more accomplished, and intelligent the members of the higher ranks in other countries were, frequently represented these differences to his courtiers —the consequence was, that they became his enemies.

By this intercourse with foreigners, he was enabled to form some notion of the doctrines and rites of other religious communions, and granted them a general toleration. It was a great and unexpected satisfaction to this Czar, that, during his reign, in 1553, some Englishmen, who had sailed on a voyage of discovery, landed in Russia, at the place which is at present the port of Archangel; and Ivan now became acquainted with persons of that nation, who soon, by their abilities and their deportment, acquired his favour to such a degree, that he encouraged the English commerce by all possible means; and thus opened a new channel of intercourse between his Russians and a highly polished people, whereby they obtained a fresh incitement to activity and industry.

The son and successor of this Prince being extremely weak, Dmitri usurped the sovereignty. Civil wars again disturbed Russia, abetted by the Kings of Poland and Sweden; until at length the sovereignty was conferred on a Prince of the ancient stock, but a collateral branch: this was Mikhaiba Federovitch, the first of the House of Romanof, who ascended the throne of Russia in 1613. This Prince cultivated amity with his neighbours of Poland and Sweden, and sought connexion also with England, and other more distant countries, and endeavoured by peace to heal the wounds of the former wars, civil, and foreign. His son Alexey, was again involved in war with the Poles, who had long been an over-match for the Russian arms; he was successful; and his enemies at last saw it was their interest to be at peace with this neighbour, in order effectually to oppose the Turks, then so formidable to adjacent Christendom.

The internal improvement of the country, long an object strenuously pursued by the Russian Sovereigns, was carried to a considerable length by Alexey.

Leaving three sons, he was succeeded by Feodor, the eldest; who, not being engaged in foreign wars, followed his father's footsteps of internal improvement. He made it a primary object of his care that law and equity were impartially administered, and that even the poor and needy of his subjects should at least have justice. With equal diligence he provided that the necessaries of life should not be kept at too high a price, nor the dealers in them oppress the poor.

Feodor was succeeded by John, an extremely weak Prince. In his time a party was formed in favour of his younger brother Peter, who was first admitted as joint sovereign, and afterwards became sole Czar, with the title of Peter the First; so celebrated in history.

No sooner had Peter the sole Sovereignty in his hands than he gave the most unequivocal proofs of his active mind, and shewed that he was thoroughly acquainted with the defects and infirmities of his empire. One of his first objects was, to improve his army; which he pursued with great perseverance and ability.

While employed in forming his army, he conceived the still more

ardent desire of having a navy, and soon set himself to work at its accomplishment. His chief attention was now turned to incite his people to commerce, and thereby to diligence and activity, by navigation; and by a fleet to increase the respect and the power of his empire. The progress of Peter's improvements, military and naval, civil and political, forms the most interesting and instructive parts of the whole history, Both the details and results exhibit very clearly, and very strongly, the character of this extraordinary Prince.

The history now becoming interwoven with the modern history of Europe, embraces subjects not new to most literary and political readers, but very interesting. The progress of the superstructure raised on the basis which Peter had laid, is very skilfully marked. The author observes two distinct, but connected, lines regularly advancing—the progression of internal improvement and of influence in foreign states. In 1733 we find Russia, for the first time, dictating to Poland her choice of a King. We soon after find Russia engaged in close connexion with Austria, and trace the origin of the league which proposed to overwhelm the illustrious Frederic.

The causes and progress of the disaffection to Peter the Third, afford a very instructive lesson to rulers not to seek innovations which the prejudices and habits of their people will not bear. Peter was a German, and was so little acquainted with the art of concealing his predilection for his countrymen, so plainly manifested on all occasions, his contempt for the Russians, that it was utterly impossible for him ever to gain the attachment and affection of the nation which he governed. By his general conduct, and particularly by his inordinate admiration of whatever was Prussian, he injured himself most with the troops, and especially with the guards. The Clergy likewise took umbrage at the conduct of Peter, and became his enemies; pretending to discern, from the whole of his behaviour, that he was not a true Christian. He expressed a desire to limit the worship, and lessen the number of the figures of Saints; and required that the revenues of the sacred order, particularly the church-lands, should be better managed. Peter soon fatally experienced the danger of provoking two so powerful bodies as the army and clergy: a conspiracy was formed against him, the event of which raised the late Empress Catharine to the throne.

These are the principal outlines of this history, of which the execution displays very considerable industry of research, with judicious selection, and clear and connected arrangement. If the author can hardly be ranked in the class of philosophical historians, he certainly deserves the praise of a very useful narrator of important facts.

II. *Voyages from Montreal to the River St. Laurence, through the Continent of North America, to the Frozen and Pacific Oceans; in the years* 1789 *and* 1793: *with a preliminary account of the rise, progress, and the present state of the Fur-Trade of that Country. Illustratea with Maps. By* ALEXANDER MACKENZIE, Esq. Cadel and Davis, 1801.

The north-west passage so much occupied the attention of Bristol voyagers, in various stages of progressive navigation, that whatever

aſcertains the exact ſtate of this object of enquiry, certainly deſerves publication and peruſal. This queſtion is, by the firſt voyage of Mr. Mackenzie, completely ſet at reſt.

An introductory diſcourſe, compriſing an hiſtory of the Fur-trade, preſents to us the ſcenery and manners of the Indians: from this general view he proceeds to his voyages.

The firſt was from Montreal to Fort Chipewyan, and thence towards the North Sea, in 1789; the ſecond, in 1793, was to the Weſt Pacific Ocean.

Having, in 1789, reached Fort Chipewyan, in latitude 58, 40 North, and longitude 110, 30, Weſt from Greenwich, our voyager embarked, June 3d, on the lake of the hills in a canoe, accompanied by Mr. Leroux, and attended by ſeveral Canadians and Indians. Thence, entering the Slave river, they ſailed to the North-weſt: notwithſtanding the ſeaſon of the year, they ſoon found the weather extremely cold; but, by hunting and fiſhing, they found plenty of proviſions. As they verged to the North they were conſiderably annoyed by floating ice. Through their Indian attendants they met with a very friendly reception from tribes of Indians, where they occaſionally landed.

In the end of June they reached a lake, called the Great Slave-Lake, becauſe the tribes on its banks have been enſlaved by ſome neighbouring ſavages. The river paſſing through this lake, they continued their courſe in nearly the ſame direction. One day that they landed they diſcovered a great party of Indians, who were at firſt extremely alarmed; "there were (ſays our author) five families, conſiſting of twenty-five or thirty perſons, and of two different tribes, the Slave and Dog-rib Indians. We made them ſmoke, though it was evident they did not know the uſe of tobacco: we likewiſe ſupplied them with grog; but I am diſpoſed to think, that they accepted our civilities rather from fear than inclination. We acquired a more effectual influence over them by the diſtribution of knives, beads, awls, rings, gartering, fire-ſteels, flints, and hatchets; ſo that they became more familiar even than we expected; for we could not keep them out of our tents; though I did not obſerve that they attempted to purloin any thing. Theſe Indians endeavoured to diſcourage them from proceeding, but in vain." (Here the author gives a particular account of the manners and cuſtoms of the Indians).

By the middle of July they reached 70 degrees North latitude, and received a deſcription of the Eſquimaux Indians. The various tribes of Indians ſtill coutinued to diſcourage them from advancing, but without effect. In the courſe of their advances they found they had conſiderable reaſon to doubt the fidelity of their chief Indian-guide, and found him very refractory.

Towards the end of Auguſt, Mr. Mackenzie found that the ſea could not be reached in that direction, and that there was no outlet. Returning, he, in September, reached Chipewyan.

Of the ſituation and purſuits of our traveller during three years we are not informed; but, in October, 1792, we again find him at Chepewyan, about to undertake a new expedition, weſtward to the

Pacific Ocean. Accordingly he ſet ſail along the Peace river, in a weſtern and ſouth-weſtern direction.

In the beginning of November he landed at a place where he intended to reſide during the winter ſeaſon. Thus ſtationary, he had an opportunity of examining the manners of the Indians. He and his company, amounting in all to ten, in May, 1793, ſet ſail on their voyage of diſcovery; the weather was ſtill extremely cold, though their latitude was not more than 56. After they had proceeded about a fortnight, they found the river ſo extremely rocky that it was neneſſary to leave the water, and carry their canoe acroſs the mountains. This arduous undertaking they effected, and re-embarking, proceeded in their voyage. In the courſe of the month of June, they arrived at the ſource of the Peace river; thence traverſed the country, until they arrived at a lake; whence they entered a great river, and purſued a weſtern direction, ſtill verging to the South. Finding their voyage obſtructed, they proceeded a conſiderable way over-land. Travelled and voyaged alternately, until they at length reached the Pacific Ocean, on the 20th of July. In the courſe of this voyage, and journey, they found the Indians in general much more frank and hoſpitable than in the former expedition: In ſome parts, however, the natives were ferocious, and our adventurers were in very great danger. Having effected his purpoſe, he and his companions returned to Chipewyan, where they arrived after an abſence of about three months.

The reſult of theſe voyages and travels is, that they aſcertain the non-exiſtence of a paſſage by ſea through America to Aſia; but, on the other hand, the exiſtence of a practicable paſſage over the American Continent. The author was alſo at great pains to aſcertain the capabilities through the countries in which he paſſed: hence he propoſes the formation of a grand commercial aſſociation, for improving theſe capabilities, and augurs very great commercial advantages to Britain, if ſuch a plan were judiciouſly and reſolutely executed.

HISTORY.

National Tranſactions.

INDIA.

OUR lateſt information from India announces new ſucceſſes againſt the Dutch ſettlements, prior to the concluding of the late preliminary treaty; the death of the Nabob of the Carnatic, one of the oldeſt vaſſal princes, ſubject in that country to Britiſh power, the inſurrection of ſeveral of the great tenants of the lands; and military movements to ſuppreſs it, which, though in part ſucceſsful, have not yet entirely over-powered the reſiſtance, and reſtored tranquillity.—The Company and its ſervants ſtill perſiſt in extending, there, a territorial dominion, which has long been far too wide.—The Nizam has been lately perſuaded to cede to them, a conſiderable diſtrict. But, it is evident, that the territories of Britain, ought for the intereſts of this country, to be the narroweſt within which it may be poſſible for us to command the trade of Hindooſtan and China, and to

protect our commerce and military power againſt the triumph of a rival. The Engliſh Company ought to govern India by dependent allies, and by depth and vigilance of policy, not by ſuch a direct oſtentation of Imperial power. The commerce of India ſeems to become continually leſs and leſs profitable to Britain. As in the colonization of North America, we now fix irremoveably much more of Britiſh produce and manufactures and other property on the Indian continent, than is imported of Engliſh profits from India, to be permanently fixed in this country. It is impoſſible, that things ſhould very long proceed in this train, without introducing conſequences the moſt fatal to Britiſh proſperity. Unleſs a great change of principles and ſyſtem ſhall ſpeedily take place in the adminiſtration of the Britiſh power; that power cannot but *ruere mole ſuâ*.

TURKISH DOMINIONS.—Of theſe dominions, *Egypt* is the territory upon the tranſactions in which, European curioſity has, of late, been chiefly fixed. The arms of Britain ſuppreſſed the rebellion of the Mamelukes and Arabs, while they expelled the invading French. The effect of treaties ſince concluded reſtores Egypt to the dominion of the Turkiſh Sultaun. It is not, however, yet finally evacuated by the troops of Britain. But, the Turks have begun to adopt meaſures for eſtabliſhing over it, a vigorous authority which ſhall not, as formerly, be deſpiſed and over-awed by the Beys or Mameluke Chiefs, nor by the Schiechs of the Arabs. Seven of the Beys were lately by an unexpected act of power in the Turkiſh General and Admiral ſent on board the fleet. Dreading death by treachery, they endeavoured to eſcape on ſhore. Five were ſlain in the attempt. The two ſurvivors threw themſelves under the protection of General Hutchinſon. They have ſince, however, returned on board the fleet, and on the faith of the moſt flattering promiſes conſented to ſubmit to the will of the Turkiſh Government.

On the Weſtern frontier of Turkey, Paſſwan Oglou has lately renewed his rebellion.

The accounts of our officers and ſoldiers who have ſerved in Egypt, deſcribe the Turkiſh ſoldiery, as not leſs ſtrangers to diſcipline, than any London mob, yet poſſeſſing a ſpirit which could they be inured to diſcipline, and inſtructed in tactics, might render them perhaps the moſt gallant and formidable military force in the world. Nothing but the diſſolution of the Janiſſaries, as Peter the Great of Ruſſia diſſolved the Strelitzes, and the formation of new ſoldiers, into which Greeks, Arabs, and Turks ſhall be equally admitted, and of which the diſcipline and tactics ſhall be the ſame as in France, Germany, and Britain,—can effectually avert the ruin of the Turkiſh empire.

THE STATES OF BARBARY AND THE MOORISH EMPIRE remain ſtill feeble, lawleſs, barbarous and piratical. The Anglo-Americans have thought good to check their piracy by the preſence of a ſmall armed ſquadron in the Mediterranean. It is much to be wiſhed, that all the maritime powers in Europe would, with one conſent, withhold the preſent ſubſidies which are paid to thoſe barbarians, and compel them to obſerve, unbribed, the common law of nations. Nothing could tend more happily than ſuch a meaſure, to promote the civilization of Barbary by turning its inhabitants from rapine to peaceable induſtry and fair traffic.

THE REPUBLIC OF THE SEVEN ISLES.—The independence of this ſmall Republic is now eſtabliſhed under ſufficient guarantees. Its ſituation is eminently advantageous for traffic and ſea-faring induſtry. We ſhall, after ſome time, be able to learn, whether liberty cannot now there reſtore the ſcience, the elegant arts, the induſtry, and all the literary glory of the ancient Greeks.

ITALY.—This country and the iſles immediately contiguous to its coaſts are now parted into thirteen political ſub-diviſions of dominion; Malta ſtill in the poſſeſſion of the Britiſh; Sardinia with a few iſlets, the only remain-

ing territory of its ſovereign; the kingdom of Sicily and Naples; the territory ſubject to the temporal authority of the Papal See; the newly erected kingdom of Etruria; the Ciſalpine Republic; the Venetian poſſeſſions of the Houſe of Auſtria; the Republic of Genoa; the territory of Piedmont; the duchy of Parma; the French department of Corſica; the Lucceſe Republic; and the petty commonwealth of San Marino. Theſe are almoſt all, for the preſent, ſubject to the overbearing influence or the immediate and oſtenſible dominion of France. Their political ſituation is ſtill, in many reſpects, uncertain. They are ſtill rather in effect, under martial law, than under any equitable and ſtable civil juriſdiction. Their inhabitants are as yet greatly divided among themſelves by fierce political enmities. No arts but thoſe having a reference to war, and thoſe which the neceſſities of exiſtence could not forego, have been of late, ſucceſsfully cultivated, there. It is devoutly to be wiſhed that all Italy might be united into one great republic, ſuch as might effectually counterbalance the power and ambition of France.

PORTUGAL, during the greater part of theſe laſt ten years, ſafe under the protection of Britain, made no inconſiderable advances in thoſe arts which are the moſt eſſential to national proſperity. She has, in the end, ſuffered ſlightly by the lawleſs ambition of the French. The Portugueſe now cultivate with increaſing diligence, the benefits of returning peace. The French ſtrive to divide them from their wonted connexion with the Engliſh. The attempt is vain: for though there may be ſtill a French faction in Portugal; yet ancient habits and partialities of alliance are not to be thus ſpeedily effaced; and beſides, no other commercial or political connexion can be ſo profitable to the Portugueſe as that with England.

SPAIN has ſuffered more than almoſt any other country by the war; is now without political or military energy; reluctantly ſacrifices Trinidada in the renewal of peace; and feels the influence of France to be ſo baneful and oppreſſive, that ſhe will, no doubt, ſooner or later, though with timidity, and moſt probably without ſucceſs, ſtrive to eſcape from that alliance to the more equal and advantageous amity of Britain.

FRANCE ſtill preſerves by military force, her authority over moſt of the countries which ſhe lately ſubdued. Great armies remain yet undiſbanded within the French territory. The government of the country is, in fact, military. All power executive and legiſlative reſides in the Chief Conſul, his colleagues, his miniſters, and in thoſe officers and corps of ſoldiery in whom he has confidence. His popularity declines, ſince he is no longer new in the public eye, and ſince though he has reſtored peace, ſtill every man in France is not abſolutely ſo happy as he could fancy or wiſh himſelf. His policy is diſingenuous and crafty: for, if not vigilantly watched by our Britiſh miniſters; he would have ſeized the aſcendency of force in the American ſeas, by ſending out a greater fleet, than we there maintained; and would then moſt probably have graſped at new advantages in the definitive treaty. He has lately viſited Lyons, of purpoſe, probably, among other reaſons, to win the favour of that ſouthern capital as his protection if he ſhall become utterly unpopular in Paris,—and it may be, alſo, on account of ſome ſecret negociations which, at Paris could not have been eaſily concealed. It is believed that news may be ſpeedily received of the final ſigning of the definitive treaty at Amiens. France, fortunately for the nations who dread her rivalry, inſtead of turning to cultivate her natural ſtrength, aims for the preſent at the power of colonization, and naval greatneſs, and extenſive foreign influence—a power which ſhe muſt aim at to her misfortune, as long as ſhe ſhall for its ſake withdraw a capital ſtock which has been already far too much exhauſted, from thoſe internal improvements in which a country like France, muſt ever find its only ſure ſources of wealth. The accounts we receive of the preſent ſtate of induſtry and domeſtic life in that country,

remove much of that deluſion which reigned in regard to it, during the war, and repreſent it, as in the utmoſt degree ſqualid, indigent, and miſerable. In conſequence of the ſtorms of laſt ſummer and harveſt, grain and other agricultural produce are far from plentiful, and are, of courſe, dear.

The DUTCH REPUBLIC remains under ſubjection to that of France; has diſpatched ſmall ſquadrons of ſhips of war to both the Eaſt and the Weſt-Indies; dreads the ruin which may enſue to its trade from the expected reſtoration of the ancient commercial activity of Antwerp; and begins to avail itſelf of the reſtoration of peace by ſending large quantities of cheeſe, butter, eggs, &c. to ſupply the markets of London.

GERMANY will ſee the plan of indemnities negociated at Luneville carried moſt probably into effect. Auſtria has acquired territories, a due cultivation of the advantages of which will ſoon compenſate for all that ſhe has loſt. Pruſſia rather loſes than gains in relative importance by the iſſue of the war. Bavaria is likely to riſe to the importance of a great power under the dominion of its preſent Sovereign. The Electorate of Saxony at preſent flouriſhes above any other part of Germany in manufactures, in literature, in ſcience, and in the fine arts. The Hanoverian dominions are likewiſe in a conſiderably flouriſhing ſtate. Hamburgh loſes a part of that commerce which has of late, ſo greatly enriched it, by the renewal of peaceful intercourſe between Britain and the ports of Holland. In the whole, it is not doubtful but this country which becomes, every day more and more, the moſt intereſting in Europe, will quickly recover from the deſolation and impoveriſhment which it has, in any of its diſtricts, ſuffered by the late war.

DENMARK has gained new conſequence in the eſtimation of the maritime powers on the Continent, by the gallantry and firmneſs with which ſhe met the Britiſh attack on the 2d of April laſt. She is ſtill the dupe of France, to whoſe ambition ſhe was deluded, fool-hardily to ſacrifice her own beſt ſtrength. She is not yet heartily reconciled to Britain. She looks on Sweden, with mingled jealouſy and contempt. She hates, yet ſubmits to, the influence of Ruſſia. She renews her lucrative trade to the Eaſt and Weſt-Indies. And the inhabitants of the Daniſh dominions continue to make extraordinary advancements in the agricultural improvement of the country, and in all the arts of peace.

SWEDEN is ſubject to the influence of Ruſſia, and dependent on the protection of France. Her political conſequence in the ſyſtem of Europe is now wonderfully ſmall. Her commercial intercourſe with this country is actively renewed. Her young monarch is very active. But, we do not know, whether he be deeply wiſe.

RUSSIA, under its young Emperor, has, by the conceſſion of new powers to the Senates, of new immunities to the towns, of new advantages to the landholders, in fact, gained a new conſtitution. Its preſent government ſeems wiſely to turn its principal cares to the object of internal improvements. The reign of Catharine was rather ſplendid and oſtentatious than truly happy. Paul was, in all things a Quixote. If the preſent Emperor ſhall, without ſuffering himſelf to become in the eyes of foreign nations, contemptible, yet bend his principal attention throughout his reign to the civilization of his ſubjects, the opening up of his dominions to the arts of peace, the introduction of new manufactures, the very gradual emancipation of the peaſantry, the improvement of the condition of the commercial towns, and at the ſame time to the due invigoration of the energies of the government, and the perfecting of the diſcipline of the ſoldiery; we ſhall ſoon ſee Ruſſia, in the eyes of all nations, much more conſiderable than it has ever yet been.

GREAT-BRITAIN AND IRELAND have ſuffered and expended much in the progreſs of the war now ended. But, they have ſubſtantially accompliſhed all its leading objects. Jacobiniſm is, in fact, abjured and proſcribed throughout all Europe. By a ſucceſſion of victories in the war crowned

with moderation in the concluſion of the peace, Britain has attained to a fair eſtimation in the judgment of ſurrounding States which muſt in the end contribute much more to her real advantage, than if ſhe had made one-half of them her ſlaves. The military energies of the people, when about to languiſh, amid a train of commercial and manufacturing proſperity, have been ſeaſonably revived and invigorated, in both the army and the navy, by the courſe of the war. We have engroſſed while the war proceeded, the trade almoſt excluſively for all Europe, with both the Eaſt and the Weſt-Indies. Our maritime trade may be, in conſequence of the peace, diminiſhed, ſo far as it runs in theſe two channels; but then it will be augmented probably in a quadruple proportion, in its internal operations, and in its intercourſe between Britain and Ireland and the other countries of Europe.—The nation await with ſome eagerneſs of expectation, yet without anxiety, the news of the concluſion and ratification of the definitive treaty with France. —Parliament is ſuppoſed to meet from time to time, after very ſhort adjournments, with a view to the early conſideration of that treaty.—Changes are expected in the adminiſtration of our government which, it is ſuppoſed, will ſtrengthen the whole, without diſplacing the preſent leaders.

THE BRITISH WEST-INDIA ISLES, under the immediate government of his Majeſty's Lieutenants, and the different colonial Legiſlatures, and under the protection of a powerful force naval and military, enjoy conſiderable tranquillity. The Aſſemblies are often ſufficiently refractory in their official intercourſe with the Repreſentative of the Sovereign. But, the fear of the negroes and people of colour on the one hand, and on the other, the preſence of the force with which our government is there protected, prevent the little jealouſies of the Aſſemblies from ever riſing into any thing that can be judged to menace rebellion. The Earl of Balcarras returns, it is ſaid from the government of Jamaica, with one of the largeſt fortunes which have been acquired by any Britiſh Officer, during the war.

THE FRENCH WEST-INDIA ISLES are in the hands of the blacks and people of colour. Touſſaint who rules in St. Domingo, is ſaid to be highly popular among his ſoldiers and ſubjects. He was lately fortunate in detecting and ſuppreſſing a conſpiracy which threatened deſtruction to the Whites. Guadaloupe has been in a formidable ſtate of inſurrection. We know not in what manner the reſpective pretenſions of the European and the African races are to be relatively adjuſted by that plan of ſettlement which the great French force recently ſent into that quarter, has gone to carry into effect. We await, with ſome impatience, the news which are to enlighten us farther upon this head.

THE ANGLO-AMERICAN STATES now contain a population of more than five millions of ſouls. The Anti-Federaliſt party have, by the elevation of Jefferſon to the Preſidency gained the aſcendant in the general adminiſtration. But, partly becauſe the Federaliſt oppoſition is ſtill very little leſs powerful than the Anti-Federaliſts, and in part becauſe the original principles of the latter were ſuch as muſt of courſe be abandoned when they came into the poſſeſſion of power; the government is adminiſtered, and the deliberations of the Legiſlature are conducted nearly in the ſame ſpirit as during the late preſidency of Mr. Adams. An inconſiderable military force is maintained; and a ſmall naval armanent is to be permanently ſtationed in the Mediterranean. With the Indians, the Anglo-Americans aſſiduouſly cultivate a peaceable intercourſe. They have entered into a connexion with France, which, however recommended by the commercial intereſts of the Americans may perhaps be diſturbed when the French ſhall enter upon the poſſeſſion of Louiſiana, now ceded to them by Spain.

THE BRITISH COLONIES OF NOVA SCOTIA, AND OF LOWER AND UPPER CANADA proſper under the gentle colonial government which is exerciſed over them. They know not the political diſturbances of the

Anglo-American States. And they are not cut off, like Spaniſh America, from intercourſe with the reſt of the world. Spaniſh America muſt, for ſome time, be more valuable to the Britiſh in the poſſeſſion of Trinidada, than to the Spaniards who have upon them, the expence of its government.

PORTUGUESE AMERICA, THE BRAZILS, contains the beſt hope and ſtrength of Portugal, yet is not for colonization, and territorial improvement, at all in a condition to be compared with any of the colonies which have been ever eſtabliſhed by Britain. The manners and ſpirit of the Portugueſe are extremely adverſe to all hope of its ſpeedily riſing to a very flouriſhing condition.

SPANISH AMERICA is even now in a ſtate in which Old Spain loſes more than it gains by the government of it. The natives of half blood between the Spaniſh and the Indians, are in fact, maſters of the adminiſtration. Before half another century ſhall paſs, it may poſſibly be emancipated into an independent empire.

DUTCH AMERICA is in a progreſs of cultivation, which will be ſomewhat interrupted by the gradual withdrawing of the Britiſh capital that has been lately veſted in it.

CAYENNE AND GUIANA, the American territories of France, are little valuable, eſpecially the latter, except as convenient places of exile for thoſe whom the government may wiſh to put to death, without ſhewing the infamy of actually aſſaſſinating them.

NEW SOUTH-WALES is the ſeat of a Britiſh colony, in which the criminals of the mother country are reſtored to the beſt uſes of ſociety. Its eſtabliſhment will hereafter be the greateſt glory of the preſent reign. It is an agricultural colony. The firſt difficulties have been overcome. And it is rapidly advancing to a ſtate of the greateſt proſperity. No modern nation has contributed ſo much to people and civilize the world by happy colonization as has Great Britain.

Commercial Affairs.

THE total population of England and Wales which Sir William Petty, in the year 1682, calculated as likely to increaſe, againſt the year 1802, to 9,800,000, has been found by enumeration, not to exceed, in 1801, the ſum of 9,500,000; of which, by the eſtimate of the Rev. Mr. Beeke, about 700,000,000, are engaged in agricultural buſineſs. The population of Scotland ſomewhat exceeds 1,500,000. The inhabitants of Ireland are eſtimated at 3,500,000. Perhaps, the whole number of ſouls in the Britiſh Iſles, if it were accurately counted, would be found to amount to 15,000,000. Out of theſe, not more than 4 millions, are engaged in *commerce* and *manufactures*.

Spain has imported only $\frac{1}{4}$ part of the produce of the gold and ſilver mines of America, annually, into Europe, during the late war. About 100,000,000 of dollars are now ready, it is ſaid, to be brought at once to Spain, from the New World. The diſtribution of theſe over Europe, will render gold and ſilver for a time, more abundant, than they have lately been.

The value of the exports from New-York in the months of July, Auguſt, and September 1801, was not leſs than 3,155,000 dollars.

A Committee of Trade and Manufactures has been appointed among the other Committees of the Anglo-American General Legiſlature, at Waſhington. Many beneficial new regulations are expected to reſult from the cares and intelligence of the gentlemen of whom it is compoſed.

The iſland of Trinidada will confer advantages for the ſmuggling trade between the Britiſh Weſt-India Iſles, and the Spaniſh poſſeſſions on the

Continent of South-America, greatly ſuperior to any which that very profitable, although otherwiſe not eaſily juſtifiable, branch of Engliſh commerce has hitherto enjoyed. The extent of that Iſle, and its ſuſceptibility of cultivation, are, likewiſe, ſuch as to encourage every hope of the moſt lucrative returns from thoſe new plantations of ſugar-canes, coffee, cotton, and cocoa-treęs, which will, no doubt, be, ſoon, eagerly formed in it.

A great fiſhing company is, we hear, about to be eſtabliſhed with the faireſt hopes of the moſt profitable ſucceſs, in the ſouth of Ireland.

Among the laſt imports from France, are 1200lb. of verdigreaſe. This calx or oxide of copper, ſo uſeful in the arts, is prepared from plates of copper ſubjected to the action of the lees of wine. But, ſince England and Scotland, as well as Ireland poſſeſs ſo many copper-mines: it is much to be deſired, that the inventive ingenuity of the people of this country might be directed to find out a method of making verdigreaſe at home, at a rate ſufficiently cheap to preclude all poſſibility of its being advantageouſly imported from France.

The Dutch have already begun to pour their goods of all ſorts, in the greateſt abundance into the London markets.

Forgeries upon the Bank of England to a great amount, have been recently committed by certain French emigrants of titled diſtinction. One of theſe gentlemen, a Count, was lately taken into cuſtody, and examined before Sir Richard Ford and Mr. Graham. He had been accuſtomed to viſit the apartments of the moſt faſhionable and expenſive women of pleaſure, with 10l. notes of the forgery in his pocket. To pay for his entertainment, change was always to be procured at the next ſhop by one of the ſervants for a note. He, then, paid for his pleaſure, and decamped with the balance, as clear gain. Not fewer than 12 of thoſe unfortunate females appeared againſt him at his examination before the magiſtrates.

The commercial houſe of HENRY HOPE, is about to be re-eſtabliſhed in Amſterdam, and to renew its accuſtomed tranſactions.

The Exchequer-bills iſſued, in virtue of ſeveral Acts of Parliament, for the ſupplies of the years 1800, and 1801; amounting in value to above 12 millions ſterling, were, on the 20th of January, paid off at the Exchequer-bill office, in St. Margaret's-ſtreet, between the two Palace-yards Weſtminſter. New Exchequer-bills bearing an intereſt of three-pence a day per 100l. were delivered to ſuch as choſe to accept payment in this ſpecies of ſecurity. The new bills are payable out of certain inſtalments of the next loan.

A great number of counterfeit ſeven-ſhilling pieces have come lately into circulation. The baſeneſs of the metal is ſcarce otherwiſe to be detected than by weighing them.

By very late accounts from Madrid, we learn, that trade is both there and at Cadiz, in a very languiſhing condition. At Cadiz, the epidemical diſtemper, which lately prevailed there, has, to the interruption of all buſineſs, renewed its ravages. Three millions of piaſtres of the expected remittances from South-America, were lately received by the arrival of a ſmall veſſel from Buenos Ayres.

A reſpectable oilman was lately convicted before the Lord Mayor of London, of not ſelling for the price of one penny, the quantity of ſalt required by the aſſize of the Court of Aldermen. The appointed penalty was exacted.

The fiſhermen of Gottenburgh have been leſs ſucceſsful, this year, than uſual, in the capture of herrings at the mouth of the Baltic, and in the North Sea. As the ſhoals of herrings were advancing in their paſſage upon thoſe coaſts; they were driven back by a ſtrong Eaſt wind, to the great diſappointment of the fiſhermen.

Very conſiderable failures took place at Copenhagen, about the middle of December laſt. The merchants were, in general, alarmed: and it became

neceſſary for them to adopt certain common meaſures to prevent a ſucceſſion of other bankruptcies from immediately enſuing.

The Pruſſian Government has lately endeavoured to introduce into South and Eaſt Pruſſia, the mode of pecuniary accommodation by lending money on pledges.

The Bookſellers and Printers of London, perceiving, that, under the preſent duties upon paper, the whole foreign trade of this country in printed books, and even a great part of its domeſtic trade, of the ſame nature, muſt be entirely ruined; have, after ſome meetings and deliberations, ſtated to the Chancellor of Exchequer, their reaſons for hoping, that he may be induced, ſoon after the meeting of Parliament, to move a repeal of the Act by which the lateſt duty on that article was impoſed. They met a reception which encourages the hope, that their wiſhes may be complied with. But, though Mr. ADDINGTON be, in truth, much more the friend of ſcience and literature, than any Miniſter, except SIR GEORGE LYTTLETON who, ſince the days of HARLEY and ST. JOHN, has directed the counſels, or found ways and means for ſupplying the revenue, of the Britiſh government; yet, it is indiſpenſibly requiſite to the accompliſhment of an object in which patriotiſm and the perſonal intereſts of the bookſellers and printers are equally concerned, that they ſhould continue their exertions—ſhould collect a demonſtrative ſtatement of facts—ſhould engage in the intereſts of their repreſentation, every gentleman in Parliament to whom they may have acceſs, and who would not factiouſly employ the ſtatement of their wiſhes to harraſs government—and ſhould invite all bookſellers and printers in town and country to unite with them ſo far as this may be poſſible without doing aught that may have, in the ſlighteſt degree, an air of political turbulence. Beſides, it will be neceſſary that MEN *of* LETTERS (*you are the ſalt of the world; but if the ſalt have loſt its ſavour, wherewithal ſhall* IT *be ſalted?*) who are really intereſted in the improvement of virtue, of ſcience, and of elegant literature, ſhould take ſuch means as are for them the moſt competent, to forward, lawfully, modeſtly, and quietly, the ſame end which the bookſellers and printers have in view. What are the *Stationers* doing? Some of them may think themſelves greater gainers, as things now are, than if paper were cheaper. Thoſe err egregiouſly. Better an extenſive trade with moderate profits, than a very narrow one with exorbitant profits. What do the *Paper-makers?* Should the duties be reduced; their trade would, within a very few years, be ten times as great as at preſent. In ſhort, if all perſons intereſted in the beneficial influence of Britiſh literature, and in the extenſion of the book and paper trade of Great-Britain, do not now earneſtly exert themſelves to convince government and the legiſlature,—that while the nonſenſe of newſpapers, and the turpitude of printed calumny, and all the ſeditious enormities of the preſs ſhould be repreſſed,—on the other hand, every thing related to genuine and uſeful literature—ſhould be left free from all taxation—if this be not done; Britain muſt inſtantly loſe a branch of her trade more valuable than that in either woollens or cottons—an engine, by which ſhe might draw to her, the hearts of the whole world.

An iron and mine-maſter at Stockholm has juſt become bankrupt, whoſe debts amount to the ſum of 400,000 rix-dollars.

The emperor Alexander of Ruſſia, has, by the advice of the Senate, juſt iſſued an order to regulate the purity and the relative values of the coins to have currency in his dominions. Ninety-ſix ſolotnicks compoſe the Ruſſian pound: every pound of ſilver for coinage is to have in it 94-one-third ſolotnicks of pure ſilver, with only 1-two-thirds ſolotnicks of alloy: every pound of gold is to contain 83-two-thirds ſolotnicks of pure gold, with 12-one-third ſolotnicks of alloy. The pound of ſilver thus alloyed, is to be coined into 12 roubles, and 75 copecs: roubles, half-roubles, quarter-roubles and pieces of ten copecs, are to be coined of ſilver. Pieces of 10 and pieces of 5 roubles are to be coined of gold. Forty pounds of copper are

to be equal in money to 16 roubles. The gold or ſilver employed in plate and works of art of all ſorts, is to be of the ſame intrinſic value with that of the coinage.

On Tueſday laſt, a deciſion was given in the Court of Common Pleas, and in the caſe of Harris againſt Leuthwaite; which eſtabliſhes, that, upon a commercial contract ſtipulating for a performance contrary to law, no damages can be recovered, in the event of non-fulfilment on either ſide.

The ſhipping at Liverpool, and on that coaſt, has ſuffered exceedingly by a ſtorm which took place on the morning of Thurſday Jan. 23d.

The conſtruction of new wet docks at Leith, and the enlargement of that harbour, with the new freedom and activity of the Baltic trade, promiſe a very rapid increaſe of commercial proſperity to the capital of North-Britain.

A late valuation has aſcertained the whole commercial, manufacturing, and money capital of the ſubjects of the King of Sweden to amount to about 196,124,897 rix-dollars.

Portugal coin in gold was, on the 22d of January, at the price of 4*l.* 3*s.* 6*d.* an ounce, in London: foreign gold (ſo called by the merchants) at 3*l.* 19*s.* an ounce: new dollars at 5*s.* 10½ each.

The French *Tiers Conſolidé*, being 6 per cent. intereſt, is now at 57¼. The Britiſh 3 per cents. were on the 22d of January, at 67¼.

Agriculture.

AGRICULTURAL REPORT FOR JANUARY.

HITHERTO, the winter months have been ſuch as to encourage the moſt flattering hopes of fertility in the enſuing ſeaſon. They have paſſed in ſhort alternations of froſt and ſnow; neither of theſe, being either extremely intenſe, or of very long continuance.

Chatteris, Jan. 23, 1802.

"THE almoſt conſtant froſty weather has been extremely favourable for clayey lands, eſpecially ſuch as were plowed over early after harveſt. The ſnows have greatly preſerved the young wheat plants from being injured by the froſts and winds; and the wheat plants in general are at preſent very healthful, and promiſe fair for a good crop. The growth of the graſs lands as well as the turnips and cole-ſeed is rather checked; but as ſtore ſtock of all kinds are ſcarce, we truſt there will be found a ſufficiency, particularly if the ſpring proves early.

"The froſty weather has alſo enabled the farmers to carry much muck and manure on the low, and all kinds of lands. But ſhould the froſty weather continue, or return frequently, it will make the farmers an extremely buſy ſpring, or throw their buſineſs late in the ſeaſon. On all clays they had better ſow the lands that are ſown broad caſt with a plowing leſs than uſual, eſpecially if there happen a few froſts to make them harrow well. The corn markets, both in the metropolis and the country, though they rather fluctuate, have advanced but little on an average above laſt month's prices. The meat markets, with leſs variation, are in general rather riſing, and we fear will be higher ſtill before the ſpring graſs meat is ready for market. We fear that the froſts have rather injured ſome potatoes; and the exaggerated accounts of their being ſo extremely plentiful, have cauſed them to be eaten by hogs and other ſtock more than they ought to have been.

"JOHN SCOTT."

The well-known profeſſor DANZEL has opened in a convenient ſituation at two miles diſtance from Hamburgh, an inſtitution for the education excluſively of young men intended for agricultural and commercial employ-

ments. Only 12 pupils are to be received at one time, into this inſtitution. The theory and practice of agriculture; the theory and practice of commerce; writing, arithmetic; civil and natural hiſtory; geography; drawing; with the Latin and French languages; and the principles of the Proteſtant religion; are the branches of inſtruction to be there taught.

Great ſeverity of cold now prevails, particularly in the South of France. The Saone is frozen up. The Rhone alſo begins to be covered with ice.

The price of grain continues to fall at Stockholm. As the produce of the laſt harveſt was not unuſually abundant; this effect is attributed to the peace, and to the preſent ſtagnation in the corn-trade of Sweden.

The Emperor of Ruſſia, with a policy ſimilar to that of our Henry the Seventh, has iſſued an order permitting his ſubjects, in all caſes, to make, at pleaſure, a fair ſale of their lands. The conſequences of this permiſſion cannot but be infinitely beneficial to Ruſſian huſbandry.

The Society of Ruſſian Noblemen and Gentlemen for the Improvement of Rural Economy and the Uſeful Arts has ſubſiſted almoſt ever ſince the acceſſion of the late Empreſs Catherine; has beſtowed very many præmia, with the happieſt ſucceſs; has collected accurate deſcriptions of almoſt all the valuable practices in huſbandry which are peculiar to Ruſſia; and has introduced an extraordinary number of improvements in all the œcumenical practice of Ruſſian huſbandry, and domeſtic life. Its exertions are, juſt now, continued more ſtrenuouſly than ever.

The dykes in Holland were broken down by the ſtorm in the end of December; and to the infinite terror and loſs of the huſbandmen, more than 6000 acres of land have been, in conſequence, inundated.

Of 44,000 emigrants out of the new French department of the Lower Rhine, the Conſular Government has directed thoſe who were labourers in huſbandry, farmers, or artiſans, to be reſtored to their country, at their own requeſt: thus teſtifying due reſpect to thoſe moſt important employments upon which human life depends immediately for its ſuſtenance.

In the courſe of laſt month, or rather between the 25th of December and the 22d of January, the prices of wheat, barley, malt, oats, and ſplit-peas have riſen in the Corn-market of London. The prices of rye, horſe-beans, and hog-peas were the ſame on the latter as on the former, of theſe days. The prices of Negro beans and boiling peaſe, have fallen.

It is a remarkable fact, that, in conſequence of the exceſſive waſte and expence at which cattle are now fattened for the London market, the Roaſt Beef of old England, is the moſt expenſive luxury which an inhabitant of the metropolis can, at this moment, put upon his table. Poultry are, in compariſon, the cheapeſt article of animal food that is ſold in London. A turkey, a gooſe, or a couple of common fowls go, at this time, farther, as a dinner to a family, than any good roaſting piece of beef, or a round of beef for ſalting and boiling that can be bought for the ſame money. Every miſtreſs of a family, every houſekeeper, every gentleman who attends to the purchaſe of meat for his own houſhold, and its conſumption, can bear teſtimony to the truth this fact. Nothing can more ſtrikingly evince,—how extremely profitabl ois the breeding and fattening of poultry of all ſorts!—and how very ruinous to the country are the preſent methods of rearing beeves for the butcher!—The writer of theſe words can aver from his own knowledge, that the caſe has been the ſame in London, for nearly theſe laſt three years.

The culture of the poppy in India has received a conſiderable check by a prohibition iſſued at Canton which forbids the future importation of opium into the Chineſe empire.

The HIGHLAND SOCIETY of Scotland held their anniverſary general meeting for the year 1802, on Tueſday January 12th, in their Hall in South Bridge Street, Edinburgh. The Earl of Eglintone, one of the Vice Preſidents, in the chair. Above 100 Noblemen and Gentlemen, Members of the Society, were preſent. To the number of 44 new Members were admitted. The So-

ciety examined the minutes of the proceedings of their Committee; and approved the præmia which the Committee had voted for the improvement of the breed of black cattle, and for the cultivation of waſte lands.—They exceedingly approved the reſolution of the Directors to give a piece of plate of the value of 15 guineas to the Rev. Mr. Bremner, Miniſter of Walls, in Orkney, for a plan ſuggeſted by him to ſave the lives of perſons ſuffering ſhipwreck by means of a certain proportion of caſk or cork to be fixed to any common ſhip's boat. A Sub-Committee reported, that this plan had been brought into actual experiment; and that it was fully aſcertained that a boat prepared agreeably to Mr. Bremner's plan, will not ſink, though full of water, and can ſcarcely be overſet by any violence of the waves.—The Society farther reſolved to apply to Parliament, and to his Majeſty's Miniſters, to ſolicit, that ſpeedy meaſures may be taken to improve and extend the fiſheries, to open up communications by roads and bridges, to cut canals in certain places, and to encourage the woollen manufactures.—The meeting voted its thanks to the Britiſh army of Egypt, and eſpecially to the 42d regiment.—They received the report of the Secretary, intimating, that he had correſponded on the objects of the Society, with Mr. Vanſittart of the Treaſury, and with the Dublin Society, which has produced from both thoſe quarters, ſeveral highly agreeable communications.—They referred to the Directors, a very ſenſible letter from Mr. Baron Hepburn on the ſubject of winter-feeding and green crops,—as alſo certain communications and ſuggeſtions from Mr. Girvan of Leith, relative to the ſalt-laws, fiſheries, &c.—The Society had great pleaſure in finding, that the ſtate of its funds would enable it to leave a larger ſum than uſual, at the diſpoſal of the Committee of Directors, for promoting, during the current year, the ends of the Inſtitution. His Grace the Duke of Argyle was re-elected Preſident.—After the adjournment, the Members dined together, as uſual, at Fortune's Tontine Tavern.

A Correſpondent who had lately occaſion to travel in *Hertfordſhire*, informs us, that the plaſhing of the hedges, is there performed in a manner extremely waſteful, and in all appearance, very little effective. The ſhoots are cut more than half through, ſo that they either die immediately, or if preſerved, are ſo weak that the hedge can afterwards have but very little ſtrength. He recommends, on the contrary, to dreſs the hedges when the ſhoots may be intertwined with very little cutting; and to add the briar, the black-thorn, the buck-thorn, and the willow to the hazels and other plants now common in theſe hedges. Theſe additions would thicken the hedge, render it more formidable to cattle, and admit of being entwined in their growth, without any neceſſity for the preſent deſtructive practice of plaſhing. Pray might not that admirable hedge-plant, the *cactus opuntia* be naturalized, though it were even in a dwarfiſh and unfruitful variety of it, in this climate?

The total quantity of grain neceſſary in Britain for bread and ſeed-corn, is eſtimated at 8,497,338 quarters.

There are of *cultivated land* in England and Wales, 11,350,501 acres in tillage; 16,796,458 acres in paſturage.—Of *uncultivated land* 3,515,25 acres fit for tillage or paſturage,—2,148,921 acres fit rather for planting only,—3,454,740 occupied by towns, villages, roads, rivers, &c. The total meaſurement of England and Wales is thus, 37,265,855 acres. There are for each perſon of the population, four acres of ground barren and productive, or three acres of productive ground.

Chaptal the French Miniſter for Internal Affairs, publiſhed, ſome time ſince, a treatiſe, the reſult of much laborious enquiry and many experiments, on the culture of the vine and the preparation and management of wine. That treatiſe was intended for the direction of all the proprietors of vineyards throughout the republic. To render it fully beneficial, *oinologic miſſionaries* have been recently ſent into the different wine-diſtricts, to inſtruct the people by actual practice, in the methods which Chaptal has recommended. One of thoſe miſſionaries, is Mr. Cadet-Devaux.

The French Agricultural Society of the department of the High Garonne has lately offered præmia for the beſt anſwers to theſe two queſtions—"What are the different ſorts of vines fit for culture in that territory?" "What is the beſt method of managing vines.

There are, in *Montgomeryſhire*, about 250,000 acres, of land reckoned to be, at preſent, unfit for tillage, but which might be very profitably planted with wood.

A correſpondent enquires—whether there be not various ſorts of graſſes indigenous to Britain and Ireland which might be adopted into culture with our other graſſes called artificial, with infinite advantage to the country?

The county of Norfolk, on an average, exported from its four ports, on each of the years 1792-3, and 4, the quantity of 63,046 quarters of wheat, and 37,135 quarters of flour; retaining at the ſame time, abundance for its own huſbandry. Its drill-huſbandry has been found to favour the increaſe of agricultural population.

At Little Broughton, near Cockermouth, in Cumberland 1662 grains of fine wheat were reaped from 40 ſtalks which ſhot, all, up from a ſingle grain.

The Fuſe or Common Acacia, a native of North America, of which there are ſome few plants in different parts of England, produces leaves ſo highly grateful to cattle, that ſome have doubted, whether this plant ought not to be extenſively cultivated for agricultural purpoſes.

The province of *Leinſter* ſometimes written Lemſter, was, as appears from our old ballads; anciently very famous for the wool which it ſupplied to the Engliſh manufacturers. There is now great reaſon to expect that under the patriotic encouragement of the Iriſh Truſtees and the Dublin Society, not that province only, but a very great part of the reſt of Ireland, may ſpeedily become more famous for wool, than any other part of the world. The Spaniſh breed of ſheep thrive even in Denmark and Sweden. But, the beſt judges in theſe caſes, are of opinion that, from the mildneſs of the climate and other local advantages, they might ſucceed in Ireland, even better than in Spain itſelf.

The county of Pembroke has, in the courſe of theſe laſt fifteen years, derived very great benefit from the improvement of watering the meadows. The climate is ſo much milder than that of Middleſex, that the inhabitants of Pembrokeſhire frequently read in the newſpapers of ſkaiting in St. James's Park, when they themſelves enjoy weather perfectly mild, open, and menacing no ſeverity.

The prices of hops begin to riſe ſlightly in the market, as the ſeaſon advances. Bags are now ſold at from 3l. 10s. to 5l.—Pockets at from 4l. 8s. to 8l.

Of all the varieties of ſheep known in this country, there is none that fattens or grows ſo faſt, upon a change from a coarſe and ſcanty to a tender and luxuriant, as the ſmall black-faced Scottiſh race known in the South of Scotland by the name of *Short Sheep* in diſtinction from the *Cheviot breed* called *Long Sheep*.

It is a certain fact, that the land occupied in highways, and even in pariſh roads and others ſtill more private, though commonly regarded as waſte, will be found when the facilities which it gives to farm labour, are fairly eſtimated, to afford a higher profit for it per acre, than even any garden-ground in theſe kingdom.

Should the preſent open weather continue; the wheats are likely to be too luxuriant at an early period in ſpring.

Manufactures and Useful Arts.

WE are happy to inform the public, that the Society for the encouragement of Arts, &c. Adelphi, have, with great public ſpirit, agreed to give a very honourable and valuable teſtimony of their approbation of Mr.

Greathead, of Shields, Life Boat. This invention has been the means of preserving the lives of many shipwrecked mariners, and has therefore deservedly engaged the attention of this discerning institution.

Coals are, fortunately, just now, at an unusually reasonable price in London. Cheapness of fuel has been justly condidered by all writers on subjects of public economy, as the very soul of manufacturing industry. We may, therefore, consider the fact which is here mentioned, as for this season, extremely auspicious to all the manufactures in this metropolis.

The Rev. Mr. Edmund Cartwright has obtained, in his favour, an Act of Parliament, extending to a second term of 14 years, the duration of his patent-right to the exclusive use of his invention for combing wool.

The following are the proportion of the ingredients in the famous mortar of LORIOT.

Fine siliceous sand, . .	3
Burnt bricks, . . .	3
Slaked lime, . . .	2
Lime slaked and recalcined .	2

There is found in France, a lime containing manganese, with which a mortar may be made that hardens to the most extraordinary firmness and tenacity.

The town of Buckhaven, on the coast of Fifeshire, in Scotland exhibits, at present, a remarkable instance of the enriching powers of the industry employed in the herring-fishery. It has been almost entirely rebuilt by the fishermen, occupying it. From a dirty fishing village, the abode of the most squalid misery, it has now become a snug neat little town. The families of the fishermen possess almost all some accumulated property, yet are now accustomed to live comfortably. Six men in a single fishing-boat, took, one morning, not long since, a cargo of herrings, in the space of six hours, which they immediatly sold for 90l. sterling; and then returned home to Buckhaven to dinner!

A Mr. Leekey, of London was a proprietor of a manufactory for spinning linen yarn by machinery wrought with a steam-engine, which stood on ground that was necessarily to be cleared, in order to make room for the erections of the Wet-Dock Company. The Act of Parliament by which they are incorporated, authorises them to pull down such obstructions to the accomplishment of their undertaking, upon making fair compensation to the proprietors. The Company offered Mr. Leekey, a compensation of 4000l. sterling. He sued them at law: and a Jury gave a verdict of 4000l. more, in his favour.

In the Linen-Manufactories at Perth, bed sheeting is woven with a shuttle which runs on small rollers. A pair of sheets of the finest linen cost not less than 7l. or 8l. The table-cloths and napkins manufactured at Perth, are prefered by the best judges, to the finest which are made in any of the departments of the French Republic.

Steam-Engines, first established in France, by Messrs. Perier, within these last fifteen years, are, there, far from having been yet improved to the perfection, or applied to the extensive utility to which they have attained in England. This is one of the instruments of manufacture which the French are, now, the most solicitous to improve after English example.

We can state, upon the best authority, that the forests in France have been to such a degree consumed, and that the strata of pit-coal are so very little wrought, as to make the most intelligent and patriotic persons in that country entertain the most serious fears for the fate of all their manufactures which depend much upon the use of fuel.

There is no one manufacture at present more flourishing in Great Britain than that of *glass*. It was first introduced in England by Sir Robert Mansel and others towards the end of the reign of James the First. The workmen and conductors were procured from Venice. The glass-works were established

in Broad-ſtreet. In the reign of Charles and the Uſurpation, this manufacture went to ruin. After the reſtoration, the Duke of Buckingham, at a vaſt expence, eſtabliſhed a new glaſs-work in London, in which glaſs equal to that of Venice was quickly made. Even ſince that time, this manufacture has been continued. It did not, however, become a ſource of vaſt profits till the ſea-weeds on our ſhores began to be burnt into Kelp. Since that æra glaſs-works have been rapidly multiplied at London, at Briſtol, at Liverpool, at Newcaſtle, at Dumbarton, at Leith. They are exceedingly profitable to the manufacturers. The glaſs of all ſorts which they afford, is exported to every foreign country with which we have trading intercourſe. The French envy, and deſpair of equalling us, in this moſt elegant manufacture. Even the Venetians do not now excel us. As in conſequence of the reſtoration of peace, ſumptuous works of architecture, and the uſe of ornamental furniture muſt conſiderably increaſe; hence, the demand for our Britiſh glaſs muſt at the ſame time, become conſiderably briſker.

The cotton-manufacture has made conſiderable progreſs at Berlin. *Manchesters* of Pruſſian manufacture, little inferior to the genuine fabric of Manchester, are, now, ſold in conſiderable quantity, as if they were really Engliſh goods. There is now at the ſame capital, a flouriſhing manufacture of *blue broad-cloth*. Mr. Von Eckardſtein, the Wedgewood of Berlin, has lately eſtabliſhed there a manufactory of Porcelain of which the productions vie with the China of Dreſden, and the Staffordſhire ware of England.

There exiſts in Switzerland, a manufacture of *ſugar of milk* from whey. Is it impoſſible that this manufacture ſhould be profitably imitated in England?

Where are the beſt and moſt elegantly finiſhed piſtols now made? By a family who have been, for many generations, hereditarily ſmiths, in a remote Highland ſituation in Stirlingſhire in Scotland. The workmanſhip of the piſtols which they produce, is, like that of the Indian canoes finiſhed with the labour even of years. It is moſt exquiſite. The piſtols are bought by Gentlemen who know how to value exquiſite workmanſhip in theſe things, at any price.

The beſt manufacturer of agricultural implements who has ever yet tried the taſk in Great Britain, was a Mr. SMALL, of Berwickſhire, who was directed and patroniſed by the late Lord Kaimes, in making a plough of peculiar conſtruction which has ſince obtained general preference. The manufacture which he eſtabliſhed, ſtill ſubſiſts. The ploughs and other implements which it furniſhes, are, in all reſpects, for the purpoſes of huſbandry, the beſt in Britain.

Fine Arts, Sciences, and Literature.

MR. Brera, in Italy, has recently aſcertained by a variety of experiments, that Medical remedies incapable or being taken in by the ſtomach, may be, with great advantage, applied by friction over the ſkin, ſo as to affect the whole vital ſyſtem in the manner deſired.

Mr. *Lowitz*, of St. Peterſburgh, ſome time ſince, made many experiments to reduce honey to the ſtate of ſugar, by treating it with powdered charcoal. He could not fully effect his purpoſe. Yet, he ſucceeded ſo far as to form a ſyrup of honey which might be uſed juſt as agreeably and uſefully as honey in making either tea or punch. That, however, in which Lowitz failed, has been recently accompliſhed by Mr. CAVEZZALI, a chemiſt of Lodi in Italy. He took a certain quantity of the pureſt and whiteſt honey which he could procure. This he ſet to boil in mixture with pulveriſed egg-ſhells. As the boiling continued, he carefully ſkimmed the mixture. In the ſkimmings, there was ſome appearance of a peculiar acid which he could not then analytically examine. When this ſcum ceaſed to appear on the ſurface; he

removed the liquor from the fire. The liquor when cool, was a rich ſaccharine ſyrup. He laid a part of it aſide in a cloſe bottle. That part was, after ſome time, found to have depoſited pure cryſtals of genuine ſugar, ſomewhat reddiſh in colour. Mr. Cavezzali quickly made them, by alcohol, perfectly white.

It is a curious fact in the hiſtory of metals; that *lead* was, in the reign of Auguſtus, juſt about 24 times as dear in Rome, as it is now in London. *Tin*, more plentiful on account of the vicinity of the Britiſh tin-mines, was then, only eight times as dear in Rome, as it is now in London.

Mr. Gmelin has lately analyſed the *beryl-ſtone*; and has found it to contain 54 parts of ſelex, 24 of alumina, 15 of glucin, 1,5 of oxide of iron, two of water, beſide 19,28 which were loſt without account, in the analyſis.

It was long ſince known, that *amber* and certain other bodies poſſeſſed a peculiar attractive and a peculiar repulſive power. Theſe powers were ſoon diſcovered to depend on the capacity of thoſe bodies to contain a peculiar aeriform fluid which was named ELECTRICITY, and on the modes of its entering them, reſiding in them, and paſſing out of them. That fluid was afterwards found, in certain caſes of its decompoſition, to have light and heat for its principal elements. This diſcovery ſuggeſted the poſſibility that it might be the ſame with that fluid by the decompoſition of which, in thunder, lightning burſts from the clouds. This conjecture was aſcertained to be truth, by the late Dr. Franklin of Philadelphia. The next progreſs of the ſame ſcience was to the diſcovery by the late Dr. Galvani in Italy, of the reſidence of a peculiar fluid in the living animal body, which might be made to ſhoot from one bare nerve to another, through the medium of certain metallic conductors, and under laws nearly ſimilar to thoſe of electricity. M. Volta not long ſince contrived to elicit this fluid, by means of a pile of layers of metals different in debility or in conducting power, ſuch as zinc and ſilver, with intermediate ſtrata of moiſtened paſteboard,—to elicit by theſe the galvanic fluid in a quantity in which it exhibited, identically, the ſame phœnomena, as electricity. The *ſpark*, that is the evolution of light and heat, was produced in the one caſe as well as in the other. Hence, the neceſſary inference, that electricity and galvaniſm are the ſame. The experiments of Volta have been ſince varied and extended by the Aſkeſian Society in London, by Mr. Davy, by Mr. Hyde Wollaſton, and others. Mr. Tromſdorff has lately with a pile of 130 plates of zinc and copper with the humid intermedia, produced ſuch an effuſion of galvaniſm or electricity, as inflamed various metallic filings. He promiſes to make ſoon experiments ſtill more conſiderable, with a pile of even 500 or 600 plates.

A National library has been formed at the Hague for the uſe of the Legiſlators of the Dutch Republic.

A ſimilar library has been juſt eſtabliſhed at Waſhington for the uſe of the members of the general government and legiſlature of the Anglo-American States.

Meſſrs. Ruiz and Pavon who returned lately from South-America, are preparing to publiſh at Madrid, a complete *Flora Peruvienſes*, or Catalogue and Hiſtory of the plants of Peru.

Vaccination is practiſed witd ſucceſs in Spain, by Meſſrs. Luzuriaga, Azaola, and Jaurigui.

Mr. Sennebier has recently aſcertained by a train of eminently curious experiments, that of all poſſible mixtures of the gaſes, that, of three-fourths Azcoot with one-fourth oxygen, the common compoſition of the atmoſphere, is the moſt favourable to vegatation. If the proportion of oxygen be diminiſhed to leſs than one-eighth, the germination cannot take place. Pure unmized oxygen accelerates germination, but at the ſame time enfeebles it. *Peaſe* grow in diſtilled water without the preſence of any air, in gaſes of all ſorts, and even in oil, if they have been but previouſly ſteeped in water.

The French have at Rambouillet, a national flock. They have lately reſerved ſome of theſe unſhorn for the ſpace of two years. The fleeces at the end of this time, were twice the weight of a fleece of one year's growth; and were with advantage, manufactured into excellent kerſeymeres. Their philoſophers conclude, that it is not natural and uſual for ſheep if left unſhorn to drop their fleeces annually.—We have obſerved many facts which make us greatly doubt the certainty of this concluſion.

The natives of New Caledonia, and the Ottomaquas in South-America, eat in caſes of extreme want and hunger a certain greeniſh earth. Specimens of that earth have been analyſed by M. Vanquelin at Paris. It is 37 parts of magneſia, 36 of ſelex, 17 of metallic oxide, three or four of water, and two or three of lime or copper: four parts were loſt in the analyſis.

Mr. Hammer is ſaid to have brought to this country an Arabian manuſcript furniſhing a complete key to the hieroglyphics. Reader don't believe this ſtory too haſtily.

Morals and Manners.

THE total number of houſes in Stockholm, is about 6,000. Its population was, in 1751, about 55,700 ſouls; in 1772, about 72,444; and amounts at preſent to above 80,000. It is very unhealthy. The deaths are eſtimated at 4,000 annually, or one out of every 20 of the whole population.

Governor Joſeph Wall was, on the morning of the 28th of January, executed at Newgate, for the crime of ordering without the authority of a Court Martial, that a Serjeant ſhould be flogged with 800 laſhes, of which, and perhaps drinking his grog unſeaſonably, he afterwards died. The mob behaved at Mr. Wall's execution, with a blood-thirſty ferocity worthy of the aſſaſſins in the maſſacres at Paris.

Sir Edward Hamilton, one of the moſt gallant officers in the Britiſh navy, has been diſmiſſed by the ſentence of a Court Martial, from the command of the Trent frigate and from the King's ſervice, for tyranny and oppreſſion in ſending a gunner to remain in the mizen-maſt, amidſt a ſeverity of ſtorm, that in the courſe of an hour and a half had nearly chilled the man to death.

Ten or twelve ſailors were lately executed at Portſmouth, in virtue of the ſentences of two Courts Martial; becauſe they had mutinouſly refuſed obedience to their commanding Officers, on the coaſt of Ireland, in the apprehenſion that they were to be ſent to the Weſt-Indies.

It is extremely to be regretted, that the negligence of parents to inſtruct their children in the principles of religion and of moral honeſty ſhould be ſuch as to occaſion in London, the moſt enormous profligacy and faithleſsneſs to truſt, among the young people who are brought up, in this metropolis, to trade and to manufacturing induſtry. A young man, clerk to Meſſ. Combe and Co. being on the 16th of October laſt, intruſted with a check by which to receive at their banker's 456l. to be applied in a payment; took the money; eloped to the haunts of vicious pleaſure; and eluded all ſearch till he was, on the 2d of January, apprehended, in the evening, at the Theatre, in company with a woman of eaſy virtue. He was examined before the Lord Mayor, and committed to priſon for trial.

A father and his ſon, of the name of the Mooney, were convicted, at the laſt aſſizes at Naas in Ireland, of mail robbery. They were ordered for ſpeedy execution.

The Society for Bettering the Condition of the Poor, continue their beneficent labours and enquiries, in many inſtances, with the happieſt effect.

A Tragedy under the name of ALFONSO, by M. G. Lewis, is the only new dramatic piece of any diſtinction which has been brought under repreſentation at any of the Theatres, during the preſent ſeaſon. Its ſucceſs has been far from ſplendid.

Natural Phoenomena.

ON Thurſday Dec. 27th, the river Medway was ſwollen by the rains to a greater diſtance and height over its banks, than it had been raiſed to, for the ſpace of 38 years before. Prodigious damage was done by the inundation. Happily, no lives were loſt.

On Sunday January the 3d, Lord Cholmondeley's gamekeepers took, alive, in the woods at Houghton, in Norfolk, one of the largeſt eagles that have been ſeen in England. Its meaſurement between the extremities of the expanded wings, was full eight feet.

The river Tay in the North of Scotland, the river Dee in the ſouth-weſt, and ſeveral other rivers in that part of theſe united kingdoms afford a ſort of freſh-water muſcles, within the ſhells of which, pearls are often to be found. Perſons who have curiouſſty obſerved the appearances peculiar to the ſhells containing the pearls; affirm that they can diſcover with certainty, even without opening any particular muſcle, whether it have or have not a pearl within it. The formation of a pearl never takes place but in conſequence of a particular vitiation of the ſhell of the muſcle, in which it is formed. That vitiation is effected by a very ſmall auger-worm which attacks the ſhell near the ſide of the valve; penetrates longitudinally between the laminæ; and after thus proceeding for an inch or an inch and a half towards the inner part, doubles back, and returns in a parallel direction to the exterior ſurface. The irregular depoſition of the animal ſecretion that naturally lines the ſhell, is produced by theſe attacks of the auger-worm. And the conſequence is, the formation of a pearl.—Another enemy, a pholas, attacks the pearl-oyſter at ſea. In conſequence of its attacks, alſo, is the pearl formed. The Chineſe know to imitate an oyſter, the injuries of this ſea-worm, and thus at pleaſure to produce pearls.

As proviſions of all kinds, particularly animal food, are at ſuch an exorbitant price, every likely mode to remove the evil ſhould be adopted; and from the following remarkable inſtance of fecundity, the increaſed breed of hogs will certainly produce a good effect.—Mr. Smith, a Baker, at Eaſthampſtead, Berks, has a ſow, which on Jan. 29, 1801, farrowed 15 pigs, on June 15th, 20; and on Nov. 30, 22; in the whole 57 pigs, in the ſpace of 45 weeks, 26 pigs from the two firſt litters were brought to maturity. The ſow is now in good order, and 14 pigs (that were preſerved) in a fine and thriving condition.

BANKRUPTCIES AND DIVIDENDS,

Announced between the 20th of Dec. 1801, *and the 20th of Jan.* 1802.

BANKRUPTCIES,

(The Solicitors Names are between Parentheſes.)

ARNOLD, T. Wolverhampton, baker (Allens, Clement's inn.

Adam, J. Brompton, Kent, butcher (Biſhop, Eſſex-ſtreet.

Abbot, J. and Mark Palmer, Monkueremouth-ſhore, ſail-makers (Wawn, Mark-lane.

Addiſon T. Chute Forſit, and W. Addiſon, Melton, Wilts, corn dealers (Bexwell and Keys, James-court, St Mary Axe.

Brady, J. Ipſwich, linen draper (R. S. Dunham, Ipſwich

Bulmer, T. Barmby, Yorkſhire (Hodgſon, Clement's inn.

Bonnin, H. G. New Bond ſtreet, furniture printer (Biſhop, Lyon's inn.

Bailman, M. Corſe Mullen, Dorſet, miller (Pearſon and Son, Temple.

Bendal, W. Whitcombe, Somerſet, mealman (Edmunds, Exchequer-office, Lincoln's inn.

Blackmore, R. Colonade, near the Foundling Hoſpital, painter and glazier (Dawne, Bridges ſtreet, Covent Garden.

Bellamy, J. and A. de Valangio, Holborn, wine merchants (Smedley, at Mr. Welchs's, Aldergate ſtreet.

Biſhop, J. Leighton hall, Lancaſter, merchant (Maſon and Wilſon, Lancaſter.

Biſhop, W. Leighton hall, merchant, Partner with J. Biſhop, of Leighton hall, and T. Law, of Barbadoes (Maſon and Wilſon, Lancaſter.

Cowgill, J. Manchester, merchant (Lee, Temple.

Cooper, W. Derby, iron founder (Lowten, Temple.

Chamberlain, J. Bremford, Suffolk, inn keeper (Cutling, Barlett's buildings.

Daniel, J. late of Ballyſhannon, now of Liverpool, merchant (Blackſtock, Temple.

Duſt, J. Finſbury ſquare, merchant (Walton, Girdler's hall.

Depper, T. New ſtreet, Covent Garden, goldſmith (Aubrey, Tock's court. Curſitor ſtreet.

Donne, W. J. Liverpool, linen draper (Williamſon, Liverpool.

Douglas, A. Mount row, Lambeth, dealer (Williams, Curſitor ſtreet.

Dane, J. W. Williamſon, and R. Clay Arnold, Nottingham, hoſiers (Macdougal and Hunter, Lincoln's inn

Eyre, A. Union ſtreet, St. Mary le bone, grocer (Edwards, symonds inn.

Field, W. Old Cavendiſh ſtreet, painter and glazier (Watkins and Stackhouſe, Featherſtone buildings.

Fothergill, T. Manchester, merchant (Ellis, Curſitor ſtreet.

Graham, W. Rainington, miller, &c. (Ellis, Curſitor ſtreet.

Graham, J. and J. Burn, Southampton, wine merchants (Elliot, Catharine court, Seething lane.

Gates, R. Great Saffron hill, baker (Biſhop, Lyon's inn.

Guthrie, R. and C. Cook, Liverpool, merchants (Cooper and Lowe, Southampton.

Green, W. Swanlea, cheeſemoneer (Price, Lincoln's inn.

Holmes, W. Otley, mercer (Sykes, New inn

Heawood, J. late of Stockport, now of Manchester, manufacturer (Ellis, Curſitor ſtreet

Harris, A. [illegible] chapel road, hatter (Smith, Barber's hall, Monkwell ſtreet.

Juxon, T. Birmingham, cornfactor (Sanderſon, Palſgrave place; or Chilton, Exchequer office, Lincoln's inn.

Ingold, G. P. Braintree, ſcrivener (Ledwick, Queenhithe.

Jones, L. Colonade, Grenville ſtreet, Brunſwick ſquare, Middleſex, builder, &c. (Tilbury and Bedford, Ely place.

King, S. Glouceſter, ſhop keeper (Jenkins and James, New inn.

Key, W. Duke ſtreet, Aldgate, man's mercer (Skyes, Caſtle ſtreet, Holborn.

Kiſſon, G. Halifax, inn keeper (Coulthurſt, Bedford row.

Kendray, G. Harnmer, Yorkſhire, dealer (Hodgſon, Clement's inn.

Lickley, J. Newcaſtle ſtreet, Strand, hoſier (Williams, Sion College.
Lindſay, W. Mancheſter, manufacturer (Ellis, Curſitor ſtreet.
Lonſdale, N. and T. Thompſon, Bedford ſtreet, Covent Garden, woollen drapers (Jopſon, Lincoln's inn.
Morris, J. now of John ſtreet, Weſtminſter, formerly of the Inner Temple, ſcrivener (Tagg, Furnival's inn.
Morrey, J. C. Mancheſter, cotton manufacturer (Ellis, Curſitor ſtreet.
Malliſon, G. Gwuxholme, corn miller, &c. (Battye, Chancery lane.
M'George, W. Old Bond ſtreet, banker (under the firm of Adey, M'George, and Co.) (Forbes, Ely place.
M'Knight, S. jun. Liverpool (Battye, Chancery lane.
Nabb, J. Garriſon, Derbyſhire, callico printer (Lee, Temple.
Naſh, M. Wootton Underedge, currier (Price and Williams, Lincoln's inn.
Nobes, J. and W. Southſea Common, green grocers (Cornthwaite John Hector, Portſea.
Needham, T. Aſhby de la Zouch, hoſier (Kinderley, Long, and Ince, Symonds inn.
Nanſan, T. Mancheſter, warehouſeman (Wiggleſworth, Gray's inn.
Parker, E. Stevenage, Herts, corn dealer (Wells, Wood ſtreet, Spital fields.
Phillips, J. Swan inn, Roſs, inn holder (Collins and Pryke, Roſs.
Powell, W. Brompton, Middleſex, butcher (Ellis, Curſitor ſtreet.
Rees, T. Broad ſtreet, St. Giles's, glaſs ſeller (Maddocks Lincoln's inn.
Reece, W. Liverpool, merchant (Ellis, Curſitor ſtreet.
Roberts, J. Shrewſbury, linen draper (Griffiths, Lincoln's inn
Rozas, S. C. Brown's buildings, Leadenhall ſtreet, merchant (Dixon, Naſſau ſtreet.
Smith, R. late of Liverpool, now of Little Chelſea (Freame, Little St. Martin's lane.
Streater, W. Billingburſt, Suſſex, miller (Wilſon and Broad, Union ſtreet, Southwark.
Siſſons, J. Kingſton on Hull, merchant (Fiem, J. Siſſon and Co.) Lyon and Collier, Bedford row.
Stewart, J. Canterbury ſquare, Tooley ſtreet, mariner, ſurviving partner of A. Stewart, deceaſed (Daun and Teaſdale, Threadneedle ſtreet.
Toledano, Phineas de Baruch, Great Aſhe ſtreet, merchant (Willett and Anneſleys, Finſbury ſquare.
Thring, J. late of Moorhouſes, Reveſby, Lincolnſhire, farmer, (R: Clithernwe, Horncaſtle.
Trollip, H. Nailſworth, mealman (Gardener and Skinner, Minchinhampton.
Tobin D. and T. O'Meara (under Firm of Tobin, O'Meara, and Co.) Nicholas lane, Lombard ſtreet, merchants (Flaſhman and Pringle, Ely place.
Timms, J. Bowling ſtreet, Weſtminſter, ſhopkeeper (Lindeman, Crown ſtreet, Weſtminſter
Thorn, W. Drury lane, woollen draper (Jopſon, Lincoln's inn.
Woolridge, G. Wimborn Minſter, Dorſet, dealer (T. Parr, Poole.
Wallace, J. Upper Maryle bone ſtreet, carpenter, &c. (Netherſole, Eſſex ſtreet.
Wakeman, R. Birmingham, plater (Kinderley, Long, and Ince, Symond's inn.
Webb, W. Cloth Fair, ſmith (Collyer, Great Eaſtcheap
Walker, W. Lancaſter, merchant (Cheſhyre and Walker, Mancheſter.
Wright, G. Worceſter, glove ſeller, &c. (Platt, Bride court.

DIVIDENDS ANNOUNCED.

Alderton, J. R. Salehurſt, Yorkſhire, Feb. 2.
Allan, J. Birmingham, corn dealer, Jan. 25.
Allgood, J. Glouceſter, mercer, Feb. 13.
Armſtrong, S. Bath, ironmonger, &c. Feb. 15.
Almond, T. Dowgate hill, Feb. 2, final.
Andrews, T. Hackney road, brewer, Jan. 23.
Abernathy, J. and F. Henderſon, Lothbury, merchants, Feb. 26.
Bebbington, J. City road, umbrella maker, Jan. 22.
Bainbridge W. Gerard ſtreet, carver and gilder, Jan 23.
Braſſey, T. Wigan, ſhopkeeper, Jan. 28.
Bleaſe, J. Liverpool, Jan. 18.
Bleaſe, J. Liverpool, and J. Wiſeman, jun. St. Vincents, merchants, ſurviving partners of G. Burgeſs, Jan. 18.
Bateman, J. Kingſton upon Hull, merchant, Jan. 25.
Bache, P. and A. Baſſinghall ſtreet, merchants, Jan. 23.
Bonney, W. Liverpool, ſoap boiler, &c. Jan. 26.
Bottomley, T. Liverpool, linen draper, Feb. 12.
Bibby, T. Stockport, grocer, Jan. 27.
Bigiby, J. Nottingham, merchant, Jan. 29.
Bennett, W. Watling ſtreet, warehouſeman, Feb. 13.
Berridge, R. Old City Chambers, merchant, Feb. 16.
Burgeſs, L. Old Change, ſtraw hat warehouſeman, Feb. 13.
Bate, E. Liverpool, merchant, Feb. 12.
Bacon, J. Fulham, potter, Feb. 16.
Barlow, J. Shude hill, Mancheſter, innkeeper, Feb. 17, final.
Clay, B. Huddersfield, linen draper, Jan. 25.
Cliff, R. and B. Pratt, Coventry, ſtuff manufacturers, Jan. 18.
Child, E. South ſtreet, St. Luke's, Middleſex, Jan. 22.
Corbet, T. Minchinhampton, clothier, Feb. 9. final.
Cock, A. and H. Glouceſter, drapers, Jan. 27.
Clutterback, P. York ſtreet, brewer, Jan. 19, final.
Collins, J. St. Paul's church yard, confectioner, Feb. 13.
Charters, T. Haydon ſquare, merchant, Feb. 9.
Conaard, J. Piccadilly, cutler, Feb. 26.
Clemſon, E. Strand, glover, Feb. 13.
Cole, F. North Tawton, ſerge maker, Feb. 11.
Cullin, M. Liverpool, merchant, Feb. 12.
Dards, J. Bankſide, lighterman, Jan. 23.
Dennis, H. B. Gainſborough, mercer, Jan. 23.
Damerum, W. Portſmouth, builder, &c. Jan. 18.
Downing W. Sutton upon Trent, maltſter, Jan. 18.
Devey, J. Shrewſbury, upholder, Feb. 2.
Delamain, J. Kingſton upon Hull, merchants, Feb. 9.
Elkins, W. Oxford-ſtreet, bookſeller, Jan. 22.
Evans, J. Paternoſter-row, bookſeller, Feb. 13.
Edwards, T. Fore ſtreet, Limehouſe, victualler, Jan. 23.
Eltoft, J. Cheſter, wine merchant, Feb. 16.
Fletcher, G. Thornhaugh ſtreet, plaiſterer, Jan. 9.
Fozard, J. ſen. and jun. and L. Fozard, Park lane, ſtable keepers, Jan. 19.
Fenner, T. Weſt Wycombe, ſhop keeper, Jan. 21.
Frome, J. P. St Stephen's Walbrook, merchant, Feb. 6.
Grayſon, G. South Cave, Yorkſhire, grocer, Jan. 14.
George, W. Chepſtow, innkeeper, Jan. 30.
Greenaway, M. and F. Calne, collar makers, Jan. 27.
Green, W. Crooked lane, warehouſeman, Feb. 12.
Hartſinck, J. C. J. Hutchinſon, and W. Playfair, Cornhill, bankers, Feb. 13.
Heath, F. Bath, ironmonger, Jan. 20.
Hinton, W. Weſt Harding ſtreet, engraver, &c. Feb. 23.
Hoyle, H. Ilminſter, grocer, Feb. 9.
Harper, W. and J. Wilſon, Caſtle ſtreet, Budge row, merchants, Feb 6.
Haynes, R. Bedford ſtreet, Covent Garden, man's mercer, Feb. 9.
Harris, G. Briſtol, grocer, Feb. 16.
Jackſon, T. Shalford, Eſſex, ſhopkeeper, Jan. 23.
Illidge, W. Wolverhampton, rope maker, &c. Feb. 18.
Krohn, J. New court, Throgmorton ſtreet, merchant, Feb. 2. final.
Ker, P. Old Jewry, merchant, Jan. 30.
Kent, A. and M. Pemberton, Lime ſtreet ſquare, merchants, Feb. 13
Kellatt, T. Birmingham, baker, Feb. 17.
Kemble, S. and W. Spens, Norfolk ſtreet, Strand, merchants, Feb. 15.
Living, N. Newgate ſtreet, linen draper, Jan. 26.
Lowe, J. Finſbury place, merchant, Jan. 22.
Lowes, D. and J. H. Rigg Hart ſtreet, Covent Garden, rectifiers and brandy merchants, Feb. 2.
Langſtaff, S. Sunderland, ſhip owner, Feb. 13.
Lewington, H. Andover, inn holder, Feb. 10.
Liddard, T. Great Pulteney ſtreet, carpenter, Feb. 9.
Metcalf, S. and J. Golden leg court, hoſiers, Feb. 23.
Morris, P. St. Martin's court, hoſier, Jan. 23.
Mee, W. and W. Evans, Wood ſtreet, hoſiers, Jan. 26.
Millard, R. pariſh of St. James, Clerkenwell, victualler, Jan. 16
Motterſhead, T. Mancheſter, cotton manufacturer, Jan. 15.
Martin, W. Homerton, broker, Feb. 2.
Mulgrave, E. Leeds, ſtuff merchant, Feb. 3, final.
Moore, J. E. Bermondſey ſtreet, leather dreſſer, March 9.
M'Carthy, R. Briſtol, tobacconiſt, Feb. 26, final.
Mills, J. Swanſea, ſhipwright, Feb 16.
Nantes, H. Warnford court, ſurviving partner of R. M. T. Chiſwell, merchant, Jan. 30.
Newman, T. Exeter 'Change, optician, Feb. 19.
Needs, R. St. Thomas the Apoſtle, Devon, ſerge maker, Feb. 11.
Owen, E. St. James's ſtreet, taylor, Feb. 19.
Payne, T and R. Cheapſide, goldſmiths, Jan 12, final
Perry, J and G Rigg, Bread ſtreet, warehouſemen, Feb. 16
Parker, B. Birmingham, ſcrivener, Jan 20
Phillips, C. Halifax, merchant, Jan 27
Parker, J. St Wells ſtreet, ſadler, Feb 2
Perry, R and T Andrews, Hackney, brewers, Jan 23
Ponter, A. Southwark, china man, Feb 23
Roberts, R and W. Williams, Great Diſtaff lane, warehouſemen, Jan 23
Reichard, J. J P Dahmer, and J J Brune, Angel court, Throgmorton ſtreet, merchants, Feb 6.
Reimer, H. Catharine court, Tower hill, merchant, Jan 30
Richards, J. Truro, ſhop keeper. Feb 5
Reckſtrow, J Henley on Thames, grocer, Feb 19
Steward, J. late of the Earl Howe Eaſt Indiaman, Jan 30
Saul T and J Reynolds, Mancheſter, wool ſtaplers, Feb 2
Smith, W. Mile end, inſurance broker, Jan 30
Smith, E. Birmingham, hat manufacturer, Jan 20
Smith, R. Whitechurch, ſcrivener, Feb 15
Shivers, T. Nicholas lane, merchant, March 6
Saul, T and J Reynolds, Mancheſter.
Symonds, —, E Pare, and P W Crapp, Plaiſtow green, woolſtaplers, Feb 13
Scales, W Middleton, miller, &c. Feb 8, final
Scott, S and J. Mount ſtreet, haberdaſhers, Feb 13
Stanton, T. Ironmonger lane, factor, Feb 23
Slater, G. Liverpool, merchant, Feb 11
Tufting, J N. Lincoln, cornfactor, Jan 23
Vaughan, H. Liverpool, grocer, Jan 26
Van Sprangen, N. Wells ſtreet, Goodman's fields (firm N. Van Sprangen and Co) Feb 26
Walker, P. Dudley and Weſt Bromwich, draper, Jan 16
Wilſon, R. Bread ſtreet, merchant, Jan 30
Warner, R. George yard, factor, Feb 2
Weſt, J and T Davis, New Bond ſtreet, ſilverſmiths, Jan 30
Willis, R Crescent, Minories, merchant, Feb 2
Weſt, J. Bath, cordwainer, Feb 6
Weſt, D. Windſor, coal merchant, Feb 6
Worthington, G. Mancheſter, merchant, Feb 8
Wattors, J. Hammerſmith, victualler, Feb 9
Williams, J. Abingdon, currier, Feb 13
Wetherherd, C. Liverpool, merchant, Feb 10
Winter, B. Long Acre, cabinet maker, Feb 27
Young, J. Sculcoates, York, Feb 8
Zurhorſt, H. Baſinghall ſtreet, merchant (Firm, Reilly, Zurhorſt, and Co.) Feb. 16.

LONDON PRICES OF GRAIN for *January*, 1802.

MARK-LANE, *Monday, Jan* 4.

Although we had a pretty good ſupply of Kent and Eſſex corn at market this day, yet there being a good many buyers, Wheats went off rather briſk in the morning, but towards the cloſe of the market, prices rather gave way.——Rye is nearly the ſame.——Barley and Malt are very dull, and rather cheaper.——In Oats there is little or no alteration.——Both Small and Tick Beans, owing to a good ſupply, are cheaper; the former about 1s. and the latter 2s. per quarter ſince laſt Monday.

Price of Grain, on board Ship, as under:

Engliſh Wheat	48s to 63s	Fine	to 57s	Fine	to 47s
Fine	75 to 82s	Oats	21s to 28s	Small Beans	32s to 38s
Rye	30s to 40s	Fine Polands	30s	Old	to 46s
Barley	36s to 40s	White Peas	40s to 45s	Ticks, new	28s to 35s
Fine	to 46s	Fine	to 48s	Old	to 44s
Malt	48s to 50s	Grey ditto	36s to 38s		

Monday, Jan. 11.—Having only a very moderate ſupply of Wheat this morning, ſuperfine White ſamples, from Eſſex and Kent, experienced a ready ſale at laſt week's prices; but Red Wheat, and the inferior qualities, went off upon rather better terms.—Rye is 2s. per quarter higher.—Barley comes to market very freely, and is full 2s. per quarter lower—Malt nearly as much, and the ſales of each extremely dull.—New Beans of both ſorts maintain the prices quoted in our laſt, where the ſamples are perfectly hard and handſome, but not otherwiſe; and Grey Peas are rather more in demand.—White Peas are lower, and have ſcarcely any buyers.—In conſequence of a tolerable arrival of Foreign Oats, we had heavy ſales, at a reduction in prices of 1s. per quarter ſince this day ſe'nnight.

Wheat	48s to 65s	Fine	to 57s	Grey ditto	38s to 40s
Fine	78s to 88s	Oats	20s to 26s	Fine	to —s
Rye	30s to 40s	Fine Polands	29s to 30s	Small Beans	35s to 38s
Barley	36s to 42s	White Peas	40s to 44s	Fine Old	to 46s
Fine	to 48s	Non Boilers	36s to 40s	Ticks, new	30s to 35s
Malt	42s to 56s				

Monday, Jan. 18.—We have had a few freſh arrivals of Corn for this day's market, and the navigation of the river being again nearly open, cauſed our Wheat Market to be very dull, and rather on the decline.—Barley, owing to a great many ſamples at market, is cheaper, from 1s. to 2s. per quarter.—Oats are very dull, and rather lower.—In White and Grey Peas little or no alteration.—Tick and ſmall Beans are ſomewhat cheaper.

Wheat	48s to 65s	Fine Ship do.	to 56s	Grey ditto	38s to 40s
Fine do.	78 to 82s	Oats	20s to 25s	Fine	to 42s
Rye	30s to 40s	Fine	to 28s	Sm. Beans new	36s to 38s
Barley	36s to 40s	Polands	28s to 30s	Old	to 46s
Fine	to 42s	White Peas	40s to 44s	Ticks, new	28s to 34s
Malt	40s to 48s	Non Boilers	36s to 40s	Old	44s

Monday, Jan. 25.—We have had a great many freſh arrivals of Corn in ſince laſt week, chiefly Oats and Barley; but Wheat comes very ſparingly to market, which article is about 2s. per quarter dearer than on this day ſe'nnight.—Barley, owing to a good ſupply, is full 2s. per quarter cheaper; as are alſo Oats.—Both Small and Tick Beans are very plentiful; the former is about 2s. and the latter 3s. per quarter lower.

Wheat	48s to 65s	Fine	to 50s	Non Boilers	—s to —s
Fine do.	78s to 84s	Oats	20s to 22s	Grey Peas	36s to 38s
Rye	30s to 40s	Fine	to 25s	Fine	to —s
Barley	36s to 38s	Polands	—s to 27s	Small Beans new	35s to 43s
Fine	40s to 45s	White Peas	40s to 42s	Old	to 44s
Malt	40s to 45s				

Return of Wheat in Mark-lane, from the 21ſt of Dec. to the 26th Dec. inclusive.

Total 8667 Quarters—Average 77s 9¾d.— os. 6½d. higher than laſt return.

Return of the Prices of Flour, from Dec. 19, to Dec. 25, inclusive.

Total 9028 Sacks——Average 69s 5¾d.——1s o¼d higher than laſt return.

Hence reſults the Price of BREAD.

Eighty Quartern loaves at 1s o¼d. 4l 1s 8d———In favour of the Baker 2¾d.

Price of Hops.

Pockets.				Bags.			
Kent —	4l 8s	to	7l 12s	Kent —	3l 18s	to	5l 5s
Suſſex —	4l 6s	to	5l 8s	Suſſex	3l 18s	to	5l —s
Farnham —	4l 4s	to	5l 8s	Eſſex	6l —s	to	7l 10s

Seeds.

Red Clover, (per cwt.)	20s to 84s	Cinque Foil, ditto	—s to —s
White Clover, ditto	40s to 116s	White Muſtard-ſd. p. bu.	10s to 14s od
Trefoil, ditto	10s to 50s	Brown, ditto do.	10s to 14s 8d
Turnip, (per buſhel)	12s to 16s	Canary ſeed do.	9s to —s
Rye Graſs (per quarter)	20s to 30s	Rapeſeed, per laſt	39l to 40l

Meat. Smithfield, Monday, Jan. 4. (To ſink the offal, per ſtone of 8lb.

Beef	5s 6d to 6s od	Veal . .	5s od to 7s od
Mutton	4s 8d to 6s 6d	Pork . .	6s od to 7s 6d
	Lamb, -	os od to os od	

Head of Cattle this day——Beaſts about 2,000—Sheep and Lambs 7,500.

Raw Hides.

Heifers and Steers(per ſt.)	3s 4d to 3s 8d	Market Calf —	9s od each
Middling —	2s 10d to 3s 2d	Engliſh Horſe —	12s to 15s each
Ordinary —	2s 2d to 2s 4d	Sheep Skins —	4s od to 8s od

Price of Tallow.

St. James's Market —	4s o½	Ruſſia ditto (Soap) —	58s od
Clare Market — —	os od	Melting ſtuff — —	48s 50s
Whitechapel Market —	4s od	Ditto rough — —	35s —s
Per ſtone of 8lb.—Average	4s o½	Graves — —	19s —s
Town Tallow .	68s od	Good Dregs —	12s —s
Ruſſia ditto (Candles)	61s 62s	Yellow Soap,68s-Mottled 76s—Curd 80s	

Price of Candles per Dozen, 11s. od.—Moulds 12s od

Prices of Hay and Straw on Saturday, Jan. 3.

St. James's—Hay	3l os to 5l 8s	Average	4l 4s od
Straw	1l 16s to 2l 8s	———	1l 19s od
Whitechapel—Hay	4l 4s to 5l 8s	———	4l 16s od
Clover	5l 10s to 6l 10s	———	6l —s od
Straw	1l 12s to 1l 17s	———	1l 14s od

Coal Exchange for the week.

Monday.—Coupin	43s 6d	Kenton Main	45s 6d
Tanfield Moor	42 6d	Friday—Adair's Main	42s 3d
Pontop	41s 6d	Benton	43s
Wedneſday.—Bigg's Main	45s 6d	Biggs's Main	45s
Coupin	43s 6d	Heaton Main	45s
Hebburn Main	45s 6d	Montague	44s 6d
Heaton Main	45s 9d	Windſor's Pontop	42s 6d

Delivered in Town at 8s advance on the above price.

Return of Wheat in Mark-lane, from 28th of Dec. to the 2d of Jan. inclusive.

Total 7897 Quarters——Average 79s. 9¾d.——2s. 0d. higher than last return.

Return of the Price of Flour, from Jan. 2, to Jan. 8, inclusive.

Total 19,902 Sacks.———Average 69s 1d.—0s 0¼d higher than last return.

Hence results the Price of BREAD.
Same as the last return.

Price of Hops.

Bags	3l	10s	to	5l	—d	Pockets	4l 8s to 8l —d

Seeds.

Red Clover, (per cwt.)	40s	to	90s	Cinque Foil, ditto		30s	to	45s
White Clover, ditto	40s	to	120s	White Muſtard Seed, p. bu.		10s 6d	to	14s
Trefoil, ditto	20s	to	50s	Brown, ditto do.		10s 6d	to	14s 6d
Turnip, (per buſhel)	10s	to	18s	Canary Seed,	do.	11s	to	12s
Rye Graſs, (per quarter)	20s	to	32s	Rape Seed, (per laſt)		35l	to	68l

Meat. Smithfield, Monday, Jan. 11. *(To ſink the offal, per ſtone of* 8lb.)

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

Head of Cattle this day——Beaſts about 1,000—Sheep and Lambs 11,060

Raw Hides.

Beſt Heif. & Steers, per ſt.		3s 4d	to 3s 8d	Horſe Skins	—	12s	to 15s each
Middling	—	2s 10d	to 3s 2d	Calf ditto	—	9s 0d	each
Ordinary	—	2s 2d	to 2s 4d	Light Calf	—	6s 7d	per lb.

Price of Leather.

Butts, 50 to 56lb. each		16½d	to 18d	Calf Skins, 35 to 40lb.	*p.* doz.	24d	to 28d
Ditto, 60 to 66lb. each		21d	to 22d	Ditto, 50 to 70lb.	do.	26d	to 28d
Merchants Backs		—d	to —d	Ditto, 70 to 80lb.	do.	24d	to 26d
Dreſſing Hides	—	10d	to 15d	Sm. Seals (Greenland)		24d	to 28d per lb.
Fine Coach Hides		16d	to 16½d	Large ditto		100s	to 120s *p.* doz.
Crop Hides for cutting		18d	to 20d	Tanned Horſe Hides		18s	to 30s *p.* hide.
Flat Ordinary	—	15d	to 18d	Goat Skins		21s	to 63s *p.* doz.

Price of Tallow.

St. James's Market	—	4s	1½d	Ruſſia ditto (Soap)	—	60s	to 61s
Clare Market	—	3s	11½d	Melting Stuff	—	50s	52s
Whitechapel Market	—	3s	9d	Ditto rough	—	35s	—s
Per ſtone of 8lb.—Average		4s	0d	Graves	—	19s	—s
Town Tallow	—	68s	0d	Good Dregs	—	11s	—s
Ruſſia ditto (Candles)		64s	0d	Yellow Soap, 68s.-Mottled		76s.--Curd	80s

Candles, *p.* doz. 11s 0d—Moulds, 12s 0d.

Prices of Hay and Straw on Saturday, Jan. 9.

St. James's—	Hay	4l 0s	to 5l 8s	0d	Average	4l 14s	0d
	Straw	1l 12s	to 2l 0s	0d	———	1l 16s	0d
Whitechap.—	Hay	3l 10s	to 5l 0s	0d	———	4l 5s	0d
	Clover	5l —s	to 6l 6s	0d	———	5l 13s	0d
	Straw	1l 8s	to 1l 14s	0d	———	1l 11s	0d

Coal Exchange for the Week.

Monday.—Hebburn	44s	Wedneſday—Walſend	45s
Biggs's Main	45s	Friday.—No buſineſs done.	
Benton	43s 9d		

Delivered in Town at 8s advance on the above price.

Return of Wheat in Mark-lane, from Jan. 4, to Jan. 9, inclusive.

Total 5073 quarters.—Average 78s. 10¼d.——os. 11½d. lower than last return.

Return of the Prices of Flour, from Jan. 2, to Jan. 8, inclusive.

Total 19,902 sacks.——Average 69s. 1d.——os. 0½d. higher than last return.

Hence results the Price of BREAD.

Eighty Quartern loaves at 12¼d.—4l 1s 8d—In favor of the Baker 7d.

Price of Hops.

Bags.				Pockets.			
Kent —	3l 10s	to	5l —s	Kent —	4l —s	to	5l 15s
Suſſex —	3l 10s	to	4l 16s	Suſſex —	4l —s	to	5l 8s
Eſſex	3l 10s	to	4l 10s	Farnham	6l —s	to	7l 7s

Seeds.

Red Clover (per cwt.)	New	56s	to 94s	Rye Graſs (per quarter)		26s	to 36s
	Old	10s	to 54s	Cinque Foil, do.		30s	to 45s
White Clover, do.	New	84s	to 126s	White Muſt. Seed (p. buſh.)		1 s 6d	to 14s
	Old	os	to 110s	Brown do. do.		10s 6d	to 14s 6d
Trefoil, do.	New	25s	to 50s	Canary Seed do.		11s	to 12s
	Old	5s	to 42s	Rape Seed (per laſt)		35l	to 38l
Turnip (per buſhel)		16s	to 21s				

Meat. Smithfield, Monday, Jan. 18. (*To ſink the offal, per ſtone of 8lb.*)

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

Head of Cattle this day—Beaſts about 1,900—Sheep and Lambs 12,000.

Price of Leather.

Butts, 50 to 56lb. each	16½ to 18d	Calf Skins, 34 to 40lb. *p.* doz.	24d to 28d
Ditto, 60lb. to 66lb. each	21d to 22d	Ditto, 50 to 70lb do.	26d to 28d
Merchants Backs	—d to —d	Ditto, 70 to 80lb. do.	24d to 26d
Dreſſing Hides	18d to 15d	Sm. Seals (Greenland)	28d to 32d *p.* lb.
Fine Coach Hides	16d to 16d½	Large do.	100s to 120s *p.* doz.
Crop Hides for cutting	18d to 20d	Tanned Horſe Hides	18s to 30s *p.* hide
Flat Ordinary	15d to 18d	Goat Skins	21s to 63s *p* doz.

Raw Hides, per Stone.

Beſt Hides	3s 4d	to	3s 6d	Horſe Skins	12s od	to	15s od
Middling	3s od	to	3s 4d	Calf ditto	9s d	to	—s od
Ordinary	2s od	to	2s 4d	Light Calf	os od	to	os od

Price of Tallow.

St. James's Market —	4s 1½d			Ruſſia ditto (Soap) —	60s	61s	
Clare Market —	4s od			Melting Stuff —	52s	53s	
Whitechapel Market —	3s 11½d			Ditto rough —	36s	—s	
Per ſtone of 8lb.—Average	4s od			Graves —	19s	—s	
Town Tallow	68s od			Good Dregs —	12s	—s	
Ruſſia ditto (Candles)	—s	to	64s	Yellow Soap 72s. Mottled 80s. Curd 80s			

Price of Candles per dozen, 11s. do.—Moulds 12s. od.

Prices of Hay and Straw on Saturday, Jan. 16.

St. James's—Hay	3l 6s	to	5l os	Average	4l 7s 6d
Straw	1l 14s	to	2l os	———	1l 17s 6d
White-ch.—Hay	3l 10s	to	5l 5s	———	4l 7s 6d
Clover	5l 10s	to	6l 10s	———	6l os od
Straw	1l s	to	1l 16s	———	1l 12s od

Coal Exchange for the Week.

Monday.		Heaton -	47s 9d
Wylam -	42 o	Friday.	
Wedneſday.		Biggs's Main -	47s od
Biggs's Main	47s od	Heaton -	46 5d
Walker -	46 o	Bourn Moor -	46s od
Wallſend -	48s o		

Delivered in Town at 9s. advance on the above price.

Return of Wheat in Mark-lane, from the 11th Jan. to 16th, inclusive.

Total 3319 Quarters——Average 72s. 7½d.——6s 2¾d. lower than last return.

Return of the Prices of Flour, from 9th Jan. to th 16th inclusive.

Total 19,153 Sacks———Average 69s. od——os 1d lower than last return.

Hence results the Price of BREAD.

Eighty Quartern loaves at 1s ¼d—4l. 1s. 8d.—In favour of the Baker—8d.

Price of Hops.

Pockets			Bags.		
Kent	3l 10s to 5l —s		Kent —	4l 8s to 5l 14s	
Suſſex -	3l 10s to 4l 16s		Suſſex —	4l —s to 5l 10s	
Farnham -	4l 4s to 5l 8s		Eſſex ——	5l 10s to 7l 10s	

Seeds.

Red Clover, (per cwt.)	56s to 94s	Cinque Foil, ditto	30s to 45s
White Clover, ditto	10s to 54s	White Muſtard Seed, p. bu.	10s to 13s 6d
Trefoil ditto	20s to 50s	Brown, ditto do.	11s to 14s 6d
Turnip, (per buſhel)	16s to 24s	Canary Seed do.	10s to —s od
Rye Graſs, (per quarter)	26s to 36s	Rape-ſeed, (per laſt)	36l to 38l

Meat. Smithfield, Monday, Jan. 25. (To ſink the offal—per ſtone of 8lb.

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

Head of Cattle this day—Beaſts about 1,800—Sheep and Lambs 7,500.

Raw Hides.

Beſt Heifers & Steers(p ſt.)	3s 4d to 3s 6d	Horſe Skins	12s to 15s each
Middling ——	2s od to 3s 2d	Calf ditto	9s od each
Ordinary ——	2s od to 2s 4d	Light Calf	7d per lb.

Price of Leather.

Butts, 50 to 56lb. each	17d to 18½	Calf Skins. 30 to 40lb. *p.* doz.	21d to 24d
Ditto, 60 to 66lb. each	20d to 23d	Ditto, 50 to 70lb. do.	24d to 28d
Merchants' Backs	16½ to 17½	Ditto, 70 to 80lb. do.	24d to 28d
Dreſſing Hides	13d to 15d	Sm. Seals (Greenland)	2 d to 32d *p.* lb.
Fine Coach Hides	15d to 16½	Large do	100s to 130s *p.* doz.
Crop Hides for cut. 45 to 50	17d to 20d	Tanned Horſe Hides	18s to 30s *p.* hide.
Flat Ordinary, 35 to 40	15d to 18d	Goat Skins	21s to 63s *p.* doz.

Price of Tallow.

St. James's Market —	4s 1½	Ruſſia ditto (Soap) —	61s od
Clare Market —	4s 4½	Melting Stuff	52s 53s
Whitechapel Market —	3s 1½	Ditto rough ———	35s —s
Per ſtone of 8lb —Average	4s 1d	Graves	19s to—s
Town Tallow —	69s 6d	Good Dregs —	11s
Ruſſia ditto (Candles)	65s to —s	Yellow Soap 70s Mottled 78s Curd 82s	

Candles per Doz. 11s 6d—Moulds 12s 6d

Price of Hay and Straw, Jan. 24.

St. James's—Hay	3l 3s od to 5l 6s	Average	4l 4s 6d
Straw	1l 13s od to 1l 19s	———	1l 16s od
Whitechap.—Hay	3l 10s od to 5l —s	———	4l 5s od
Clover	5l —s od to 6l 6s	———	5l 13s od
Straw	1l 8s od to 1l 14s	———	1l 12s od

Coal Exchange for the Week.

Monday—Bigg's Main	43s 9d	Heaton	42s
Tanfield Moor	43s 6d	Heburn	42s
Heaton	44s	Walker	42s
Wedneſday—Eighton	42s	Willington	42s
Coupin	41s 3d	Wallſend	43s
Friday—Benton	41s		

Delivered in Town at 9s. advance on the above price.

AVERAGE PRICES OF CORN, by the quarter of eight Winchester bushels; and of OATMEAL, per boll, of 140 pounds Avoirdupois.

From the Returns received in the Week, ended JAN. 16, 1802.

INLAND COUNTIES.

COUNTIES.	Wheat.		Rye.		Barley.		Oats.		Beans.		Peas.		Oatmeal.	
	s.	*d.*	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*
Middlesex	82	0	42	0	42	5	28	4	41	6	43	0		
Surrey	82	4	40	0	41	6	27	8	39	9	42	3		
Hertford	73	10	46	6	44	0	26	6	41	6	42	10		
Bedford	78	4	56	4	45	5	23	6	43	2	44	8		
Huntingdon	77	9			42	6	19	2	33	0	38	4		
Northampton	74	6			41	4	20	4	44	9				
Rutland	78	0			45	6	20	6	45	0	52	0	70	6
Leicester	77	5	56	0	42	4	19	9	45	10	62	6	57	3
Nottingham	81	0			55	0	22	0	52	0	41	0		
Derby	80	0			51	0	23	1	52	6	38	0		
Stafford	81	4			52	9	24	8	50	5			36	6
Salop	81	9	64	0	54	2	25	6			46	1	83	4
Hereford	73	6	57	6	43	6	24	10	43	8	40	1	71	2
Worcester	83	0	48	0	45	8	30	11	45	1	43	1		
Warwick	82	2			47	2	26	3	51	5	56	7	47	9
Wilts	67	8			42	6	26	6	58	0	43	0		
Berks	78	4			36	9	26	6	41	7	42	7		
Oxford	74	0			39	11	23	6	39	8	45	1		
Bucks	77	4			39	7	24	0	42	11	41	6		
Brecon	75	2	52	8	41	10	20	0			32	0	45	9
Montgomery	76	10			51	2	18	0			36	10	50	10
Radnor	82	5			45	0	25	3			35	4	86	8

Maritime Counties.

Essex	79	7	46	0	41	0	26	4	32	6	34	0		
Kent	75	2	38	0	39	6	27	2	38	4	49	0		
Sussex	71	6			40	6	25	6						
Suffolk	77	10			44	1	22	9	33	9	39	6	57	3
Cambridge	75	7			37	10	18	11	35	6				
Norfolk	74	3	39	6	40	11	23	7	33	7	37	7		
Lincoln	74	9			41	8	20	5	32	6	60	0		
York	69	8	45	6	41	11	20	5	43	0	64	0	41	7
Durham	70	7			40	0	19	0						
Northumberland	65	11	40	8	36	0	20	5					16	4
Cumberland	85	6	51	10	42	4	23	14					19	2
Westmorland	80	1	56	0	45	9	23	0					19	5
Lancaster	77	5			51	10	26	7	48	0			21	5
Chester	81	0			54	6	25	5					21	8
Flint														
Denbigh	84	0			57	9	23	3	48	0	35	2	40	6
Anglesea					42	0	20	6						
Carnarvon	85	4			49	4	31	0					47	8
Merioneth	82	8			48	0	26	0			48	0	40	3
Cardigan	73	10			36	0	16	0						
Pembroke	62	7			38	6	17	3						
Carmarthen	68	8			41	6	18	4						
Glamorgan	76	7			44	0	20	11						
Glouceſter	76	0			54	11	25	11	44	8	56	6		
Somerset	71	8			43	9	22	0	43	0	47	6		
Monmouth	81	11			50	6								
Devon	72	5			40	4	20	4	48	0			54	1
Cornwall	75	4			36	11	17	1						
Dorset	75	3			43	7	34	10	48	6				
Hants	73	9			42	10	27	1	46	10				

A TABLE of the Prices of STOCKS in *January*, 1802.

Days	Bank Stock.	3per Ct. Red.	3 per Ct. Consols.	4 per Ct. Consol.	5per Ct. Navy.	5per Ct. Loyalty	Long Ann.	Short Ann.	Imp. 3 per Ct.	Imperial Ann.	Irish 5per Ct.	Ind. Stock	Eng. Tick	Consols for open.
Jan. 1														
2		67½ ⅝		84¼		98¼ ⅜	19 11-16 ¾		66½	12 1-16⅞	96½		16 10	68⅞ 69
4	187½	67⅝ ⅜		84¼ ⅜		98⅜ ¼	19¾ 13-16	5 3-16 ¼			97		16 10	69⅛
5	187½ 188⅛	67⅞ 68		84½ ¾		98⅝ ⅞	19 13-16⅞		66¾	12⅛	97		16 11	69¼ ⅙
6														
7	188¼	68	67¼ ex.d.	84½ ¾	98⅜ ex.d	98⅞ ⅜	19 13-16⅞		66¾ ⅞				16 11	69⅝
8	188½	68⅛	67½ ⅝	84¾ ⅞	97⅞ 98	98¼ ⅞	19⅞ 15-16	5 3-16¼	66⅞				16 11	69⅜ ¼
9	189¼ 188½	8¼ ⅜	67¾ ⅜	84⅞ 85⅛	98¼	99⅜	19 15-16 20	5¼	67⅜	12¼			16 11	69⅜ ½
11	189¼ ½	68⅜	67⅞ 67¾	85¼ ⅛	98¼ ⅛	99⅞ 99	20-16 20	5¼	67½ ¼	12 3-16			16 11	69½ ⅜
12	188½ 189	68¼ 68⅛	67¾ ⅜	85 84¾	98⅛ 97⅞	98¾ 99	19 15-16				97¼ ½	213 ex.d.	16 11	66¼ ⅛
13		68 67⅞	67½ ⅜	84⅝ ¾	97⅝ ¾	98⅝ ⅜	19 15-16⅞		67 66¾	12 ⅛			16 11	69 68⅞
14		67¾ 68	67¼ ⅜	84½ ¾	97½ ⅞	98½ ¾	19⅞ 15-16	5¼	66¾ ⅞	12⅛ 3-16			16 11	68⅞ 69
15	189½	68¼ ⅛ 67⅝		84⅞ 85	97¾ 98	98¾ 99	19 15-16		67⅞ ¼	12⅛ 3-16			16 11	69⅛ ¼
16		68⅛	67½ ⅝	84⅞ 85⅛	98⅞ ¼	98⅛ 99	19 15-16 20		67¼ ⅛	12⅛ 3-16			16 11	69⅛
18														
19	188½ ¾	68⅞ 68	67⅜ ½	84¾ ⅞	98⅞	98¾ ⅞	19⅞ 15-16	5¼	67	12 3-16⅛	98		16 11	69
20		67⅞ 68	67⅜ ½	84¾ ⅞	98¼ ⅛		19⅞ 15-16	5¼	67⅛	12⅛ 3-16			16 11	69⅛ 69
21		68	67½	84¾ ⅞	98⅛	98⅞ ¾	19⅞ 15-16	5¼ 5-16	67⅛ 67	12⅛ 3-16	97¾ 98		16 11	
22		67⅞ 68¼	67½ ¾	84⅞ 85	98⅛	98⅜ ⅞	19⅛ 15-16		67 ⅝				16 12	
23		68½ ¾	68⅜ ¼	85½	98⅛ ¼	98⅞ 99⅛	19 15-16 20		67 ⅞	12 3-16¼			16 12	68½ ¾
25														
26		68⅝ ¾	68⅜	85¼ ⅜	98¼ ⅜	99 99¼	19 15-16 20		67⅝ ⅞	12 5-16¼			16 12	68¾
27	189 188¾	68¾ ½	68⅜ 68	85⅜ ¼	98¼ 98⅛	99¼ 66	20 15-16		67⅞ ⅝		98	214 213	16 12	68⅞ ¼

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