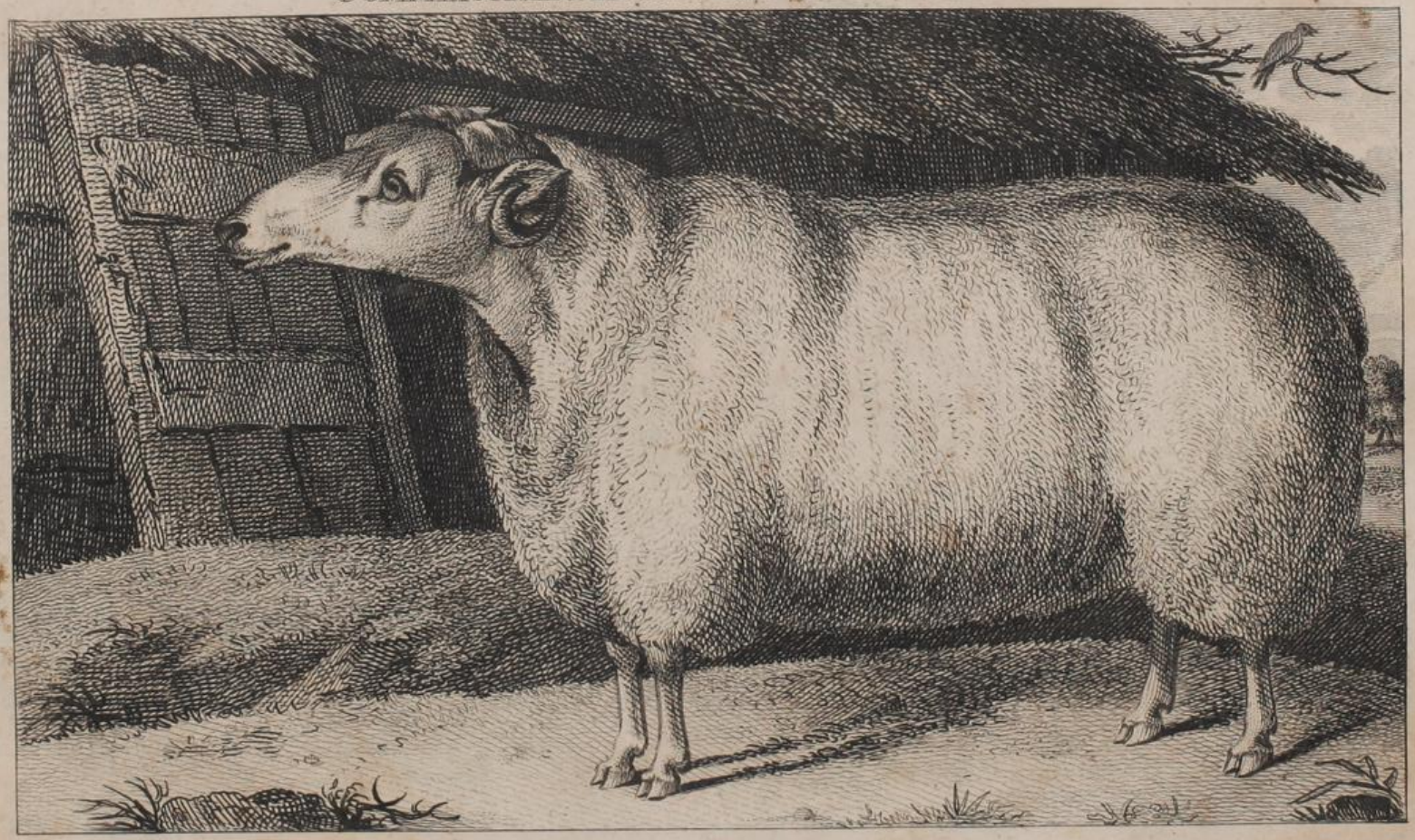

THE EXTRAORDINARY WILTSHIRE LAMB *See. Pa. 231*

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Commercial and Agricultural Magazine.

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We feel ourſelves ſo ſolicitous to encourage original information from the practical manufacturer, that we have not heſitated to inſert the following communication, from Newcaſtle upon Tyne; though we could have wiſhed the copy had been handed to us in a more reviſed ſtate. We are, however, fully aware of the moral impoſſibility of the conſtant junction of perſpicuous language, and practical knowledge, and in ſuch caſes can only aſſure the Communicator, and the Public, that all eſſential Errata ſhall (on notice) be faithfully corrected in a ſucceeding Number. Nothing could be more pleaſing to us, becauſe we are ſure nothing could be more uſeful to the Public, than to collect in our Magazine a body of original information concerning the extenſive and various efforts of the induſtry of our countrymen.

E.

To the Editor of the Commercial and Agricultural Magazine.

Sir,

Permit me, through the medium of your publication (which from its adopting the title of a Manufacturer's Magazine, ſeems properly adapted for the diſplay of manufactures) to throw in my mite towards your ſucceſs, by giving your readers the account of one hitherto little known; I mean "Hat-making." As the detail is long, I ſhall not fill up your pages with apology, with accounts of the immoralities of the men, or any other exordium, but proceed directly to the ſubject. The Hat Manufacturer on a large ſcale, employs ſix* diſtinct ſets of men. The makers of felts, or wool hats, from 1s. to 7s. or 8s. each. Thoſe of plaits, or rough all-overs, from 7s. to 16s. or 18s. and the makers of ſtuff, or fine plain hats, from 8s. to 26s. To the wool then; lamb and fleece wool are weighed out after undergoing the previous operations of ſorting, waſhing, and carding. The two firſt operations are moſt generally done by women, the laſt moſt generally by an engine, as much as will make, for example, 12 doz. of one quality: if men's hats, about 9 ounces of good clean wool in each, if ſmaller hats, or for youths, from 5 to 7 ounces: this is the proportion in which it is weighed by the piece-maſters to their men. The weight for one hat is then laid upon a hurdle (a ſquare table parallel to the horizon) on this with an inſtrument called a bow, much like that of a violin, but eight or nine times larger, whoſe ſtring is worked by a bowk pin, and being made to play on the wool by the vibration of the ſtring, it flies and mixes together; the duſt and filth at the ſame

* Theſe diviſions of the manufacture are not very methodically diſtinguiſhed by the author: apparently they ſhould ſtand thus: 1. Felters. 2. Plaiters. 3. Makers of ſtuff or fine hats. 4. Dyers. 5. Stiffeners. 6. Finiſhers.

time being left on that part of the hurdle where the wool was firſt laid. This is rather a difficult operation, on account of the juſtneſs required to ſpread the wool thick in the centre of each "bat." A bat is near the quarter of the wool weighed out into one hat after Bowing, they are next joined by means of a baſoning-cloth (a piece of cloth that may coſt about 1s. per yard, of about 1 yard broad, and 1½ yards long) upon a baſon, by being folded up and rolled with the hands backwards and forwards, and preſſed down at intervals to favour the excitation, they are now unfolded, and a ſmall piece of finer cloth, about 1s. 6d. per yard, and about 2 feet long, and 1 broad, called an inlayer, is folded into a conical form by laying the two corners of one end towards the middle; this is then laid upon one of the bats, and the edges of that turned over upwards, ſo as to leave their thinneſt parts, the edges where the thickeſt part of the other bat will be placed; after which is done the rolling up again of the bats into the cloth with the inlayer between them, is again repeated for about half an hour, and the firſt ſtage of felting is effected by this mean. The baſon is a round piece of caſt iron like a girdle (that kind of girdle on which the people in Yorkſhire bake their muffins) ſupported like that with bricks, and built about three feet high, with a ſmall fire underneath, upon which, laying one of the bats ſprinkled over with water, (the warm baſon being ſprinkled too) the bat folded into the baſoning-cloth, the journeymen, by preſſing and rolling, embody the wool into a ſlight piece of felt; the firſt bat is now laid by, and the ſecond proceeded with in the like manner, when both are joined by the introduction of the inlayer as above; the baſoning being finiſhed, they are next boiled (the 12 dozen, or as many as the boiling kettle will conveniently hold) in one part of ſtale human urine, and two parts clean ſoft water; frequently to make a long thick nap, about three or four pounds of currier's ſhavings are thrown into that quantity. Oat ſtraw is put to the bottom and top of the kettle, and they are alſo ſurrounded by it to ſave them from being torn in the boiling, which is continued for about ſix hours, or until the pan boils dry. It would be well if a ſubſtitute for urine could be found; the heat in boiling, opens the pores of the wool, and the ſalts of that liquid get incloſed or impriſoned in them, and make the wool hats much harſher than they otherwiſe would be. I have ſometimes avoided this, when I could get my men to take the trouble, by blacking and boiling the hats in clean ſoft water *before dying*, which clean them of a great deal of the dirt contracted in the firſt proceſs, and, when finiſhed, the difference was very great. This boiling in urine and water, "cloſes the body," that is, it is neceſſary to correct the openneſs in the body, or that ſpongineſs which would otherwiſe be perceived in wool hats. The hat new bowed, baſoned, and boiled, is next carried to the plank; this is compoſed of either 4, 6, or 8 pieces

of 3-inch plank, (plane-tree is beſt, or any ſuch cloſe grained wood) joined together, and tapering from where the men work down to the kettle, which is generally made of caſt lead, and but rarely now of caſt iron; the cloſeſt grained wood is preferred, leſt the nap, which is then very eaſily hurt, might be injured; and a caſt lead kettle in preference to an iron one, leſt the oil of vitriol (if uſed) ſhould injure the kettle. The baſoned hat is firſt dipped here, and that by degrees, before being completely plunged, leſt the air bubbles, in eſcaping from the folds of the hand, ſhould burſt it; it is then allowed to ſoak, and to be well impregnated with the hot liquor, which is ſufficiently done in the time that two or three more are dipping. They now proceed to work it by rolling or unrolling it, one corner of the felt after another, firſt with the hand, and then with a little wooden roller tapering from the middle to each end, called a *pin*; taking care to dip the hat previous to each rolling, till at length by thus fulling and thickening for two or three hours, it is reduced to the extent of the intended hat, as yet preſerving its flat-conical ſhape for thoſe hats on which fine goat's hair or boiled cod wool (wool that comes off the lambs in the firſt month) is to be applied. After the hat is boiled in the urine and water, and ready for the plank, a certain proportion from 1½ to 3 ounces of either of the laſt materials are *bowed* and laid upon the body at the baſon; and then the work at the plank is the ſame; there it is at firſt preſſed gently with one hand, and by degrees an increaſed preſſure is applied, cauſing by this means an agitation of the whole maſs, by which the covering introduces itſelf by that end next the root, a certain depth into the felt, and is fixed by their ſpiculæ, in ſuch a manner as not to be eaſily extracted. The hat being now got up to its ſize, and its conical ſhape ſtill preſerved, they proceed to give it the proper form, which is done by ſhaping it with the fingers into the appearance of ſix or eight connected rings, each leſſening towards the centre, and then pulling the innermoſt one flat, which forms the top of the crown; it is then put upon a wooden block of the intended ſize of the crown or head of the hat, and, thus tying it down with a ſtrong cord, called *a blocking cord*, after which, with a piece of iron or copper bent for that purpoſe, called a *ſtamper*, they gradually beat down the cord all round till it has reached the bottom of the block, and what remains below is pulled flat for the brim. Having been ſo minute, it will be ſufficient to work the operations of the plaiter and ſtuff-maker. The buſineſs of plaiting, is laying beaver or hare's-wool from the back, or both, mixed on to a wool body after it is got up to its ſize. The plaiter or ruffer takes it, and after bowing and hardening the material, he has to lay on (and I muſt add, ſtealing a part of the beaver) which (to make it ſtick eaſier) is firſt mixed with the ſame weight of flax, it is

then beat on by the brush at the kettle till it sticks; and by shaking in the boiling liquor and beating alternately, the flax is shook off and left swimming on the water in the kettle, the fine stuff remaining on the hat; then the *plaite*, for such it is then called, is blocked, &c. as above. The few alterations that the stuff-men use are the following: the wool-men divide by the eye their bowed wool into four bats; the stuff-men into two, and those with a pair of scales; the wool-maker basons his hat on an iron as described before; the stuff-maker on the hurdle with an inlayer of cloth about 20d. per yard, and 1 foot wide, and 2 feet long; the wool-maker uses only water in his kettle to work his hats with, the maker of stuff hats adds oil of vitriol and dregs of ale, porter, or any other fermented liquor, the wool-maker lays on his covering of cod-wool or goat's-hair just before planking, the other lays on his covering (whether of prime hair or beaver) when the hat is nearly shrunk up to the size they want. To finish the parallel, the stuff hatter robs his master of 1s, 1s 6d, or 2s. of best stuff and beaver from each hat, whilst the poor woolman *can only steal* about 3d. or 4d. from each. To remedy such inconveniences, Messrs. Wells and Chatterton, of Brenchley in Kent, and Messrs, Cooper, Bibly, and Downal, of Lea-wood, near Cranford, in Derbyshire, set themselves to work to erect engines. They have succeeded, amidst the curses of the journeymen, and the sneers of the masters, who can scarce yet be brought to believe that engines can effect the purpose.

Having now attended each division of hat-making to its conclusion, let us proceed to the other branches. From the makers they are given when dried; from blocking to the dyer, who also raises the nap with a card, called a jack card, (a large card with a handle in the middle like those in which wool, cotton, or tow are carded, but with much finer teeth) or "a hatter's card," which is nearly square, with teeth the same quality as the jack card. The hat is now strung again on a block for dying, where with their blocks they are put into a large kettle, generally capable of holding from 4 to 40 dozen at once. When as many as the kettle can contain have been in one hour, they are taken out and others put in, which stay the same length of time, and so on alternately; if for wool hats three suits; if stuff, four, five, or more, *by suits*, (we mean hours slow boiling) after this they are washed out with cold water till it *runs clear* from them, then boiled about half an hour in clean soft water, to disengage any dirt that may remain, or particles of rosin from the dye wood; the dyers use logwood, copperas, and verdigrease, according to their own discretion; and sometimes galls are added: they are then dried in a stove which is built circular, having a fire-pan in the centre and a tube to convey the smoke from it. When perfectly dry, they are laid in a cool place to lose their heat and the crispiness of their nap, and then well beat to clear them still

further of any impurities from the dye. They are next given to the ſtiffener, who ſtiffens them with good common glue and warm water (a great deal weaker than the Dyers uſe). When ſtiffened, they are again placed in the ſtove, lying upon light railing, with their brims down. By this means if the glue ſhould run it runs into the band, where it ought to be ſtrongeſt.—When dry, the glue is cleared from the under-ſide of the brim, (when it has received the ſtiffening) with ſoap and hot ſoft water; they are replaced in the ſtove to dry from the clearing; and when dry, they are laid in a damp place to cool, twenty-four hours, at leaſt, when they are given to the finiſher, who lays the knap flat, in the manner it is when ſold, with bruſh and water, and an iron, the ſame ſhape as women iron linen with) about 18 or 20 lb. weight. After finiſhing, a lining is put in; they are bound in the brim, and "done off," that is, ironed over again, when they are ready for ſale.

You will eaſily perceive from this account, Mr. Editor, how extremely defective and erroneous all the Encyclopedias are in their accounts of this manufactory, and how neceſſary it is for the public information, to give a correct ſtatement the firſt opportunity. I conclude, by requeſting your correſpondents to give, through the channel of your Magazine, any remarks, diſcoveries, &c. on the above; and, by aſſuring you that I am,

Your Servant,

Newcaſtle, Feb. 10, 1800. J. C.

For the Commercial and Agricultural Magazine.

A SIMPLE METHOD OF MAKING GUNPOWDER IN EGYPT.

BY CITIZEN ANDREOSSY.

THE ſulphur uſed in Egypt, is uſually carried thither from Venice and Trieſte. The charcoal is made from the lupin, a plant which bears a ſmall bitter fruit, the ſtalk of which is turned into trenches, and produces a very ſoft charcoal, which is poured and paſſed through a ſieve. Saltpetre is indigenous in Egypt: the earth is ſaid to be contained in veins, which are worked in ſome places in the neighbourhood of Cairo; and the proceſs employed in the making it is the ſame as in Europe, only that here the ſalt-petre is ſometimes found. The gunpowder is fabricated by means of manual labour. It is compoſed of eight parts of ſaltpetre, two of ſulphur, and two of charcoal. Theſe materials are thrown into mortars, cut in ſtone, and rounded at the bottom. The diameter, at top, is a foot; and the depth a foot. The workmen ſit, almoſt naked, on a bench. Every mortar contains fifteen pounds of compoſition,

which is pounded for ſeven hours, by means of a peſtle of very hard wood which is brought from Syria. A ſmall quantity of water is thrown into the mortars to render the compoſition humid, and facilitate the mixture and compoſition of the materials. When taken out of the mortars, it is paſſed through ſieves, like thoſe employed for corn, the interſtices of which are proportioned to the ſize the powder is intended. The commodity is then grained againſt a grating with the hand, taking care to communicate a circular motion to the ſame time. The powder thus made is good.

For the Commercial and Agricultural Magazine.

THE TRUE WEALTH OF NATIONS, THE BALANCE OF COMMERCE AND THAT OF POWER.

BY THE LATE BARON HERTZBERG.

EVERY good government, eſpecially a monarchical one, would loſe nothing, but, in my opinion, would gain conſiderably, if they were to manage their affairs with a prudent publicity. The prince whoſe views are grand and elevated in the pure principles of public good, ought to promulge from time to time, as occaſion may offer, and the caſe require, by declarations, edicts, ſpeeches, or by deliberations in his council, the meaſures of his adminiſtration, internal as well as external, with their cauſes and their objects; by this means he would inſure the confidence and acquire the aſſiſtance not only of his own ſubjects, but of the neighbouring nations, who may be ſaid, at leaſt in Europe, to live in a ſort of ſociety, or general republic; he would hold out to the one as well as to the other a convincing proof of the wiſdom, juſtice, and energy of his meaſures, and, by ſo doing, he would guard againſt his own errors, and thoſe illuſions, of which all mankind are but too ſuſceptible when they conſult themſelves only. By acting in this open manner, he would diſcloſe the ſecrets of the ſtate; which, after all, are very few, and which beſides cannot long eſcape the ſagacity and vigilance of a miniſter of any tolerable degree of penetration. It is for theſe reaſons that I often conſider it as one of the great advantages of the Britiſh Conſtitution, that the king of England, at the opening of every ſeſſions of parliament, lays the ſtate of the public and particular affairs of the kingdom before the nation; by this means the meaneſt ſubject in that kingdom is as well acquainted with the ſtate of public affairs as the miniſter himſelf.

It is on theſe principles and ſimilar motives that I have communicated for ſome years paſt to the public, a part of the great and good operations of his majeſty, for the care and happineſs of his ſubjects, ſuch as the means which he has ſucceſſively purſued to promote Agriculture, the baſis of all public proſperity; the premiums which he has held out to incite a ſpirit of in-

duſtry, and the ſteps which he has taken to encourage manufactures and uſeful arts, which ultimately tend to extend the ſphere of our commerce. In this eſſay I ſhall confine myſelf chiefly to the population of Pruſſia, which by the means I have juſt mentioned has been tripled within theſe few years; and, as this matter is not only intereſting to Pruſſia, but to all Europe, I hope to make it appear that its continual progreſſion is founded upon ſolid principles, and upon the true wealth of a nation, *agriculture*, *national induſtry*, and the *balance of commerce*; advantages which will naturally lead in the end to the *balance of power*. I do not intend to trace all the grand principles of public happineſs of nations, and of their governments, thoſe who wiſh to be thoroughly acquainted with theſe matters, will find them very amply detailed in the writings of *Monteſquieu*, *Hume*, *Stewart*, *Veri* and others, particularly in that profound Engliſh claſſic *Adam Smith*, on the *Nature* and the Cauſe of the *Wealth of Nations*, it will be ſufficient for me to point out theſe principles, and to ſhow how far they can be acted upon by Pruſſia.

The true power then of any ſtate, conſiſts in a population proportioned to the extent of its territory, directed in ſuch a manner by a wiſe government, ſo as to inſure to its inhabitants the neceſſary ſubſiſtence as well as every other deſirable proſperity. The *happineſs* (or *riches*, if the reader chuſes,) of a nation undoubtedly conſiſts in the multitude, the quantity, and good quality of the means by which that nation is able, in the firſt inſtance, to procure the neceſſary articles of ſubſiſtence; then the conveniences, and afterwards the comforts, of life. As corn and grain of all kinds are eſſential to the ſubſiſtence and nouriſhment of populous ſtates, Agriculture then is inconteſtibly the primary ſource, and the fixed baſis of the ſubſiſtence of large ſocieties or nations. It is to Agriculture that we are indebted for all kind of grain, either for the ſubſiſtence of men or beaſts, as well as wine, beer, oil, tobacco, and even wood. It is to this long neglected art that we are indebted for flax, hemp, wool, ſilk, and almoſt every thing that can render life agreeable. It furniſhes the principal materials for the manufacturer, for commerce, and navigation. By theſe means, and by the exchange of the ſuperfluous productions, raw as well as manufactured, nations to whom nature has denied mines of gold and ſilver, procure thoſe metals, which are of no real intrinſic value; but, from their commodious uſe, they have obtained, and are received in all poliſhed nations, as the repreſentative ſigns of real riches, and have taken place of all the reſt. Agriculture not only nouriſhes the farmer, but all thoſe that are not occupied in the cultivation of the earth, ſuch as the ſtateſman, the ſoldier, the ſailor, the ſcholar, the handicraft, the merchant, the fiſherman, and the miner that is employed in exploring the bowels of the earth.

Agriculture, thus being, confeſſedly, the firſt and principal baſis of public proſperity of every ſtate and of every nation, this principle has, at length, prevailed in Europe for ſome years, and has been crowned with extraordinary ſucceſs. The plough is beginning to find favour in the eyes of the Spaniards. A certain claſs in that country, who have aſſumed the proud name of *Œconomiſts*, or *Phiſiocrates*, have contributed very much, by their writings, to promote the cultivation of the ſoil. We are now convinced, by experience, and the moſt mature deliberation, that this principle cannot be extended too far; and that a wiſe government ought to pay the ſame attention to *national induſtry*, which may be ranked, without contradiction, as the ſecond baſis of public proſperity; becauſe, it is that which enhances the value of the natural and territorial productions of a ſtate, as well as the labour and ability of its inhabitants. It is labour, as Mr Smith (whom I have already mentioned) very judiciouſly obſerves, that may be looked upon as the unerring and univerſal ſtandard of all merchandiſe and wealth; money being only the medium and inſtrument for the exchange of *labour*, that each individual in ſociety performs for the maintenance of himſelf, and to communicate the ſuperfluities, by exchange, to his fellow-ſubjects, which the nation afterwards communicates equally to other nations, by exchange alſo. From all theſe premiſſes it will naturally reſult, that the *labour of individuals*, or *national induſtry*, may be conſidered as the ſecond baſis of *national proſperity*; and even in certain caſes, may ſupply the firſt Agriculture. It is thus that the French, (previous to the deſtruction in that unhappy country) with a tillage, often inſufficient for home-conſumption, rendered almoſt all the nations of Europe her tributaries, after a century and upwards, by their manufactures and ingenious trifles. The Dutch nation, with an ungrateful and limitted ſoil, which furniſhes but a ſmall portion for its own conſumption, has, for a long period, carried its commerce and navigation to every part in Europe, profiting by the indolence and ignorance of other nations, and ſupplying all their neceſſities and luxuries, and in return brought home the gold and ſilver of other countries. Spain, with all the treaſures of South America, often ſtands in need of common ſubſiſtance. Poland, which boaſts an extenſive and fertile territory, enjoys only corn and other productions, merely neceſſary to the exiſtence of animal life, and is deprived of every other, through the want of *national induſtry*, which may be attributed to the deprivation of liberty, property of the ſoil, and a well regulated conſtitution. All thoſe obſervations, which I have juſt made, are ſufficient, I truſt, to remove every doubt as to the general principle, that the firſt principle and eſſential baſis of the proſperity of a ſtate, and its *real riches*, conſiſt in *Agriculture*, and in the abundance of the productions of the earth; and that the ſecondary baſe will

be found in *national induſtry*, which is employed in bringing the natural productions to perfection, which creates manufactories, which raiſes the artificial productions of a ſtate into value and eſtimation.

EXTRAORDINARY WILTSHIRE LAMB.

For the Commercial and Agricultural Magazine.

Hatchet's Hotel, April 14, 1800.

MR. EDITOR,

I AM a conſtant reader of, and an occaſional contributor to, your very entertaining Magazine; and on theſe grounds I preſume to ſolicit a favour, that you will, for this month, introduce in a plate, a well executed figure of a moſt intereſting animal, which I have juſt ſeen at Smithfield, but which neither you nor I can adequately deſcribe in words. I am well aware, and all your readers are ſenſible, that the price of your publication will not allow you to give us two plates in one number; if, therefore, you ſhall think fit to grant my requeſt, you muſt omit the print which you have hitherto given us in the front of each number. Any cenſure that you may apprehend as likely to fall upon you for making this alteration, I know, that this beautiful little ſtranger, this true picture of innocence, if properly introduced, will have intereſt enough either to ward off, or to convert into commendation. If your painter will repair, either to-day or to-morrow, to the Greyhound inn in Smithfield, he will there be ſhewn an ewe lamb of the Wiltſhire breed, which, for extreme fatneſs, for ſmallneſs of bone, for quantity of wool, and admirable juſtneſs of proportion, I believe ſtands without a rival in the annals of Smithfield. For this lamb, the immenſe ſum of ten pounds was refuſed by Mr. Ebſworth on Friday laſt, and it is to-day ſold to Mr. Marſhall, of Carnaby market. If you will endeavour to give us a good likeneſs of this wonderful little creature, I will promiſe to collect and ſend to you a few facts reſpecting its mode of life, and its appearance and product when dead.

I am your's, &c.

T. WESTON.

Piccadilly, April 18, 1800.

MR. GRIFFITHS,

ACCORDING to promiſe, I ſend you the following particulars reſpecting the very extraordinary Wiltſhire lamb which was ſold at Smithfield market on Eaſter Monday. I call it a Wiltſhire lamb, for it was truly of that ſtock, and reflects great credit on the breed, although it was yeaned and fatted at Cippenham-court near Windſor, by Mr. Henry Round.

It was a twin lamb, and being bred by an ewe that was thought incapable of fatting two, and being inferior in ſize to the other, it was early taken from its dam, in order to be brought up by hand. Its food was ſolely cows' milk and oats. It was rather more than half a year old. When killed, (I am informed by Mr. Ebſworth, a ſaleſman of great reſpectability and ſtrict veracity) its carcaſe, for delicacy of colour as well as fatneſs, was pronounced by many real judges who ſaw it, to be the completeſt ever ſold at Smithfield. It weighed more than 24 pounds per quarter, beſides 14 pounds of looſe fat. The appearance of its udder and kidneys, gave me rather the idea of a fat Eſſex cow-calf, than that of a lamb.

Three of its quarters were ſent as preſents into the country, that is, one into Cambridgeſhire, another to Reading, and the third to Knightſbridge; and its ſkin, head and legs, were ſold together for a guinea, to be ſtuffed and preſerved *.

I hope that the print which you ſtipulate, (in your note to me), to prefix to your Magazine, will ſtrikingly repreſent the unuſual fullneſs of coat of this lamb, and likewiſe its beautiful ſmall features and ſmallneſs of leg. The weight of the wool, I was told by the man who dreſſed the lamb, was in his opinion about eight pounds, and I meaſured one of the fore legs, and found it only two inches and a half in circumference.

I hope the above particulars will ſerve to check the many unfavourable things which we have of late heard of the Wiltſhire breed of ſheep. I ſhould be happy to ſee the laudable ſpirit of ſuch a man as Mr. Round properly encouraged, by a handſome medal, either from ſome of the Agricultural Societies, or from the city of London, whoſe market is much indebted to ſuch men as this and Mr. Weſtcar.

I am, your's, J. Weston.

For the Commercial and Agricultural Magazine.

On the PRODUCE, MANUFACTURES and TRADE of the AUSTRIAN DOMINIONS in GERMANY.

THE Auſtrian dominions in Germany compriſe, 1. Lower Auſtria, which is the country above and below the Ens. 2. Inner Auſtria, to which belong the duchies of Stiria, Carinthia and Carniola, the counties of Goez and Gradiſca, and the country of Trieſte. 3. Upper Auſtria, or the county of Tyrol; and 4. Hither Auſtria, or the Auſtrian poſſeſſions in Suabia, to which

* The purchaſe was made by the publiſher of this Magazine; the ſkin, &c. is now in the hands of the preſerver; the preparation will be completed in a fortnight's time, it may then be ſeen by any perſon, at No. 1, Paternoſter-Row, London.

may be added the counties of Hohenſtein and Falkenſtein, ſituated in the circle of the Upper Rhine.

This extenſive territory, the area whereof meaſures upwards of ſeven thouſand Engliſh ſquare miles, and which is interſected by the Danube, the Traun, the Ens, and ſeveral other rivers, produces a great variety of valuable commodities. The hills in Lower Auſtria are covered with vines, which yield about ſix millions of gallons white wine, and the beſt of which grows on the *Kahlenberg*. Next to wine, ſaltpetre, conſtitutes the principal branch of trade of the inhabitants. Theſe ſeveral years paſt, endeavours have alſo been made to introduce the culture of ſilk in Lower Auſtria, and they have ſo well ſucceeded, that the Auſtrian ſilk is but little inferior to that produced in Italy. The rearing and management of bees is likewiſe ſufficiently productive, and the culture of grain is of great importance. The country above the Ens produces alſo ſome wine, but in ſmall quantities; cattle are reared in conſiderable numbers. The culture of flax is extremely important, it ſucceeds beſt in the diſtricts of *Muehl* and *Traun*. All ſorts of fruit are cultivated with great care; prunes conſtitute an important branch of commerce; and Upper Auſtria produces annually upwards of eighty thouſand gallons of perry and cyder; madder is chiefly cultivated in the vicinity of *Kiembs* and *Doebling*. The Auſtrian dominions are rich in marl and precious ſtones, iron, ſalt, &c. The only ſilver-mine wrought in theſe provinces is at *Annaberg*; gold-duſt is mixed with the ſand of the Danube.

The manufactures in the Auſtrian dominions have been greatly improved of late years. The numerous manufactories of wool, cotton, and flax, employ at leaſt 150,000 ſpinners. *Fridau*, *Schwaibel*, *Kettenhof*, *Ews*, and *Ebreidſtorf*, contain important cotton manufactories; that of *Fridau* produces annually 40,000 pieces of calico and dimity. The calico manufactories in Lower Auſtria manufacture in the whole, annually, 180,000 pieces, or 2,880,000 ells, the value of which amounts at leaſt to 2,500,000 florins*. The duchy of Auſtria poſſeſſes alſo two very conſiderable woollen manufactories, one of which is eſtabliſhed at *Lintz*, and the other at *Ponegy* in Upper Auſtria. *Vienna* contains ſeveral manufactories of ſilk, gloves, leather, and china or porcelain. *Waidofen* poſſeſſes manufactories of fiſh-hooks, which are made there of ſo ſmall a ſize, that 6,910 of them weigh but half an ounce. Theſe fiſh-hooks being generally ſold for 56 florins per ounce, a hundred weight is conſequently worth 832,000 florins, while the value of the iron, of which they are manufactured, exceeds not 8 florins. They are exported to Italy.

Vienna is the central point of the commerce of Auſtria. The trade to the Levant is very conſiderable, and is carried on partly

* About 250,000l. ſterling.

by land, and on the Danube through Hungary, and partly by ſea by the port of *Trieſte*. The cotton-wool imported from Turkey, amounts to five millions of florins per annum; but a ſmall quantity of which is exported to other countries; for inſtance, to Salzburg, by far the greateſt part thereof being manufactured into calicoes, cottons, &c. in the Auſtrian provinces. The commercial intercourſe with Italy is alſo of great importance. This branch of trade was formerly entirely in the hands of the Venetians, but is now carried on, by the way of Trieſte and the county of Tyrol. During the reign of the emperor Charles VI. *D. J. J. Becher* conceived the firſt plan of a company of adventurers trading to the Levant, on an extenſive ſcale; ſeveral noblemen and merchants ſubſcribed large ſums for that purpoſe; and the direction of the company's concerns was confided to a Paſſau merchant of the name of *Triangle Fuchs*, who at the ſame time was free of the merchants' company at Vienna. But Becher's plan failed of ſucceſs. As early as in the year 1718, the mutual commercial privileges of the two nations were ſettled in the treaty of peace, concluded at Paſſarowitz, between the houſe of Auſtria and the Porte; and the trade to Turkey being thrown open to all the inhabitants of the Auſtrian dominions, took the moſt favourable turn without the aſſiſtance of a company, chiefly for this reaſon, that numbers of the Turkiſh merchants ſettled at Vienna, many of whom ſtill reſide in that city, though their privileges were greatly reduced in the year 1774. The dollar-trade to Turkey, which was formerly of great importance, has much decreaſed of late years. *Bueſching*, the celebrated German geographer and ſtatiſt, ſtates the ſum of dollars and half dollars coined in the Auſtrian mints, and exported to Turkey from 1741 to 1773, to amount to 107,000,000 of florins, or 1,070,000*l.* ſterling. This branch of trade is now entirely engroſſed by the noted banker, *count Frieſs*. By the moſt authentic ſtatiſtical accounts we have been able to procure, it appears, that the exports from the Auſtrian dominions in Germany to Turkey, amount, upon an average, to 6,000,000 florins *per annum*, and the imports from thence to 9,000,000, ſo that the trade to Turkey ſhould ſeem unfavourable to Auſtria, were it not that the imports chiefly conſiſt of cotton and ſuch like raw materials, by the manufacturing of which, conſiderable ſums are gained by the Auſtrian manufacturers and traders.

Under the reign of the emperor Charles VI. it was alſo endeavoured to promote the trade to Italy and the Mediterranean, for which purpoſe *Trieſte* and *Fiume*, in the year 1719, were declared free ports, and the harbour of *Porto Ri* in Dalmatia was conſtructed. In 1726, a beginning was made with building the cauſeway, which leads from Carliſtadt in Croatia to *Fiume*; for the conſtruction whereof mountains were levelled, dales filled up, and rocks connected with each other by walled bridges. The

late empreſs, Mary Thereſa, commenced, in the year 1752, the conſtruction of a large moat or pier at Trieſte, to check the inroads of the ſea. The following trading companies were alſo eſtabliſhed under her reign: viz.

I. The *Fiume company*, chiefly deſigned to exchange Auſtrian commodities for ſugar.

II. The *Temeſwar company*, intended to export Hungarian grain, pot-aſh and wool to Italy, Spain, and France; their capital ſtock conſiſts in 1,000,000 of florins.

III. The *Janoſchez company*, deſtined to export the ſame commodities to Turkey; their capital ſtock amounts to 800,000 florins.

IV. The *Bohemia linen company*, eſtabliſhed at Vienna for the purpoſe of exporting Bohemia linens to America by the way of Fiume; their capital ſtock conſiſts in 1,000,000 of florins.

V. The *Egyptian company*, alſo eſtabliſhed at Vienna, and and principally deſigned to export Auſtrian commodities to Egypt, and from thence to Aſia, and to import in return raw materials from Africa and Aſia, to be manufactured, in the Auſtrian dominions, into various ſorts of goods.

VI. The company of *Kilianova*, where the Danube empties into the Black Sea, chiefly deſigned for trading to the coaſts of the Euxine.

The principal commodities exported by theſe companies and private traders, conſiſt, 1. in Imperial dollars, exported to Turkey; 2. quick-ſilver of the mines of Idria, copper, verdigriſe, vitriol, ſalt-petre, alum, and other minerals and foſſils; 3. all ſorts of leather, dreſſed and manufactured in Hungary, Moravia, and the city of Vienna; and 4. Hungarian and Auſtrian wines, which are exported in large quantities to all the different parts of Europe.

In order to promote the ſale of the laſt very important article, a company of Hungarian noblemen and owners of vineyards was formed at Vienna in 1782, which delivers the wine at Vienna for the ſame price it is ſold for on the ſpot, at *Tokay*, *Oedenburgh*, *Eſlau*, *Ofen*, &c. Foreign merchants who apply and direct to this company, may have any quantity of Tockay or other Hungarian and Auſtrian wine they deſire, in caſe of the buyers giving ſufficient ſecurity, and paying down half the purchaſe-money at the time of ſale; they are indulged with a twelvemonth's credit in regard to the other moiety. Buyers who take any conſiderable quantity of Tokay, receive every tenth bottle *gratis*; large quantities muſt be ordered three months before the time of the delivery thereof. The company's warehouſe is at Vienna, in the ſtreet called *die Schulen Straſſe*, No. 820.

The principal imports conſiſt in cotton-wool from Turkey; ſilks, from Lyons and Paris; chintz and linen from Bohemia, Moravia, and Sileſia; Eaſt India muſlins and broad cloth from

England, Holland, Moravia, and Limburgh; wine, grocery, and pices, from France, Spain, Italy, England, the Rhine, and Moſelle; oxen, horſes, pigs, poultry, and fruit, from Hungary; ſalt and dried fiſh from the Netherlands; paper from Holland; millinery from Paris and Bruſſels. The commercial intercourſe between the Auſtrian dominions in Germany and the low countries was formerly carried on by the way of Holland and Hamburgh; but of late years the Auſtrian merchants have opened an immediate communication between Trieſte and Oſtend, which in times of peace, precludes the neceſſity of employing any intermediate agents. The navigation of the Danube and Traun is of great importance. On the Danube arrive yearly ſeveral thouſand veſſels at Vienna, laden with timber, wood, fruit, grain, ſalt, butter, fiſh, and ſuch like articles. The largeſt veſſels are thoſe which come from Ratiſbon and Paſſau, and are from 100 to 150 tons burden. Since the year 1771, the navigation of the Danube is ſuperintended by a peculiar board, whoſe direction extends as far as Semlin.

ON THE MANUFACTURE OF CHEESES.

For the Commercial and Agricultural Magazine.

MR. EDITOR,

AS the dairy ſeaſon is at hand, ſome of your readers may perhaps think the following piece of information neither unſeaſonable nor impertinent.

We all of us, I preſume, who are in the habit of finiſhing our dinner with a little old Cheſhire, North Wilts, or double Glouceſter, wiſh to get rid of that rancid nauſeous flavour which is too often prevalent in theſe cheeſes, eſpecially ſo when they are made of the richeſt milk, which would otherwiſe render them not only palatable, but delicious. To remedy this evil, I am happy to find, that, in many parts of Cheſhire, the dairy maids have adopted the ſimple, but efficacious proceſs, of ſalting their milk as ſoon as it is taken from the cows. I mean the evening's milk, which is kept, during the night, in pans and coolers, in order to be mixed with the new morning's milk for coagulation.

The quantity of ſalt uſed, on this occaſion, is about a table ſpoonful to each gallon of milk, and is generally ſprinkled on the bottom of the veſſel that is to receive the milk, the milk is then poured upon the ſalt, and they immediately become incorporated. This early ſalting has enabled many dairy women in the above county, whoſe cheeſe was before always *hoven* and deteſtably rank, now to produce perfectly well flavoured and excellent cheeſe, from cattle fed on any kind of graſſes, and on farms that have been pronounced totally unfit for that moſt pro-

fitable of all ſyſtems of huſbandry, the dairy ſyſtem. To this ſmall portion of ſalt, various good effects are attributed, by thoſe that thus uſe it; they ſay, it prevents the milk from growing either ſour or putrid in the hotteſt night of ſummer; that it rather encourages coagulation, and very much promotes the ſeparation of the curd from the whey, which occaſions a great ſaving of the curd. The dairy women in the North have immediately ſhewn a willingneſs to adopt this practice, when it has been propoſed to them, although they are in general not very fond of new fancies, becauſe, they ſay, "this ſtands to reaſon:" and perhaps the ſame claſs of women in the South, for they likewiſe ſtand in need of amendment in this point, would ſhew the ſame teachableneſs of diſpoſition if it was communicated to them.

With pleaſure I announce to you another valuable diſcovery, lately made in the aforeſaid branch of huſbandry; that it is a falſe idea, and a loſs to the proprietor, inſtead of a gain, to rob cheeſe of a ſingle particle of butter; and for theſe two reaſons, becauſe a point of cream will produce more than double the quantity of curd that a pint of ſkimmed milk will give; and becauſe a cheeſe, with all the butter left in it, will loſe very little of its weight by keeping, whereas that from which the butter has been avariciouſly taken, will ſuffer a diminution of one third of its original weight in twelve months. To ſuch reaſoning as this, I am as unwilling as I am unable to ſtart any thing like an objection.

I am, yours, A FACTOR.

ON THE ORES, &c. OF IRELAND.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

AS a union betwixt this country and Ireland, on the broad grounds of a communion of intereſt, is on the eve of being carried into effect, it is preſumed that a few occaſional communications, on the ſubject of the natural and commercial hiſtory of the ſiſter kingdom, may not be unacceptible to your readers; as a ſpecimen, I preſent you with the following account of the iron, lead mines, &c. found in the county of Cork, by the late *Doctor Smith*.

"IRON.—This ore is like lead, in great plenty in moſt parts of this county. There are two conſiderable iron works carried on, as it were, in both extremities of the county, *viz.* at *Cornoly*, near *Buntry Bay*, for both ſow and bar iron, and in the pariſh of *Affadown*, near *Roaring-water Bay*, for ſow iron only, and alſo at *Araglin*, near the eaſtern extremity of the county; in all which places iron ore is found in plenty, as it might alſo

be in many other parts of this county; but the want of wood for charcoal is an obſtruction to theſe works. I doubt not but theſe bloomeries might be ſupplied by peat, a kind of turf, which, being cleared, ſerves ſmiths and other artificers inſtead of coal. In all theſe works they uſe a ſixth part of the Engliſh *red mine* to the native ore, in order to render it more ductile. Our ores are generally very rich, and make exceeding good iron *. A ſandy concretion, with ferruginous efflorescences in its ſurface, from a ſmall riv[illegible] near *Iniſkillan*. Theſe efflorescences ſhewed their ferruginous nature, by the powder being conſiderably attracted by the loadſtone were crude, but ſtrongly when calcined. The ſandy part was alſo attracted when calcined, though leſs than the other. However, one part of the ſandy matter to three of burnt lead, vitrifies and forms a duſky brown glazing for earthen-ware, and ſo ſaves lead, and conſequently would be of uſe to the potter, and reſembles *manganeſe* in its effects.

Tuberous iron ore, having pebbles petrified with it, from the rivulet of *Iniſkean*. It breaks of an ochreous colour within,

* About the year 1632, the Earl of Cork had in his ſeveral forges, or bloomeries, in this county, 1000 tons of bar iron, beſides 200 tons drawn out and faggoted into rods, at a ſlitting mill erected by his lordſhip, and above 20,000 tons of ſaw iron; bar iron was then ſold for 18l. the ton.

On the 20th of June 1632, letters patent were granted to *Thomas Whitmore* and Mr. *William Webb*, of all mines and minerals in this province (*Munſter*) for twenty-one years, to pay the king a fifth part, clear of all expence.

They petitioned the council of England, alledging that they had ſpent great ſums in working five ſeveral lead mines holding ſilver, ſome of which lay very near the ſea, and all very hopeful; and that they had erected ſeveral chargeable works in England for melting the ore; that they had ſince diſcovered a rich lead mine at *Knockinanagh* in the county of *Tipperary*, on which they had expended 4,000l., and prayed his majeſty to have new letters patent, with a releaſe of the ſaid fifth part, as ſome part of their works had turned out unprofitable, paying in lieu of it a tenth; which was granted accordingly.—*M. S. Lermore.*

Anno 1629, *Luke Brady* of *Thomgreny*, of the county of *Cork*, Eſq. *Richard Blacknall* of *Macroomp*, and *H. Wright* of *Dloughlane*, in the county of *Waterford*, obtained a patent for making iron ordnance, ſhot, and croſs-bar ſhot in this kingdom. Letters were directed to the Lord Preſident to aſſiſt them, and particularly to aid them in purchaſing by compoſition, iron mines, from *Sir R. Everard*, Knight, in the territory of *Clangibbon*, in this county, and from *Sir W. Fenton*, in the ſame territory. The King wrote letters to the Lord-deputy *Falkland*, deſiring him to take a leaſe from *Sir W. Fenton*, for his Majeſty's uſe, of all the iron ore diſcovered, or to be diſcovered, in the mountains of *Clangibbon*; and if *Sir William* refuſed to grant ſuch a leaſe, the Lord-deputy was ordered to ſend copies of the *White Knight's* grant, and ſurrender made of theſe lands to Q. *Elizabeth*, and the patent paſſed thereof by her to him, and to *Sir John Everard*, upon the *White Knight's* death, and alſo a copy of the late *King James's* patent paſſed to *Patrick Murray*, and his heirs, of the ſaid lands, to Chancellor *Hudſon*, his Majeſty's commiſſioner for Iriſh affairs.

and the powder was conſiderably attracted by the loadſtone. It burns to a ſnuff colour.

In ſeveral promontories on the coaſt, there are efflorescences of a copper ore; as alſo ſymptoms of lead to be evidently traced among theſe cliffs.

Lead ore is extremely common in Munſter. The varieties of lead ore are owing to accident, for the ore is much the ſame in all. Specimens diſcovered in this county and tranſmitted to Dublin, were theſe following:

I. Lead ore from the lands of *Shaudon Park*, near *Caragiline*, ſix miles S. E. of *Cork*, holding three-fourths of lead; the vein, though not worked, is very profitable.

II. Lead ore found in the barony of *Clangibbon*, W. of *Water Park*, in lime ſtone grounds, near the *Black-water*. This ore was never wrought, though the place does not ſeem unworthy of trial.

III. Lead ore found near the church of *Creagle*, interſperſed among the rocks. The vein ſeems to promiſe well, though it runs diſcontinuous. It has been never yet wrought; and it is experience alone that can determine how far it be worth while to carry on a work of this kind.

IV. Lead ore found near *Cary's-ville*, in the barony of *Clangibbon*, running among ſome rocks of lime; it contains about half lead. The mine was never worked.

V. Lead ore found intermixed with an iron vein, near the *Leap* in *W. Carbery*; upon an aſſay made on a ſpecimen of it tranſmitted to *Dublin*, by Mr. *Robert Calderwood* of *Dublin*, goldſmith, and member of the *Phiſico-hiſtorical Society*, it was found to contain a large portion of lead, namely, 13 penny weights in an ounce of ore, and $\frac{42}{100}$ parts of grain of ſilver to each ounce, being the greateſt proportion of ſilver he ever met in any lead ore which he had hitherto examined that was found in *Ireland*.

FULLER'S EARTH.

A kind of *fuller's earth*, found in plenty near *Carigaline*, four miles S. of *Cork*, and has been uſed as ſuch, but does not ſtand the leaſt upon a compariſon with the *Engliſh*, having too much gnit, which however may be ſeparated. But, that we may not be wanting in a further ſearch for a material which would make ample amends by its diſcovery, I ſhall mention a better kind, which is found in great plenty, though in a certain neighbouring county, viz. in a hill half a mile W. of *Caſhel*, which is very ſhining, ſmooth, and unctuous, with ochre-coloured and bluiſh veins interſperſed. It melts readily in water, and takes greaſe out of woollen preſently, as alſo out of boards, and deſerves to be recommended to farther trial. I am, Sir,

Your humble ſervant, J. W——N.

MR. HARTLIB's OBSERVATIONS ON AGRICULTURE.

MR. HARTLIB, who has left us many valuable obſervations on agriculture, lived about 130 years ago. He was the intimate friend and correſpondent of Milton, who addreſſed his treatiſe on Education to him. Sir William Petty alſo correſponded with him. Dr. Hart tells us, that Cromwell was ſo ſenſible of the utility of his writings on georgical ſubjects, that he allowed him a penſion of 100l. a year.

Mr. Hartlib, in one of his productions, ſays, " If huſbandry were ſo profitable as many pretend, why are there not more rich huſbandmen? and why do ſo many farmers live poorly and in debt? To theſe he anſwers: firſt, the poſition is in itſelf a miſtake, there being more rich men among thoſe who manage rural affairs, than among any other profeſſion; and if there were more of them who cultivated well, there would be more of them rich; and if they were all frugal, they would all be rich. Secondly, the firſt families in the country have either been raiſed or ſupported by the plough; and whilſt nothing is more reputable to a perſon, or a nation, than *hoſpitality*, yet this becomes the deſtruction of families, when they are bountiful alone without induſtry or frugality; but when they are as induſtrious in good huſbandry, to provide and meaſure out with the one hand, as the other is to extend and laviſh without meaſure, thoſe men only are the good houſekeepers; thoſe men only can be the conſtant friends to the poor and their neighbours; they alone are wiſe. The good bee gathers and gives honey, without defacing the fair flower of his eſtate, which he always leaves to his poſterity well encreaſed. Thirdly, there are many graziers, and corn-dealers of great eſtates, acquired by their own good huſbandry. Fourthly, ſuppoſe it were not ſo, yet the fault is not in the profeſſion, but in the failure of practice and perſons; for the more common, mean, and vulgar claſs of huſbandmen, have only ſome general, rude, imperfect, and irrational habits, from which they can be no more moved than a dull ſturdy aſs can be gotten to mend his pace; and they are generally ſo averſe to all new practices and improvements, that it is found impoſſible to infuſe better practices and improvements into their heads, by any other means than by ſome *one* manifeſt example at a time repeated and reiterated under their noſes. The ſtubbornneſs of their nature is diſcovered in this, that when the moſt rational ways to make their ſtarved lands bear good crops are diſcovered and held out to them, they utterly reject that notice, deride the propoſers and inventors, and endeavour to retard or defeat the practice, leſt their ignorance or envy ſhould be thereby expoſed. There are people below the medium of underſtanding and goodneſs, who have no other way of ſeeming to be of conſequence

than by pulling down better men. There is a baſe ſpirit within them. A good man wiſhes to ſee his neighbour improving his eſtate, for the ſupport of his family, and their common country in affluence and independance. Certainly, he, who having a ſtock to begin with, doth firſt carefully inform himſelf, when, and where, and how to proceed, and ſhall do ſo induſtriouſly, and throw himſelf upon God's Providence for the ſucceſs, cannot fail to be as rich as a good man can deſire to be; and he who refuſes ſo to do, is like the dog in the manger, that eats not hay himſelf, nor lets the ox that would. The rich men, the ſcripture tells us of, were moſtly inſtrumental to their greatneſs by ſuch attentions, and not born ſo: witneſs the hiſtories of *Abraham*, *Iſaac*, *Jacob*, *Lot*, *Job*, good men, or of *Rabal*, the rich man of the goſpel, who had his barns full, and goods laid up for many years.

ANCIENT WELSH HUSBANDRY.

[No. 4, *continued from page* 181.]

JANUARY: cut thy timber trees, and do not ſplit them: grub up the underwood and the brambles and weed thy meadow, and they will not grow up again: do this within about four days of the end of the moon. Dig thy garden, and manure it: remove thy bees: lay bare the roots of thy fruit trees, which are old and without bearing fruit: prepare all the materials of thy plough: fallow thy land for thy wheat, and thy rye: break up thy new ground for thy oats, ſo that it may be ſoft.

February: take away the moſs from thy fruit trees: cut off the watery ſhoots; ſet rue and roſe trees: lop and plat thy hedges about the end of the moon: ſet the cuttings and ſlips of young trees, about the full moom: plough thy new ground; ſow thy beans, and thy peas, and thy oats in dry land at the end of the moon: In wet land ſow at the full of the moon, four days before or after.

March: ſow beans, and peas, and oats, in the beginning of the month: graft, and plant fruit trees: and, in the end of the month, ſet hot ſaladings: cover the roots of the trees, which thou haſt before laid bare, with dung and freſh mould: plough thy barley land, and dung in the end of the moon, and it will not dry away.

April: ſow thy barley, in ſtrong land: ſow hemp, and flax, and, ſome of the garden ſeeds, onions, leeks, and ſimilar things.

May: ſow thy barley, in the beginning of the month: and, the ſeed of onions, parſley, coriander, and others of the kind: plough the former ploughing, and thy land for the wheat and rye.

June: carry manure to thy wheat land, and to thy rye land: carry thy timber home: plant leeks in the end of the month: ſow tender herbs: cut the hay on the meadows that are on low land near water.

July: mow hay in the high meadows, and the moſt part of thy hay land, on account of the fair weather, which is likely to be at that time: and, about the end of the month, reap a portion of thy corn harveſt.

Auguſt: reap thy rye, and thy wheat; and carry in about the end of the month: and, plough the latter ploughing, and thy fallow for thy wheat and rye.

September: reap thy barley, peas, and beans: and, about the middle of the month, ſow wheat and rye in ſtrong land: carry manure to thy land for wheat and rye, for one load at this time is worth three before.

October: ſow wheat and rye over thy fields in general: ſet the trees of plums, and pears, and apples: remove trees: ſet walnuts: and plat thorn hedges.

November: remove the trees of plums, and pears, and apples: fell thy timber trees, in the end of the moon, eſpecially ſuch as are uſed for the materials of the plough: and fallow thy land.

December: cut down timber trees for building: lop the hedges, and uſeleſs ſhoots: catch birds, and fiſhes, with nets: fallow thy wheat land.

[*To be continued.*]

THE COW POX.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

YOUR correſpondent, who ſigned himſelf Medicus, in your 5th Number, page 326, certainly meant it to be Mechanicus; for if he is really what he pretends to be, and made the ſubject he writes upon at all his ſtudy, he cannot but be acquainted with facts innumerable, though he has mentioned only one, and that, in a manner as if no other was atteſted with the ſame authenticity. Why my name alone to a fact, which he endeavours afterwards to render doubtful by his reaſoning? Indeed, Medicus, I am convinced, is not any way entitled to that ſignature, as no medical man I know, or have ever converſed with, ventured, even early in the buſineſs, to pronounce on the Cow-pox, as your correſpondent has done, who, I believe, by the by, knew not clearly what he was about, and I think, never read his own letter after he wrote it; for it is by no means conſiſtent with itſelf, as muſt be obvious to any who reads it attentively. The two firſt paragraphs, a ſort of introduction, ſpeaks of what it is and what it does. 'A remarkable fact in its hiſtory is,' he ſays, 'that perſons affected with the Cow-pox, have in many inſtances, either been ſecure againſt any ſubſequent infection of the ſmall pox, or elſe, if after-

wards ſmitten with the ſmall pox, have had this diſorder but ſlightly, with no dangerous fever, and without any numerous eruption of puſtules.'

He follows this with what, I think, a contemptuous manner of introducing the gentleman who firſt noticed it; and thus begins his third paragraph. '*A Dr. Jenner* lately communicated this TRUTH to the public. It attracted the notice, of Dr. Pearſon and Dr. Woodville, &c. &c.' But, by the by, I think, Dr. Woodville ſhould ſtand firſt, and ſo he would have known if he had ever made the matter a ſubject of enquiry. The indefatigable and truly benevolent Dr. Beddoes was among the foremoſt to have the fact inveſtigated; and on this inveſtigation, what is the fact? not that only ſometimes, but that always as far as time has allowed, and enquiry gone, it has proved AS CERTAIN *a prevention againſt the variola for the ſmall pox as the* INNOCULATION *for the variola* SMALL POX *itſelf has done.* In the ſame paragraph, he ſays, 'the fever has been dangerous, and the eruptions proved malignant, and even deformingly ulcerous.' Pray what is the ſmall pox; and what was it in the natural way? the deſtruction of one ſixth it attacked, and, deforming threefourths, it left innoculation, when firſt introduced for the ſmall pox, with a loſs of about one in forty or fifty, now not more in five hundred; and as it cannot be proved, that the Cow-pox has loſt in the proportion of the innoculated ſmall pox, it is a poſitive fact that the patients are generally neither ſo long, nor ſo ſeverely indiſpoſed: and Medicus allows, even, ſometimes, they eſcape the ſmall pox, and it has never been even hinted any harm is done to the conſtitution, as is believed ſometimes to be the caſe in the ſmall pox; I argue it is likely to produce good, ſuperior to the riſk of evil, therefore prefer the vaccine to the variolous as the ſafeſt and beſt.

The ſixth paragraph ſays, unleſs for experiments ſake, no honeſt and rational medical practitioner will recommend innoculation for the Cow-pox, and a very conſiſtent handſome compliment to the perſons referred to in the third paragraph, with all others who do recommend it, as ſuppoſing them willing to ſport patients and friends for experiments; and he concludes it with a 'perhaps,' a new diſtemper may be introduced to waſte and deform human life. Though he muſt, if he knows any thing about it, know this has rather proved the reverſe. He then goes on with waſting two more of your pages which might be much better occupied than with his phyſical, metaphyſical, chemical, logical, comical reaſoning, which few can underſtand, and which after all is controverted in ſo convincing a manner, that he might as well, with as much verboſity, argue againſt many phenomena in nature, which is only believed, becauſe frequently ſeen. He then concludes from his own reaſon-

ing thus; 'Such the general result of fair experiment upon this subject, forbidding us to borrow this distemper of cattle, and assuring us that this scheme is worthy only of quacks and wrong-headed medical projectors.' Another handsome compliment to those respectable characters he has named, and to many others I could name, whose consistency, practice, study, observation, and understanding, induce them still to continue in a practice, apparently fraught with much more good than even the hob-goblins he has conjured up by his unintelligible, inconsistent epistle can do harm; and I must desire, before he writes again, that he would be better acquainted with his subject.

I shall neither now or hereafter, take more notice of Medicus; let him jingle his pestle and mortar ever so loud, and only relate an occurrence, convincing me of the utility of introducing the vaccine instead of the variolous disorder. I, last summer, accidentally was enquiring of some farmers in Bedfordshire, if they knew any thing of the Cow-pox, but they had not heard of it, though it appeared by three persons in company, to be well known in Buckinghamshire, at no farther distance than fifteen or sixteen miles; and two of the persons had had it, and each been several times, and at distant periods innoculated with others for the small-pox, and associated with them who had it, but remained free from infection. At any rate, I cannot but think it advantageous; for if it be only sometimes a preventive, that is even in its favour; as it is not attempted to be proved seriously dangerous. I might swell this letter with much more on the subject, but shall only add, that an institution for the further encouragement of its adoption, is forming, patronized by the Duke of York, and others, whose rank, information, experience, &c. are alone sufficient; for such persons, would not patronize experiments but upon the best and most authentic information of its salutary effects.

I remain, yours, &c.

J. W.

P. S. On reading my letter, I find I have not said what I intended; but as you seem to have no objection to long epistles, I shall write a long postscript, endeavouring to prove the utility of the Cow-pox; therefore, supposing, with the little risk that is run, as I have before stated, it even shall, only sometimes, have the desired effect.—Now should it happen, the small-pox appears on board a ship when at sea, and no one on board has had it, to what a situation must they be reduced? but if some on board have had the Cow-pox, and escape the infection, it might preserve the ship. If innoculation therefore, is more general, which it might be, was there not a fear in many of catching the disorder from others, who are innoculated, and throw many impediments in the way of it for the

ſmall-pox? And as the vaccine diſorder does not appear to be infectious without actual contact, how much leſs oppoſition would be given to it than is to the variola, among farmers, and in country villages, when known how ſafe and how ſlight the Cow-pox is, and that it will attack none but the innoculated. When people can with ſafety ſee the progreſs of it, many more will, no doubt, ſubmit to the operation; the ſame will alſo hold good in manufactories, where, if two or three have the diſorder, and ſtill appear in their places, which cannot be with propriety in the ſmall pox, how much it will take off the apprehenſion. In ſhort, Sir, I hope and truſt to ſee this diſorder, notwithſtanding what Medicus may ſay, ſo generally diffuſed that we ſhall know the ſmall-pox but by name, for to my certain knowledge, the faculty are daily becoming proſelites. We know now many varieties of the ſmall pox, ſuch, as 5, 7, 9, 21 days; diſtinct and confluent; one many degrees more dangerous than the other; but even the ſlighteſt is deemed a preſervation from any farther infection, and few, if any, will innoculate from the worſt ſort; from this I argue, as the prediſpoſition of the human race to this diſorder is ſo very general, and its operation under various circumſtances ſo different, why may not the Cow-pox ſo nearly reſembling its mildeſt form, be another variety that will attract the affinities in the chemical manner Medicus talks of, but not through the medium of the air, being too weak in its epidemic effluvia?

THE FECUNDITY OF VEGETABLES.

Subſtance of a Letter, containing an Account of the Fecundation of Vegetables, from THOMAS ANDREW KNIGHT, *Eſq. to Sir* JOSEPH BANKS; *publiſhed in the Philoſophical Tranſactions.*

MR. KNIGHT obſerves, that the breeders of animals have entertained an opinion, that conſiderable advantages are obtained by breeding from males and females not related to each other; and that although this opinion has been controverted, the number of its oppoſers has gradually diminiſhed. From his own experience he aſſerts, that animals degenerate, at leaſt in ſize, on the ſame paſture, and under the ſame management, when the proceſs of croſſing the breed is neglected.

The analogy between the animal and vegetable world, and the ſexual ſyſtem equally pervading both, induced Mr. K. to ſuppoſe that ſimilar means would produce ſimilar effects; and he thinks the event has fully juſtified his opinion. His chief object was to obtain improved variations of the apple, to ſupply the place of thoſe which were diſeaſed or unproductive, by being cultivated beyond the period apparently aſſigned by nature. But as theſe experiments would require a ſeries of years, he determined to ſee what could be effected in annual plants, and ſelected the com-

mon pea, becauſe he could obtain many varieties, and becauſe the ſtructure of its bloſſom had rendered its varieties remarkably permanent. He had a kind, which having been long growing in the ſame ſoil, had ceaſed to be permanent, and even when removed to a new ſoil, did not appear to reſume the whole of its former vigour. On theſe he made his firſt experiments in 1787. He opened a dozen of immature bloſſoms, deſtroyed the male parts, taking care not to injure the female, and in a few days, when the bloſſoms appeared mature, introduced the farina of a large luxuriant grey pea, into one half the bloſſoms, leaving the other half as they were. The pods of both grew equally well; but in thoſe in which the farina had not been introduced, the ſeeds remained as they were before the bloſſom had expanded; and in that ſtate withered. The others attained maturity, but were not in any perceivable degree different from other plants of the ſame variety, owing, as he ſuppoſes, to the external covering of the ſeed being furniſhed entirely by the female. Next ſpring the difference was obvious; the plant roſe with luxuriance, and the colour of the leaves and ſtems ſhewed they had exchanged their whiteneſs for the colour of their male parent; the ſeeds produced in autumn were dark grey. The farina of another white variety (and ſometimes by ſimple culture) being introduced, the colour was diſcharged, and a numerous variety of new kinds produced, many of them in ſize, and other reſpects, ſuperior to the original white kind, and which grew with exceſſive luxuriance, ſome as high as twelve feet. Theſe had a ſtrong tendency to produce purple bloſſoms and coloured ſeeds, then white ones; for when the farina of a purple bloſſom was introduced, the whole of the ſeeds became coloured; but if Mr. K. endeavoured to diſcharge this colour, part only afforded plants of a white colour. The quantity of farina employed, Mr. K. thinks, made no difference.

Theſe experiments afforded him an eaſy method of aſcertaining, whether ſuperfœtation would take place in the vegetable world. For as the farina of a white pea is always white, unleſs coloured farina be introduced, and as the colour of the grey is always transferred to its offspring, although the female be white, it occurred to him, that if the former was mingled at the ſame moment, the offspring of each could be eaſily diſtinguiſhed.

The firſt experiment did not ſucceed; they received the colour from the coloured male, although they reſembled the other male, except in colours. In the ſecond year he obtained grey ones perfectly ſimilar. He was diſpoſed to believe that the ſeeds of them were of common parentage.

Another ſpecies of ſuperfœtation (if it may be ſo called) had occured ſo often, as to remove the poſſibility of doubt of its exiſtence. Having prepared many white bloſſoms, in 1797, Mr. K. introduced the farina of a white and of a grey pea, nearly at

the ſame moment, but of the coloured the leaſt quantity, and found that almoſt every pod afforded plants of a different colour: the majority, however, were white. Laſt year he ſucceeded better. Having prepared bloſſoms of the little early frame pea, he introduced its own farina, and immediately after the farina of a very large and late grey pea, and ſowed them in the latter end of ſummer. Some retained the colour of the early pea, and bloſſomed before they were eighteen inches high; others, whoſe colour was changed, grew to the height of four feet, and were killed by the froſt before any bloſſom appeared. Mr. K. thinks it evident, in theſe inſtances, that ſuperfœtation took place; and ſuggeſts, that if a ſingle plant may be the offspring of two males, whether ſome curious conjectures may not ariſe by analogy relative to the proceſs of generation in the animal world.

In theſe, and other obſervations, Mr. K. could never diſcover that the character either of the male or female preponderated in the offspring; but ſaw a ſtriking effect of the ſtimulative effects of croſſing the breed, for the ſmall variety, which rarely exceeded two feet in height, was increaſed to ſix; and from hence, he concludes, that any new variety may be obtained.

This ſucceſs in peas induced him to try ſome experiments in wheat; but theſe did not ſucceed to his expectation. He eaſily obtained many varieties, merely by ſowing the different kinds together; from ſome of theſe he obtained excellent, others very bad, but none permanent. By ſeparating the beſt varieties, an abundant crop was obtained, but its quality was not equal to its quantity; and all the diſcarded varieties again made their appearance. It was extraordinary, that in 1795 and 1796, when almoſt the whole crop of wheat was blighted, the varieties in Mr. Knight's neighbourhood all eſcaped, although ſown in different ſoils and ſituations.

His ſucceſs on the apple was fully equal to his hopes; and here he ſpared no probable means of improvement, either in ſoil or ſituation. The plants obtained from his firſt efforts to unite the good qualities of two kinds of apples, ſeem to poſſeſs the greateſt health and luxuriance; in ſome of them the character of the male appears, in others the female, and in others both, or perhaps neither is diſtinguiſhable. The reſult of the experiments on another fruit, the grape, was nearly the ſame, except that, by mingling the farina of a black and a white grape, juſt as the bloſſom of the latter were expanding, he ſometimes obtained plenty from the ſame berry, ſo diſſimilar, as to conceive them the produce of ſuperfœtation. By taking off the cups, and deſtroying the immature male parts, he ſucceeded in combining the characters of different varieties of this fruit.

Experiments were tried on other plants; and all evinced, that improved varieties of every fruit and eſculent plant may be obtained by this means.

The following Eſſay, (which has evidently been compiled with much care) we give with pleaſure to the public.—It bears ſtrong marks of the ſchool of Adam Smith, the parent of political Œconomy. When on the future fall of Malt and Hops, the Miniſter ſhall take the Public Brewery into conſideration, we are convinced our Readers will feel obliged to us for inſerting in our Magazine, a comprehenſive and radical view of the ſubject.
E.

OBSERVATIONS ON THE PRESENT STATE OF THE PUBLIC BREWERY.

I. AN attempt to extend the information of the public mind on any ſubject can do no harm: if the attempt be frivolous or abſurd it naturally ſinks into merited oblivion; even if the recommendation of ſpecious error ſhould attain publicity, the certain claſh of oppoſing intellect can ſcarcely fail to produce ſome ſparks of truth. At leaſt in every diſcuſſion whoſe tendency appears inimical to the intereſts of any rich or powerful portion of the community; the developement of all poſſible oppoſing arguments, may be expected to precede its final adoption.

II. When it ſhall appear that the avowed tendency of the following ſtatements is to augment the comforts of the moſt numerous claſs of ſociety, by diminiſhing the price of their only nutritious beverage; and at the ſame time to increaſe the public revenue of a nation much cramped by exiſting and accumulating taxes: ſuch a tendency will excite attention in the proportion that ſuch an object may appear beneficial. But this benefit is not to be hoped for without a conſiderable alteration in the eſtabliſhed mode of collecting an important branch of the revenue. Such alteration will probably appear at firſt ſight injurious to the intereſts of many individuals, and therefore can never be adopted without a diſcuſſion extenſive enough to inſure ſomething like a final eſtabliſhment of its expediency or defects.

III. Truth in its nature is eternal and immutable: but to inculcate truth effectually it is always expedient to apply its elucidations to the reigning topics of public attention, or its diſſemination will be too limmitted for any final utility. The late determination of the Porter-brewers to raiſe the price of their commodity, certainly affects the laborious population of the metropolis very conſiderably; and, as it may be expected to conſtitute ſome part of the Parliamentary diſcuſſions * of ſome

* The extravagant price of malt and hops has made a ſubſtantial apology for the conduct of the porter-brewers at preſent: but it is not the leſs needful to ſtimulate the vigilance of the public, leſt the reduction of the price of porter ſhould not inſtantly follow the future reduced price of its materials. Advance of price in all commodities is uſually introduced by ſome ſuch temporary good reaſon; but the advanced price remains when its proper cauſe has long ceaſed.—This treatiſe contains obſervations not temporary.

future ſeſſion, it ſeems not impertinent to lay before the public any obſervations which bear on that ſubject.

IV. In any branch of buſineſs on which every man may employ his capital, and chuſe his occupation, the profits can never be exorbitant; that is, they can never be finally higher than the profits of every other buſineſs in the neghbourhood. For if any one trade offered ſuperior profit, many would immediately turn to it, and the croud of competitors would immediately lower the profits to an equality with the uſual profits of other occupations. But if, on the other hand, an excluſive privilege reſtrains any buſineſs to a limited number of individuals, the public inſtantly pays a price too high in the proportion of the narrowed competition. This price is properly called a monopoly price: and as this phraſe is frequently miſapplied, and the imputation ſtill more frequently miſplaced, I ſhall proceed to explain the nature of monopoly, and afterwards examine whether that imputation can be juſtly applied to the public brewery of Great Britain.

V. The time when the odious word (*a*) *monopoly*, became familiar to Engliſh ears, ſeems to have been in the reign of Elizabeth, whoſe political ſagacity was eminent in the external relations of government, but extremely deficient in the very ſalutary knowledge of raiſing a definite revenue with the leaſt poſſible expence and vexation to her ſubjects. The habit of the moſt extreme and abſurd parſimony, which then actuated every Parliament, joined to her own arbitary ſtyle of government, rendered it irkſome to requeſt, and difficult to obtain, the moſt neceſſary ſupplies; unfortunately her moſt obvious reſource was the ſale of monopolies, which (with the rapid progreſs of abuſe) were ſoon granted to the importunity of every favourite courtier. But, among all the modes of oppreſſing a nation, the monopoly is the moſt injurious and deteſtable; and we may wonder, after conſidering the extent of (*b*) monopoly in that illuſtrious reign, that England was not effectually turned into one vaſt deſert. However the parliaments were inceſſant in their petitions for redreſs; but though they ſucceeded in an alleviation of the evil, it exiſtted ill the glorious (*c*) Petition of Right, and after that, under the covert name of Patents, conſtituted a very efficient cauſe of the (*d*) commencement of the unhappy civil-war.

(*a*) Monopoly: from Μονος alone; πωλεω to trade, to deal in: a monopoliſt therefore ſtrictly means, the ſole dealer.

(*b*) Some of the articles under monopoly were; currants, ſalt, iron, powder, cards, calf-ſkins, fells, ox-ſhin-bones, train-oil, liſts of cloth, pot-aſhes, anniſeed, vinegar, ſea-coals, ſteel, aquavitæ, bruſhes, pots, bottles, ſalt-petre, lead, oil, calamine-ſtone, oil of blubber, glaſs, paper, ſtarch, tin, ſulphur, new-drapery, dried pilchards, tranſportation of iron-ordnance, of beer, of horn, of leather; importation of Spaniſh-wool and Iriſh-yarn. A member had ſome reaſon to cry out, "Is not bread in the number!"---*Hume*, *ch.* 44.

(*c*) Anno 1628. (*d*) Anno 1642.

VI. The public clamour againſt monopolies had been ſo univerſal, that no attempt has been made to revive them ſince that period: but though perſonal monopoly, and the ſtricter propriety of the word has ceaſed, many remnants of ancient laws, and privileges of corporate bodies do ſtill continue in ſome meaſure to embarras the operations of Britiſh induſtry. The ſtatute of apprenticeſhip, many excluſive privileges of corporations, and above all, the Certificate-law, which virtually confines the poor man to his pariſh, has received ample diſcuſſion from the luminous abilities of Adam Smith; who has demonſtrated, beyond contradiction, that all theſe regulations are no better than alleviated monopoly.

VII. From the ſocial nature of the human mind, every maſs of individuals is actuated on every intereſting occaſion as by one ſoul. Opinion is as evidently, and as unaccountably propagated by infection, as an epidemic diſeaſe: and as the queſtions of commercial intercourſe are rather abſtract, on no ſubject is the popular cry ſo frequently erroneous as on that of monopoly. In the moſt intereſting of all occupations, the ſupply of the articles of food, an advance of price is uſually imputed to monopoly, and eſpecially in the corn-trade; though as that trade is neceſſarily in more hands than any other, it is in the ſame proportion leſs ſuſceptible of monopoly: for if a ſtrict monopoly be conſtituted by the exiſtence of a ſingle dealer, the virulence of its effect muſt languiſh in proportion to the greater number concerned; that is, in the proportion of one to the total number of farmers, corn-factors, millers, and bakers, in England! A number perhaps ſurpaſſing that of any (*e*) ten aggregate occupations in the kingdom.

VIII. After this obſervation which is more ſtrictly applicable to the preſent price of bread than to our immediate ſubject, I proceed to conſider, whether the regulations of the public brewery conſtitute a lurking monopoly? In other words, whether the profits of that trade are not higher than of any other, and conſequently the price of the commodity charged ſomewhat too high on the public?

IX. When the legiſlature has an important object in view, it is not wonderful that it ſhould ſometimes overlook a diſtant conſequence, or ſometimes, foreſeeing an inconvenience, be even compelled to ſuſtain it, in hope of an overbalancing advantage. The uſe of every good thing may be carried to exceſs; the people are nouriſhed by ſtrong beer, but they are alſo ſometimes (*f*) intoxicated by it. Hence has reſulted a very well-meaning re-

(*e*) And therefore ten times leſs liable to monopoly than any other trade in the kingdom.

(*f*) If we may be allowed to make compariſon between the effect of drinking ale, or common gin, we may be apt to chuſe between the two evils, as did old Cato on another occaſion:.

Quidam

ſtriction in the number of alehouſes, and the execution of this law is enforced by all juſtices of peace, as a regulation eſſential to the order and morality of the whole neighbourhood. A licence for opening a new alehouſe is therefore very difficult to obtain, and ſeldom is obtained without ſome ſort of neceſſity, or influence on the mind of the licenſing bench. I confeſs I do not perceive any great utility in this caution: a man who has money, and chuſes to drink to exceſs, I believe always finds opportunity; and how he could do more, I am unable to conceive. The expence of the licence naturally limits the ſale of ale to fewer dealers than any other commodity of equal requeſt; their buſineſs would then depend (like all others) on the excellence and cheapneſs of their goods, and the public by preferring the beſt and cheapeſt beer, would ſufficiently inſure a fair competition. The law has indeed *(g)* attempted to prevent all public brewers from *(h)* engroſſing alehouſes into their hands; but its regulations in this caſe being oppoſed to the nature of things, have accordingly failed in effect.

X. I contend therefore, with little fear of contradiction, that the preſent ſyſtem of the licenſing laws has thrown into the hands of the brewer a monopoly againſt the public. Does the brewer deny this? He will withdraw his negative, when he conſiders that in purchaſing an eſtabliſhed alehouſe, not the ſize, not the convenience of the premiſſes, determines the price, but the quantity of beer expected to be ſold in that ſituation. How is this additional purchaſe-money to be reimburſed? Clearly, in one way only: by charging to the public an advanced price on the commodity beyond its intrinſic value. The additional purchaſe-money is indeed only another mode of paying for a privilege to enhance the price, and it differs from a monopoly only in the exact proportion of the number of brewers (who hold alehouſes in any one town) to the number one. This number of brewers is uſually not beyond *(i)* two or three in a coun-

> Quidam notus homo cum exiret fornice; "Macte
> "Virtute eſto, inquit ſententia dia Catonis,
> "Nam ſimul ac venas inflavit tetra libido,
> "Huc juvenes æquum eſt deſcendere, non alienas
> "Permolere uxores." HOR. Sat. L. 1. S. 2.

(*g*) All clauſes in a leaſe, compelling the leſſee to take his beer of a particular brewer are void; but this is eaſily eluded by granting no leaſe, except from year to year.

(*h*) It ſhould ſeem that the adventage of engroſſing alehouſes was not always ſeen by the brewer, ſince that practice has not arrived at its perfection till lately; now indeed the alehouſes are always ſold as regular and indiſpenſable appendages to the brewery, and uſually form more than a moiety of the purchaſe. I ſuppoſe not one alehouſe in fifty remains what is phraſed by brewers, a private houſe; i. e. not in brewer's hands.

(*i*) In London there are more than a dozen porter-brewers who ſhare the porter-houſes; and probably in London the porter has always been ſomewhat cheaper (conſidering its quality) than ale in the country.

try-town; and a combination (however tacit) muſt neceſſarily influence the quality of their beer.

XI. This truth (however evident) the brewer will feel unwilling to confeſs: though he need not feel any ſolid repugnance to ſuch a confeſſion, except the dread of injury from popular odium. But the ſame hand that has withdrawn the veil of his tranſanctions, may alſo, by farther ſcrutiny, prove to himſelf and to the public the perfect innocence of his apparent extortion.

XII. To gain uncommon profit on any commodity; to ſell a thing for more than it is worth, is a practice always reprobated by the vulgar, and frequently condemned by their ſuperiors without ſufficient inveſtigation. It cannot be denied that if ſuch a practice be unjuſt, it remains ſo in all caſes, as injuſtice certainly does not depend on time or place. Therefore if it be poſſible to produce any common inſtances in which the moſt ſcrupulous accept any profit (however enormous) without imputation of injuſtice, it muſt be granted that a perſonal deteſtation of the monopoliſt muſt be founded on ſome erroneous ground.

XIII. In ſales by auction it never occurs that the vender, perceiving an adequate ſum offered, interferes to prevent farther augmentation. Yet it is notorious that from a ſpirit of rivalry, or from local convenience, many articles, church-ſeats, plots of ground, copies of books, &c. are continually ſold much above their intrinſic value. In ſuch caſes it is uſual enough to congratulate the vender on his good fortune; but nobody impeaches his morality for receiving an unuſual price for his commodity.

XIV. In the ſame manner all dealers in commodities of fluctuating value, in corn, ſugar, &c. are never expected to ſubtract from their demands, becauſe a purchaſer may be able to plead to them, that the article came into their hands at a lower price. The preſent market-price (that is, the higheſt that can be got) is the price at which the world always conſents to buy, without any imputation on the honeſty of the vender.

XV. The monopoliſt does no more than this; he too only gets the higheſt price the world conſents to pay him. If indeed a monopoly enables a perſon to reap uncommon profits on his capital, the public is deeply injured, eſpecially if the commodity be a neceſſary of life. Hence mankind are apt to perſonify the object of their vengeance, and to abuſe the neceſſary effect inſtead of its cauſe: to blame the monopoliſt inſtead of the eſtabliſhment of the monopoly.

XVI. But as this is a deep-rooted error, I ſhall add another argument to exculpate the monopoliſt, ſo often the object of unmerited execration. The very idea of monopoly implies that all who ſtand in the ſame predicament exact the ſame exorbitant profits: for if any one of them do otherwiſe, the monopoly is evidently at an end. Now who will venture to pronounce, that a whole claſs of men (otherwiſe reſpectable) are in one inſtance

uniformly villains who conſpire to cheat the public? He who affirms this does in effect blame human nature inſtead of individuals, ſince the general act of all the men in the ſame predicament, is a direct proof, that all others, that their accuſer himſelf, would do the ſame were he alſo placed in the ſame predicament. Be it then eſtabliſhed, that the public brewer as well as every other monopoliſt, and every other man, obtains the higheſt price he can for his commodity, and may conſcientiouſly do ſo as long as he poſſibly can.

XVII. Beſides it muſt not be forgotten that all monopolies of any ſtanding muſt have been paid for by the preſent poſſeſſor, and therefore conſtitute a kind of property; odious indeed and precarious; but ſurely deſerving ſome part of that reverence which prevents all public interference with private property in every well-governed ſtate. In the preſent inſtance, it is notorious, that it muſt be a ſmall brewery indeed which would not ſuſtain a damage of ſome thouſands by throwing the trade open, and conſequently reducing the value of their public-houſes to the bare rental.

XVIII. Yet nothing leſs than this ought to ſatisfy the public claim on the legiſlature; ſince when the fictitious property of the monopoliſt invades the general property of ſociety, no heſitation can exiſt about the preference of the latter. For as monopoly implies an unjuſt transfer of property, the claims of the parties are incompatible, and no more than a choice between the ſufferers remains to the ſupreme legiſlature of the nation. Thus an inveterate abuſe can ſeldom be remedied without hardſhip to many worthy individuals: a proof how incumbent it is on legiſlators to examine the remote conſequences, as well as the immediate effects of every propoſition ſubmitted to their conſideration.

XIX. We ſhall hereafter examine, whether it be not poſſible to ſuggeſt a plan of accommodation, which may indemnify the brewer, not only without damage, but even with much advantage to the moſt numerous and moſt neceſſitous order of ſociety. But before I explain myſelf farther on this head, it is neceſſary to enter into certain calculations on the duties at preſent impoſed on the manufacture and material of all malt-liquors.

XX. Some ſort of land-tax has always been the firſt taxation of the governments of rude ages. But when induſtry had accumulated other kinds of property, in the neceſſary progreſs of taxation, the comforts and conveniences (what the ſevere moraliſt terms the luxuries of the age) became ſucceſſively the objects of public revenue. As taxation, in this caſe, acts as a ſumptuary law, it is frequently not unpopular, and is therefore continued till theſe articles are taxed up to the natural maximum of taxation: that is, till the number who relinquiſh the enjoyment of them more than countervails the increaſe of duty on the leſs number who retain their uſe. When this happens, evidently recurrence

muſt be had to articles more nearly approaching the acknowledged neceſſaries of life (*k*). Fiſh and fleſh ſuffer a heavy exciſe in moſt countries, and in Holland the government has even proceeded to a tax on bread. Our own legiſlature (under all our difficulties) has not gone ſo far; a faint intention was once manifeſted to tax the (*l*) carriage of commodities, the cotton manufacture, and even (*m*) population; but theſe projects have been relinquiſhed on more mature deliberation.

XXI. But a tax, to be very productive, muſt fall on the many; no charge (even the moſt exhorbitant) on the few opulent members of ſociety can make a very grand total in the catalogue of national income. For this reaſon, neceſſity has driven government to have recourſe to an exciſe on the moſt uſual beverage of its ſubjects. Hence malt, beer, and Britiſh-ſpirits, furniſh the largeſt article of the public revenue. The neceſſity is to be lamented; but as it clearly exiſts, the queſtion cannot be about the abolition, but about the modification, of thoſe duties.

XXII. Here is a (*n*) ſtatement of the rate and produce of theſe ſeveral duties, for one year, up to October 10th (*o*) 1794.

The exciſe on malt at 8s. 4d. per quarter,	-	£1,146,790.
on ale or beer at 8s. od. per barrel, on ſmall beer at 1s. 4d. per Hogſh,	-	1,970,378.
The amount of the exciſe on Britiſh ſpirits,	-	988,858.
Grand Total		£4,106,026.

On the laſt article the rate is not given, becauſe computed at two ſtages of the manufacture in a complex manner.

XXIII. The exciſe on beer deſerves ſome inveſtigation, as it is probably the moſt diſgraceful on our records. However there are reaſons to ſuppoſe, that it appeared to the Parliaments of Will. III. well calculated to prevent exceſs, and to preſerve private houſes from the ſcrutiny of the exciſeman. It has now acquired all the additional ſtability which can be conferred by the preſcription of a whole century; in which time the public attention has been diverted to more novel taxes, and the enormity of its injuſtice is almoſt forgotten. It has not however eſcaped obſervation; and a ſhort explanation of its effect may perhaps ſucceed to make it once more the topic of public diſcuſſion.

(*k*) Fiſh paid 48 per cent. on its value, at entering the gates of Paris.

(*l*) The tolls of turnpikes and canals; and the parcels ſent by ſtage-coaches, were once mentioned as intended ſources of revenue.

(*m*) A ſtamp duty on baptiſms, &c. was once impoſed, but ſoon dropped.

(*n*) The Scotch duties are every where omitted; as they are paid into the Exchequer at irregular periods, the annual amount cannot be aſcertained.

(*o*) The year 1794 preceded a very dear time, which may be ſuppoſed to have effected ſome irregularities in ſome of theſe duties ſince.

[*To be concluded in our next.*]

For the Commercial and Agricultural Magazine.

ACCOUNT OF THE COMMERCE, SITUATION, &c. OF THE TOWN OF SWANSEA, IN GLAMORGANSHIRE.

*** Communications on this ſubject are earneſtly ſolicited from every Commercial Town in the kingdom:

MR. EDITOR,

If a deſcription of commercial towns comes within the limits of your very uſeful and entertaining Magazine, I have to requeſt your inſerting the following particulars relative to the town and bay of Swanſea.

THE town of Swanſea is ſituated near the centre of a moſt beautiful bay, on an angle between two hills, which defend it from the north-weſt to the north-eaſt. The ſoutherly wind blowing over a vaſt expanſe of ſea, renders the air mild, and the ſoil being, to a conſiderable depth, gravelly, makes it a very pleaſant and healthy ſituation; the adjoining county is very picturesque, and furniſhes a great variety of beautiful rides and walks. The tides ebb and flow a great way over a flat ſandy ſhore, and up the river Tawey, which runs through the town, and is navigable for veſſels of above 200 ton burden for above two miles.

This town has much encreaſed during the laſt twenty years, and from the beauty of its ſituation, has of late been much reſorted to by company for ſea bathing, for which purpoſe the corporation have taken a houſe particularly adapted for ſea bathers, furniſhed with machines, &c. and likewiſe ſome as compact hot and cold ſea baths as any in the kingdom have been lately erected in the town, by a gentleman of ſpirit. Swanſea has always been a place of trade, from whence there is a conſtant intercourſe with Briſtol, Cornwall, and Ireland, and lately has partaken of ſome of the Baltic, Levant, and Weſt India trade. From the immenſe mines of coal, ſtone-coal, culm, lime, iron, rotten-ſtone, flags, and clay, the following very extenſive manufactories have been erected within two miles of the town, viz. ſeven copper works, in which 500 men are conſtantly employed, 400 ton of coal daily conſumed, and 220 ton of copper ore daily melted. One large iron foundry, one braſs houſe, one ſpelter manufactory, one large pottery, in which upwards of eighty perſons are daily employed; likewiſe two large breweries, and a wet and dry dock. Very few places in this kingdom have had ſo rapid an encreaſe in trade as Swanſea, for, from the Cuſtom-houſe books, it appears that the number of the veſſels entered in 1768, were 694, making 30,631 regiſter ton, whereas in the laſt year, 1799, they were 2351, making 134,876 regiſter tons.

A plan being delivered to the truſtees of the harbour for forming an outward harbour, and deepening the river, by erecting a

pier of 228 yards long, and likewiſe another oppoſite, ſo as to leave only 70 yards opening, which would form an harbour capable of containing many hundred veſſels, the ſame is going on, and two feet of water have been already gained. Indeed, throughout Glamorganſhire, the trade has been, and is rapidly increaſing; as an inſtance of which we need only mention the iron works at Merthyn and Neath, the collieries, &c. on the Cardiff canal, the coal and tin trade on the Neath canal, are all going on with ſpirit. In a line of country of leſs than four miles in the neighbourhood of Swanſea, there are two navigable rivers, four canals, all communicating with the ſea; there are upwards of fifteen collieries which raiſe about 2000 ton of coal, ſtone-coal, and culm, *per diem*, and for which there is a regular ſale.

I remain, Sir, with eſteem, your's, &c.

VERITASNE.

Swanſea,
April 22, 1800.

THE FOLLOWING LETTER, SUGGESTING A MODE OF PRESERVING POTATOES FOR A LONG TIME, IS PUBLISHED BY ORDER OF THE SOCIETY, FOR BETTERING THE CONDITION OF THE POOR.

MY DEAR SIR, *Berner's-ſtreet, Jan.* 11, 1800.

IN compliance with your requeſt, expreſſed at the meeting of the ſociety for bettering the condition of the poor, I herewith ſend you my ſimple, but effectual mode of preſerving potatoes without fire, ſweet and good, for great length of time.

I have, as yet, only tried it upon ſmall quantities of potatoes in my own family; and I had intended deferring the publication of any account of it, until I had aſcertained, by an apparatus I have ordered to be made, the expence and effects of the operation on a great ſcale. But your requeſt, and the peculiar circumſtances of the preſent ſeaſon, added to the exiſting apprehenſion that the laſt year's crop of potatoes is not calculated for keeping, induce me to give ſome account of the experiments I have already made; and to expreſs my hope that country gentlemen and farmers may be induced to try, whether, on a bad day, they cannot advantageouſly employ their poor neighbours, in this mode of preſerving from decay, ſo material an article of food.

The firſt of the two proceſſes which I have adopted is as follows.—I took three pounds and a half of potatoes, and had them peeled and raſped, and put them in a coarſe cloth between two clean boards in a napkin preſs, and preſſed them into a dry cake, hardly ſo thick as a very thin cheeſe. I then placed the cake on a ſhelf, as I ſhould an oil cake, to dry. There was about a quart of juice preſſed from the potatoes. To this I added the ſame quantity of cold water; and in about an hour it depoſited

rather more than ſixty grains of very white ſtarch, or flour, fit to make fine paſtry.

The cake, which I produced at the meeting of the ſociety, and which you obſerved to be perfectly ſweet, was prepared in the preceding manner, ſo long ago as the year 1797. In ſize it occupied a ſixth of the compaſs of the potatoes. In weight it loſt about two-thirds by the proceſs, but, upon being dreſſed, either by ſteam or otherwiſe, the cake will produce very nearly the ſame weight and quantity of food, as three pounds and a half of potatoes, properly dreſſed for table, would do. I ſhould obſerve, that I have lately prepared in this way ſome potatoes that were quite frozen, and that the cake is now perfectly ſweet. Some of the ſame potatoes that were left, and not preſſed, were rotten and ſpoiled in a few days.

The other mode of preparation is what I very lately tried in your preſence.—I took five pounds of potatoes, and, without peeling them, had them well cleaned, and pounded in a mortar; and put them into a ſmall wine preſs, and preſſed them into a thin cake; completing the proceſs as before.—The cake produced in this way appears to be ſweet and wholeſome; but it has not that *clean white*, which the other cakes have; nor has there been ſufficient time to aſcertain, whether it will keep* as well as that made of the peeled potatoes.

I have conceived that the firſt and moſt material thing, is to aſcertain the mode of preparation and its effect in preſerving the vegetable. Proceſſes for abridging labour are ſo ſpeedily invented and completed in England, that there can be little apprehenſion but the mere mechanical proceſs will very ſoon be made perfect, and adapted to general uſe. Upon the invention itſelf, I truſt it will not be too much to ſay, that if its benefit was confined to ſupply the navy of Great Britain, in every ſtation of the globe, with abundance of this wholeſome and nutritive vegetable, it would be an object of no ſmall moment; but when it is conſidered that it may be the means of ſaving, in an abundant ſeaſon, for a time of ſcarcity, and of preſerving for years, an article of food ſo important, and ſo ſubject to decay; that the potatoe ſo prepared may be packed in one-ſixth its former ſpace, and ſupply not only our navy, but our manufactures, and our ſoldiers at home and abroad;—and that it may afford acceptable employment, within doors, for the poor, during the ſevereſt part of the winter, it will appear to be deſerving of great attention.

With regard to the proceſs, I have to obſerve, that though the peeling of the potatoes is not abſolutely neceſſary, yet it greatly improves the cake; and that the clearing them from all diſco-

* This cake has not kept well; probably on account of there being defective ſpecks in the potatoes, which had ſuffered by the froſt, rather than from the circumſtance of their not having been peeled. 20th Jan. 1800.

loured and froſt-bitten ſpecks appears to be neceſſary. I have uſed the mode of raſping or pounding them; but, upon a large ſcale, grinding them would probably be an eaſier operation; unleſs the inſtrument applied in the Weſt Indies for raſping Caſſada bread ſhould be made uſe of, which is cheap and ſimple, and is likely to anſwer the purpoſe. With a very powerful machine, I conceive that the cakes might be made at once, by merely preſſing the potatoes, without any previous preparation. As to the means of preſſing them, a common cyder preſs might be uſed, or a cheeſe preſs, with the advantage of a lever to increaſe the power. With great eſteem and regard,

I am, dear ſir,

Your faithful and obedient ſervant,

Thomas Bernard, Eſq. LANGFORD MILLINGTON.

ANSWER TO THE LETTER ON THE EVILS OF MONOPOLY OF GRAIN, &c.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

THAT the high price of the neceſſaries of life, ſhould have rouſed the attention of the public, is not to be wondered at; nor can any one be ſurpriſed to meet with writers, who produce their various opinions to the world on this intereſting occaſion. In your laſt number, you have inſerted a letter from a correſpondent, who after modeſtly aſſerting a right to differ from a deciſion of the Houſe of Commons, tells us, "That he is convinced, from his own knowledge, no real ſcarcity exiſts."

Surely the Houſe of Commons neither poſſeſſes, nor pretends to, the abſurd infallibility of the Roman Pontiffs; and their opinion is only that of five hundred individuals of liberal education, and the beſt information on the ſubjects they diſcuſs. Before education was ſo common, or the truths of domeſtic policy ſo well underſtood, before information was ſo acceſſible, they frequently were guilty of the moſt egregious blunders; they ſometimes enacted the moſt grating monopolies, and ſometimes (erring on the contrary extreme) forbade that facility of commerce, which can only reſult from the capital of the intermediate agent; whom the laws of Edward VI. ſtigmatize under the opprobrious and barbarous names of Regrater, Foreſtaller, and Monopoliſt.

Your correſpondent, however, ſeems not unwilling to concede that the crop of laſt year was deficient; he thinks the ſuperabundance of the preceding year enough to make up the deficiency. But when he has conſidered, how incontrovertible is the fact, that we have imported corn largely on the average of twenty-five years, and that at leaſt there has been no ſucceſſion of very plentiful years, he can juſtly aſcribe but little corn to that ſource;

and when he remembers the unexampled rains of the last season, and has been informed, in one of your numbers, that only forty-eight days of 1799 were without rain; he cannot but allow that the crop of last year was very deficient, or he must be understood to assert that the weather has no influence on the fruits of the earth.

But the quantity, and consequently the price, of bread-corn, must certainly vary with the seasons; and man, suffering under the dispensations of providence, almost as certainly accuses his fellow-creatures of enhancing his distress. Persons of solid information in matters of political œconomy are not to be informed that the utmost efforts of the monopolist, in such an extensive a commodity as wheat, can only tend to equalize the price of wheat throughout the year; to prevent the profusion and waste consequent on excessive cheapness, and the misery inflicted by absolute famine.

The very idea of monopoly is buying at a low rate, and selling at a higher; and if cheapness implies plenty, and dearness a scarcity of any commodity, surely what is bought in the former predicament, is not injurious to the consumer; what is sold in the scarcity directly tends to alleviate his distress. Monopoly must open its stores, at the moment when the monopolist expects no farther rise of price; that is, at the very point of time when the public distress is most violent. To open, by legal or illegal violence, the stores of the speculator, is a certain mode of aggravating scarcity to famine, famine to a general dissolution of society.

If an unjust monopoly be practicable, it must be always practicable, and, according to the opinions of the vulgar, it must at all times be equally in the power of the dealer to raise any commodity to his wishes. But it is obvious to all, however unthinking, that such is not the case; that commodities indeed fluctuate, but like oscillating bodies, always preponderate toward the middle of their extremes. When there are more horses than buyers in a horse-fair, there is no man but what knows that horse-flesh becomes instantly cheaper; when the demand is above the present commodity, it naturally becomes dearer. Why will mankind shut their eyes so wilfully, as not to acknowledge that the same simple fact takes place in all articles, and that the price of wheat, as well as of horses, must be regulated by the relative number of buyers and sellers in the market?

Your correspondent seems particularly to be persuaded that unfair prices exist in the London market. Does he not know, or will he not see, the accounts of prices through the kingdom published by authority every month? In that statement he will see that London is very little higher than the neighbouring counties, even less so than the necessary carriage would seem to threaten.

Besides, if these tremendous monopolists exist, how strange is it, that no man can point out one of them?

In the cheapeſt years, the annual value of the wheat of England cannot be leſs than twenty millions ſterling. Can this immenſe capital be made to act in concert without palpable combination? To raiſe a loan to this amount, all the monied men of London are in an uproar of competition and intrigue; and can obſcure individuals, whom nobody knows, engroſs the corn of England? the very agents for the purchaſe, could never be undiſcovered, during two ſucceſſive market-days, in any market in the kingdom. Be it always remembered, that when any compulſion makes a commodity unnaturally cheap at any one time, the augmented conſumption of that period muſt afterwards enhance the commodity beyond a former example.

The junction of farmers alſo annoys your correſpondent: that queſtion I refer to future examination; at preſent there is a greater neceſſity for examining the propoſed arrangements of his intended legiſlation.

His firſt propoſal would make many farmers waſte money and time at market, who at preſent pay a moderate per centage to jobbers or agents.—The ſecond and third would ſoon prevent any corn being brought to market. A man muſt be a fool indeed to run the riſk of carrying his corn backward and forward to no purpoſe.—The fourth *regulates* factors, whom the fifth *aboliſhes*; and yet the facility of Britiſh commerce has been evidently increaſed by the intervention of riders in England, and reſident agents abroad. Beſides, London could not be ſupplied with corn, if no agents were ſuffered to buy and ſend corn up from Lynn, &c.—The ſixth, ſeventh and eighth relate to a ſuppoſed monopoly of farms: Can a ſmall farmer be an improver? Why is the public inſtitution of experimental farms, with a powerful capital, ſo evidently uſeful?—The laſt regulation relates to fixing the price of labour. Is the ſtrong and the weak man, the ſluggard and the induſtrious, to be equally paid? Or, if payment be uniform, would not all labourers become emulouſly idle? The cuſtom of taſk-work extends every day, and the benefit of that practice has no ſubtraction, but the *inordinate* labours conſequent on the temptation of higher pay, and the partial objection to ſuch work as thraſhing, whoſe accurate performance is ſo *eſſential and ſo obſcure*.

I recommend to your correſpondent, a careful peruſal of Adam Smith, one of the glories of our nation; and conclude by premiſing in a future number, a more finiſhed examination of the ſubject of extenſive farms; a ſubject rather proper to be elucidated from the general error in that point, than from any intrinſic difficulty or obſcurity. I remain, &c.

R.

THE RURAL ŒCONOMIST.

NUMBER VI.

On the Education of the Daughters of Farmers: And, on the proper Style of Living for a Farmer's Family.

The RURAL ŒCONOMIST has been very agreeably anticipated by the following letter, in his deſign of concluding with ſome hints concerning the tuition of the daughters of farmers.—Theſe preliminary eſſays on the general *education of the children of huſbandmen*,—a ſubject that, notwithſtanding its very great importance, *was never before regularly and particularly treated in print*. This lady's letter is inſerted, without alteration, preciſely as it was received.

To the Rural Œconomiſt.

SIR,

I HAVE had the misfortune to ſurvive an excellent huſband, with whom I lived happy for forty years; the greater part of which was paſſed on his eſtate in the country, in the midſt of his tenants and other dependants. Our children were only two boys and a girl, to whoſe education we paid much—and as I now have, every day, the pleaſure to experience, not unſucceſsful attention. We delighted equally in a country-life, in the duties to which it called us, and in the innocent and virtuous recreations which it afforded. Next after the care of our children, our favourite engagement was, in endeavouring to promote the welfare of our tenants and other ruſtic dependants. My huſband taught them improved modes of agriculture, compoſed their differences, ſuperintended their morals, aſſiſted them in forming ſettlements for their young folks, rewarded induſtry by advantageous leaſes and other favours, puniſhed incorrigible negligence and vice by diſmiſſion from his eſtate. My province was more of a domeſtic nature. I viſited the fire-ſides of the farmers, and even of the loweſt cottagers. I inſpected their management of their younger children, I encouraged cleanlineſs, neatneſs, tenderneſs, and watchful care. I endeavoured eſpecially to inſtruct the mothers in what I believed to be the beſt way of bringing up their daughters. To thoſe who were poorer, my purſe was often, not laviſhly, but ſeaſonably open. Such as needed not pecuniary aid, in this way, were excited and rewarded by attentions intended to do them honour in the eyes of their neighbours; invitations to the great houſe, courteſies and converſation in the meetings at church, viſits to ſhare their feſtivity at a harveſt-home, a chriſtening, or a wedding. In no other manner, could my huſband and I have ſo reconciled our duty with our amuſement and happineſs. Twenty times the money that we ſpent, might have been eaſily laviſhed away in oſtentatious generoſity, to the ſame people, without doing them half ſo much real good.

I ſtill reflect on theſe employments of my better years, with greater delight than I can now receive from any preſent enjoyment. Every thing relative to the country, and to the welfare of the farmers and peaſantry, intereſts me beyond what is common for perſons of my ſex, age, and condition. I have read with attention and pleaſure, the papers of the *Rural Œconomiſt* upon the education of the children of farmers and labourers in huſbandry. Having written ſo well of the education of the ſons, you cannot mean to overlook that of the daughters. Yet, you heſitate; and perhaps feel yourſelf more at a loſs to give directions, how to educate young females, than in regard to the bringing up of young perſons of your own ſex. I have, therefore, reſolved to ſend you my thoughts upon this ſubject. But, I ſhall not be, in the ſlighteſt degree, offended with your ſuppreſſion of my letter, if you diſapprove what I ſhall propoſe, or if you have already prepared a paper that may render its publication ſuperfluous.

Till the age of ſix or ſeven years, there can be very little reaſon for any conſiderable difference between the education of the little boy and that of the little girl. About this age, however, that diſtinction of habits, ſhould begin, which their different deſtinations by nature and cuſtom, neceſſarily demand. Let the little maiden now become, at thoſe hours when ſhe is not engaged at her leſſons, the follower of the footſteps, and the mimic of the employments, of her mother. Are there infants, her brothers or ſiſters in the family? invite her to aſſiſt in nurſing them. Let her try little practices of cookery; let her ſpin on a ſmall ſpinning-wheel of her brother's or her father's making; let her learn to uſe her needle for any little amuſive purpoſes of her own: allow her to acquire a partiality for ſports leſs rough and boiſterous than thoſe of the boys. Commit to her, from time to time, little charges of houſehold confidence and authority. Rather *ſeem*, however, to truſt, than blindly truſt your little houſewife, in a manner in which it may be poſſible for her to deceive you. Do not, too anxiouſly, confine your little girl from running about in the fields, and joining in all the ſports of other children of her own age. Take no premature pains to lead her to conſider herſelf as a different ſort from the other ſimple and innocent creatures like herſelf though of the other ſex, with whom ſhe may incline to run harmleſsly about at play. Send her to ſchool with your other children; let her there learn to write a fair hand, to read with correctneſs and intelligence, to perform the common operations of arithmetic, at leaſt as far as to the rule of practice. Let her accompany you to church, either every Sunday, or at leaſt in turn with her brothers and ſiſters. Having the charge intruſted to you, by nature, of ſuch a child, of a human being that you may make uſeful, or a nuiſance to ſociety, happy or miſerrable for itſelf, even to eternity;—O you who are a mo-

ther, be careful to ſet before her, an example of matron prudence, of maternal tenderneſs, of piety, fortitude and reſignation, ſuch as may command her attention in a manner never, hereafter, to be forgotten. At the age of from ſix to ten, many more permanent impreſſions than we are well aware of, never fail to be made on the minds of children. Girls eſpecially, as *their* minds ripen ſooner than thoſe of the other ſex, are apt to receive at this age, no ſmall part of that education which regulates their whole future life.

It is commonly remarked, that the minds and characters of young females attain much ſooner to maturity than thoſe of the youth of the other ſex. This is not a neceſſary effect of the laws of nature. It happens only becauſe female children, even from the earlieſt years, aſſociate more with their mothers, and in general with grown up perſons, than is uſual for boys. As there is a ſtriking difference in manners between domeſticated brute animals, and thoſe which are left in native wildneſs; the former imitating the actions and habits of mankind with whom they ordinarily aſſociate; ſo, juſt in the ſame manner, muſt the manners and habits of thinking in girls partake much more of the caſt of thoſe of older people, than the manners and thoughts of boys who are ſuffered to run much more about, wild, untutored, and unconſtrained. Whenever the primary facts are otherwiſe, the conſequences are, of courſe, reverſed. Among the children of the farmers and cottagers, I have often obſerved—boys who poſſeſſed prematurely, ſomewhat of the grave conſideration of men,—and girls who, not having been confined to ſedentary and houſewife habits, were at eighteen or twenty, raw, wild, and childiſh, as if they had not been above nine or ten years of age. Womanly diſcretion is, however, a quality which a young female cannot too early acquire. Thoſe modes of life, are, therefore, favourable, which tend to impreſs this quality, even ſooner than it might be naturally expected from the progreſs of age.

Of the female children of the cottagers, I had frequent opportunity to obſerve, that ſcantineſs of food, labour above their ſtrength, a confinement fatal to the healthful gaiety of the youthful ſpirits, and to the ſtrengthening elaſticity of the muſcles in the young and tender frame,—too often cut off many of the faireſt of theſe flowers between the ages of eight and ſixteen years, or dwarf their growth, and ſickly over their firſt lovelineſs, or affect them with the beginnings of diſeaſe which is to cut them off before they have far exceeded the firſt bloom of life. This takes place in a much greater proportion, among the girls, than among the boys in the loweſt condition of peaſant-life. I often thought of it with deep affliction. It is one of the ſevereſt of all the calamities which the ruſtic poor are doomed to feel.

The female children of farmers in eaſy circumſtances, are more

fortunate. They are reſtrained; but not too rigorouſly; and though they be uſually required to perform little taſks of labour, that labour is not above their ſtrength. Perhaps of all female education, that which is in this country ordinarily given to the daughters of farmers whoſe parents are, in their ſtation, worthy, intelligent people, is the moſt favourable to health, underſtanding, and morals. Its greateſt diſadvantage is, when an ambition to make his daughters ladies, and a natural ignorance of the true means for accompliſhing this, betray the farmer into the folly of decking them out in too fine clothes, procuring them to be taught arts and airs of no real utility, and ſupporting them in his houſe, in what he may fancy a lady-like idleneſs. I had many opportunities to remark the prevalence of this folly; and was not always ſucceſsful in my attempts to correct it.

In the females, both of the farmers and the cottagers, I could very often obſerve a diſcontent, acrimony, and mutual recrimination among all the members, young and old; partly occaſioned by the hardſhips of want and toil, in part, the conſequence of early bad habits, and of a careleſs rude familiarity, which contributed exceedingly to poiſon the happineſs and vitiate the tempers, eſpecially of the young women. One of the moſt beneficial things which both rich and poor can do for the welfare of their female children, is to ſet before them the example of a kind and forbearing, though not a careleſsly good-natured, temper.

Every pariſh ought to entertain, at a ſmall annual ſalary, ſome reſpectable woman,—reſpectable for diſcretion, induſtry, and piety,—with whom the female children of the farmers and peaſantry, might learn to knit, and ſew, to make up all their own clothes whether coarſer or finer, and to do the ſame with the laundreſs-work for the linens of the men in the families to which they belong. Beyond this, and the pariſh-ſchool for reading, writing, and arithmetic, I would not extend the ſchool-education of the daughters of the peaſantry. They muſt, now, enter into ſervice, or aſſiſt their parents in conſtant, daily labour at home. It will be better that they go to ſervice, if they can be placed in families in which they may ſee none but good examples, and may not be expoſed to aſſociation with improper companions. For the daughters of the lower farmers, the ſame ſort of education as that for the female children of the cottagers, may ſuffice.

I always recommended, however, where it was not extremely inconvenient, that, at the age of eleven or twelve, the daughters of the farmers, ſhould be ſent to paſs a year at a boarding-ſchool, in the neareſt ſituation where a good one was to be found. Such ſchools for young girls as well as for boys are too often opened, with merely trading views, by perſons exceedingly ill-qualified for a truſt ſo important. I, with the conſent and aſſiſtance of my dear huſband, prevailed with the lady of the vicar of

our pariſh,—a ſmall, though not uncomfortable living,—to open a ſeminary for the education of the daughters of the farmers in our neighbourhood. She was a woman who had been herſelf excellently educated; of great piety and prudence; good-nature, but not without ſpirit and dignity of mind. She had three children of her own: and, her care for them, was, in part, her motive to undertake ſo difficult a taſk as the education of a number of young girls from ruſtic families. But, in truth, ſhe was moved much more, by our earneſt intreaties, and by a deſire to do as much good as poſſible. Her huſband had his part in the education of the young perſons whom they received into their houſe. The truths of religion, the moral duties of life, the writing of letters, the keeping of family accompts, were taught by him. Sewing and embroidery, the decencies of female behaviour, the management of the affairs of a houſehold, the ſinging of ſimple melodies with the accompaniment of the guitar, ſome elegancies of baking and cookery, and drawing ſufficient for the ſketching of flowers and others of the ſimpler natural objects, were taught by his wife. We very frequently viſited them. And I was always delighted to aſſiſt in the duties which that excellent woman took upon herſelf. Thoſe who diſtinguiſhed themſelves by very good behaviour were rewarded by confidence and authority in the family, and invitations to viſit at the great houſe. After ſpending a year with this excellent preceptreſs, at the age of twelve or thirteen, theſe young women, by our advice, returned to aſſiſt, for two or three years, in the families of their parents. During that time, we recommended, that they ſhould be made, in turn, and not with exertion to extreme fatigue, to perform taſks in every care of their mothers, and in every ſort of work that belonged to the female ſervants. The coarſer work was their toil: the more elegant and eaſy taſks were their relaxation. One taſk that I always wiſhed them to be often employed in, was the management and inſtruction of their younger ſiſters. Another taſk in which we wiſhed them to be much engaged, was the keeping of books of houſekeeping for their mothers, and even of the proper farmer's books, for their fathers, &c. Above all things, I was anxious, that they ſhould not acquire any light and giddy modes of dreſs and behaviour which they might fancy to be lady-like. At the age of ſeventeen or eighteen, it was my recommendation to their parents, that they ſhould, if poſſible, be ſent to paſs another year in the family in which they had been before educated. Before that excellent woman, with her huſband, could only inſtruct them as good children; now, they might be addreſſed as young women: And they had, likewiſe, gained experience which made them more earneſtly deſirous than before of improvement in whatever they were requeſted to learn. This ſeminary ſubſiſted for the ſpace of fifteen years; at the end

of which, it was broken up by the death of the worthy vicar, and the happy eſtabliſhment of one of his ſons in a diſtant country, into which his mother was induced to accompany him. Many of the young women who were educated in it ſtill ſurvive, and are now mothers and miſtreſſes of families. They are the pride of the paiſhes in whieh they live. Ah! Sir, the reflection that I have contributed to make them—what they are, will be a joy to me, even in a better world.

It is my wiſh, that the wives of farmers ſhould be, univerſally, ſuch as theſe young women have proved. Were they ſo, the daughters of the cottagers living with them, as ſervants, would acquire almoſt every benefit of the miſtreſs's more expenſive education. Ruſtic ſociety would, by ſuch means, quickly aſſume a new aſpect. So much has the conduct of theſe worthy daughters, ſiſters, and mothers, convinced me of the felicity of that mode of education which I had the good fortune to recommend for them; that I do, moſt earneſtly wiſh to ſee the ſame plan adopted, for the ſame claſs of perſons univerſally, throughout the Iſle. Within every eight or ten pariſhes, there may, ſurely, be found a reſident clergyman and his wife, whoſe virtue and accompliſhments qualify them for this moſt honourable taſk, and who are neither by falſe pride, nor by wealth, ſet in their own eſtimation, above it. If ſuch may be found, let them, by the moſt virtuous and enlightened of the gentry and the farmers, be earneſtly ſolicited and engaged to undertake the taſk. Nay, without awaiting ſolicitation, let them, as they value the approbation of Heaven, open ſuch ſeminaries, invite to them ſuch pupils as they have deſcribed, and conſcientiouſly do their duty to them!

I fear, Sir, that you may already think this letter too long. Yet I cannot but add ſomething concerning the amuſements in which theſe young women may be permitted to aſſociate gaily with the youth of the other ſex. At church, on ſundays, at weddings, at chriſtenings, at the amiable feaſt of harveſt-home, which ſhould never be ſuffered to fall into diſuſe, and even for a quarterly rural aſſembly, I ſhould think, that, under the eyes of a ſufficient number of their parents and ſeniors, theſe young people might be properly enough ſuffered to meet, to converſe together, to join in the diverſions of dancing, ſinging, and harmleſs domeſtic merriment. At their gayeſt meetings, I ſhould wiſh their parents, and a ſufficient mixture of perſons of a graver age, to be always preſent. At church, and in meetings remote from any exceſs of amuſement, I would allow the young to aſſociate more freely by themſelves. Educated as I have adviſed, the young women would not fail to look with ſevere diſapprobation on young men who were drunken, or diſſolute; and addicted to ſwearing, or ſtupid and ignorant from profligacy and indolence, or either negligent or ridiculouſly foppiſh in

their dreſs and perſonal appearance. Such diſapprobation would powerfully check the vices and follies againſt which it ſhould be directed. Marriages contracted in ſuch circumſtances, and after ſuch a train of education, could not be happy.

Theſe, Sir, are but a few hints on a few out of very many important topics relative to this ſubject. But I will not farther prolong this letter.

I am, with earneſt wiſhes for the ſucceſs of the purpoſes you ſeek to promote by theſe papers, Sir,

Your humble ſervant,

MARGARET NELSON.

This lady's letter was without date of time or place. But, on the corner, we obſerved the BATH poſt-mark.

We ſhall conclude this paper, with the two following letters, which have, alſo, been lately addreſſed to the RURAL ŒCONOMIST from unknown correſpondents. They are very ſhort. And as the one ſeems to offer a good anſwer to the other, no comment on either is neceſſary.

SIR,

I AM the proprietor of a ſmall eſtate, which has been inherited, in our family, ever ſince the days of my great-great-grandfather. My anceſtors have always lived upon it, as country-gentlemen, without impairing or encreaſing it, for four generations. Though ſmall, it enabled them to live like gentlemen. Till my time, no farmer in the pariſh or neighbourhood ever preſumed to vie with us, either in dreſs or houſehold expence. If the times were not changed very much for the worſe, it would be ſo ſtill.

But, Sir, the land which afforded my grandfather but two hundred and fifty pounds a year, yield me five hundred pounds; yet, I, and my family, can ſcarcely hold up our heads with our own tenants. Theſe are only two, but, both moſt provokingly rich, thriving, and high and ſumptuous in their livings. One of them ſits on a leaſe that was granted him by my father, and of which there are ſtill fifteen years to run. To be ſure, he has much improved the farm; and, when his leaſe is at an end, I ſhall eaſily let it for more than twice as much as he now pays me. But, ſuch are his returns from it, that he entertains his family, and educates his children, at very nearly as great an expence as I can afford to lay out upon mine, yet has, for theſe laſt ten years, laid up annually, as I am well informed, a ſum equal to three or four times the rent he pays me. My other tenant, though on a latter, and ſomewhat leſs advantageous leaſe, is likewiſe in flouriſhing circumſtances, lives well, gets rich, and laughs at the difficulty his landlord has to maintain his conſequence on ſo ſmall an income.

Now, Sir, all this is not to be borne; though I know not well how to hinder it. It is a diſhonour to the times, that our tenants ſhould thus live better than their landlords. It is inſufferable, that he who ploughs my land, ſhould gain more by it than myſelf. There is an end to all ſubordination, if this muſt go on. The farmer's reſt occaſions equally poverty to his landlord, and a ſtarving dearth of proviſions to the poor. Pray, contrive ſome ſcheme by which, without checking the improvement of the country, we may prevent our farmers from getting thus, to an invidious degree, rich, proud, and luxurious. Pray, warn the farmers to be more modeſt in their ſtile of living. It is too much for them, both to get rich by us and inſult us.

Your attention to this, will exceedingly oblige, Sir,

Your very humble ſervant,

W. B.

SIR,

WOULD you ſuppoſe, that any landholder would envy the proſperity of his own tenants,—a proſperity that neceſſarily brings along with it, the improvement of the value of his eſtate?

I have the misfortune to occupy a farm, of which the proprietor is a man of this temper. The rent at which I obtained my leaſe, ſeemed, at that time, exceſſively high. But my leaſe was for fifty-ſeven years. I had ſome money, which I laid out in ſtock and improvements. I was young, ſtout, healthy, and not unſkilled in my buſineſs. Both my wife and I were diſpoſed to be ſufficiently induſtrious and ſufficiently frugal. It was within a year or two after the American war that we entered upon our farm. And the times, you know, have ſince been favourable. For the five or ſix years, we had much to ſtruggle with. But, we paid our rent punctually, even at the worſt. Our ſtock, by degrees, encreaſed. We began, ſhortly after, to lay up a little money. I have more than tripled the value of my farm; and I now lay up, every year, much more than I pay my landlord; I alſo live comfortably, and give my children a good education. I can afford it. My induſtry, my ſtock, the national proſperity, as well as the land I cultivate, are the ſources. Beſide paying my rent, punctually and handſomely, I have improved the value of my farm to my landlord, againſt a ſale, or the commencement of a new leaſe, perhaps a great deal more, than the value of any land in this neighbourhood, has been improved.

Yet, Sir, would you believe it, this man envies me the little I have ſaved; is enraged to ſee my children decently clad, or to hear of them receiving a good education at the ſame ſchool or college with his own? Does he hear of my giving a dinner to a neighbour? He curſes the bloated luxury and the pride of theſe farmers; and ſays, that I may well revel, ſince it is at his coſt.

Yes, Sir, all this I ſuffer for having laboured hard, and not unſucceſsfully, both for him and for myſelf. Do you approve of this ſpirit in landholders? Can you judge it favourable to the improvement of the country? Do you not know it to be very univerſal? And pray, is not its direct tendency, to drive all capital, all ſpirit, all true ability, out of the employment of farmers? and to reduce all our huſbandmen to a ſet of poor, ſtupid, ignorant, miſerable clowns? T. W.

THE GLEANER.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

WE are informed by holy writ, (Geneſis xli. 36, 57.) that the Egyptians had *public ſtore-houſes*, with guardians or overſeers appointed over them, and wiſe and exact diſpenſers of the corn lodged in them. Diodorus, (lib. i. p. 67, 68.) informs us of the care and attention that was paid to the inferior part amongſt them. "Huſbandmen, ſhepherds and artificers," ſay he, "formed the three claſſes of lower life in Egypt, but were nevertheleſs held in very great eſteem; particularly huſbandmen and ſhepherds. The body politic requires a ſuperiority, and ſubordination of its ſeveral members, for, as in the natural body the eye may be ſaid to hold the firſt rank, yet its luſtre does not dart contempt upon the feet, the hands, or even thoſe parts which are leſs honourable."

Amongſt the *Romans*, in times of great dearths, there was an extraordinary officer created called the * *Corn-Prefect*, and he was for that time inveſted with great powers. He was to ſee that bread corn was bought up from all places, and that if any had more than would ſerve their own uſes, he was to order all hoarders to bring it out and to ſell it at a juſt and reaſonable price. By the aſſiſtance of this magiſtrate the people of *Rome* in time of dearth, often received great benefit. When *Pompey* the great was inveſted with this power, as he was once, during the adminiſtration of it, going to ſail with a great quantity of corn from Sicily, the admirals told him it was not ſafe to venture to ſea in ſo tempeſtuous a ſeaſon, when he is ſaid to have made that ſpirited and patriotic reſolution. "There is no neceſſity for us to *live*; but for the preſervation of the *Roman* people there is an abſolute neceſſity for us to *ſail* at all adventures," which he did.

Amongſt the *Romans* the corn merchants were exempted from municipal offices; they were raiſed to the dignity of knights by Conſtantine. *Arbuthnot*, p. 279.

* Præfectus Annonæ

Bakers, according to Pliny, were firſt known in Rome about the year 580 U. C. before that time every Roman citizen had his bread baked at home.

By our own ſtatutes, bakers are declared not to be handicrafts. No man for uſing the myſteries or ſcience of baking, brewing, ſurgery or writing, ſhall be interpreted a handicraft. 22 Hen. viii. chap. 13.

Many of the Emperors we find to have given a *Teſſera*, or victualling Ticket to the poor, upon producing which to the officers on the day of diſtribution, they were to receive ſuch a proportion of corn or bread; and when they were enabled to ſubſiſt without the public charity, they might transfer their ticket to another. *Suet in Vit.* Cæſ. Auguſt. c. 40.

Several of the Romans had the honour of aſſuming family names from their inventions of public utility. Hence the *Pilumni* who firſt invented the peſtle to bray corn. Alſo the *Piſones* who took their name *a Piſendo*, from pounding corn in a mortar. W.

POETRY.

The following Pieces were recited by their reſpective Authors, before the Subſcribers of the LITERARY FUND, *at their Anniverſary, in* FREE-MASON'S HALL, *April* 24, 1800.

LINES

By HENRY JAMES PYE, ESQ.

WHEN angry Themis quitted Earth's domain,
And vice uſurp'd her abdicated reign;
To check the progreſs of her wayward views,
Kind Heav'n in mercy ſent the ſuccouring Muſe;
By Wiſdom nerv'd, in conſcious Virtue brave,
Her ſons the awful wand of Juſtice wave;
O'er trembling Guilt the ſword of Vengeance wield,
Or ſpread o'er proſtrate Worth Protection's ſhield;
Tear from Ambition's head the baleful wreath,
With ſlaughter ſtain'd, and redolent of Death;
While with the precious gems of pure Renown
They conſecrate the ſceptred Patriot's crown;
Such as for Gallic Henry's brows they twine
Such, Britiſh George! as now encircle thine.

But ſoon pale Poverty, with palſy'd hand,
And cold Neglect depreſs the godlike band;
Corruption warps the Poet's gen'rous view,
And Avarice graſps the ſword that Virtue drew.
To pow'rful Guilt the venal Muſes raiſe
The ſhameful incenſe of perverted praiſe:
Rear with malicious aim fell Scandal's dart,
And ſoothe the bad, and rive the virtuous heart;
Shake o'er mankind Sedition's iron rod;
And threat with impious boaſt the Throne of God.

But lo! a gen'rous race, whom Virtue draws,
To vindicate the injur'd Muſes cauſe:
Reſcue from Want and Woe the wand'ring train,
And lead them back to Glory's paths again.
In the warm breaſt re-kindling Ardour ſprings,
The manly arm returning Vigour ſtrings,
Indignant burſting Shame's opprobrious band,
A goſſamer torn by a giant's hand.

Foster'd by you, the hallow'd Muse shall give,
The Hero's fame in deathless verse to live.—
Lo, the vast fabricks by mistaken pride!
Rear'd on the brink of Nile's redundant tide.
Whose name, whose actions, have they wafted down?
What Patriot's virtue, or what Chief's renown?
While deeds, recorded in the Muse's lay,
Shall last when rocks, when mountains melt away.
The eternal laurels from the Egyptian shore,
Which British arms and British valour bore,
Shall live, shall flourish, when the pilgrim train
Seek for the mouldering pyramids in vain.

AN ADDRESS, &c

WRITTEN AND RECITED BY WIL. THOMAS FITZGERALD, ESQ.

WHEN barb'rous Nations sack'd Imperial Rome,
And the World's Mistress yielded to her doom;
Oblivion o'er that land her poppies flung,
Where Patriot Sages taught, and Poets sung!
Science deplor'd her Tully's prostrate bust,
And Genius dropp'd a tear on Maro's dust;
O'er Europe's face a gloomy Darkness spread,
And Learning deep in Cloisters veil'd her head.
A Gothic Age no Patrons could afford,
Where ev'ry Man was Vassal or was Lord;
Fierce was the temper, barren was the mind,
And War the only business of mankind:
Till Leo rose, to foster ev'ry art,
That charms the fancy, and delights the heart;
On him each Muse was eager to attend,
And Learning found a Patron and a Friend:
So, when stern Winter reigns, all Nature sighs,
The cheerful Green of Vegetation dies;
One dreary waste the eyes of man behold,
Deluged with rain, or blasted with the cold!
But, when the glorious Sun relumes the sphere,
The trees bud forth, the tender plants appear,
Nature no longer feels the Winter's storm,
Cheer'd by the rays that ripen while they warm.
Enlighten'd Science soon her radiance bore,
From fair Italia to our Northern Shore;
Where Genius breath'd his soul in Shakspeare's line!
And Milton, like his subject, was sublime!
Yet in this soil, where all the Virtues grow,
And, 'ere the Poor can ask, the rich bestow!
Authors have often mourn'd their hapless lot,
Their Works still cherish'd, but themselves forgot!
Hard is his task who writes for daily bread,
And pillows on a couch of cares his head;
Can Fancy charm the Poet's fever'd brain,
Where thought serves only to engender pain?
Can Passion animate his torpid breast,
By Hope deserted, and by Want oppress'd!
And yet, though wretched Envy's constant aim,
The sport of Fortune, and the slave of Fame!
If he a Patron seeks in time of need,
With Giant's weight he leans upon a reed—
What can his Muse from pride of Wealth expect,
But ostentatious aid, or cold Neglect!
Tow'ring Ambition scarce can look so low,
And selfish Pleasure shuns the face of Woe.
In Life's more private scenes those virtues shine,
Where Human Nature proves her source divine;
'Tis there the Great to suff'ring Worth attend,
And Man's misfortune finds in Man a friend!

Your Plan, which Princes might be proud to own,
Long bless'd in silence, and was little known;
Early you saw, beneath your fost'ring care,
Genius and Learning rescued from Despair:
At first, 'tis true, you could but just bestow,
A Dew of Comfort upon Letter'd Woe;
Yet did that Dew a ling'ring Life sustain,
Cheer the last pang, and smooth the bed of Pain!
Gradual, but sure, your purpose works its way,
And ample Bounty consecrates this Day:
The streamlet thus obscurely glides along,
Till made by tributary waters strong:
Each drooping plant, refresh'd, new vigour shows,
To grace the living River as it flows:
Onward it rolls to meet the Ocean's tide,
And spreads a gen'ral blessing far and wide.
Though other climes more genial Suns supply,
A purer atmosphere, and clearer sky!
Amidst our gloomy days, and wint'ry storms,
Bounty protects, and godlike Pity warms!
Though stern in War, and oft by Factions cross'd,
The Nation's Character is never lost;
Human, and manly, liberal, brave, and free,
Contending Parties in this point agree,
To feel the pathos of misfortune's sighs,
And wipe the tears from pallid Misery's eyes!

Illuſtrious Iſle! fair Freedom's laſt retreat!
The throne of Honour! pure Religion's ſeat!
Object of Europe's envy, and her hate!
Still ſhalt thou ſtand amidſt the Nations great:
Still ſhall the perſecuted ſtranger find,
Thy happy ſhores the refuge of mankind!
Still ſhall thy naval arm thy foes repel,
Though leagu'd againſt thee all the Powers of Hell!
Thus Calpe's rock, high tow'ring from the main,
The pride of England, and reproach of Spain!
While at its baſe contending waters roar,
Indignant ſpurns the billows from the ſhore:
In vain the tempeſt low'rs, the winds ariſe,
And vivid lightnings fork the lurid ſkies;
By Heaven decreed 'gainſt all aſſaults to ſtand,
It braves alike the Ocean and the Land!

AN ADDRES, &c.

BY WILLIAM BOSCAWEN, ESQ.

WHEN, nor allied to Taſte, nor kind to Worth,
Sound the mad orgies of unmeaning Mirth!
When Muſic gives to Vice her flattering ſtrains;
And fierce Intemperance revels in the veins;
The joy that owns not Reaſon's juſt controul
Smiles on the face, but ne'er can touch the ſoul.
Not thus when honeſt zeal our mirth inſpires
When Pleaſure ſhines illumed by Virtue's fires.
When generous feelings, generous deeds impart
That ſacred joy which vibrates in the heart.
'Tis then, exulting in the glorious cauſe,
The humble Muſe, that ſeldom courts applauſe,
May own th' inſpiring theme, may wake her lays,
In Learning's aid, in heavenly Mercy's praiſe.
How juſt the pride, on this auſpicious day
When Pity triumphs, and aſſerts her ſway,
That prompts remembrance of her numerous foes,
And counts the toils from whence her glory roſe!
How pure the joy that ſpeaks her peril's o'er,
And hails her landed on the deſtined ſhore!
Faint roſe the dawn, by doubts and fears o'ercaſt,
The glimmering dawn that cheer'd her labours paſt;
While, to the eye of Hope, its feeble ray
Scarce gave the promiſe of a brighter day,
Could Greatneſs, ſtooping from it's lofty throne,
Attend to ſufferings, which it ne'er had known?
Or Wealth, allured to tempting Luxury's arms,
Hear Pity's gentle voice, or feel her charms?
Elate with Fortune's gifts, or vainly wiſe,
Ev'n Learning ſcoff'd at kindred Merit's ſighs,
With ſpecious art decried each bounteous deed,
And ſcorn'd to follow, while it dared not lead.
Yet, in the purpoſe which their virtue plann'd,
Still perſever'd the firm, the faithful band,
By ſmall, but well-timed aid to worth oppreſt,
Dried many a tear, and lightened many a breaſt;
Till favouring Britain ſmiled, till Mercy found
Her ſons applauded, and her deeds renowned;
And Bounty, long reſtrained, now gladly pours
Her liberal gifts from ſtill increaſing ſtores.
Thus Thames, unnoticed, in his early courſe
Flows a ſmall current from a ſcanty ſource,
Till, fed by tributary rills, his ſtream
(The Painter's ſubject and the Poet's theme)
Wafts Britain's wealth through many a fertile plain,
And bears her floating thunders to the main.
Then, may ſome Muſe, that boaſts a loftier lay,
Oft hail with rapture this returning day;
May pure Benevolence, with taſte combined,
Cheer while it mends, inſtruct yet charm mankind!
And may the reſcued Bard, and cheriſhed Sage,
Proclaim your glories to the lateſt age!

CRITICAL

CRITICAL CATALOGUE.

I. ANGLING, *in all its Branches, &c.* By SAMUEL TAYLOR, *Gent.* 8vo, 298 pages. LONGMAN & REES. — Old *Iſaac Walton* wrote a book upon *angling*, which was long popular in England. *Dr. Brookes*, a very laborious compiler, was the author of an *Art of Angling*, in the form of a pocket dictionary, which has paſſed through various editions. *Mr. Taylor*, the author of the work before us, fancies that he has reduced *angling* to "a complete ſcience." He gives, in the *firſt* part of his book, a very brief topographical account of the different counties in Britain and Ireland, in which there are rivers and other ſtreams affording fiſhes that may be taken by *angling*. In the *ſecond* part, he explains the natural hiſtory of the different fiſhes in the lakes and rivers of Britain and Ireland; deſcribes the method of taking them with the rod and line, and intermingles various anecdotes of his own adventures and ſucceſs as a fiſher. In the *third* part of his book, he treats of the preparation of all the different ſorts of *artificial flies* which anglers uſe for the deception of the fiſhes they attempt to take. Having often ourſelves enjoyed much agreeable amuſement, wandering on the banks of the lakes and rivers, in a diſtant part of the iſland, with Horace, Virgil, or Thomſon's Seaſons under the arm, and an angling-rod in one hand; we have peruſed this book of *Mr. Taylor's* with no ſmall pleaſure. He is, ſometimes wrong in facts. He is, perhaps, too much an enthuſiaſt for his art; and, like many other good men, perhaps values too highly his own proficiency in it. But, this book is, nevertheleſs, the beſt directory for the angler that we have ever ſeen. To farmers, artiſans, and other perſons living in the country, who may have occaſional leiſure for this diverſion, and a taſte for it, we heartily recommend the purchaſe and the peruſal of *Mr. Taylor's* performance. He deſcribes it, as containing "the reſult of forty years practice in the rivers, &c. of Great Britain and Ireland."

II. *A Compendious Medical Dictionary; containing an explanation of the terms in Anatomy, Phyſiology, Surgery, Materia Medica, Chemiſtry, and Practice of Phyſic, collected from the moſt approved authors.* By R. HOOPER, M. D. of Pembroke College, Oxford, Fellow of the Linnæan and London Medical Societies. MURRAY & HIGHLEY, *Fleet-Street.*—Whoever would dip into medical ſcience, or wiſh to improve their acquaintance with the phyſical world, would do well to conſult this breviary. It has, however, many defects. Pharmacy, for example, which is the moſt uſeful part in the practice of phyſic, and leaſt known beyond the pale of the profeſſion, our author ſeldom, and ſparingly elucidates. And no information he could ever give of more benefit, eſpecially to the middling orders of the community, who live far from an apothecary. We have known a patient of great worth and utility, loſe his life by having the preſcription of his phyſician made up at ſome miles diſtance. Let us therefore hope, that in a new edition of the work before us, the author will avail himſelf of this hint, and render his book as much a diſpenſary as he can, as a manual of pharmacy muſt inevitably make its way into every family in the kingdom.

III. *The System of the World.* By M. LAMBERT. *Translated from the French by* JAMES JACQUES, Esq. 12mo. VERNOR & HOOD.—This is one of the finest astronomical theories that ever was formed by the human imagination. It is not so much calculated to teach the science, as to use it for the construction of a peculiar system, and as the medium of specific intelligence on one of the most august and magnificent objects of consideration that ever occupied the intellectual powers of man. The author himself gives this epitome of his labours. The laws of gravitation extend universally over all matter. The fixed stars, obeying centrical forms, move in orbits. The milky-way comprehends several systems of fixed stars; those that appear out of the track of the milky-way form but one system, which is our own. The sun being of the number of the fixed stars, revolves round a centre like the rest. Each system has its centre; and several systems taken together have a common centre. Assemblages of their assemblage, have likewise theirs. In fine, there is a universal centre for the whole world, round which all things revolve. *These* centres are not void, but occupied by opaque bodies. *These* bodies may borrow their light from one or more suns, and hence become visible with glasses. Perhaps the pale light seen in Orion is our centre. The real orbits of comets, planets, and suns, are not ellipses, but cycloids of different degrees. The orbits of those bodies which are immediately subject to the action of the universal centre, can alone be ellipses. Such is a bird's-eye view of this magnificent system, which involves a series of the most profound and sublime speculations. The translation is well performed; and the publication is a real acquisition, both to literature and philosophy.

IV. *A Vocabulary of Sea Phrases and Terms of Art used in Seamanship and Naval Architecture: in Two Parts,* 1. *English and French, and,* 2. *French and English. Carefully collected from the best Authorities, written and oral, aided by a long and intimate acquaintance with the nautical Language of both Countries; and containing all the Orders necessary for working a Ship, and carrying on the Duty on board, as well at sea as in port.* 2 vol. 12mo. 8s bound. DEBRETT, *Piccadilly.*

This publication will be found a most useful and acceptable accommodation to all our fleets, and every person aboard a ship of war. The marine language of every crew appears, to such as have not been long in the habit of considering it carefully, perfectly unintelligible. And here the whole technical phraseology, which runs through every branch of practical navigation, is familiarly explained and reduced to our common vernacular idiom. The compiler, whoever he may be, seems competently skilled in the science he would develop; and, as he proposed to himself, has omitted no term, phrase, or form of expression, that can be useful either to the sea officer, the naval architect, the ship-owner, the reader of voyages, or the translator. To all these classes in the community this book will afford incalculable convenience; and we congratulate them on an acquisition perfectly invaluable.

V. *A Compendious System of Astronomy, in a course of familiar Lectures, in which the Principles of that Science are clearly elucidated, so as to be intelligible to those who have not studied the Mathematics: Also Trigonometrical and Celestial Problems, with a Key to the Ephemeris, and a Vo-*

cabulary of the Terms of Science uſed in the Lectures; which latter are explained agreeably to the application in them. By MARGARET BRYAN. 8vo. 12s in boards. WALLIS, *Paternoſter-Row.*

An elegant and beautiful woman, however occupied, is an object of general admiration; but, in giving leſſons of ſublime inſtruction to the young of her own ſex, and with all the tenderneſs of a good mother for affectionate daughters, raiſing their opening minds from terreſtrial to celeſtial ſcenes, greatly enhances her in our eſtimation, and combines with the charms of nature the qualities of an angel. We can hardly conceive a more reſpectable, prepoſſeſſing, and intereſting point of view, in which our amiable and worthy authoreſs could challenge public attention. The work is highly creditable to her every way. It indicates a very ſuperior underſtanding; and the purpoſes to which her ſtudies tend, could originate only in ſingular goodneſs of heart. Her aim is, to give ſuch an account of the ſcience in its elements, progreſs, improvement, and utility, as may render it eaſy and popular. And ſhe does not ſo much avoid as explain the various obſcurities in which it has been ſo long envelloped. Her clear and ready conception, aided by the perſpicuity and ſimplicity of her language, renders all her ſtatements, illuſtrations, and demonſtrations, luminous and intelligible, even to the ſhalloweſt capacity. She aims at making aſtronomy underſtood, independent of mathematical ſcience, which muſt facilitate its acceptability in the female world, and ſenſibly increaſe its votaries. And, from the happy union of plainneſs and preciſion which pervades her compoſition, we cannot help ſaying ſhe bids fair to fulfil her engagement. To her fair pupils, and her learned countrywomen, her acquiſitions, and the application of them, are eminently exemplary. And the pious ſenſibility which animates her ſpeculations, and directs them, muſt have the beſt effect on the ſuſceptible hearts, both of her pupils and readers.

VI. *The Annual Regiſter; or a View of the Hiſtory, Politics, and Literature for the Year* 1794. ORTRIDGE & SON, &c.

We are glad to find this work got up at laſt, in a ſtile equal in ſome meaſure to that in which it originally appeared. It ſeems now to have fallen into hands of thoſe who are determined to do it as much juſtice as the preſent ſtate of Engliſh literature will permit. We look in vain for that brilliancy of language, thoſe beautiful flights of imagination, and that exuberance of wit, which diſtinguiſhed a claſs of political writers, who then had the late Mr. Burke, and Junius, perhaps, among them, in this volume; but it exhibits, in bright and natural colours, the period it deſcribes; traces occurrences to their natural ſources; accounts, on rational and juſt principles, for the facts it enumerates; inveſtigates the origin and views of the various meaſures that have been adopted in the proſecution of the war, and, with a laudable ſpirit of neutrality and independance, cenſures and approves impartially, according as the caſe is made out. In the hiſtorical department more eſpecially, we perceive a great deal of ſound and important information; a maſterly compreſſion of the huge maſs of material, which preſent themſelves a luminous order; accurate diſcrimination, and a language no where weakened and inflated by epithets and antitheſis, but remarkable for its ſimplicity, elegance, and preciſion. The period of the revolutionary ſyſtem, here conſidered

in all its extravagances and horrors, as it bore on the various courts and political conſtitutions in Europe, and the great body of the people, is in no ſimilar publication whatever ſo ably and fully diſcloſed. On the ſelections of this performance, its chronology and criticiſms, we would be more moderate in our praiſe. Theſe we think not arranged in the beſt manner, or indicative either of much taſte, ſolid judgment, or competent induſtry. It were, however, injuſtice not to allow, that the volume before us will bear a compariſon in this reſpect perhaps with any of the former ones. But we muſt confeſs ourſelves ſomewhat diſappointed in our expectations even here, from the very ſuperior ſtile in which the hiſtory of Europe is given,

VII. *Analyſis of Horſemanſhip: teaching the whole Art of Riding in the manege, military, hunting, racing, or travelling Syſtem; together with the Method of Breaking Horſes, and dreſſing them, to all kinds of Manege.* By JOHN ADAMS, Riding-Maſter. 12s. *Cadell and Davies, in the Strand.*— We have ſeen few modern books in which there is more ſcience, or more induſtry, than in this analyſis. Every poſſible poſition, or form of horſe or rider, is here minutely and accurately conſidered. The whole of this elegant and faſhionable art ſeems to have been the ſtudy and practice of the author's life; and it muſt be owned, he details the experiments he has made with great judgment, if not always with taſte. Indeed he diſclaims all *pretenſions to literary abilities;* and we are ſorry the compoſition is not as ſtriking a ſpecimen of good writing as of real induſtry. The dedication is, however, written in a maſterly ſtile; and who can help wiſhing the whole had been exhibited in the ſame elegant form. The precepts and inſtruction, however, on the ſubjects which the author profeſſes to know and to teach, are ſo preciſe and appropriate, as muſt command the approbation of every one in the leaſt acquainted with the ſubject. And he apologizes in very reſpectful terms for his incapacity in other reſpects, "I have not attempted," ſays he, "to decorate my work with long digreſſions and flowery language, to relieve the heavy dead page of ſcience, which, without attention and ſtudy for the purpoſe of practice and improvement, were inſupportable. My endeavours have been to explain my meaning in the cleareſt manner; not only giving the precepts, but pointing out their importance and neceſſity, by ſhowing their cauſes and conſequences. If I have ſucceeded in this, it is all I aimed at; and if I ſhould not have been ſufficiently clear in any paſſage, I ſhall be happy to explain myſelf further, ſhould any gentleman think proper to wait on me for that purpoſe."

VIII. *Philoſophical Tranſactions of the Royal Society of London for the Year* 1799. Part I. & II. *Elmſly.*—The tranſactions of this ſociety, publiſhed yearly, conſtantly afford information to the learned. The firſt number for the preſent year, contains, 1. The Crœnian Lecture, Experiments and Obſervations on the Structure of Nerves, by Everard Home. 2. The Bakerian Lecture, Obſervations on an Unuſual Horizontal Refraction of the Air, by the Rev. J. Vina. 3. Abſtract of a Regiſter of the Barometer, Thermometer, and Rain, at Lyndon, in Rutland, by Thomas Barker, Eſq. 4. Some Additions to a Paper on a Child with a Double Head, by Everard Home, Eſq. 5. Obſervations on the Manners, Habits, and Natural Hiſtory of the Elephant, by John Corſe, Eſq. 6. On the Decompoſition of the Acid of

Borax, or Sedative Salt, by Lawrence de Crete. 7. A Method of Finding the Longitude by means of two Altitudes of the Sun, and the Time elapſed betwixt the Obſervations, by the Rev. W. Lax, A. M. 8. A French Catalogue of the Comparative Brightneſs of the Stars, by W. Herſchell; and, 9. On a Submarine Forceps, by J. Corria de Sierra. In the ſecond part is, 10. An Account of the Diſſection of an Hermaphrodite Dog, by Everard Home, Eſq. 11. An Enquiry concerning the Weight aſcribed to Heat, by Benjamin Count of Rumford. 12. An Account of ſome Experiments on the Fecundation of Vegetables, by Thomas Andrew Kadght, Eſq. 13. Obſervations on the different Species of Aſiatic Elephants, and their mode of dentition, by John Corſe, Eſq. 14. Some Obſervations on the Structure of Teeth of Graminivorous Quadrupeds, by Everard Home, Eſq. 15. Experiments to determine the quantity of Tanning Principle and Gallic Acid in the Bark of various Trees, by George Biggin, Eſq. 16. Eſſay on the Reſolution of Algebraic Equations, by Griffin Willſon, Eſq. 17. On the different Sorts of Lime uſed in Agriculture, by J. Tennant, Eſq. 18. Experiments and Obſervations on Skin and Bone, by Charles Hatchett, Eſq. and, 19. A Catalogue of Oriental Manuſcripts, preſented by Sir W. and Lady Jones, by Charles Wilkins, Eſq. Such is the contents of this volume. Of the above papers three are agricultural, the twelfth, fifteenth and ſeventeenth; which we ſhall abridge for the uſe of our readers. We lament to ſee, among the very numerous liſt of members of this ſociety, ſo few contributors; and think, if ſome regulation was made to render the preſentation of a paper neceſſary to admiſſion, it would be of ſervice both to the ſociety and the public.

IX. *Tranſactions of the Linnæan Society. Vol.* 5. 4to, boards, 21s. This Society, although in its infancy, as it may be called, having not been eſtabliſhed more than eleven years, has ſhewn great induſtry and application, having already produced five valuable volumes. That now before us contains no leſs than thirty-one papers, and is embelliſhed with thirteen plates, ſome of them coloured. Theſe volumes certainly form a very valuable addition to natural hiſtory. One complaint only we have to make againſt the contributors to theſe tranſactions; that they confine their attention too much to botanical reſearches, and neglected other parts of natural hiſtory. In ornithology, zoology, and entomology, there are very few papers; and in mineralogy we have met with ſcarce any in the firſt volume.

X. *The Geographical Syſtem of Herodotus examined and explained, by a Compariſon with thoſe of other ancient Authors, and with modern Geography. By James Rennell, F. R. S. L. & G. and late Major of Engineers, and Surveyor General in Bengal.* London, 4to, 1800. 766 pages. *Two guineas.* — Major Rennel, who ſome years ſince publiſhed a map of Hindoſtan, on a very extenſive ſcale, and a judicious memoir which accompanied the map, has this year given to the world the preſent volume, being the firſt of a ſyſtem of ancient geography, and which promiſes to be a work of conſiderable extent and utility. The volume now offered, as its title imports, is the geographical Syſtem of Herodotus; but is not ſolely confined to that object, as, in the courſe of the work, diſſertations on the itinerary ſtate of the Greeks, on the expedition of Darius Hyſtaſpes to Syria, on the poſition of ancient Ba-

bylon, on the alluvions of the Nile and canal of Suez, on the temple and Oaſes of Jupiter Ammon, and on the circumnavigation of Afrina, are inſerted.

This very extenſive ſurvey of the knowledge the ancients had of the globe, is embelliſhed with ſeveral well drawn maps; one of which ſhews how very confined the knowledge of the Greeks in theſe days was. The ſouthern coaſt of the Baltic, and Britain, bounded their geographical line to the north. Africa, or at leaſt that part of it near the ſea coaſt, they had a better information of; and their inveſtigation to the ſouthward in India ſeems bounded by the river Nerbudda.

The continuation of this work, depends, we are told, on the ſucceſs of the preſent volume. We think, and we ſincerely hope, that neither the author or public will be diſappointed. At the ſame time that we give all due praiſe to the work, we cannot help reprobating the author's ridiculous practice of introducing, in a work of ancient geography (without any apparent reaſon) political alluſions to modern affairs.

XI. *Journey from India towards England, in* 1797, *by a Journey commonly called Overland, through Countries not much frequented, and many of them hitherto unknown, to Europeans.*—Our Indian poſſeſſions are, in a commercial point of view, of ſo much importance to us, that every thing which can facilitate the paſſage from one country to another, is of valuable tendency; and Mr. Jackſon is of opinion, that the route he took was the moſt expeditious for ſending diſpatches to India. He ſailed from Bombay to the Perſian Gulph, and then proceeded by the Euphrates to Bagdat. Here Mr. J. equipped himſelf like a Tartar. He paſſed through Meſul, the ancient Nineveh, to Diarbeker on the Tigris, Armenia, and Natolia in Aſia; and Romania, Bulgaria, Wattachia, and Tranſylvania in Europe. He embarked at Bombay on the 4th of May 1797, and arrived at Hamburgh on the 28th of October; but as Mr. Jackſon travelled without any motive of expedition, undoubtedly the journey may be performed in a much ſhorter time.

XII. *Travels in England, Scotland, and the Hebrides, undertaken for the Purpoſe of examining the State of the Arts, Sciences, Natural Hiſtory, and Manners of Great Britain.* By M. Fanga's de St. Fond. Paris. Tranſlated from the French, and publiſhed in London, 2 vol. 8vo.

M. St. Fond's name is well known to the literary ſcientific man. He made this tour as long ago as the year 1784, with the view expreſſed in the title page; and the obſervations of a learned and inquiſitive foreigner, cannot fail to afford entertainment to a Britiſh reader. The great object of M. St. Fond's purſuits, however, were mineralogy; and he introduces mineralogical deſcriptions of the country round Newcaſtle-upon-Tyne, of the mountains of Derbyſhire, of the environs of Edinburgh, Glaſgow, Perth, St. Andrews, Inverary, &c. and a deſcription of the cave of Fingal. In this part of his work, he has committed ſome miſtakes in the Engliſh cuſtoms; but he afterwards ſeems to have become better acquainted with them, and deſcribes them with as much correctneſs as can be expected from a foreigner only travelling through the country.

HISTORY.

National Transactions,

CIVIL AND MILITARY.

BY an overland diſpatch from INDIA, we learn, that every thing was quiet in that quarter, and that the fort of Jemaulabad, the laſt of Tippoo's fortreſſes, had ſurrendered on the 8th of October. That Vizier Ally, the rajah of Benarez, who was concerned in the death of ſeveral of the Company's officers, had been delivered up by the rajah of Jaypore, on condition that his life ſhould be ſpared. The Brave frigate had taken the French corvette Surprize, and, on the other hand, two French cruizers had captured the Princeſs Royal Eaſt-India ſhip, and thirteen country ſhips.

EGYPT. An Armiſtice for a month, was concluded between the Grand Vizier and the French General Kleber, in order to afford time for the adjuſtment of a Convention for the ſurrender of Egypt to the Turks. We have ſince received the terms of capitulation, which appear highly honourable to the French.

TURKEY. The ſurrender of Egypt has cauſed great joy throughout the whole empire, particularly at Conſtantinople. This event, if properly attended to, may be of the greateſt importance to Turkey. The dominion of the Mamalukes is now totally deſtroyed; and it muſt be the fault of the Turkiſh government if they are ever permitted to regain their power. The French have already ſhewn the Turks the immenſe advantages which may be derived to themſelves from this country; capable alone of ſupplying the whole Turkiſh empire with corn, the demands of the greater part of Europe for ſugar, and of becoming, once again, the depot for Indian commodities; in ſhort, of rivaling its ancient ſtate under the Ptolomies, and the Roman emperors.

The French having evacuated Cairo, and the other fortreſſes, and were, by the laſt accounts at Damietta and Roſetta, in which towns the French and Turks mount guard together, and where the former wait for the tranſports which have been ſent from Conſtantinople, Smyrna, &c. to convey them to France. The vizier of Turkey, and the pacha of Acre, who command the two armies ſent againſt the French, are certainly quarrelling, if they have not abſolutely commenced hoſtilities againſt each other. On the other ſide of the Turkiſh empire, Paſſawan Oglou, the rebel chief, is in open hoſtility againſt the Porte, and in full force.

MALTA. The French ſhip of war the Genereux, of 74 guns, convoying a number of tranſports for the purpoſe of victualling this iſland, fell in with the Engliſh ſquadron employed in the blockade, and was captured, with ſome of her convoy. This circumſtance induces us to hope, that the iſland muſt ſoon ſurrender, as it is known that the fort has, for ſome time, been ſhort of proviſions.

On the appropriation of this iſland, the deſtiny of Europe ſeems, in a great degree, to hang. It has been allowed, for ſome time, that the ſiege was carried on with a view to its being delivered up to the emperor of Ruſſia, who has aſſumed the title of Grand Maſter of the Order of Malta; but we are now told, that it is to be taken for the king of Naples, and to this change in its deſtination, is generally attributed the withdrawing of the Ruſſian troops, and the apparent ſeceſſion of the emperor of Ruſſia from an

active part in favour of the coalition. It muſt be remarked, that the Emperor Paul taking upon himſelf the grand maſterſhip of Malta, is contrary to the fundamental rules of the order. The grand maſter ſhould be a catholic, and unmarried; Paul is of the Greek church, and married.

ITALY. The campaign, in this country, may be ſaid to have begun. On the 5th of March, General Maſſena attacked the Auſtrians at Seſtri de Levante, drove them from thence, and took from them between five and ſix thouſand quintals of corn; and on the ſame day, he attacked the inſurgents at Fontana Buona, killed many of them, and burned ſome of their villages. The fate of Italy is, therefore, ſtill in ſuſpenſe. The ſouth, belonging to the king of Naples, ſeems in a moſt diſtracted ſtate; terror, diſorganization, robbery and aſſaſſination, ſeem to reign in every part. The king of Naples and his family are ſtill at Palermo, preparing, we are told, to return to his capital, where there are conſtant executions and tranſportations of thoſe who have eſpouſed the French cauſe.

The Neapolitan troops are in poſſeſſion of Rome, and the Engliſh of Cevita Vecchia; there could, therefore, be no reaſon, why the cardinals who were called together for the election of a pope, might not have held the conclave in that city. But the emperor's influence has kept them ſitting at Venice, with a view, as is ſuggeſted, to ſecure the election in favour of one of his adherents. The chair, however, has fallen on an Italian, and one of the moſt obſcure of the ſacred college, Cardinal Gregorio Barnibas Chiaramonte, who has aſſumed the name of Pius VII. As it is not evidently the intention of either party, that the future pope ſhould reaſſume his temporal power, the combined kings may poſſibly have permitted an obſcure individual to be elected, as leaſt likely to give them any oppoſition.

TUSCANY might, had its benevolent ſovereign been allowed to purſue his own pacific plans, have eſcaped the ſcourges of war; and it has, indeed, ſuffered leſs than any other part of Italy. It is now, however, made uſe of as the depot for the Engliſh commerce, and its port of Leghorn as the rendezvous for the Britiſh fleet, now preparing to proceed againſt Genoa. Near this port the Queen Charlotte, Admiral Lord Keith's flag-ſhip, was lately deſtroyed by fire, and near ſeven hundred men periſhed.

The emperor is ſaid to have, in ſome degree, acknowledged the right of the king of Sardinia to Piedmont: he has conſented that the affairs of that country ſhall be adminiſtered, in that prince's name, and is ſaid to be withdrawing his troops from the garriſons, who are to be replaced by Piedmonteſe.

SPAIN. This kingdom, although deprived of her reſources from South America, by the vigilance of the Britiſh cruizers, ſtill continues cloſely attached to France. The ſmiles of the queen of Spain ſeem to decide the deſtiny of that country: her former favourite, the Prince of Peace, was fond of power, and aſſumed the reins of government; while he ruled, the coalition had a friend at that court, but the preſent perſon in favour, having neither talents or deſire for politics, has brought into power his friend Irquiejo, formerly ſecretary to the Spaniſh embaſſy in England, a man well known in this country for his democratical principles, and for his ſtrong attachment to France. While he remains in power, the deciſion of Spain is irrevocably fixed. Many circumſtances ſeem to portend, that a revolution in this country is not very diſtant. The grandees have long beheld the loſs of power with regret, and although a change of authority from the hands of the king to thoſe of the nobles, is what the miniſter can by no means wiſh, yet, as the revival of the Cortez might appear to lead to a more democratic form of government, it certainly, if demanded, will not be refuſed by the preſent men in power.

PORTUGAL, who has always ſtood in ſome degree of fear of her neighbour (Spain,) has lately concluded a treaty with Ruſſia, in which ſhe has acknowledged Paul as grand maſter of the order of Malta, but reſerves to herſelf the diſpoſal of the property of the order ſituated in the Portugueſe dominions.

The above treaty has caused a great sensation at the court of Spain. The contracting powers stipulate, in case either is attacked, to furnish the other with a certain number of ships, or troops; and it is agreed that the fleet of Portugal shall be employed, in conjunction with the British fleet, against the common enemy.

FRANCE. On the 17th of March the legislative body, on a motion of M. Moreau de St. Mery, resolved that the legislature should, in future, determine in all causes respecting privateering. This law was introduced to prevent the numerous complaints made by foreigners, of the decisions in prize causes. As the time for opening the campaign approaches, proclamations are issued to stimulate the people to join their efforts to those of the government, to repel the enemy. Bonaparte seems to labour, unremittingly, to conciliate the affections of the French, and to rouse a national spirit, which has, for some time, appeared on the decline. He has issued several proclamations, calling on the conscripts, and even on the *veterans*, who are entitled to exemption from service, to join him. His conduct is, however, not steady, and he seems to doubt of the stability of his own power. Indeed, a circumstance has happened, which shews that the power he possesses, if great, is not despotic. A vacancy happened in the senate, and Bonaparte sent a letter to the conservative senate, in whom the election resides, recommending General D'Arcon, one of the most celebrated engineers in France, to be elected; but the senate, without paying any respect to the Grand Consul's recommendation, elected Lanjuinais. The war with the Chouans is most certainly at an end; several of the chiefs have been executed, and most of their deluded followers have laid down their arms. Those who retain them seem to do so more for the purpose of robbing than war.

The legislative body have broken up for the eighth year. The chief Consul's conduct appears marked with great irresolution; he, at one time, declares his intention to command the army of reserve at Dijon; now he has bestowed that command on his friend Berthier, and has, with great difficulty, persuaded the celebrated Carnot, to take Berthier's post of secretary at war. He seems equally desirous to quit and to stay at Paris; for the day of his departure has been more than once altered.

HOLLAND. The Batavian directory, by an arret, have nominated General Angereau, commander in chief of the French troops in their service. The chief Consul of France has written to the government of this country, requiring a loan; whether it will be complied with or no, is uncertain: it is more than probable, that the fears excited by the threatened expedition from this country, will induce the wary Dutchman to comply. Mean while, the government of that country is assiduously employed in raising and training men, and in fortifying every place that can be deemed accessible to the enemy.

SWISSERLAND. The chief Consul of the French republic has communicated to the Helvetic government, the efforts he has made to obtain peace. —We are happy to find, that the distresses of Swisserland are not so great as we had been informed. The smaller cantons have suffered dreadfully, but the larger have not been ravaged; on the contrary, we are assured from undoubted authority, they have suffered so little, that they have it in their power, and are now liberally contributing to the distresses of their brethren. In the vicinity of this country, on both sides, the hostile armies are assembled, ready to recommence the dreadful note of war. As we are now so near the scene of action, it may not be improper here to notice the respective forces of the hostile states.

The armies of the belligerent powers present a most imposing spectacle, and the commencement of hostilities cannot be far distant. The forces of France seem to be thus divided:—Brune commands an army of 60,000 men, in the late revolted departments; and, although the war there seems at an end, his troops cannot possibly be drawn from thence, but must remain to meet the

very powerful bodies of Engliſh and Ruſſian troops, now ſaid to be ready for an expedition to the French coaſt. Moreau has the command of an army, ſaid to be about 120,000 men, extending from the Mein and Necker to the Upper Rhine and Swiſſerland. The amount of the army of Maſſena, in Italy, we do not know, but it muſt be conſiderable; and the Grand Conſul is preparing a body of 60,000 men, to be called the army of Reſerve, and which is to be formed at Dijon. It is this army he, at firſt, declared his intention to take the command.

On the other hand, every effort is made on the part of the emperor, aided by England, to bring an adequate force into the field:—12,000 Bavarians; 4,500 Wirtemburghers; 4,000 of the troops of Mentz, and 2,000 of thoſe of Bamberg, are engaged, beſides the militia of the Voreiberg, of Anterior Auſtria, Swabia, and Franconia, which will form a total of 24,000 men. Theſe, added to the imperial forces, which are ſaid to conſiſt of 66 battalions of foot, of 1,000 men each; 130 ſquadrons of horſe, of 100 each; and 18 companies of artillery, of 100 each, will form a prodigious army—To which, we are informed, will be added 12,000 Bavarians in the pay of England, or engaged to that power by ſubſidy; the corps of Condé, of 5000, and all the emigrant Swiſs, which are reported to amount to 4,000 more; both which corps, it is likewiſe ſaid, will be in the pay of England.

The force of the Auſtrian army in Italy we are quite ignorant of, yet all the accounts from Germany concur in aſſerting, that the campaign will open in that country, and that the firſt operations of the imperial force will be directed againſt Nice and Genoa. The firſt object of the French, it is thought, will be directed againſt Milan, in which, if they ſucceed, the emperor's forces in Piedmont will be cut off from any further ſupplies from Germany.

DENMARK. Through the prudence of her government, obſtinately maintains her neutrality; how far the treaty between Sweden and Ruſſia may induce her to interfere, is uncertain.

SWEDEN. Diſturbances, which manifeſt a very reſtleſs ſpirit in the people of that country, have occurred in ſeveral places, but particularly in Gottenburg, and part of Oſtrogothia, occaſioned by the high price of corn, and a monopoly granted by the crown to a diſtillery, the owner of which, having availed himſelf of his excluſive privileges to raiſe the price of his commodity, rouſed the indignation of the lower order of people, who compelled the diſtiller to fly. The ſcarcity of grain, in this country, appears to forebode much diſturbance.

On the other hand, Sweden has concluded a very important treaty with Ruſſia. By this treaty, each power, if attacked *in any of its dominions*, is to be ſupplied by the other with a certain number of troops and ſhips for its defence, to be paid by the party lending them; but each party has reſerved to itſelf a power to give its quota in money. One of the moſt important articles in this treaty is ſaid to be a clauſe to protect each other's flag from inſult, a clauſe which tends to the ſame point as the celebrated armed neutrality which was entered into about twenty years ago, and which, if perſiſted in, may give a moſt decided turn to the political affairs of Europe.

PRUSSIA. While a great part of Europe is ravaged and deſolated by war, the dominions of the king of Pruſſia enjoy a profound peace, are increaſing in population and commerce, and even reaping a benefit from the misfortunes of her neighbours. Nor do the advantages of his prudent and pacific diſpoſition appear only in his own country, all the north of Germany, within what is called the line of demarcation, enjoy the like exemption from the horrors of war. Some fears have lately been entertained, that one of the belligerent powers intended to treſpaſs on the line, in conſequence of which the cordon of troops ſtationed for its protection has been ſtrengthened.

RUSSIA. The eyes of all Europe are turned to the ſovereign of this country. Laſt year, when his troops were advancing to the ſcene of action,

the moſt ſanguine hopes were entertained of the ſucceſs of the allies, from their co-operation; and the campaign, on the whole, was highly advantageous to the allies; but the ſacrifice made by this monarch to procure theſe advantages, and which have hitherto only tended to the benefit of the emperor of Germany, although not well known to the public, are *felt* by Paul in every point of view. To Italy he ſent 45,000 of the beſt troops of Ruſſia, under the command of the celebrated Suwarrow, and that general carried back with him to the Griſon country only from 8 to 10,000, ſtripped almoſt of every thing. The army, in Britiſh pay, under Korſakow, loſt from 15 to 20,000; and the other Ruſſian armies in Italy, the ſervice of Turkey, and Holland, ſuffered conſiderably: on the whole, the total loſs of Ruſſian troops, in this campaign, cannot be leſs than 70,000 men. This conſideration, added to his diſappointment with reſpect to Malta, and the want of co-operation in the German princes, will readily account for this emperor's conduct, and ſhew, that the allies have little more to hope from him.

AUSTRIA. It ſeems now generally agreed, that this power has, all along, been combatting for its own advantage, and will, probably, take the firſt favourable opportunity to make a ſecond peace with France. It is a well-known fact, that the emperor of Germany, laſt year, refuſed a ſubſidy from this country, which was offered on condition that he ſhould not conclude any ſeparate peace. We do not hear of any ſubſidizing treaty being this year concluded with him, which he probably declines for the ſame reaſon. The emperor, however, ſeems reſolved on one more campaign, and the troops he has brought, and is now bringing into action, are immenſe. His army on the Rhine has, we think, gained a very great acceſſion of ſtrength by the reſignation of the Archduke, and the appointment of that excellent officer Kray.

AMERICA. The will of that juſtly celebrated patriot, General Waſhington, has been tranſmitted to England, and affords a ſtrong proof how deeply the mind of that good man was impreſſed with the ſentiments of humanity and patriotiſm. He has directed that all his ſlaves ſhall be made free, but in ſuch a manner as they ſhall, by no means, become a burthen to themſelves, or others. The lands voted to him for his ſervice rendered his country in the late war, (for he never would accept of any pecuniary acknowledgments,) and his ſhares in ſome inland navigation, he has bequeathed for the eſtabliſhment of a univerſity. Nor has he forgotten the fine arts. Not a perſon related either to him, or his wife, is omitted, but have legacies, greater or ſmaller, bequeathed them in his will, and thoſe in the moſt kind and friendly terms.

GREAT BRITAIN. In the houſe of peers, on Friday the 21ſt of March, a warm debate took place on a clauſe for prohibiting an adultereſs from marrying the perſon with whom ſhe has been culpable, after ſhe ſhall have been divorced. The bill was ſupported by the biſhops of Rocheſter and Durham, and by lords Auckland and Grenville. The ſame day, in the Commons, the third reading of the bill to enlarge the term of the charter to the bank of England, for twenty-one years, ſtood for the order of the day. Mr. Tierney oppoſed the meaſure with ſtrong reaſons, and was anſwered by Mr. Pitt and Mr. S. Thornton; after which the bill paſſed the houſe.

In conſequence of the report made by the committee of the houſe of commons reſpecting the copper-trade, Lord Hawkeſbury brought forward ſeveral reſolutions, which were ordered to be printed, and taken into conſideration on a future day; viz. 1ſt, That the exportation of copper ſhould be prohibited when at a certain price. 2dly, That the importation of copper, duty free, ſhould be allowed when the ſtandard price of copper, in Cornwall, ſhould exceed 100l. per ton. 3dly, And that then a duty of 5l. per ton be laid on all Britiſh copper exported, and a duty of 10l. per ton when it ſhould exceed 105l.—and when it exceeded 110l. that the exportation ſhould be prohibited.

March 25. Mr. Dundas proceeded to open the ſtate of the Eaſt-India company's affairs; or, in other words, to bring foward his Eaſt-India budget. After entering with great minuteneſs into the particulars of each preſidency, he concluded with giving the following general view of the company's receipts and expences for the year 1797-8, and 1798-9.

Amount of revenues for 1797-8.

Bengal	£.5,782,741		
Madraſs	1,938,956		
Bombay	338,183		
		£.8,059,880	
Charges—Bengal	4,031,660		
Madraſs	2,515,772		
Bombay	939,921		
		7,487,363	
Nett revenue		572,525	

For 1798-9.

Revenue—Bengal	6,259,600		
Madraſs	2,004,595		
Bombay	346,110		
		8,610,703	
Charges—Bengal	3,952,847		
Madraſs	2,857,519		
Bombay	996,699		
		7,807,065	
Nett revenues		602,638	

Mr. Dundas then proceeded to ſhew the ſtate of the company's commercial affairs, and other debts, both in England and India, and concluded with ſhewing, that a nett improvement in their ſituation had taken place, to the amount of 1,108,527l.

The next day Mr. Long obtained leave of the houſe to bring in a bill, to enable the lords of the treaſury to iſſue exchequer bills to a limited amount, on all aids and ſupplies granted by parliament for the ſervice of the preſent year.

The Chancellor of the Exchequer, on the 31ſt March, moved ſeveral reſolutions reſpecting a ſupply, particularly for paying off exchequer bills. As he has now finiſhed the votes of ſupply for the ſeaſon, we ſhall give the particulars of the whole expenditure, and ways and means, for the year.

SUPPLY.

	£.
For the navy	23,629,079
army	11,350,079
ordnance	1,694,956
miſcellaneous	750,000
Intereſt due to the bank	816,650
Deficiency of the ways and means, 1799	447,030
Deficiency of land and malt	350,000
To pay off exchequer bills	2,506,250
Deficiency of aids	1,079,730
Deficiency of ſupply, 1800	1,914,000
Reduction of national debt	200,000
Subſidies	3,000,000
	37,728,785
Remain for other ſources	1,771,215
Total of ways and means	39,500,000

These Ways and Means were,

Duty on Sugar, Tobacco, and Malt	-	2,750,000
On Exports and Imports -		1,250,000
Lottery - - - -		200,000
Tax on Income -	7,000,000	
Deduct Intereſt of Loans mortgaged	1,700,000	
	Nett	5,300,000
From Bank, for Renewal of Charter,	-	3,000,000
Vote of credit - - - - -		3,000,000
Loan - - - - - -		18,500,000
Conſolidated fund - - -		5,500,000
		39,500,000

Ireland. After many long, warm and intereſting debates, the Houſes of Parliament of this country, have paſſed various reſolutions, reſpecting the intended Union with Great Britain; the ſubſtance of which, are as follows; The Union to take place the firſt of January next, and the United Kingdoms to be called, "the United Kingdoms of Great Britain and Ireland." The title of the King and the Arms borne by him, to be regulated by his Majeſty; the ſucceſſion to the throne, to continue as it now ſtands. Four Lords Spiritual, by rotation, and twenty-eight Lords Temporal, to be elected for life, to repreſent the Peerage of Ireland, and one hundred members, to repreſent the Commons of Ireland in the Imperial Parliament. The Churches to be United, and one Convocation only held. Exportation and importation to be free, except in ſome few caſes, when prohibitions, bounties, and counter-vailing duties appear neceſſary. The debts of the two countries to continue ſeparate, until they ſhall be reduced to the proportion of 15,17ths for England, and 2,17ths for Ireland, and then to be united. In this proportion, are all finance affairs are to be regulated in future.

To receive the Imperial Parliament of the three Kingdoms, we are informed, that a building, in a moſt magnificent and expenſive ſtyle, is now planning on the ſpot of the preſent Houſe of Lords and Commons, but on a much more extenſive ſcale.

Commercial Affairs.

THE great fluctuation in the price of coals, and the enormous rates at which they have lately been ſold, has at length drawn the attention of the Legiſlature; and from the Committee appointed by the Houſe of Commons, to enquire into the Coal Trade, we may hope to find from what quarter this evil really ariſes; whether from a combination of the coal owners in the North, of the ſhip owners, or of the dealers in that commodity in London. At preſent, there is a prohibition from bringing coals, by the canals, to London.—We beg leave to hint, whether the taking off this prohibition, when ſea coal exceeds a certain price, would not tend to keep down the price of this neceſſary article?

Among other papers laid before the Committee, an account of coals imported into the Port of London, from 1ſt. March 1790, to 1ſt. March 1800.

From 1ſt. March 1790	to 1ſt. March 1791	754,307 chald	2,345 tons.
1791	1792	814,614	2,251
1792	1793	832,358	2,403
1793	1794	815,318	1,500
1794	1795	734,826	1,748
1795	1796	928,743	578
1796	1797	829,684	931
1797	1798	871,097	814
1798	1799	769,047	398
1799	1800	865,804	470
Average of ten years		821,579	1,113

The eſtabliſhment of the Bank of France, mentioned in one of our laſt numbers, is of much more conſequence than is there repreſented. The capital, conſiſts of 30,000,000 of Livres, or 2,500,000l. ſterling. They have begun to do buſineſs, and the directors have in a body, addreſſed the Conſuls of France, and offered to aſſiſt the government of their country, as far as in their power. Whether opening a commercial bank for this purpoſe, will ſupport its credit, time only can determine. We, however, noticed, at the foot of the addreſs, the names of ſome of the moſt reſpectable houſes in Paris.

A new inſurance company has been for ſome time in agitation in this metropolis, which, if it is eſtabliſhed, promiſes to be of great utility. It embraces every part of inſurance, fire, lives, and ſea inſurances. An act of parliament paſſed, to enable the King to grant a charter laſt ſeſſions, but ſome objections having ariſen to the paſſing of the patent, we believe an account of its militating againſt the excluſive charters of the London and Royal Exchange Inſurance Companies. The name the proprietors have choſen, is that of *The Globe*; the capital is to be 1,000,000l. ſterling; among the directors are ſome of the richeſt and moſt reſpectable men in London.

From India, we learn that a great number of country ſhips have been burned. So many have been deſtroyed this way, that certainly all of them could not ariſe from accident. It has been generally thought to have been cauſed by the cuſtom of paying the Laſcars, or black ſeamen, four or ſix months pay in advance, which has induced the abandoned part of this people to ſet fire previouſly to the ſhips, and by that means, get rid of their contract. To prevent theſe accidents, the Governments of the Company's Settlements, have determined, that theſe men, belonging to ſhips burned in harbour, ſhall ſerve the remainder of their time, for which they had engaged in the public works

As a proof to what extent the commerce of Hull is now arrived, it appears, that the duties and cuſtoms for one year, amounted to 320,000l. and thoſe of exciſe, to rather more than 200,000l. the tonnage of ſhipping, cleared for foreign parts, was 94,560, for the coaſting trade, 58,250 ton. The laſt convoy, which ſailed from thence to the Baltic, had on board manufactures of woollen to the amount of 800,000l.

The poſt office, in conſequence of a report made by Mr. Auſt, one of their ſurveyors, has reſolved to extend the communication of the poſt from Lewes to the eaſtern extremity of Suſſex. A daily poſt has alſo been ordered between London and Bridlington for the convenience of the commercial part of that country.

The manufacturers of wool have had a meeting, with a view, to petition againſt a clauſe in the treaty of Union with Ireland, which they conceive will militate very much againſt them. As by that clauſe, raw wool may be exported to Ireland, manufactured there, and then imported in cloth to this country, at a lower rate, than, conſidering the relative price of labour in the two kingdoms, it can poſſibly be manufactured here. In a public advertiſement, the dealers declare, that it is not their wiſh to impede the Union, but only to ſecure a protecting clauſe in their favour.

Manufactures and Useful Arts.

TWO patents have been lately obtained for an improved method of making bricks and tiles by machines, inſtead of manual labour.

The Rev. Mr. Hagget, Prebendary of Durham, has diſcovered, that flour kneaded with bran water, will produce one fifth more of bread than if kneaded with plain water; and the bran is not loſt or injured by the boiling. Mr. Hagget boiled five pound of bran, with the liquor ſtrained from it, he kneaded fifty-ſix pounds of flower, adding the uſual quantity of ſalt and yeaſt. The weight of the whole before it was put into the oven, was 93lb. 13 oz. about 8lb. 10 oz. more than the ſame quantity of flour kneaded in the common way, It loſt in baking, 10lb. 5 oz. The ſame quantity of flour kneaded in-

the common way, loſes 15lb. 11 oz. Thus a clear increaſe of one fifth is obtained. The reaſons are obvious; bran water weighs half a pound more in the gallon than common water, and evaporates leſs with heat.

Mr. Bolton, of Soho, near Birmingham, has invented a coining machine, which is adapted to work eight dies at a time, and each is capable of throwing off, from ſeventy to eighty-four pieces in a minute; which is equal to between 30 and 40,000 in an hour, and at the ſame blow, which ſtrikes the face and reverſe, the edge of the piece is alſo ſtruck.

Mr. Harmer of Sheffield, has obtained a patent for raiſing a ſhag on all ſorts of woollen cloths, and cropping and ſhearing them; and alſo for cropping and ſhearing fuſtians.

Meſſrs. W. and J. Turner, of Lane-end, Staffordſhire, have taken out a patent, for a method of manufacturing porcelain and china-ware, from the rocky ſubſtance, in the county of Stafford, known by the name of Tabberner's Mine Rock, little Mine Rock, and New Rock. This material, ground in the uſual manner, and mixed with one ſixth part of ſilicious earth, produces a pottery, that requires a leſs degree of heat in burning than any now made.

Some accounts having appeared of the ſurpriſing length that has been produced out of a pound of coral by nice ſpinning. The following very accurate ſtatement on the ſame ſubject was publiſhed a few years ſince, and may be deemed well worth the attention of the curious, particularly the ladies.

A hoe of woollen yarn meaſures in length, 80 yards.

A hank of ditto, by the cuſtom of Norwich, conſiſts of ſeven lees.

Twenty-four hanks in the pound, is eſteemed good ſpinning in the ſchools, 13,440 yards.

Twenty hanks in the pound is eſteemed ſuperfine ſpinning at Norwich, 39,200 yards, or 21 miles.

One hundred and fifty hanks on the pound, were ſpun in 1754, by Mary Pringle, of Eaſt Deriton, in Norfolk; and this was thought ſo extraordinary, that an account of it is regiſtered at the Royal Society, 85,000 yards, or 48 miles.

Three hundred hanks in the pound, have already been ſpun by Miſs Ives, and though, this young lady has carried the art of ſpinning combed wool to ſo great a degree of perfection, ſhe does not deſpair of improving it one ſtile farther, 168 yards, or 95 miles.

Mr. Kerwan, the celebrated Iriſh chemiſt, has been employing himſelf, in inveſtigating the compoſition and proportion of carbon in bitumen and mineral coals, and has determined, that the beſt coal for common purpoſes is that where the carbon is to the bitumen, nearly in the proportion, of five to four, which is nearly that of the component part of Newcaſtle coal. The Kilkenny, the compact canal, and the Swanſea, contain the largeſt proportion of carbon, the Wigen, the ſlaty canal, and the Whitehaven, the largeſt proportion of bitumen.

A very handſome pump has been erected in the front of the Royal Exchange, over the well lately diſcovered in Cornhill. The caſe is of iron, and forms a lofty and very handſome obeliſk. It is elegantly painted and decorated with emblematic figures, among which is the plan of a houſe of correction, which was built on the ground adjoining the pump in 1282, by *Henry Wallis*, Eſq. then Lord Mayor of London.

One ſide of the Pump bears this inſcription—"This well was diſcovered, much enlarged, and this pump erected in the year 1799, by the contributions of the Bank of England, the Eaſt India Company, the neighbouring Fire Offices, together with the Bankers and Traders of the Ward of Cornhill."

On the reverſe theſe words appear:—

"On this ſpot a Well was firſt made, and a Houſe of Correction built, by *Henry Wallis*, Mayor of London, in 1282."

A Mr. Cumberland, of Biſhopsgate, near Egham, in Surrey, has made a moſt important diſcovery, that ſugar may be made at a very cheap rate in

Great Britan, and in any part of Europe, from the Turkey corn, or American wheat. The fruit was gathered in October, the juice preſſed by means of a roller, and reduced to a ſirup by the ſimple proceſs of boiling.

Meſſ. Dixie and Bramſtone have obtained a patent for raiſing water from wells, and other deep places. It conſiſts of a chain revolving round a wheel; to each link of the chain is a bucket of ſome metal, which bucket, as the chain paſſes through the water, fills, and on their coming up to the vertical wheel on which the chain works, empty their contents into a trough.

Serious apprehenſions are entertained, that the farmers, in the fens of Lincolnſhire, and the iſle of Ely, will be conſiderable ſufferers this year, having been prevented from getting their ſeed into the ground, in conſequence of the wetneſs of the ſeaſon.

A correſpondent informs us, that good ſoil, manured by lime and tanners' exhauſted bark, and improved moſs and ſoil, manured by lime, will produce a moſt excellent crop of potatoes, which would afford much food for the poor.

A French agriculturaliſt of celebrity, (Cadet de Vaux,) has lately publiſhed ſome reflections, to prove that the ſcarcity of water, in ſome parts, may be aſcribed to the deſtruction of woods, and aſſerts, that theſe two circumſtances have occaſioned, in ſome parts of France, an extraordinary barrenneſs. His obſervations have made ſo great an impreſſion on ſome adminiſtrative bodies, that they have planted a number of trees upon the common grounds in their juriſdictions.

The ſeed of celery is ſaid to make as good ſoup as the root itſelf, and the green leaves of celery, hung up and dried, make, when pounded, a good ſubſtitute for the root.

The corporation of Leiceſter, with a truly benevolent ſpirit, have permitted ſome fields, in their poſſeſſion, to be ſowed with potatoes, and other vegetables, for the uſe of the poor.

The King has cauſed an overſhot mill to be erected, and worked by the waſte water which falls from the lake below the lodge, in Windſor park. A ſufficiency of corn, two-thirds wheat, and one third rye, is ground and dreſſed, and diſtributed to all the labourers at 14d. per ſtone of 14lb, in quantities ſuitable to the ſize of their families.

To lovers of gardening it may, perhaps, not be unacceptable to know, that painting the walls black greatly forwards the ripening of fruit. Experience has proved, that a vine of an uncommon ſize, which even in the hotteſt years would not produce any ripe fruit, has now, for ſeveral years, regularly yielded the fineſt grapes; all other fruit, the trees of which are planted againſt that black wall, ripen thirty or forty days ſooner than thoſe in the neighbourhood.

Mr. Clay, of Birmingham, has obtained a patent for making buttons of ſtate, cut into their layers, and then into the ſhape of the button.

Return of the quantity of broad and narrow cloth, made in the Weſt Riding of York, within twelve months:—

Pieces of broad cloth	272,755
Increaſed laſt year	48,596
Yards	8,806,688
Increaſed in yards	1,692,574
Pieces of narrow cloth	180,168
Increaſed laſt year	31,610
Yards	6,377,277
Increaſed in yards	1,106,962

We learn that a quickſilver mine has been diſcovered in England, which promiſes to be very productive.

Mr. Morecroft, of Oxford-ſtreet, has, with indefatigable perſeverance, brought to perfection his machine, or rather ſeries of machines, for making horſe-ſhoes. The proceſs is remarkably expeditious. The bars of iron being cut into the proper lengths, theſe lengths are heated in the furnace, and

being taken out, one by one, with a pair of tongs, are placed in the first machine, which work, with a lever, and, by one quick motion, gives the necessary *circular* shape to the intended shoe. It is instantly removed to the second machine, which operates like an engine for drawing piles, and by one stroke, makes the shoe complete, except the holes. A third machine pierces these holes with equal expedition; and a fourth smoothes the roughness which necessarily remains on the reverse of any substance in which holes are made by great force. Thus is the whole process complete in a very short period of time, and it is incredible the number of horse-shoes this apparatus will complete in an hour. These shoes have a great advantage over those which are commonly made, as they are better fitted to the natural shape of a horse's feet.

The following MANUFACTORIES *are carried on in the city of* MANHEIM.

The *Silk* manufacture was established in 1782 by Mr. John P. Regal, in an extensive building erected for that purpose in the suburbs of the city. The garden, called the Herren-garden, attached to this erection, is extensive, planted entirely with mulberry-trees, with a long range of buildings for the worms to spin their silk. The principal object of this manufactory is to extend the culture of silk throughout the palatinate. Silk-stockings and linen are also manufactured with considerable success in this *fabrique*.

The *Wax* manufactory was erected in 1769, by a society under the firm of Ernstaud and Co. His Highness was so pleased with the spirit and taste of the proprietors, that he has granted them many privileges. Every species of wax is manufactured—here the white and yellow are said to be of the first quality, as well as fancy candles and marbled soap.

The *Woollen* manufactory was established in 1760—The progress, at first, was slow, but at present the demand is considerable.

The manufactory of *Tobacco* is very extensive.

A *Pin* manufactory has been lately erected, with that of *Black Soap*—Some of these manufactories are on a very extensive scale, particularly the silk and woollen; and notwithstanding the war has, in a great measure, arrested the progress of the shuttle, on the return of peace, however, they promise to rival the first of the kind in Germany.

LAW.

GUILDHALL, LONDON, APRIL 25, 1800.—SITTINGS BEFOER LORD ELDON AND A SPECIAL JURY OF MERCHANTS.—CARTWRIGHT AND ANOTHER, *v.* AMATT AND ANOTHER.

THIS was an action on the case brought for the infringement of three different patents, which had been obtained by the Rev. Edmund Cartwright, for an invention for the combing of wool by machinery. The first dated April 27, 1790, the second, Dec. 11, 1790, for improvements and additions, and the third on the 15th of May 1792, for still farther additions and improvements. The damages were laid at 15,000l.—These patents were assigned over to the inventor's brothers, who are the plaintiffs, on the 16th of November 1793. In 1795, the defendants obtained a patent for a machine, the proposed object of which was, also, the combing of wool, and which was supposed to be pirated from the plaintiffs.

After a very able opening from Mr. Serjeant Cockle, he called a number of ingenious witnesses, and particularly the Earl of Stanhope, who spent near four hours in explaining the nature and principles of the plaintiff's machine, and in which his Lordship discovered much knowledge of mechanics.

After a most elaborate speech from Mr. Serjeant Shepherd, whose great object was to shew that the defendant's machine was so different from that of the plaintiff's, as to be fairly the subject of a patent; he called his first witness, in behalf of the defendants, but many more remaining to be called, the Court at a very late hour adjourned till the next morning.

On Saturday morning the re-examination of the defendant's witneſſes was reſumed. At ſix in the evening, Serjeant Cockle made a very able reply for the plaintiffs. Lord Eldon, in a charge to the Jury of two hours and a half, ſummed up the evidence with great clearneſs, ability, and preciſion; the Jury retired for about an hour, and brought in a verdict for the plaintiffs with 1000l. damages.

Agriculture.

MONTHLY REPORT OF AGRICULTURE, FROM THE MIDLAND COUNTIES, FOR APRIL, 1800.

THE almoſt inceſſant rains which prevailed for ſome time previous to the 14th of this month, prevented barley, oats, clover, &c. from being ſown, even in the dryer and lighter ſoils, till about that period. On Eaſter Monday a favourable change took place, without producing any very material variation in the barometer, which continued low; but it had a more viſible effect upon the farmer, who, like the impriſoned bird that had long ſeemed to wait impatiently for enlargement, was now ſeen alert in thoſe fields which had lain hitherto unploughed, or in thoſe which were prepared to receive their vernal grain. The briſk arid winds, which continued for ſome days after the 14th, dried moſt of the arable lands ſufficient for the purpoſes of huſbandry; and theſe days exhibited a ſcene truly exhilerating to the Britiſh mind, when was conſidered the alarming ſcarcity which we have long experienced. The wheat crops, almoſt univerſally, promiſe abundance. In travelling through a courſe of country, of not leſs than forty miles, the writer of this report ſaw only one wheat field, of about two acres, that had ſuſtained any injury; and, in that, the ſeed had almoſt entirely periſhed—a few ſtraggling blades only being viſible:—the proprietor meant to re-ſow the piece with oats or barley. Perhaps a prudent rolling after the laſt long dry froſt, which might throw the ſeed upon the ſurface, would have enſured a crop.

The graſs-lands alſo, every where, look remarkably well; and if "the Giver of every good gift" be pleaſed to bleſs us with a genial May, the ſcythe of the mower will meet with ſufficient employment—probably *more* than has been known for many years. This ſurmiſe ſeems authorized by the following reaſon:—more manure was carried upon the ground laſt winter than was ever before recollected; owing to the fine dry froſts continuing ſufficiently long to render even the worſt pariſh lanes completely paſſable, as well as to harden the ſwampieſt meadow-lands, ſo as to permit even thoſe deſtructive vehicles of all roads and paſtures—*narrow-wheeled* carts and waggons, to convey manure wherever it was found moſt needful. Scarcely a farm-yard is to be ſeen but what was then completely cleared of its putriſcent and fertilizing bounty; in many places it had been accumulating for an unuſual length of time, owing to there not occurring a favourable ſeaſon earlier to remove it. The ſucceſſive rains in March, and till the 14th of April, have effectually waſhed it into the ground, leaving little to be dried up by the wind, or exhaled by the ſun. In the vicinity of populous towns, in general, the fields have been remarkably well manured, the laſt winter, by the ordure collected in the public ſtreets. Formerly, a premium uſed to be given, in many places, to certain individuals to carry it away: they, whoſe land lies contiguous, now begin to be very willing to carry it away gratis; and its value, perhaps, will ſoon be ſufficiently known, to induce perſons of this deſcription to allow a premium for it. After being taken from the ſtreets, it ought to lie in a body for a few months previous to its being ſpread upon the ground.

During the Eaſter week, ſome hundreds of freſh barren cows paſſed through Newport, Salop, from Lancaſhire and Yorkſhire, into the midland counties, for ſale; they were bought at the average price of 11l. per head. The

drovers, dealers, jobbers, and butchers, are unanimous in their opinion, that ſo great a number of barren cattle was never before known in their memory as at the preſent time—an impreſſive warning, ſurely, to farmers, &c. *not to kill any cows but what are barren, and alſo to rear as many cow calves as poſſible.* Should this matter not be attended to, a moſt calamitous ſcarcity, indeed, may be the conſequence! AGRICOLA.

The Farming Society mentioned, in one of our former numbers, to have been inſtituted under the care of Sir Jonn Sinclair, continues to increaſe in its number of proprietors, and amount of capital; between 30 and 40,000l. were ſubſcribed. The charter for its eſtabliſhment is now paſſing through the proper offices, and a very eligible ſpot of ground is ſecured in the neighbourhood of Merton, in Surry, for the firſt experimental farm.

The following is an abſtract of the bill for the regulation of the price of bread, of flour, and regulating the aſſize.—

Magiſtrates are to ſet the aſſize of flour by the average price of wheat, and the price of bread by the price of flour. Tables are annexed to the bill, ſhewing the manner in which it is to be done, and by which it appears the miller is to be allowed 4 per cent. when wheat is at a high—5 per cent. at a middling—and 6 per cent. at a low price. Deductions are to be made from the ſack of flour in proportion to the bran and pollard, and the price of bread is to be ſet at twenty-one peck loaves to the ſack.

All wheat is to be ſold by weight, and public ſcales are to be erected in every market-place for that purpoſe. The perſons to pay one penny for weighing every two hundred weight and a half. The proviſions in the old act to be obſerved, with ſome alterations.

The following is the allowance which it directs to be made to bakers:

The baker is allowed for baking each ſack of flour.			Allowance for each peck loaf.		
£.	s.	d.	£.	s.	d.
—	6	—	—	—	$3\frac{1}{2}$
—	7	—	—	—	4
—	8	—	—	—	$4\frac{1}{2}$
—	9	—	—	—	$5\frac{1}{4}$
—	10	—	—	—	$5\frac{3}{4}$
—	11	—	—	—	$6\frac{1}{2}$
—	12	—	—	—	$6\frac{3}{4}$
—	13	—	—	—	$7\frac{1}{4}$
—	14	—	—	—	8

A very remarkable Devonſhire heifer was killed on Thurſday ſe'nnight, from the ſtock of Sir King Mildmay, at Dognurſfield; ſhe meaſured only $13\frac{1}{2}$ hands in height, and weighed, when alive, 1300 and a half: her carcaſe weighed 134 ſtone, including the inſide fat, which amounted to 147lb.; her bone only meaſured ſeven inches below the knee of her fore-leg. All the moſt eminent graziers in the ſouth of England, pronounced her to be ſuperior to any beaſt of her ſize which has yet been brought to market; ſhe was taken from graſs three days before Chriſtmas, and has ſince been fed ſolely on turnips and carrots.

On the 24th ult. at Marden, near Woolle, in Northumberland, an ewe, the property of J. Reed, Eſq. yeaned five lambs, four of which are ſtill living; the other appeared to be ſomething of an embro fœtus, though nearly perfect. What tends to heighten aſtoniſhment is, that the ſame ewe had an equal number at each time, for the two preceding years.

On ſome mountain in South Pruſſia, a plant has been diſcovered which yields a beautiful ſilk. It grows on dry mountains covered with buſhes, to the height of three or four feet, has roots of the ſhape of graſs, a ſoft ſtalk of the thickneſs of a quill, covered with a firm, ſilky bark, and a fruit ſimilar to that of the ſilk plant in Syria, but the pods containing the ſeed of ſilk are ſmaller. The ſilk is found equal to the Syria ſilk.

A ſociety for the improvement of agriculture has been eſtabliſhed in Dublin, who are buſied in procuring an agricultural ſurvey of the country.

An oak has been felled on an eſtate of Sir Thomas Gaſcoigne, in Yorkſhire, which was eighty feet in height, eight feet and a half in girt, and contained three hundred and forty feet of timber.

We obſerved that ſome provincial agricultural ſocieties have been eſtabliſhed for giving ſmall premiums for producing the beſt cattle, horſes, bulls, cows, or ſheep, of a given ſpecies. We hope to ſee theſe little ſocieties increaſe, as they promiſe to be of the greateſt advantage.

An action was brought before a ſpecial jury, at the late aſſizes at Lincoln, by —— Ibbetſon, Eſq. to recover 233l. damages, which he had incurred in conſequence of the defendants having ploughed up fifty acres of paſture and meadow land without permiſſion of his landlord. A verdict was given for the whole ſum.

Natural Phenomena.

ALTHOUGH the following circumſtance ſeems to have happened without any apparent cauſe, yet there is reaſon to believe it muſt have been occaſioned by ſome ſlight concuſſion of the ſurrounding rock or earth. Part of the three gigantic figures in the ſubterraneous cavern, in the celebrated cave in the iſland of Elephanta, near Bombay, fell down:—a circumſtance which the bigotted Portugueſe, when they poſſeſſed that iſland, could not effect, even by the help of field-pieces of ordnance. This cave has, for a great length of time, been viſited by parties from the continent, to view one of the greateſt works ever attempted. This aſtoniſhing excavation is hewn out of the ſolid rock, and forms a temple ninety feet long and forty broad, ſupported by two regular rows of equi-diſtant pillars: at the end ſtand the three figures above-mentioned, the *face* only of one of which is full five feet long. Some paintings round the cornices are ſtill in good preſervation, although they are thought to be cotemporary with the building itſelf. The floor is generally covered with water, which cannot ſoak or drain off, and is thought by ſome to have cauſed the above mentioned fall. No book, tradition, or even conjecture, has thrown any light on the origin of this ſtupendous work.

An Eaſt-India country-ſhip fell in with a large ſhoal, which has been thrown up by the late great earthquake which ran along the coaſt of Sumatra. This ſhoal has not before been diſcovered, and an accurate account taken of its bearing has been made public: N. lat. 2 deg. 47 min. long. 96 deg. 35 min. weſt of London; diſtant from ſhore three or four leagues—extremities of land N. E. by N. and N. W. by N. A remarkable hillock appears on the land, with a circular, projecting top.

From Patna, in the Eaſt-Indies, they write, that a large flight of locuſts were ſeen to paſs that place; they came from the north-weſt, croſſed the Ganges, and were about half an hour in paſſing over the ſpectator's head; they were, afterwards, ſeen like clouds at a diſtance: the natives appeared much alarmed at ſeeing them go ſo quick, and in ſo regular a body.

On the 12th of January, about eight in the morning, ſeveral perſons in ſouthern Pruſſia ſaw three ſuns appear on a ſudden: they roſe majeſtically from the horizon. At ſeven o'clock the ſky was clear and ſerene; a few mitutes after it was covered with clouds, and at half paſt eight there were ſeen, in the eaſt, three columns of fire: the middle one roſe to the height of 45 degrees; the two others, formed by the two other ſuns, were only one-third as large as the middle one: they ſeemed to burn like a blazing fire, and, as they roſe, produced a majeſtic and awful effect.

Another phenomena has occurred in Poliſh Pruſſia. Near the village of Laborin, in the diſtrict of Pizadeze, is a lake about a league long, and near three quarters of a league broad. This lake was, all at once, covered with red ſpots, and pieces of red matter appeared on the water, ſome of them five

inches thick. Three members of the adminiſtration proceeded to take cognizance of this phenomenon, and they perceived not only ſpots of a bloody, and, in ſome places, with red and green ſpots, and, in others, with purple and violet ſpots; they cauſed the ice to be broken a foot from the land, and they found a cruſt of red and green three inches deep. Having penetrated to 11 inches they found a red and green ſubſtance, ſome of it glutinous. On taſting it was found acid, and produced an immediate and great pain in the temples and ſtomach. Experiments are making at Berlin to aſcertain what it is.

On the 9th of April, juſt after a ſhower of rain, the inhabitants of Stoke, by Clare, in Suffolk, were alarmed by the ſudden appearance of a numerous ſwarm of animals on the village green, much like grub-graſshoppers, they remained for ſome hours, and the herbage in which they ſettled was found, ſoon after, to have loſt much of its verdure: they were ſeen next day in the neighbourhood, grubbing up a young hedge-row on the road-ſide, and are conſidered as locuſts of a very deſtructive ſpecies.

From Liſbon they write, that on the night of the 26th of February, a very ſevere ſhock of a vertical earthquake was felt there, which threw down the old palace and ſome adjoining houſes; and a ſecond ſhock was experienced at three in the morning. The former took place in a tremendous ſtorm of rain, which was ſo heavy as to waſh away a great quantity of ſtones and part of the ruined palace, and to carry them near fifty yards. The inhabitants were much alarmed; but no lives were loſt.

Fine Arts, Science and Literature.

THE cloſe of Lent having given way for the feſtive jollities of Eaſter. During Lent, oratorios were, as uſual, performed at Covent Garden houſe; but got up in a very poor ſtile, both as to vocal and inſtrumental performers.

On the Eaſter Monday, according to the annual cuſtom, the theatres belonging to Aſtley's, the Circus, and Sadler's Wells, all opened for the ſummer ſeaſon.

At this period alſo, exhibitions of various kinds are brought forward; but one of the moſt ingenious, is that of Mr. Cartwright at the theatre of the Lycæum in the Strand, who exhibits a very fine diſplay of his new invented fire works, by means of inflammable air.

The Royal Academicians are preparing their exhibition at their rooms in Somerſet-Place; the *hanging* committee, as they are called, are buſily employed in fixing up the vaſt number of pieces now before them, which, we are told, exceed even thoſe of laſt year.

A taſte ſeems alſo to be riſing for natural philoſophy and chemiſtry; lectures in which ſciences are now advertiſed by Dr. Moyes, Mr. Walker, Mr. Varley, and others.

The new eſtabliſhment, planned by Count Rumford, and patroniſed by his Majeſty, called "The ROYAL INSTITUTION," having obtained a charter, opened on the 5th of March, at a houſe purchaſed for the purpoſe in Albemarle Street. We think we may ſay, that no inſtitution in this country has met with ſuch great encouragement. It can already boaſt of near two hundred proprietors, who have paid down the ſum of fifty guineas each, near five hundred life ſubſcribers, at ten guineas, and a great number of annual ſubſcribers at two guineas. Every thing is here conducted on a very extenſive and expenſive ſcale, inſomuch that the proprietors have already found themſelves obliged to raiſe their ſubſcriptions for the year to three guineas, and their life ſubſcriptions to twenty. Three courſes of lectures are read, one on experimental chemiſtry, another on philoſophical chemiſtry, and a third, a technical courſe of natural philoſophy, mechanics, and chemiſtry.

Dr. GARNER, who has long been known for his philoſophical and chemical lectures at Glaſgow, is appointed the Profeſſor, and reads the three courſes. Next year a theatre for the lectures is to be built, capable of holding one thouſand perſons.

We ſhall give an hiſtorical view of this ſociety in a future number.

An officer of long ſtanding in the army, has propoſed to give a courſe of military lectures, which are to comprehend theory, practice, field fortification, and ſelect principles of attact and defence in the field. The whole to be fully explained by drawings prepared for the purpoſe. Few lecturers ſeem to deſerve encouragement more than this; as it is certain the education of the officers of our army, except thoſe who are bred in the academy at Woolwich, is ſhamefully neglected.

Morals and Manners.

AMONG the many excellent inſtitutions for the relief of the poor, a ſociety has lately been eſtabliſhed for thoſe who are afflicted with ruptures, under the patronage of the Right Honourable Henry Dundas, preſident; Sir Francis Blake, Sir Walter Farquhar, Dr. Garthſhore, Mr. Heavſide, and Mr. Fuller, vice-preſidents. Among the ſubſcribers we obſerve the two archbiſhops, and many of the firſt nobility.

Houſes for the ſale of ſoup at an eaſy price to the poor, are opened in many of the great towns of England, (we particularly noticed York and Stafford) ſupported by the voluntary contributions of the benevolent inhabitants of thoſe places.

By a report made of the ſtate of theſe very excellent eſtabliſhments, Sundays ſchools, we learn, that 1516 ſchools have been founded; 156,400 ſcholars admitted, and 131,836 ſpelling books, 31,328 Teſtaments, and 6244 Bibles, have been diſtributed among them.

ALPHABETICAL LISTS OF BANKRUPTCIES AND DIVIDENDS,

Announced between the 20th of March, and the 20th of April, 1800.

Extracted from the LONDON GAZETTE.

BANKRUPTCIES.

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

ALLEN, T. Latford, Lancaſter, Cotton manufacturer (Clough, Manchester, Edge, Temple).

Boyd, W. P. Benfield, & J. Drummond, of Lexan, merchants. (Greg and Corfield, Skinner's hall, London).

Bake, J. Manchester, corn-dealer. (Fawcett, Manchester, Swale, Clifford's Inn, London).

Buttivant, A. Solitutt, Warwick, victualler. (Spurrier, Birmingham, Egerton, Gray's Inn).

Carr, W. Peacock, Kingſton, Surrey, ſhopkeeper. (Philpot and Gildard, Red-lion ſquare).

Carr, R. Buſil, St. George's in the Eaſt, merchant. (Patcher, Clement's Inn).

Cole, E. Exeter, taylor. (Hemmer, Exeter, Darke, Prince's ſtreet, Bedford-row, London).

Cooper, J. Epſom, Surrey, brewer. (Butt, jun. Farrington-ſtreet, Ratcliffe Highway).

Child, E. South ſtreet, St. Luke's, dealer. (Barnett, Soho ſquare).

Corri, D. Haymarket, muſic-ſeller, (Cokayne, Lyon's Inn)

Clearſon, S. Strand, carver and gilder. (Fox, Parliament ſtreet).

Drakeford, J. Birmingham, Warwick, patten-tye cutter (Gem and Small, Birmingham, Bolton ſand Speke, Elm court, Temple).

Dayles, W. Hereford, grocer. (Aſton, Hereford, Street, Philpot lane, London.

Dimock, M. Liſter, Southwell, Nottingham, ſchemiſt and grocer. (Gafrard, Olney, Whitſhaw and Co, Gray's Inn).

Green, Richard, Olney, Bucks, lace merchant. (Garrard, Olney, Whitſhaw and Co. Gray's Inn).

Gallerins J. late of Panton ſtreet, Haymarket, Scrivener. (Mr. Comrie, Fleet-ſtreet).

Greaves, J. Pudſey, Yorkſhire, and J. Duſton, Farnley, Leeds, Yorkſhire, merchants. (French, doar lane Leeds, Willſon, Caſtle-ſtreet, Holborn).

Hobſon, J. Thurſton-land, Kirkburton, Yorkſhire, tanner. (Whiteley, Hallifax, Gleadhile, Lothbury).

Howard, J. Turton, Lancaſter, cotton manufacturer. (Kay, Renſhaw and Kay, Manchester).

Horrocks, C. and W. Horrocks, Horwich, Lancaſter, Whitſiers. (Hardman, Bolton, Lancaſhire).

Hillingſworth, J. Leeds, Yorkſhire, linen-draper. (Clough, Manchester, Edge, London)

Johnſon, N. late of Henfield, Suſſex, ſhopkeeper. (Mr. Marſhall, Steyning, or Tourles, Palmer and Co. Bartlett's buildings).

Jetley, J. and J. Hucks, Leeds, Yorkſhire, ſpirit merchants. (Farrer, Lacey and Co. Broad-ſt. Holborn).

Johnſon, M. and W. Johnſon, Angmering, Suſſolk, ſhopkeepers. (Matthew Willſon, Union-ſtreet, Southwark).

Irwin, J. Red croſs-ſtreet, Southwark, brewer (Farnell, Spital fields).

Kenyon, J. and J. Kaynes, Liverpool, Lancaſhire, ſoapboilers. (Lace, Liverpool, Manly and Lawes, Temple).

Kerſhaw, J. and J. Kerſhaw, Manchester, cotton merchants. (Duckworth and Co. Manchester).

Lloyd, J. Llannonen, South Wales, dealer. (Bird and Nichols, Hereford).

Leach, J. Bolton le Moore, Lancaſter, cotton ſpinner. (Holbon and Cross, Bolton le Moore).

Lumſden, G. Newcaſtle upon Tyne, joiner. (Brumale, Newcaſtle, and R. Willſon, Lincoln's Inn fields).

Lunch, S. Richmond, Yorkſhire, cotton manufacturer [Howorth and Wilcox, Halifax, Allen and Exley Furnival's Inn].
Lockey, T. York, grocer. [Hunt, York, Baxter and Martin, Furnival's Inn].
Murphy, J. Liverpool, Lancaſter, merchant. [Wyatt and Forest, Liverpool].
Mann, A. Mark lane, oilman. [Wright and Bevill, Lincoln's Inn].
Mardon, J. Redruth, Cornwall, baker. [Wallis, Huſten, B. Fuller, Inner Temple, London].
Newton, W. Tideſwell, Derby, vintner. [Wilmot, Wilſon, near Tideſwell, Holmes, Clement's Inn].
Ollaranthaw, W. Stafford, ſhoe maker. [Dickenſon, Stafford, Price and Williams, Lincoln's Inn].
Owencroft, J. Nottingham, dealer. [Cutts, Nottingham, Macdougal and Hunter, Staples Inn, London].
Padmore, J. Leiceſter, linen draper. [Mr. Clough, Manchester, Mr. Edge, Inner Temple].
Pitkeathly, R. Tavitſtock ſtreet, London, bookſeller. [Jackſon, Great Queen ſtreet, Lincoln's Inn fields].
Page, J. Birmingham, Warwick, grocer. [Platt, Worceſter, Platt, Bride court, Bridge-ſtreet, London].
Patch, T. Dudley Court, St. Gile's, victualler. [Willingham, Peter ſtreet].
Phillips, T. of Cullum ſtreet, London, wine merchant. [Mr. Haynes, Bury Court, St. Mary Axe].
Parry, S. Malmſbury, Wilts. ſhopkeeper. [Robbins, Tetbury].
Pheips, J. Hazelbury, Plucknett, Somerſetſhire, ſail-cloth-maker. [R. Fox, Beominſter, Dorſet].
Rennifon, J. Queen ſtreet, Cheapſide, cotton merchant. Parker and Wells, Union court, Broad ſtreet].
Roberts, W. Surrey road, Surrey, baker. [Smith, Villers ſtreet, Strand].
Schobel, G. Edgworth, Lancaſter, calico printer. [Duckworth and Chippendal, Manchester].
Sutherland, J. Ogle court, Maryboue, painter and glazier. [Jeyes and Turner, Charlotte ſtreet, Fitzroy ſquare].
Storey, G. Sutton Grange, Northumberland, farmer. [Lambert, Alnwick, Sanderſon, Paſtgrove Place, London].
Sheppardſon, W. Oxford ſtreet, grocer. [Gatts, Angel Court, Throgmorton ſtreet].
Sheppard, T, Oborne, Dorſetſhire, baker. [Meſſiter, Wincanton, and Dyne, Serjeant's Inn].
Tipping, W. Leeds, Yorkſhire, merchant. [Rolland and Wilkinſon, Leeds, Allen and Exly, Furnival's Inn].
Tweddele, J. Liverpool, Lancaſhire, ſadler. [Williamſon, Liverpool].
Williams, T. Branham, Suffolk, victualler. [Ambroſe, Miſley, Eſſex].
Weſtcarman, W. Bermondſey, Southwark, plumber. [Alcock, Canterbury ſquare, Southwark].
Wright, R. Bankſide, Southwark, coal merchant. [J. Fowler, Lambeth road].
Whatton, W. and T. Poole, inkeepner. [T. Parr, Poole.]
Walter, W. Limehap, grocer. [Michel, Union court, Broad ſtreet]

DIVIDENDS ANNOUNCED.

Allen, G. Loughton, Eſſex, victualler, May 2.
Adamſon, J. Cateaton ſtreet, factor, May 9.
Antoinette, F. New Bond ſtreet, milliener, May 9.
Andree, P. John ſtreet, Minories, merchant, May 17.
Anderſon, W. London and Pearly, North-Britain, muſlin manufacturer, May 13.
Bevan, T. Portſea, Hampſhire, bookſeller, May 9.
Bevan, R. Baſinghall ſtreet, money ſcrivener, May 10.
Bailey, T. Sunderland, Durham, money ſcrivener, May 2.
Bainbridge, J. Briſtol, linen draper, May 13.
Braithwaite, J. Walbrook, factor, April 29.
Bonnel, J. Newcaſtle upon Tyne, hatter and hoſier, May 15.
Berner, G. Hoddeſdon, Herts, malter, May 10.
Brand, A. Prince's ſtreet, Lothbury, factor, May 3.
Barron, E. Wallingborough, Northamptonſhire, currier, May 8.
Blyth, T. Birmingham, Warwickſhire, factor, May 2.
Beſhaw, A. Manchester, machine maker, May 2.
Battye, J. Wilſon ſtreet, Moorfields, auctioneer, April 26.
Birchenough, M. Salford, Lancaſter, dyer, April 22.
Barr, w. and S. Birmingham, linen drapers, April 14.
Barker, J. Cannon ſtreet, ſugar factor, April 29.
Barber, J. Gerrard ſtreet, Soho, woollen draper, April 26
Cunningham, W. Preſcot ſtreet, Goodman's fields, wine merchant, May 10.
Cobham, W. Thomas ſt. Southwark, corn dealer, May 9.
Collins, R. jun. Owen ſtreet, Lincoln's Inn fields, carpenter, May 9.
Champion, R. New Malton, Yorkſhire, ironmonger, May 7.
Cook, T. Whitwell, Norfolk, dealer, April 21.
Clerke, G. Cherry-tree court, Aldersgate ſtreet, watchmaker, April 26.
Cawthra, J. Deadon, Yorkſhire, merchant. April 28.
Croſsly, W. jun. and W. Greenwood, Lancaſter, merchants, May 2.
Clarkſon, T. Bun ſtreet, Wapping, ſhip owner, May 28.
Davies, E. Snow hill, London, cheeſemonger, April 22.
Downing, G. New ſtreet, Covent Garden, oilman. May 10.
Davies, R. Bearbinder lane, merchant, May 10.
Darrele, W. Bridgewater ſquare, clock maker, May 10.
Dennis, H. Lalleading, Gainſborough, Yorkſhire, mercer, May 2.
De Gruchy, J. P. and P. Gavey, London, merchants, May 17.
Evans, W. Carmarthen, Wales, draper, May 27.
Edwards, H. Gravel lane, London, and G. Dupiex, Leeds, Yorkſhire, cloth merchants, April 17.
Fry, W. Bury court, St. Mary Axe, London, broker, April 29.
Fell, J. Manchester, Lancaſhire, cotton ſpinner, May 8.
Gazeley, J. S. Dorſet court, Cannon Row, Weſtminſter, merchant, May 7.
Gale, J. Newcaſtle upon Tyne, tallow chandler, April 21.
Gueſt, H. Blackman ſtreet, Surrey, oilman, April 26.
Gedges, R. Chafe. Cheapſide, wholeſale draper, May 17.
Greaves, W. Hackney, butcher, May 10.
Garret, J. and B. Hattaway, Oxford ſtreet, glaſs ſeller, April 29.
Gale, R. Birmingham, Warwickſhire, mercer, April 21.
George, D. Roſs, Herefordſhire, innholder, May 8.
Godfell, T. ſen. Wapping, warfinger, May 31.
Grelier, G. and C. New London ſtreet, wine and beer merchants, May 16.
Harry, W. and J. Harry, Heaton Norris, Lancaſhire, cotton manufacturers, April 28.
Hill, J. wood ſtreet, London, ironmonger, May 1.
Hayman, J. Golden ſquare, vender of medicines, May 10.
Hewit, J. Crabam, Biddeford, Devon, merchant, May 6.
Hartley, F. and B. Fleet ſt. mercers, May 6.
Haviland, J. Taunton, Somerſet, timber merchant, May 16.
Jordan, J. Shadwell, ſail maker, May 9.
Joſſen, H. White, Maiden, Eſſex, butcher, April 30.
Johnſon, E. Creeting St. Mary, paper maker, May 7.
Johnſon, A. Newcaſtle upon Tyne, hatter and hoſier, May.
Kerrod, J. Hackney, bricklayer. April 29.
King, G. Tottenham place, carpenter, May 10.
Lane, R. Bermondſey, Surrey, tanner, Ap. 26.
Lacey, J. City Chambers, London, merchant, Ap. 26.
Lumley, J. W. London, merchant, May 10.
Lewis, W. and J. Douglas Lewis, Liverpool, joiners, May 10.
Madgwick, T. Buſted, Suſſex, tanner, Ap. 26.
Merrite, J. Sunderland, Durham, grocer, May 1.
Mann, T. Piccadilly, builder, May 29.
Meredith, E. Turner, Tewkeſbury, Gloucester, May 15.
Marſh, G. Old Jewry, broker, May 13.
Newman, C. Southampton, cabinet maker, Ap. 29.
Nettleton, R. Tooting Surrey, mealman, May 3.
Noden, R. Kirby ſt. Holborn, merchant, Ap. 29.
Nightingale, W and G. Lombard ſt. bankers, May 13.
Oſman, T. Bath, Somerſet, brandy merchant, Ap. 25.
Olbourne, R. Banbury, Oxford, factor, June 2.
Page, W. Eyton, Northampton, dealer, Ap. 17.
Payne T. and R. Cheapſide, goldſmiths, Ap. 26. altered to May 10.
Palin, W. Nockcliffe, Bedford, Ap. 24, altered to June 9.
Purdy, w. Mark lane, broker, Ap. 29
Patterſon, J. Berwick upon Tweed, linen draper, May 9.
Roberton, J. Fleet ſt. oilman, Ap 22.
Rathfield, C. and S. Vauxhall, Surrey, truſs maker, May 10.
Reynolds, J. Frith ſt. Soho, carpenter, May 13.
Ramſey, I. Bedale, York, ſhopkeeper, May 3.
Reynold's, B. James ſt. Covent Garden, carpenter, May 13.
Smith, R. Bath, Somerſet, linen draper, May 13.
Sizer, J. Maningtree, Eſſex, grocer, Ap. 29.
Silk, T. London w. ſt. plaiſterer, May 28.
Scholefield, R. Great Portland ſt. Cavendiſh ſquare, upholder, Ap. 29.
Seabrook, R. Southminſter, Eſſex, dealer, Ap. 3.
Smith, W. Great Bolton, Lancaſter, and S. Birch, Skipton, York, cotton manufacturers, May 9
Tenate, E. London ſt. Middleſex, ſcrivener, May 6.
Tanner, E. Berkhamſtead, Herts, ſhopkeeper, May 10.
Thompſon, T. Southwark, Potatoe merchant, May 6.
Whiting, G. Leadenhall ſt. auctioneer, Ap. 26.
White, J. ſen. of Staines, Middleſex, innholder, May 7.
Walton, J. Halifax, Yorkſh. ſpirit merchant, Ap. 30.
Wood, J. Barrington, Herts, ſmith, May 27.
Wilſon, G. and H. Priddle, Fenchurch ſt. wine merchants, May 6.
Wignell, T. Jewry ſt. London, wine merchants, May 9.
Willſon, B. White croſs ſt. victualler, May 6.
Wood, J. Preſton, Lancaſter, woollen draper, May 7.

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

Counties Inland by the Standard Winchester Bushel of 8 Gallons.

	Wheat s	d	Rye s	d	Barley s	d	Oats s	d	Beans s	d	Peafe s	d	Oatmeal s	d
Middlesex	117	7			51	1	46	9	63	0	69	3		
Surry	121	0			58	0	47	4	61	6	69	6		
Hertford	112	9			57	0	48	3	62	4	58	1		
Bedford	122	10			59	1	44	0	64	0	60	10		
Huntingdon	116	8			59	4	41	8	57	7				
Northampton	106	0	74	6	56	10	41	10	71	6	77	0		
Rutland	100	0			70	0	46	0	60	0			65	3
Leicester	107	5			63	0	44	2	87	5			62	0
Nottingham	124	3			69	6	56	6	95	0				
Derby	114	3			63	9	53	0	100	0				
Stafford	121	0			65	5	49	1	88	10	45	4	74	10
Salop	116	7	77	4	66	6	47	0	78	4	73	2	90	6
Hereford	105	0	76	8	55	11	44	5	65	0	61	3	87	2
Worcester	123	8			59	1	46	6	77	4	79	6		
Warwick	132	2			73	5	52	9	90	9	101	0	75	10
Wilts	114	4			52	0	45	0	81	4	79	3		
Berks	115	6			48	3	42	0	64	4	63	9		
Oxford	116	9			53	5	43	0	69	10	67	9		
Bucks	117	3			51	8	45	2	75	10	64	6		
Montgomery	124	9	92	8	72	0	40	0			80	0	79	6
Brecon	98	11			62	4	37	9			63	2	78	10
Radnor	105	3			53	5	33	8			62	7	89	1
Maritime Counties.														
Essex	121	0	78	0	59	6	45	8	56	6	57	0		
Kent	112	0			51	0	43	0	61	9	72	0		
Suffex	118	4			52	0	39	6						
Suffolk	118	7			5	1	39	8	50	6	60	7	85	11
Cambridge	106	9			49	10	27	3	52	1	48	0		
Norfolk	108	7			48	3	41	3	52	2	63	2		
Lincoln	93	9	84	0	55	11	38	9	70	0				
York	96	6	69	7	52	11	41	1	100	6	89	4	78	5
Durham	110	6	98	2	61	11	54	2						
Northumberland	86	1	84	0	48	0	45	0	72	8	80	0		
Cumberland	108	1	97	0	83	8	53	11					64	1
Westmorland	135	2	112	0	81	10	52	5					55	1
Lancaster	123	11			65	10	56	7	89	4			49	4
Chester	116	8			66	6	62	8					49	10
Flint	118	4												
Denbigh	122	6			72	8	49	0	89	8	80	0	81	6
Anglesea	None		brought		for Sale									
Carnarvon	104	0	82	0	61	4	35	0					71	6
Merioneth	108	2	85	4	74	5	41	8	92	0			70	10
Cardigan	98	0			70	0	29	4						
Pembroke	97	0			60	3								
Carmarthen	104	0			62	0	25	7						
Glamorgan	116	10			57	4	34	10						
Glocester	111	9			48	5	48	1	85	3	65	8		
Somerset	117	9			48	1	42	2	69	4	64	0		
Monmouth	121	6			69	10	37	6						
Devon	116	11			51	7	31	8	72	0			55	11
Cornwall	105	5			56	4	32	6						
Dorset	115	10			40	7								
Hants	119	1			51	6	40	4	59	2				

PRICES OF COALS AT LONDON, FROM MARCH 20. TO APRIL 20, 1799.

Names of Coals	Frida 1st. S. D.	Mon. 2 th. S D.	Wed. 26th. S. D	Frida 28th. S. D.	Mon. 30th S. D.	Wed 2d. S. D.	Frida 4th S. D.	Mon. 7th S.D.	Wed 9th S. D.	Frida 11th S. D.	Mon 14th S. D.	Wed 16th. S. D.	Frid 18th S.D.
Benton	55		45	45	44			42	41 6			42	44 9
Byker	55		44 6	44 9			43						
Blyth	57 3				47 6	46 6			42			43	
Brandling	54 6			44		43			39 6			42	45
Bladon Main			44										
Biggs's Main	57 6		47 6	47 6	47	46 6		45	43 6			45	
Baker's Ma n													
Benwell													
Greenw ch Moor													
Gate's-h ad Park													
Hartley						46 6			42			42	44
Holywell Main	54		44 6	42 3								40	
Howard's Main								41					
Montague Main			44 6	44 6								41	
Pontop { Windsor's / Simpson's / Silvertop }	53 6		44 6	46 6			44					41	
South Moor			43 6	43				40	39			40 6	
Sheriff Hill	53 6			43 3									44
P ll's Tanf. Moor			45	47	46		44 6	44 6				42	44
Adair's Main			42	43 6					39 6				
Bowes's Main			42										
Team			47	43 6		44						39 6	
Walker	57			47	46	45 6	46	45	43			44	47
Willington	57 6			43 3	46	46		44 9	43		45	48	47 6
Wall's End	58 6		48	49	48 9	47	47	46	45 3			45	
Walbottle Moor			44 6					41					43 9
Wylam Moor			44 6	44 6				40	39 6			40	43
Heaton Main	58			47			45 6	44 6	43 6			44	47
Hebburn Main	57 6		47	47 6	47		46	44	44 6			45	48 3
SUNDERLAND													
Boundry													
Bourn Moor	54 6		44	44 6	42 6	42 6	42	40	38 9			40 9	44 9
Biddick new Main			40										
Newbott. Bo. Moor	53 6							38 9	48 3				
Rectory			42	43 6					38				
Ruſſell's Main						41 6							44 9
Wharton Main	53 6								37				
Waſhington									38 6				

No Coals. — Good Friday. — Easter Monday

AVERAGE PRICE OF SUGAR,

As 62s. 8d. per cwt. inclusive of the Duty of Cuſtoms paid or payable thereon on the Importation thereof into Great Britain.

A TABLE of the Prices of STOCKS in *April*, 1799.

1799 Mar	Bank Stock	3perCt. Bs Red.	3 perCt. Consols.	4 perCt. Consol.	Old 5perCt.	New 5perCt.	Long Ann.	Short Ann.	Imp. 3p Ct	Imp Ann	Irish. 5pC	Omnium	India Stock.	Exch Bills.
26			63⅜ ¼		95½ 96¼				62¼ ⅜			2¼ 1¾		
27			63⅜ ¼		96¼ ⅜				62¼ ⅜	12½		2¼		3 5 Pm.
28			63⅜ ⅛ ¼		95⅝ ¼ ⅝				62⅛ ¼	12⅛		2¼		4 5 Pm.
29			63¼ ⅛		96½ ⅝				62¼ ¾	12⅛	91	2¼		4 5 Pm.
30	Sunday													
31			63¼ ⅜		96½ ⅝				62¼ ⅜	12¼		2¼		3 4 Pm.
1			63¼ ½ ⅜		96½ ¾					12¼	91½	2¼ ½		3 ' 3 Par.
2			63½ ¾ ⅝		96¾ 97⅛				62⅝ ⅜			2½ ¾ ½		
3			63⅝ ½ ⅝		97⅛				62½ ⅝	12⅜		2½ ¼ ½		3 4 Pm.
4			63¾ ⅝ ¾		97⅞ ½				62⅝ ¾			2¾ ½ ¾		3 4 Pm.
5			63¾ 64		97½ ¾				62¾	12½		2¾ 3		
6	Sunday													
7		63¼ ⅜	64⅛ ⅜	80¼ 81¼	97⅞ 98⅜	95½ 96	18½	5	63⅛ ¼	12½		3¼ ½		3 5 Pm.
8		63¼ 63⅜	64⅜ ⅞ ¼		98⅝ ¼ ⅜				63⅜ ⅛	12½	95½ ¾	3¼ ¼ ½		
9		63¼ 63	64¼ 36 ⅞	81⅜ ⅛	98¼ 97½	95⅞ ⅜			63⅜ ⅛		93	3¼ 2¾		
10		62⅞ ⅜ ⅜	63⅜ 64 63	80⅞ 81	97¼ 96¾	95 94⅝ ¾	18¾ ⅝	5¾			92⅜			
11														
12		62⅞ 63	63 ⅞ ⅜ ⅜	80⅞ 81	97 96⅝	95 94⅝ ¾	18⅝	5¾				2¾	208½	
13	Sunday													
14														
15														
16	160¾	62⅞ 63	63⅝ ⅜ ⅞	88 80 ¾ ⅞	96⅞ ⅝	94⅛ ⅛ ⅜	18 ⅝	5			92	2¾ ⅛ ¾		
17		63 62⅞	63⅜ 64 63	81 80 ⅛ ⅝	96⅞ 97	94¾ ⅞	18 ⅝							
18	161½	62⅞ 63	63¾ 64 63	80½	69¾ 97¼	94⅝ 95	18 ⅝	5⅝			91 92		209½ ¾	
19		62¾ 63	63⅜ ¾	80½ ⅝	97¼ 97	95 94¾ ⅞	18 ⅝	5⅝				2¾	209½	
20	Sunday													
21		62⅞ ⅝	63⅓ ⅞ ½	80½ ⅝	97 ⅛ 63¾	94⅞ ⅝ ¾		5⅝				2¼ ⅛ ⅓		
22	161 160¾	62⅝ 93	63½ ⅞	80½ ¾	96⅞ 67⅛	94⅝ 95	18½	5			91¾	2¼ ½		
23	160¾ ½	63⅛	63¾ 64 63	80⅝ ⅞ ¾	97 ⅛ ½ ⅜	95⅜ ¼		5⅝				2⅔ ¾		
24	191½	62⅞ 63⅛	93¾ 64	80⅝ ⅞	97 ⅛ ½	95⅝ ⅞	18¾	5⅝			92½	2½ ¾	209	

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