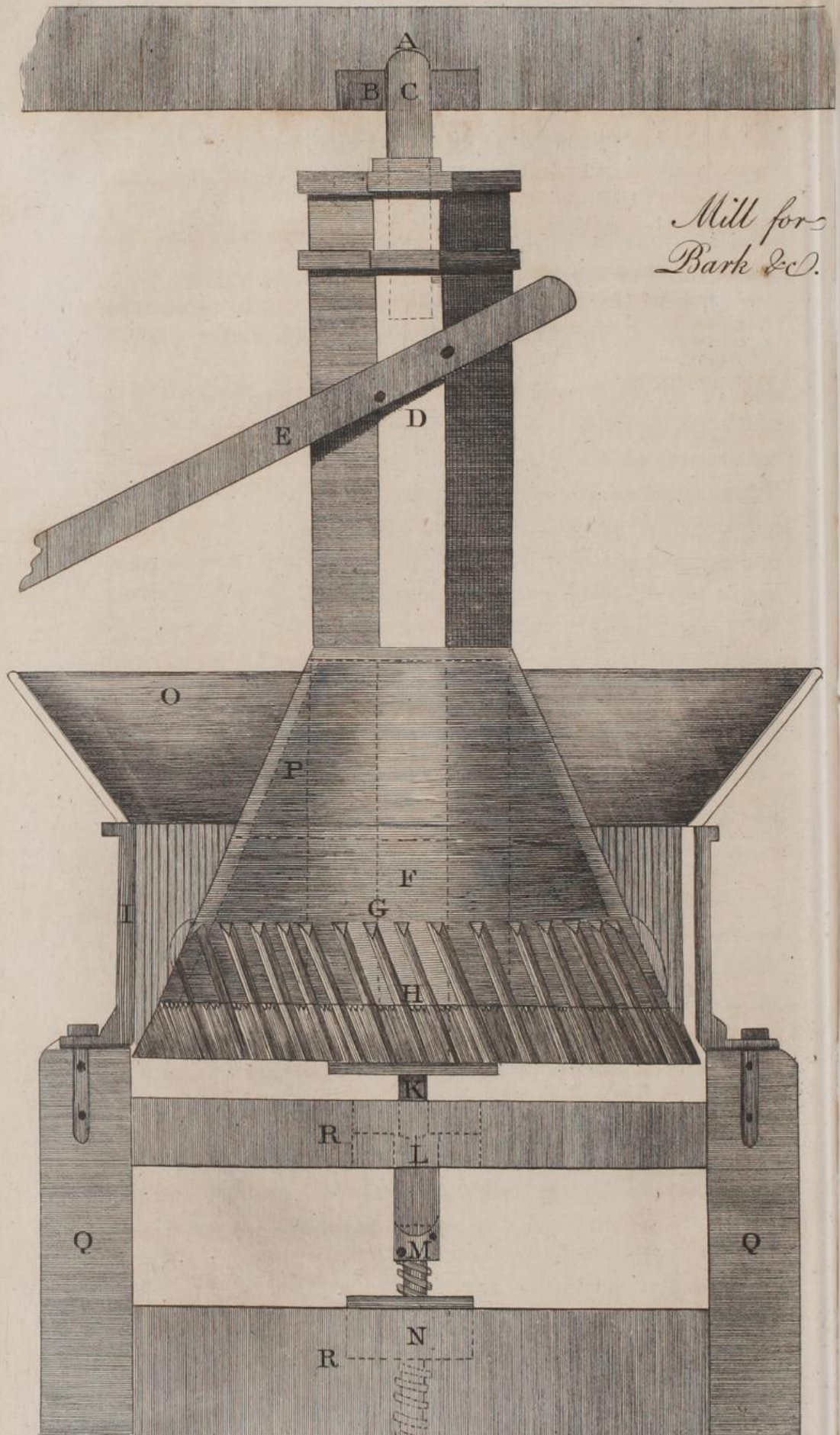


*Mill for
Bark &c.*



THE
AGRICULTURAL MAGAZINE.

No. LXIII.]

OCTOBER, 1804.

[VOL. XI.]

SPECIFICATION OF A PATENT GRANTED TO JAMES WELDON, OF LITCHFIELD, ENGINEER, FOR A MILL FOR GRINDING AND PULVERIZING BARK FOR TANNING.*

[WITH A PLATE ANNEXED.]

TO all to whom these presents shall come, &c. Now know ye, that in compliance with the said proviso, I, the said James Weldon, do hereby declare, that my said invention is described as follows, that is to say: To explain more fully the principles of my invention, as they may be applied to a mill for breaking, grinding, and pulverizing hatched or chopped bark for tanning and other uses. For breaking, grinding, and pulverizing wood and other hard substances, and for grinding of apples. I have annexed a drawing, which the following description is intended to elucidate. A, is a piece of timber, connected to the sides of the mill-house to receive the upper gudgeon of the shaft. B, an iron or metal plate, in which the gudgeon is to work. C, the upper gudgeon, let into the body of the shaft, as shewn by the dotted lines. D, the shaft, which may be of an octangular or any other form. E, the lever or shaft, to which the power for working the mill is to be applied, and which may be continued to the length necessary for obtaining sufficient force. F, a cylindrical body, forming the internal part of the mill, which may be composed of cast or wrought iron, or any other proper materials, and may be solid or hollow as shewn by the dotted lines on the drawing. G, the upper, or breaking-teeth; which may be extended higher, as may be found necessary for the different purposes for which the mill is intended. H, the lower, inner or grinding teeth. I, the hollow external cylinder, containing, on the outside, the outer grinding teeth; this cylinder may be composed of the same materials as the inner cylindrical body, and may be secured by strap-bolts, or other proper fastenings, to the posts, Q Q, of the supporting-frame. K, the lower gudgeon, secured to the shaft, as the upper gudgeon. L, the iron, brass, or other metallic step, let solid into the upper cross-rail R, for the purpose of preventing any lateral motion in the lower gudgeon. M, the regulating screw, passed through the nut N

* In our next will be given another Specification on a discovery for the same object, with an explanation of the advantages of each respectively.

and lower rail R, for raising or lowering the internal part of the mill, for the purpose of obtaining a coarser or finer operation in the works. O, the hopper affixed on the outer cylinder, to receive the several articles that are to pass through the mill: this hopper may be composed of wood, or any other proper materials. P, the hollow conical covering over the inner part of the mill, which may be of the same kind of materials as the hopper O. The frame for supporting the works, consists of posts, Q Q, let into the ground at four angular points, to which are connected the lower rail R, and two upper rails R, crossing each other at right angles. Between the posts are to be fitted, from the under side of the cylindrical body F, to the floor, wire sifters, for the purpose of separating the finer from the coarser parts of the articles passing through the mill.

Having thus explained the principles of my invention, and the manner in which they may be applied, I observe, that the materials may be of various qualities, sizes, and substances, capable of being applied to the uses, strength, and purposes, for which they are intended; and that the sizes and strength of the several parts of the machine, or mills, may be varied according to the nature and extent of the works to be performed, therefore are not subject to any precise dimensions, form, or quality of materials, and may be worked by a horse or horses, water-mill or wind-mill, steam-engine, or any other proper power, and may be applied, not only to the purposes above-mentioned, but likewise will be particularly useful for grinding barilla for soap-boilers and others, clay for making bricks and tiles, and may also be applied to many other serviceable purposes.

In witness whereof, &c.

ON SPANISH SHEEP.

To the Editor of the Agricultural Magazine.

SIR,

I AM as ready as Mr. Bartley, or any man in this kingdom, to extol those very able, numerous, and patriotic friends to agriculture, Sir John Sinclair, Lord Somerville, Lord Sheffield, the Duke of Bedford, Mr. Coke, and a list so long, that I am happy in saying my paper would not contain it. I am fully persuaded, that nothing *whatever* is of equal importance to the British empire, and, perhaps to the world, (of which she seems the bulwark) with the encouragement of British and Irish agriculture, and the improvement of our waste lands and breeds of live stock. I therefore consider the advantages which will result to the country from the meritorious exertions of the above patriots, as incalculable. Probably, the unparalleled prosperity of Great Britain, has in a

very considerable degree, arose from their example, which has, undoubtedly, wrought a sudden change in our rural economy, by rendering that almost universally fashionable, which is of the greatest public utility. To it we may safely attribute the late favourable alteration in our corn laws, and I should not be surprised if, within ten or twelve years, it proves the means of exciting such a spirit of improvement, as will lead to a commutation of tithes a general inclosure bill, and many other important advantages. Then would the plough be seen on all our wastes, and even ascending to the very summits of our heathy mountains. Then, Sir, would Britons, (as they ought) be relieved from a disgraceful dependence on foreign countries for the first article of human sustenance. I was truly sorry to observe, however, that the first and most indefatigable of these patriots, Sir John Sinclair, was, by your able contributor, Agricola Meridionalis, deemed a person of a contracted education, misled by prejudice; for you know, Mr. Editor, we Scotchmen possess a very national spirit; and very different sentiments are entertained in the north, with regard to the man who promoted, with so much zeal and ability, the establishment of a National Board of Agriculture, to which we owe inestimable advantages, *and for which we should not cease to bestow on him the tribute of our gratitude mingled with our admiration.*

I beg that Mr. Bartley will not believe me so ill informed as not to include him and Dr. Parry in the above long and very honourable list. But while I do this act of justice, and while I acknowledge that there appears *very strong reasons* for believing that the introduction of Spanish sheep into this country, will be very advantageous on certain species of lands, in certain situations, and in rendering some of our small breeds of sheep more profitable to the farmer, the proprietors of land, and the community at large, I must *yet* withhold my assent to the sweeping and indiscriminate conclusions of your valuable friend, Mr. Bartley. I should, indeed, be a "sorrowful swain," if my fat and beautiful long-woolled sheep of the new Leicestershire breed, which may be called symmetry itself, were supplanted by the Spanish kind, with their "throatiness," heron nogs, flat sides, "mugged" ugly heads, dromedary backs, woolly legs, and lean carcasses. Perhaps Mr. Bartley may *bounce* at this description; it is, however, conformable to that I received from a friend, who saw several of these sheep seven or eight years ago, in the Southern parts of the kingdom; and I should be very glad if Mr. Bartley can say, that the whole, or even the greatest part of these *deformities*, are now removed by judicious crossing and selections. Such a refutation would probably be attended with

considerable advantages, if these sheep really deserve all the praise that some writers have bestowed upon them, for it would tend to the removal of some bars to the diffusion of the breed; and after all I have said, profit is so attracting in its nature, that, if I could *clearly* discern it to any considerable degree, in preferring the Spanish breed to any other, I should be induced to make the change, however I might lament that beauty and aptitude to fatten, were surpassed by other properties.

Lord Somerville, Dr. Parry, and Mr. Bartley, were amongst the first persons who tried Spanish sheep in this country on a pretty extensive scale, and they are still the most zealous advocates of that breed. In order to be successful, however, in introducing any thing new into a country, particularly a breed of sheep so inferior to our own, *in appearance*, as the Spanish; accounts of their good properties should be as moderate as possible, and such as are not calculated to excite distrust. In my former letter to you, I adverted to some enormous stocking, which Mr. B. has past over in silence. I am far from suspecting the veracity of the advocates of the Spanish blood; when I first read, however, of 10 to 14 sheep per acre (mostly ewes and lambs) for six to eight months in the year, and 14s. to 16s. per fleece, I had almost exclaimed—*non credimus!* Subsequent accounts have rendered me more credulous.

“A house,” says the scripture, that is “divided against itself cannot stand.”—Let us see how two or three of the most noted breeders of Spanish sheep, in the west of England, agree. From Mr. B.’s last communication, and some other productions of his pen, it appears to me, that he considers the Merino sheep, a sheep raised from that blood and Ryeland or South Down, as the most profitable, on *all* lands and in *all* situations. I have stated, that even the pure South Downs have, *after repeated trials*, been found too tender for our high-land pastures in Scotland and the north of England. This, however, Mr. B. does not notice; but he says, the Spanish sheep are well prepared for “a cold tempestuous climate,” by being defended by their close fleeces. So we were told, with regard to the close fleeces of the South Downs, which, however, have proved more tender than the hardy and comparatively open-woolled sheep of the Cheviot and forest breeds. The wool of the latter is fit only for “mops” and horse-sheets, and sold at 5d. per lb. These sheep are not heavier than the South Downs, whose wool is worth 1s. 10d. per lb.; yet the black-faced, hairy-woolled, hardy mountaineers, are found the most beneficial breed! Lord Somerville, *in some parts of his work*, seems more moderate; at

page 13, he says, "we have said thus much, because false arguments are too often used to enforce adoption of heavy sheep, in districts ill suited to them. Where land is deep and strong enough to bear long-woolled sheep, there let them be bred; but let them not be foisted, by false arguments, on land unable to maintain them; by so doing, the public is most essentially injured. Our combing and coarse wool manufactures must be supplied," &c. Here we discover a great difference in the sentiments of two great breeders of Spanish sheep, with regard, not only to the quality of the pastures, but the necessity of raising a supply of coarse wool. For his Lordship does not think that it would be so proper to fabricate our "mops" with fine as with coarse wool.

In another place, Lord Somerville says, "No desire of change, or love of innovation, led me to abandon the long-woolled sheep of my own neighbourhood, (the Bampton breed dashed with the new Leicester); an undoubted improvement was visible from an introduction of the new Leicester." "This stock continued to decrease in size considerably, in spite of all attempts, consistent with profit, to maintain it, notwithstanding fresh rams were three times brought from Leicestershire, in twelve years these sheep were in my possession, the loss of size in each four years amounted to near 5 lb. per qr. on the Vale of Taunton, proverbially known to be one of the most fertile spots in the kingdom; it stands valued at 2l. 15s. per acre." Wonderful! Mr. Editor.

His Lordship continues—"A man must be blind that could withstand such evidence as this." How many thousands—how many tens of thousands of acres are there in Great Britain which stand exactly in the same predicament! Now, as the rich Vale of Taunton is not "deep and strong enough," though worth 2l. 15s. per acre, to keep long-woolled sheep, is it not evident, if his Lordship's sentiments were to prevail throughout the country, that these valuable animals would be nearly exterminated? A decrease of 5 lb. per quarter in 12 years! Surprising indeed! This "fact" would have broken the heart of *Bakewell*; and it was better for him that he departed this life so soon. What size the Bampton sheep are, I know not. I believe, however, that the old Teeswater breed was the largest in the kingdom. The owners of these sheep were "slaves to size," and long resisted the introduction of the new Leicesters: at length, trials were made; and, within a few years, the size of their sheep considerably reduced. Lands of equal quality let higher in the north than in the south, but those in the above parts of the county of Durham, do not nearly reach 2l. 15s. per acre; yet the new Leicester sheep are now almost universally preferred in that part of the coun-

try, because, though less than their old huge breed, they sooner arrive at maturity, and convert a given quantity of food into more money in a given time. It does not, however, follow from this, that some other breeds of sheep are more profitable than those of a larger size. The Leicester sheep are particularly well formed, fine boned, thin skinned, and clear of wool in the heads and legs; and though their size does not appear great, yet they weigh heavier than many long-legged, large boned, and flat-sided sheep, which appear much larger. It is also pretty well ascertained, that they consume less food per week; and there is strong reason to believe that it holds good throughout the animal creation, that animals do not eat in proportion to their weight, but that those which are well formed, thin skinned, and small boned, get sooner fat, and consume less food in proportion to their weight than those which are ill-formed, large-boned, and thick-skinned. Now, as we are not furnished with the results of accurate experiments between the new Leicester and the Spanish (crossed) sheep, in which the food has been exactly and regularly weighed, we may conclude, that the latter, of 14 lbs. per quarter, will consume almost as much food weekly as the former of a much greater weight. So that against the difference which is *said* to exist in the value of the wool*, the owners of the Leicester can place a *much* greater quantity of mutton, of *superior quality*, obtained on proportionably *less* food. This superiority will, indeed, be disputed by the *epicure*; but a much more useful description of consumers (labourers, manufacturers, and mechanics) will concur in my opinion. These labourers are the principal consumers of mutton, and can obtain a much greater quantity of food from a pound of Leicester, than from an equal weight of small mutton; for the former contains, not only a much greater quantity of fat, and will, consequently, make more broth, but a greater quantity of meat in proportion to the bone. We have heard of some *particular* sheep of the Spanish breed, which have produced from about one-fourth to one-third of the quantity of outside fat that the Leicester sheep *almost always* afford; but, in *general*, the mutton of the former would be viewed as little better than *carrion* by the great body of consumers in this northern district; by the manufacturers, pitmen, keelmen, coal-heavers, and other labourers in the counties of York, Durham, Northumberland, Berwick, and Roxburgh. The pitmen, keelmen, and coal-heavers at Newcastle, Shields, and Sunderland, consume a much greater quantity of mutton, individually, than

* Mr. Bartley should recollect, that though long wool is sold for only 13d. per pound, it is, on many pastures, worth 15s. to 13s. per fleece, on an average, of considerable flocks.

any other men in the world. They generally eat it in a cold state, (after having been boiled) and spread the fat upon their bread, instead of butter, contending, that it is not only more palatable and nutritious, but cheaper, by one-third, than the latter article. Let Mr. Bartley consider these circumstances, and how greatly fine wool would be reduced in value, were the Spanish sheep so extensively introduced as some of their advocates seem to wish, and he will be more disposed to grant a peaceable existence to those extremely handsome, fat, and profitable sheep, the new Leicester. Within a year or two, I shall probably be able to say more to him upon Merino blood; for I have been informed, that a gentleman who farms extensively in Northumberland, I believe the same person that writes so frequently to you, under the signature of Agricola Northumbriensis, (but this rests merely upon conjecture) has lately been endeavouring, both there, and in the neighbouring counties, to prevail upon a few breeders to join him in the purchase of a few Spanish rams, to be used with South Down ewes. What reason he has for his anxiety to get others to join him in the speculation, I knew not, but I suspect that he does not wish to stand *alone*, against the *keen ridicule* of the breeders of the New Leicesters, who are very numerous in this district.

Having mentioned Agricola Northumbriensis, I shall just beg to make a remark or two on the ox and horse dispute, which, in the words of Chorographus, "has kicked up a dust which is conspicuous in the pages of your Miscellany." That dispute appeared to originate in the remarks of your reviewer on a work of Lord Somerville, called "Facts and Observations." &c. It cannot be denied, that the advocates of his Lordship's opinions have been unsuccessful in the controversy; not from want of talents, but from want of *facts*. On facts—on the results of experiments which are well known in this district, and which were made with the utmost accuracy, *not by servants*, but by several intelligent practical farmers, A. N. has founded his calculations and arguments. His adversaries did not deem it prudent to refer to Lord Somerville's "facts," probably because they did not contain exact accounts of the quantity of food consumed by each species of animals. Perhaps the wanting this accuracy may induce a good many *incredulous* breeders to entertain some doubts respecting part of those conclusions on the comparative merits of different breeds of sheep, which his Lordship has, with the most pure and patriotic intentions, laid before the public. As to horses, their superior merits have given them so firm a footing upon nine-tenths of our British territory, that as they are now managed by very skilful and well disciplined men, it is greatly beyond the powers of all the oxen of all the great and

little Emperors, from Japan and China to the western shores of Europe, (not excluding those of Red Russia) to drive them back, even if Hannibal could be raised, by the way, to contrive the most dreadful firebrands for their horns.

Berwickshire,
Sept. 20, 1804.

Yours, &c.

PASTORIUS.

ON A SINGULAR EXPERIMENT TO AVOID THE
FOOT-ROT IN SHEEP.

To the Editor of the Agricultural Magazine.

SIR,

I AM an idle fellow, and am more fond of amusing myself with the superstitious, than with the reasonable habits of mankind. I do not affect to boast of this propensity, but it is perhaps a sound maxim in the philosophy of the human mind, that the more completely truths are developped, (whether favourable or unfavourable to our character, is of little consequence) the more the moral happiness of our race will be likely to be promoted.

We do not wonder at the eccentricities which are practised at the distance of two or four hundred miles from the capital, but we are astonished at the powerful influence of barbarism within the sound of the bell of St. Paul's. As I was lately ambling along between my country residence at Croydon and Godstone, my curiosity was attracted by some small plots, insulated by trees arranged in a circle, and I inquired the cause of these pigmy plantations. I was not a little gratified, from my constant attachment to the oddities of human history, when I was told the design of these artificial expedients was to prevent the sheep approaching a spot which was sure to impart one of the most dangerous diseases by which that animal is infested: I mean the *foot-rot*. From the circumstances of my education, and the irregularity of my pursuits, I have heard of the Fairy's Ring, and have followed the fungus round the magic circle, under all its progressive vicissitudes, from pristine health and vigour to the condition of the dried crust; but neither my midsummer night's dream, or my mid-winter's lucubrations, have cleared up the mystery which is the leading object of this letter. I intreat some of your grave and intelligent correspondents to expose to me the nature of the contagion with which these insulated spots are infected, and if this matter should go wholly unexplained, I shall at least have the satisfaction of reflecting, that I have discovered an additional article to the long catalogue of human absurdities.

Croydon, Oct. 15,
1804.

I am, Sir, yours sincerely,

AN ODDITY.

ON THE AGRICULTURE OF THE COUNTY OF
NOTTINGHAM.

To the Editor of the Agricultural Magazine.

SIR,

IN consequence of an intimation in the Address to your Correspondents, I gave myself the pleasure of calling at your office, and was informed, that among the collectanea you had several interesting papers on the subject of Agriculture in the county of Nottingham. This circumstance and another, neither material to you or to the public, induced me to turn my immediate attention to the farming of that province in which I have often roamed with pleasure along the tranquil shores of the Trent, and among those Sylvan retreats where the dexterous archers, Robinhood and Little John, are no longer to be dreaded.

In your Number for August, you have given a list of the counties of England and Wales, with their extent, population, and comparative importance. I shall frequently avail myself of this useful catalogue, because it appears to me to be drawn up with care and accuracy. In the note, (page 116) some observations are made on the extent and population I have assigned to some of the counties on which I have treated; and if this were the proper opportunity, these remarks should not go unanswered. Nottinghamshire is stated to contain 774 square miles, to comprehend 495,360 acres, the population is properly given at 140,350 and the number of individuals to each square mile is said to be 181. By this account it will appear that Nottingham is the smallest county of England, with the exception of twelve; that the comparative population exceeds all the others, excepting Gloucestershire, Kent, Lancashire, Middlesex, Staffordshire, Surrey, Warwickshire, and Worcestershire. It is the great depôt of the stocking manufacture, and to the abundance of employment from this source, it is indebted for this superiority in the number of its inhabitants. Its utmost length is about 50 miles, and its breadth twenty-five.

From the circumstances of the climate or situation, the harvest is in general later than in the more southern districts, but on the warm gravelly soils in the vicinity of Newark, the oats and rye are reaped as early as in any part of the kingdom.

The seed time for wheat, is from the end of September to the beginning of winter. The spring-sowing is from March to the commencement of May, and the seed of turnips is deposited in the earth from the middle of June to the end of July. The hay harvest is from about the 15th of the latter

month to the termination of August, and the corn-harvest from the dog-days to the conclusion of September.

The peculiarities in respect to the seasons prevalent in every county may in general be explained by the natural character and phenomena incident to them. Nottinghamshire is uncommonly dry; the clouds from the western and northern districts break on the mountains of the counties of Derby and York, and are there exhausted. Even the vapours supplied from the wide expanse of the German Ocean, pass in their copious volumes even the level of the Trent, and generally deposit their waters on the elevations to which I have adverted; however the greatest quantity of atmospheric liquid is supplied from that direction.

Among the difficulties I have to encounter in these provincial disquisitions, one of the greatest arises from the vast variety of soils which generally abound in each county, so that it is, as it were, a little world of itself; and to give an account of its component parts, is to detail the numerous varieties on the superficies of the globe. I am happily relieved from this embarrassment on the present occasion; there are those marked distinctions in Nottinghamshire, which enables me clearly to characterize the several districts: therefore, in the brief review I shall give, I shall consider each division separately, and then make some cursory and general remarks on the agriculture of the county, and on the most prominent articles of improvement of which it is capable.

The scientific farmer will consider the province as divided into the following districts.

The Clay District, commences a little north of Nottingham, and proceeds in that direction about twenty four miles; then abandoning the Trent, it advances sixteen miles further to the confines of Yorkshire.

The Nottinghamshire Wolds, are south of the Trent, and occupy about 40 square miles.

The Vale of Belvoir recedes to the east of the Trent at various distances, seldom less than one, and sometimes more than five miles. It includes the south-eastern part of the county, and is about twice the dimension of the Wolds.

The Limestone and Coal Districts are to the west bordering on Derbyshire.

What is denominated the Trent Bank District, extends from Leicestershire to the tongue of land projecting into Lincolnshire east of that river.

The first I shall notice is the Clay or Forest District. This part is sprinkled with several towns and villages, and there have always been little tracts of cultivation not only here, but every where else adjacent to such provincial establishments, in the midst of the most dreary deserts. Here prevail, what

are called Forest Brakes. These arise from a custom which has prevailed from time immemorial, for the inhabitants of townships to take particular tracts under the plough, perhaps to the extent of 250 acres, and to continue them in a state of tillage for five or six years. But this is not permitted without a compliance with certain ceremonies: the consent of the Lord of the Manor is first necessary; then two Verdurers must transmit a report to the Lord Chief Justice in Eyre, that this application of the land is neither prejudicial to the King or his subjects; and a restriction is attached of no inconsiderable inconvenience if it were rigidly exacted, viz. that the fences are not to exclude the deer.

A very great change has recently taken place in the agriculture of this county, in consequence of the introduction of turnips and the artificial grasses. Formerly the succession of crops on these Brakes was—1. oats, 2. peas, 3. barley, 4. oats, 5. skegs. Skegs are the *Avena Stipiformis* of Linnæus. They are pannaced; the calyx is two-flowered; the awns are twice as long as the seed, and the culm is branchy and stipiform, as the botanical name implies. At present, the culture of a Brake may be stated to be as follows. 1. Turnips, with ten quarters of lime to an acre. 2. Barley. 3. Rye, sometimes wheat. 4. Oats. 5. Seeds, i. e. wheat, clover, and rye grass, which remain for hay, and then the land is thrown open again.

It was impossible in the present improved state of agricultural knowledge, that the vast forest of Sherwood, formerly inhabited by banditti, and more lately deprived of its woody ornament, should remain in a condition utterly unproductive. The permanent inclosures constitute the most important alteration it has undergone. Clumber Park, belonging to the Duke of Newcastle, contains 4,000 acres, which have been drawn from this extensive waste. Forty years ago, it was nothing but a black heath. The husbandry, in this part, deserves particular attention. On the best land, the rotation is, 1. turnips, 2. barley, 3. clover, 4. wheat, 5. turnips, 6. barley, 7. seeds; and under the latter it remains for six years. The course on the bad land is, 1. turnips, 2. oats, 3. seeds, to remain for the same period.

Newstead Park, is also extracted from the same inhospitable state, and is divided into three farms. Beckwood Park, which contains 3,700 acres, comprehends eight farms.

The general system in this part of the country is, first, to break up a three-year old ley for wheat, on one ploughing; next, turnips; and, thirdly, barley and seeds; in which latter state, it continues for three years. If it be a poor ley, turnips take the precedence, which are followed by barley with seeds, viz. rye grass with white clover. The first year, the

seeds are pastured with beasts, as at that time sheep are esteemed particularly injurious. The beasts are bought in at Michaelmas; are kept in the day-time on turnips, and at night on straw. The seeds are ready for them by the time the turnips are eaten, and they go off fat in May and June. The lambs are weaned the beginning of the latter month, and are put on after the beasts. After wintering the year-old hogs on turnips, they are put to the second year's seeds, and they are thus fattened by the latter end of May. On the third year's seeds they put their ewes and lambs. I have stated this, with much diffidence, as the general practice; I should, perhaps, have no difficulty in calling it the best practice that prevails, but where there is so great a variety, I am not bold enough to assert which is the predominant.

Rolling seeds, has lately been introduced, and has been found very advantageous on the light lands of the county. Among the last improvements, the culture of winter tares may be noticed: they are sown in November and December, two strikes to the acre. The country of which we are now speaking, abounded prodigiously in rabbit-warrens; the following are the only ones which now remain, and some of these, by modern inclosures, have been very considerably reduced. Clipston, Peasefield, Inkersall, Oxtou, Bledworth, Culverton, and Newstead.

Weld, or Dyer's Weed (*Reseda Luteola* of Linnæus) formerly was much cultivated in these parts, and is yet grown about Scroby, Ranskill, and Torworth. It is sown with barley and clover, half a peck to the acre. Five hundred weight is esteemed a tolerable crop, and 10 cwt. a very favourable one.

Liquorice was formerly grown about Worksop, but it is now abandoned.

Water meadows, I believe, were first commenced in this neighbourhood in Clumber Park, and this extraordinary source of abundance has been since much extended.

Hops are not wholly neglected: some few gardens are cultivated with great skill and success.

The principal remains of the ancient forest wood, are in the Hays of Birkland and Bilhagh. There was a survey for the Crown in 1790, when the number of trees was taken at 10,117, and the value at 17,142*l.* Since that time, the quantity has been considerably reduced, but the price has been greatly enhanced. They are generally large oaks, and without underwood. The tract on which they grow, was then computed at 1,487 acres, and was reckoned to be worth, at that time, eight to twelve shillings an acre, when cleared. It is to be lamented, that great neglect has prevailed in these forests, notwithstanding the value of the commodity, both

for the bark and the timber. Many of the trees are seen with stag-heads, and in a condition disgraceful to the country.

Harlow Wood, Thieves Wood, and Mansfield Woods, contain only small timber, and are very contracted in their dimensions.

Some very extensive plantations have been made to supply the waste of time, and the diminution produced by the axe of the woodman, but from some pernicious mistake, and from too great a solicitude for quickness of growth, at first, only the inferior woods were cultivated. Since that time, a more beneficial and generous system has been adopted, and the advantageous consequences will in a few years be very apparent.

Trent Bank Land possesses a mellow soil on a sandy or gravelly bottom. The greater part of this rich and beautiful district is inclosed. It will be naturally supposed, that much the larger proportion is in meadow; there is, however, no inconsiderable quantity under the plough, and here husbandry is better understood than in most other situations in the county. Perhaps the rent of land, on an average, may be about 30s. an acre. There is no place in the kingdom, where the effects of the turnip culture have been more essentially beneficial; in some peculiar spots, it has increased the rents ten fold, and has converted a morass into a luxuriant garden. It will astonish some of your readers in the less productive counties, when I assert, that about Muskham and Balderton, an acre of ground frequently yields ten quarters of oats.

The course of crops near Newark may be thus given. Plough a ley, then sow grey or white peas, to be succeeded by turnips, afterwards barley, and lastly oats and seeds. Winter tares are sown by some few persons for the sake of the green fodder; they are, however, beginning to be more extensively used, and better understood.

The grass-land of this district is more generally applied to the purpose of fattening than of the dairy, excepting on the banks of the Soar, which, taking a direction south, into Leicestershire has numerous valuable dairies on its shores.

There is no great quantity of cattle bred in this vale, considering the opportunities that are afforded for this department of farming. The sheep, however, have been greatly improved by the tops of the Lincolnshire and Leicestershire kinds.

The manures employed here are, lime, soot, gypsum, compost, tan dust, and whale blubber.

The tongue of land east of Trent is sandy. A great part of it consists of low moors, and is much flooded by rains.

In the clay district, there is an admixture of sand with the

clay, where it extends north of Trent, and in the open fields the course in this division is, 1. fallow, 2. wheat or barley, 3. beans or peas, or both mixed.

Folding is far from being general, not from the want of conviction of the importance of these means of improvement, but from the farmer not having sufficient stock to resort to them with advantage.

Dove manure has never been widely used, on account of the scarcity of the commodity; but it is more common in these parts, than in any other situation in England, on account of the prodigious quantities of pigeons kept by the farmers. Seven hundred dozen have been sold in one market day, in the little town of Tuxford. This species of dung is principally employed as a top-dressing for wheat, to the quantity of three-quarters per acre. The expedient of paring and burning has, in several parts, been resorted to, without a sufficient attention to the nature of the soil; and in Norwell Lordship, they have utterly spoiled the land, by the want of skill in this process.

If I were to attempt to ascertain the proportion of land devoted to the dairy, I should say, that about eight or ten cows are kept in each division of 200 acres, but I would confine this remark to the tract of land from Fledborough, extending on each shore of the Trent.

The beasts in this part are generally of a poor and coarse kind, and it is no wonder, as they are almost universally of the commixture distinguished by the appellation of Woodland-beasts. It is, however, to the honour of the county, which begins to be insensible to no means of improvement, that endeavours have been actively directed to improve the breeds in every distinction of animals.

Hops, which are attended with such a large expence, have not been neglected; in the vicinity of Retford particularly, they have been cultivated with great care, and with a profit proportioned to the solicitude, diligence, and talent employed.

Thorney-wood-chace is in this district, of which the heirs to the earldom of Chesterfield are the hereditary keepers, and there are several other considerable tracts of wood.

In the Vale of Belvoir, in the open fields, the rotation is generally, 1. wheat or barley, 2. beans, 3. fallows. In the inclosures, there is, almost universally, a mixture of arable and pasture land, and a little dairying is admitted.

Nottinghamshire Wolds is a range of high bleak country. In the land under the plough, the course is, two crops and a fallow.

In the Lime and Coal Districts, the limestone is a hungry stone, rising upon the vegetable mould, commencing at Shire-

oaks, and abutting on the coal at Teversall. The coal runs south by west to Brook Hill, then south to East Wood, and next easterly to Belborough Woollerton and Lene. This line is scarcely a mile broad, and above the coal is a cold blue or yellow clay.

The greater part of the District is inclosed, and the rotation of crops on the limestone is, 1. fallow, 2. barley, 3. grass-seeds; or, 1. turnips, 2. barley, 3. seeds for two years, 4. peas or oats. In the coal lands, 1. fallow, 2. wheat (and seeds on it in spring), 3. seeds, pastured or mown, 4. seeds, broken up for wheat, and then oats and fallow. Woods, also, are of a pretty large extent in this part of the country, yet have been greatly diminished within these few years.

The art of draining is not correctly understood, and therefore the practice is very limited. The county where it has been most resorted to, is in the Vale of Belvoir, where some small rivers have been forced from their natural channel, to promote the purposes of Agriculture.

In the neighbourhood of Newark, a recipe is employed with success, which very nearly resembles one recommended from Nottingham, by K. Y. and not only introduced into your last Number, but, subsequently, into almost all the newspapers of the United Kingdom. It is thus expressed in the memorandum I have made. Take 28 gallons of water. In a few gallons of this liquid, boil 1lb. of arsenic, then mix it with the whole quantity. In the fluid thus prepared, steep the wheat for six or eight hours. When the grain is extracted, prepare it in the usual way with lime. The wheat should be put through a sieve, and what rises to the surface should be skimmed off.

The rot has frequently been very destructive among the sheep of the county, and the people are, in consequence, very skilful in the management of that animal under the disorder; but your friend, Mr. Dowlen, of Lewes, and others, have introduced so many valuable specifics for the cure of this complaint, that I do not feel myself at all disposed to protract this letter by adding to the number.

Those who have had an opportunity of comparing the progressive state of the population of this county, cannot avoid having observed, that it has been considerably increased by the inclosures, and this perhaps will be a sufficient answer to a host of objections which have been produced to defeat these important means of public improvement.

In the neighbourhood of Mansfield, I noticed a large quantity of yellowish free-stone; at Maplebeck a blue stone, which bleaches when exposed to the atmosphere; this may be perceived on the inspection of Newark bridge, which is built of this material. At Becon Hill, is found a blue stone, ornamental for hearths, as it nearly resembles marble.

Coals are procured in the tract I have described, and are conveyed at a small expence to various parts of the county, by the Erwarsh and Nottingham canals, and their ramifications.

You have introduced into some of your Numbers, several curious and interesting observations on the subject of gypsum. A very excellent quality of this article is obtained in the neighbourhood of Beacon Hill, a good deal of which is sent to London in lumps for the colourmen; but the principal part of the white gypsum, is ground and put into hhd's. for other purposes. At Red Hill, near the junction of the Trent and the Loar, is a very fine quarry of this commodity.

The farms of this county are mostly at will, yet, from the liberality of the landlords, the tenancy is commonly for life. The rental of few of them exceeds 300*l.* and more are below 100*l.* per annum.

On the subject of the implements, employed in farming, I need say very little. The plough frequently used, is the Dutch swing-plough, but the two-wheeled plough is not rare in the Vale of Belvoir. The harrow is light or heavy, according to the soils over which it is drawn: each harrow has its horse, and these implements are not connected, as is pretty constantly the case in other counties. In the waggons and carts there is nothing very remarkable, unless, perhaps, the eaves or shelvings of the former, which are added in the time of harvesting. They are put on at two efforts, are very light, and the waggons thus furnished, are twenty four feet long and eight wide, which dimensions give abundance of room for the load.

The farming business of the county, is wholly done by horses, with the exception of a few experimental gentlemen, who are fond of introducing every novel expedient on their estates.

The farm houses are often in the villages, and not, as in other counties, large cottages attached to the land. Both the dwellings and barns are usually of brick, and are either thatched or tiled.

In a county throughout which one of the principal rivers takes its course, it is, perhaps, unnecessary to say, that there are abundant means of water communication; and the fact is, that however important the subject, I am often less diffuse upon it, on account of the extensive information introduced into your work, in every volume, on the progress of inland navigation.

The roads have been of late years much improved. The best scheme for making new roads on clay or wet bottoms is here well understood. They first carry the soil from the sides leaving a groove or channel in the middle, for the new mate-

rials. They begin with these by depositing a quantity of brush wood, this is succeeded by the stones and gravel, and if the gravel be sharp and good they do not make the road convex, even a concave surface is found to be sufficiently firm.

The stocking trade is well known to be a principal support of a large portion of the population of this county, but I shall not now say a word upon it, for two reasons: first, because our manufactures are foreign to the design of your work; and secondly, because I have already imparted my sentiments on the effect of institutions of this kind on agriculture.

As I have extended this article so much, a few words shall suffice on the subject of the improvements I would recommend in this county. I am anxious to propose the extensive adoption of the plan of water-meadows. The best opportunities are afforded for this purpose in Nottinghamshire. On the forest, no less than five fine streams cross from west to east, parallel to each other, all of which might be applied with facility to this object.

Large tracts of forest-land still remain in the forlorn state of rabbit warrens, and sheep walks; most of which might be planted to great advantage. From some cause or other, the growth of timber is not only neglected in the districts to which I have adverted, but even in the hedge-rows in the inclosed parts. I therefore, most earnestly solicit the attention of farmers to this particular, and I sincerely congratulate with them, that a general spirit of improvement has arisen throughout the county, from which they may reasonably expect abundant emolument.

I am, Sir, yours, &c.

Oct. 12, 1804.

CHOROGRAPHUS.

For the Agricultural Magazine.

LETTER FROM GEORGE NEVILLE, ESQ. TO SIR RICHARD SUTTON, BART. ON THE INCLOSURE OF 700 ACRES, IN AN UNPRODUCTIVE DISTRICT.

SIR,

IN compliance with the desire you expressed when you took a view of my place with Mr. Lowe, that I would give you some more particular information concerning my improvements and management, I have to acquaint you that I have taken from the best sort of common ling moor-land, about 700 acres, and divided it into five small farms, and built brick houses and necessary conveniences, and tiled them all upon plain useful plans. These farms are divided by quick fences, and many of the inclosures by birch; both grow extremely

well. The birch fences for the most part are strong, and ready to plash in four years from planting, and by twigging them for besoms, pay something more than the expence of each plashing. They shoot very freely the first year after plashing, generally about the height of the hedge, and very soon make a strong fence. The best of the poor land is very thin skinned, not having above four inches of tolerable soil, before you come, in general, to a yellow, and too often to a sharp white sand. The land is the best where the yellow prevails, being stronger and not without a small mixture of clay in it. We plough thin, and keep all our manure as much on the surface as possible. *Paring* and *burning* are never eligible, but always bad management, except where the land is first taken up from the rough, viz. when full of stalky old ling or gorse. Under these circumstances it cannot otherwise be brought into management in any moderate time, or at any moderate expence. The expence of paring is from 10s. to 12s. per acre, burning from 4s. to 6s. stubbing, more or less, according to the work. This management, or rather mode of taking up land, secures a good crop of turnips, and the layer for sheep is always good. The course of tillage is for the most part as in forest land; turnips, wheat, rye, peas, (grey rouncivals chiefly) barley on some parts; oats, lentils, and vetches, grow very well with good management, the whole art of which consists (supposing the land judiciously worked and cropped) in keeping it fresh and fresh, viz. never crop it much in tillage, or continue it long in seeds. As soon as the land can be spared, when the seeds begin to decline, it should be ploughed up again in the swarth, for peas, oats, or skegs, then manure well for turnips; then lay down with proper seeds, whilst the land is in good heart with a crop of barley or winter corn, if the turnips can be eat off in time for the purpose. Rye-grass has its use upon this land, mixed with white clover, trefoil, or red clover, and perenneal red clover, commonly known by the name of cow grass, or in some other counties red honey suckle. Having no meadow land upon this sort of farm, I am reduced to mow the first year always, but never afterwards; pasturing it till again converted into tillage, with sheep. There is necessarily a variation from this system, according to circumstances and seasons. I raise heaven and earth to make *manure*, but as a very little clay of any quality is to be met with on this sort of land, I have but few opportunities of making any large or sufficient quantity for the improvement of it. We use lime, (Knottingly is by far the best) and to advantage, when mixed with good dung. A chaldron, with ten loads of manure, is more in general than we can get for an acre. Lime by itself on this sort of land, is seldom used, except on fresh land. I mow ling, rushes from other lands, which I bring to bed with it, and tread down, and

even pare waste land in lanes, to make *compost* with ditch stuff, fern, lime, rushes, dead gorse, &c. By this management you may judge how I am straightened in the article of manure. Having two dove cotes, I use about ten chaldron of dove manure every year, either on turnip land or winter corn, with advantage. *Stickle-back* manure exceeds all other I have ever tried as a present, or lasting manure; but alas! I have not been able to get any for these last 10 years: I used it then in tillage, and its effect is visible to this day. *Whale blubber* is to be procured from Hull, but the price asked is discouraging.

Of sheep I have two sorts, the one which I call my *upland* sort, of the Lincolnshire pasture breed. The hogs run about three to the tod of twenty-eight pounds. The ewes five or six.

As to my *lowland flock*, I begun to breed from the Weigh-ton Yorkshire Limestone sheep, which was a small, compact, short-woolled, hardy sort, and suited extremely well; but for many years, I have crossed with the shortest woolled forest sort. I have now a flock of Scotch sheep, with black noses and feet. They are very hardy, and very round and compact in their make, and short woolled; these have been crossed by an excellent short-woolled forester, and my lamb-hogs are as beautiful as can be. My ewes of this sort are this present season in lamb, by a tup I bought with a flock of ewes, from Sutton Cole-field. They promise to do very well upon my land, and I expect much from the crossing of my breed. I never thought any thing about the rot till the year before last, when I lost several; and again this year, I had a loss amongst those I kept on; but it is very remarkable, that the Scotch ewes, which are not three years old, have escaped the rot altogether, though on the same sort of land, and when every body suffered greatly: these ewes turned out their lambs themselves, almost fat, giving as much milk as would rear two lambs each, and this without exception. I sold the wool of my short-wool flock, at 26s. per tod, when I last sold, (the year before last); at present I sell no wool. My short-woolled flock ewes, tod about 10lb. to the tod. I have had wethers of this sort which have come up to 25lb. per quarter. Those I kill for the house this winter, are from 12lb. to 16lb. some 18lb. or 19lb. one 20lb. per quarter. I give great quantities occasionally, in the spring, of *skegs* in the corn, to my low-land ewes before lambing, when you can easily conceive upon such a sort of farm, I must be put to it frequently for support. I also chop the straw with the corn in it, and give it to them occasionally, and they are very fond of it. This year having plenty of turnips on my low farm, I have already began to give some to a parcel of ewes I expect to lamb about the

middle of February. In this manner I support a flock of 120 ewes, with their last year's lambs, on a farm which, when I began to inclose, had never been let at above 3l. a year.

Skegs are remarkably good for horses in the straw or threshed, and in the straw remarkably so for cows. Straw beasts are also very fond of the straw. I can get, taking up from the swarth, from 4 to 6 quarters an acre. On the same land, I should not have been able to get, perhaps, above three sacks of red Fresland, or what is called short-small, or any other kind of corn. If land is in the state in which all our bad land will be, more or less, after the seeds are quite run out, and as is frequently the case, when you cannot conveniently put it again into tillage so soon as you could wish, from either the two great quantity you may have to improve, or other circumstances; if in this state, I say, it were to be taken up with turnips, in the most eligible way, it would be often impossible to provide manure *upon the farm* for any quantity of land sufficient for the purpose, which makes *skegs* a very desirable crop, and which, for that reason alone, I find a great acquisition, and feel pleasure in having been the first to introduce them into this country.

Planting. The Scotch fir is least nice of any of the sorts, and grows with me like a weed, and with as little trouble as gorse. The larch and Weymouth pine are equally hard and prosperous upon all the land I plant, which is of the bad sort, and grow as fast and as well as upon the best soils I have ever seen. I plant birch in all my plantations, as nurses to other plants, and as underwood; and in both cases they are very useful and advantageous, drawing up and keeping warm oaks, beech, ash, &c. which all grow as well as possible. The *beech* (under a favourable mode of planting) grows extremely kind and well in every respect; and I am now cutting ash poles, remarkably kind and good, by way of thinning my plantations of oak, upon land never let, before I began to farm and plant, at so much as one shilling per acre.

As to the *uses of beech*. My beech is felling from November to the beginning of March, though the sooner the better, as it is very early in its sap in the spring, bleeding exceedingly if not cut before March. I first let the twigging to the besom makers, at so much per bottle (or bundle), measuring four feet in the girth. The twigger lets the bottles lie till March, then takes them away, stacks them like corn, and thatches them. They must, however, be tolerably dry, before stacking, as otherwise they would be apt to heat and mould in the stack. The besom-makers suit their own convenience as to the time of working up the twigs, generally beginning the latter end of the year, as soon as they become properly dry and seasoned for use. The making up is winter employment generally. I

then cut out the shafts, or staves, which I sell by the thousand, or hundred. The tree, thus dismembered, I sell to the brush-makers, which is converted into brush heads, painters brush handles, banisters, spindles, distaffs, &c. and short pieces are worked up by the clog-makers and shoe-heel-cutters, &c. I sell these poles by the score, or by the gross of the articles they are converted to. In the last case they are cut up in the rough before they are carried out of the woods. The refuse is kidded up for the bakers and family use: the nogging ends, unconverted, are brought into my own yard, and burnt as coal, making the quickest and best burning fire possible, and the pleasantest, never sparkling or flying in the least. I used to raise a great quantity from seed. In this case I used to pare and burn a piece of my worst land, on which I sowed turnips. eat them off early, and ploughed the ground immediately, and harrowed it well. By this means the land was immediately in order for the seed, which I harrowed well in any time before the winter, which I prefer, as the plants will grow sooner, and make greater progress by coming out of the ground earlier than if this business was delayed till the Spring. They will grow in great abundance sown broadest, like corn, and be a nursery for years, leaving a sufficient quantity for a plantation at last. The seed may be easily taken from bearing trees, by cutting the branches before it is quite ripe in August, and may be threshed out with a flail as corn, as soon as the branches dry a little. By this means I can, in the course of a few hours, get as much seed as would sow an acre or two of land, at the rate of two strikes or bushels per acre. I raise few in this way now, as I can furnish myself with seedling plants, at one shilling per 1,000, for taking up and planting the same, at three shillings per ditto. These are taken up with small bales of earth, as are the *Scotch firs*, which I grow and plant out in this way at 4s. and 5s. including the expence of taking up. These plants (whenever I plant them) do not seem to be sensible of their removal, and are carried with my own teams to the planting-ground, at no expence worth mentioning. The size of the Scotch Fir when taken up, are from two to three and four feet high, and I do not lose one in a thousand, except by some accident. I have forgot to say, that I make rails of my *birch* ray and gate-bars, first shaving off the bark. The rails frequently are used to get up a second quick-hedge on my bad land, so well do they wear; and I prefer them, for this purpose, to any oak or ash sapling rails whatever. They make very light and useful bars for inward gates for farms, and with oak heads will last many years. I have corded a great deal of this wood, where it is not kind enough for riving for farming purposes, and it charrs

very well. As to my *rein-deer moss-land*, as you termed it, I must say, bad and barren as it is naturally, it has for years worn its present coat, from the circumstance of its having been, till within this last twenty years, a turbarry for generations; and I have known persons, who, getting turf upon it, have pared the same land three times over in the same day for fuel. So little was coal the fuel for poor cottagers, or even the better farmers, sixty years ago, where turf could be got. The turf, and cutting it, came to about 14d. per load, in my memory.

The *waste open moors* might and would be, in their present state, tolerably drained, if the waters in the fosedike were not so shamefully kept up against all reason and law. It wants deepening, to save which expence, water is given to the navigation at the top instead of the bottom. My drainage is, for the most part, independent of this source of obstruction to all improvements: but I trust, the late Lincoln Navigation Act, will, in spite of every obstacle, be very useful to the drainage of moor land. I suppose there may be 10,000 acres of open waste moor-land, between Newark and Bracebridge, by Lincoln, including Swinderby, Thurlby and other Lordships between Lincolnshire and Nottinghamshire; from Newark, the Scarles, Gerton, Spaldforth, Wigsley, Harby, Clifton, Swinethorp, Saxelby, Broadholm, Thorney, &c.

I am, dear Sir, your obedient humble servant,

G. NEVILLE.

For the Agricultural Magazine.

ON THE METHOD OF PLANTING AS PRACTISED AT CLUMBER BY THE DUKE OF NEWCASTLE, UNDER THE MANAGEMENT OF J. MARSON.

THE method in practice here, for the management of a sandy soil covered with heath, whins, or furzes, &c. and which is intended for planting, is as follows.

The ground is first cleared by stubbing and burning the heath, &c. (if found too strong to be ploughed in); it is then sown with one or two successive crops of spring corn, as oats and barley, and afterwards with turnip seed, the ground being first thoroughly cleared of twitch and other weeds. The turnips are fed off early with sheep, and the ground is immediately double-trenched ploughed, from twelve to sixteen inches deep, if the soil admit of it. We then proceed to sow it with acorns, ash keys, and hawthorn berries, and to harrow them twice over. The same ground is afterwards planted with oaks, ash, beech, elms, birch-larches and other sorts, which you may occasionally have, from 6 to 18 inches in

height, but not to exceed that size. Spanish chesnuts are then put into holes, made with a dibble, from three to four inches in depth, and covered over.

In general, we fill in our plantations with a various assortment of American plants, as firs, pine, cedars, &c. besides Scotch firs and birch. These are not only a shelter for the young forest trees, but have a pleasing effect for 15 or 20 years, for their permanence of verdure, and variety of their foliage. They are then taken out to give room for the oak, Spanish chusnut, &c. This is the last process of our plantation.

For a more particular account of the rearing and management of oaks on a sandy light soil, I beg leave to refer to the communications of the very ingenious Mr. Speechly of Welbeck, which are inserted in Evelyn's *Sylvia*, published by Hunter, page 90, first part (note) which explain every thing that can be practically useful on this subject.

EXPLANATORY OBSERVATIONS ON THE ABOVE SYSTEM.

The quantities required for one acre are nearly as follows :

Plants of different sorts, from 6 to 18 inches, about 2,000.

Ash keys, four strikes.

Hawthorn berries, one ditto.

Spanish chesnuts, one ditto.

The ash keys, and horthorn berries are to be buried one year in beds or pots of sand, before they are sown in the plantation.

Six strikes of fine large acorns are supposed sufficient to sow one acre, at one foot asunder.

The plants should be healthful, straight, and firmly set; not drawn up too luxuriantly, but raised in a soil of similar quality and temperature to that wherein they are intended to be planted. This is a very necessary caution, as they will hence be much more likely to flourish than if they should have been raised from a richer soil, or warmer situation. They should also be always transplanted from the seed-beds into fresh ones in the nursery, from four to six inches asunder.

If the heath can be ploughed in, the best time will be in autumn, as it will then have the benefit of a winter fallow. It may be cross-ploughed in the spring; and after having been repeatedly harrowed, may be burnt and then sown.

With respect to the season for planting, I prefer the autumn, for a dry sandy soil: and the spring, for meadow or low ground, and also for sowing the berries, keys, &c.; at that time of the year they are not so liable to accidents by vermin or frosts as when they are sown earlier. When, however, planting and sowing are intended to take place on the same piece, both must be completed at the same season, that

is early in the spring. Precautions should be used to guard them from crows, hares, rabbits, and other noxious animals, till the chesnuts, acorns, and plants are sufficiently grown not to be exposed to such casualties.

If the land be hot and dry, you may sow some rye or oats with acorns and other seeds, but not so thick as to produce a regular crop.

I am never under any apprehension of planting too thick, for many reasons which it is needless to enumerate. When the season proves favourable, and there are more live plants upon the ground than are necessary, they are thinned at a proper period, and made use of in the next year's plantation. This mode permits me to appropriate the nursery to other uses.

About fifteen years after planting, the trees may serve for a variety of purposes; such as posts, rails, pales; punchwood for the collieries; cordwood charcoal, hop-poles, brush heads, birch brooms, joists, rafters, &c. &c. This observation is to be confined only to such trees as are cut down in the course of the second or third thinning.

The plantations are in general inclosed with quick fences. These, independently of their ornament, not only secure the young trees from being injured by cattle, but prevent the sheep from depositing their dung, which in that case, as a manure, would be of no use to the farmer. It is well known, that both in extreme hot or in extreme cold weather, the sheep always have recourse to the woods for shelter.

For the Agricultural Magazine.

ON THE AGRICULTURE OF BRADWELL, NEAR
THE SEA, IN THE HUNDRED OF DENGLEY.

THE following very valuable communication was made to the Surveyor of the Board of Agriculture, by the Rev. H. Bate Dudley, of Bradwell, and is now inserted, with the hope of obtaining some further observations.

Bradwell, *near the Sea*, is a peninsular parish, at the eastern extremity of the Hundred of Dengley, on the conflux of the river *Blackwater*, which here falls into the *German Ocean*. It contains, in severalty, about 4,000 acres of upland, which is chiefly in tillage, and 1,500 in marshes; nearly a moiety of which is under the plough, the other part continues to be grazed. These marshes, in common with those in adjoining parishes, are under a Commission of Sewers, who regulate the management of the sluices, sea-walls, and the fresh water courses which pass through them. The commissioners, in consequence of a general inundation from the great tide in the spring of 1791, raised the sea-walls and banks two feet more in perpendicular height, which will prove a safe barrier

from any similar misfortune. The effects of the salt-water, where it lay fourteen days, were not found injurious to the pasturage, nor even the tillage lands, after that year. On the south side of the parish, the sea retires; and three portions of rich land were embanked from it, in addition to the glebe, in 1786; the completion of which was rewarded by the Society of Arts and Sciences, with their gold medal of that year. This newly acquired land, so lately salt ooze, has spontaneously thrown out the richest herbage, in which are found many of the choicest grass-plants in the botanic system. About 150 acres has been gained in *Bradwell*, and the example is successfully adopting in the neighbouring parishes on the coast.

Soil.—The soil is various; the uplands are generally a tender, sandy loam, deep in staple and forcing in almost every kind of vegetation. The marshes* under the plough, though stronger land, are not less productive; those in grass are fine in herbage, well watered, and will fat an ox expeditiously, of any weight. The farms are in severalty, from 600 down to 40 acres each, all well fenced, wooded, and watered. The *glebe*, reckoned the largest in England, is about 400 acres. Throughout this parish, the finest *white wheats* are grown, some of which, even the present year, weighed 65lb. the Winchester bushel. The rentals have increased, within these ten years, from 12s. to 20s. per acre, which is now the average price on new tenures; so general is the spirit of cultivation, that there are scarcely twenty square yards of common or waste lands throughout the parish.

Crops.—All kinds of corn are abundantly grown here; but less of barley than any other, it being found to run so much to straw, and to produce the grain of a lean and coarse quality. *Rape seed, coriander, mustards* white and brown, and *carraway*, are likewise grown, occasionally, to a considerable amount.

The best course of husbandry is as follows.

1. Fallow for oats (if tender land, with turnips.)
2. Clover.
3. Wheat.
4. Beans or peas.

And if the land is in good heart, and has been cleanly hoed, another crop of wheat is sometimes taken before the next fall-

* These marshes, from the many old embankments still remaining, have evidently been inclosed from the sea, by successive advancements, and many of them are still divided as the old rills and sea-water courses left them. The removal of the two large sluices on the glebe marshes nearer the sea on the late embankments, with straight out-falls from them, has been of great advantage to the whole level, by a freer discharge of the fresh waters.

low. This system is not much departed from, except towards the end of the lease. Where the soil appears tired with the repetition of clovers, which, in that case, dye off in the spring, tares are frequently substituted in their room, and the change is found advantageous beyond the succeeding crop of wheat.

The average produce is,	{	Wheat.....	32	bushels	per	acre:
		Oats.....	48	do.	do.	
		Beans.....	32	do.	do.	
		Peas.....	36	do.	do.	
		Coleseed.	34	do.	do.	

The lands in high cultivation will yield one-fourth more. The marsh-corn, though not so bulky on the ground, is generally better set, and weighs heavier.

Hops have lately been introduced on the glebe, with a prospect of considerable success; the quantity and quality grown last year on twelve acres, refute the general opinion, that the sea air is detrimental to this plant.

Manure—Chalk rubbish, brought in vessels from the Kentish cliffs, has been the principal manure, or rather *alterative*, to the ploughed lands here, for time immemorial. Horse, and other dung, till within a few years, were esteemed of no value, and therefore not carted on the land. Eight waggon loads of chalk, value 1*s.* a load, without cartage, are a good dressing per acre, which in fair husbandry, will be productive twenty years. The universal opinion, that land once chalked would never receive benefit from rubbish a second time, is now found fallacious from daily experience, but the stiff-soiled old chalked lands require that the second dressing should be previously mixed with bank or other earth. No marle, or understratum of that kind, has been discovered in that parish. Coleseed, buckwheat, and even clovers, are often turned in upon old ploughed lands, and much benefit has been derived from their vegetable fermentation.

Improvements.—Hollow draining has not been long practised here, but is now becoming general: the ditches are cut a rod asunder, from 20 to 24 inches deep, and well filled with wood and straw, at from 4*s.* to 5*s.* per score rods. Sheep-folding has likewise been recently introduced, and is found highly beneficial to the pasturage as well as ploughed lands. Taking down the numerous pollard trees and lofty hedges, throughout all the road-sides, under the high-way statutes, in this parish, has so apparently improved the adjoining lands, by laying them open to the sun, that the mode is generally adopted through the Hundred, where the fences are now handsomely clipped low, by choice, which were at first taken down by compulsion. Turnips increase in proportion to the extent of land-ditching. The drumhead cabbage is partially

introduced for spring-feed, and answers well, except where an immediate crop of Lent corn is expected to succeed; this failing, as a natural consequence, confirms the general prejudice, that cabbages are a more exhausting crop than is truly the fact. Coleseed-feed is declining much, from the general experience that it leaves the best fallowed lands in an unfavourable state for oats and clover, and is of course prejudicial to the next winter crop in succession. As an improvement, pretty general in its operation, may be fairly reckoned the advance of rents, a sure spur to industrious emulation, from which the tenantry and landlords evidently derive a mutual advantage.

Defects.—The expensive management of cart-horses here, in common with the whole district, is a serious defect, that demands immediate reformation. The ploughing, which is done by a pair of horses, one man with reins, is certainly as soundly and adroitly executed as in any part of the kingdom; but the great expenditure of oats and hay, even at the dead season of the year, is a serious draw-back from other advantages. Independently of the ordinary savings, the introduction of oxen on farms where grazing and tillage are so generally blended, would prove extremely productive: but the difficulty of weening the prejudices of a country from an old system, however erroneous, and the risque of throwing an extensive business out of its regular course, deter those who experience the loss from attempting a reformation. Having full aged oxen from the yoke to graze on the spot without the loss attendant on over-driven beasts, would give a saving of full twenty-five per cent. in addition to the advantage derived from their draught stock. But few horned cattle are bred here; the general stock consists of Fifeshire, West-highland and Galloway Scots, North and South Wales runts, and sometimes a lot of Yorkshire beasts; and of late, some Irish steers. These are fatted off within the year, and those of superior quality and condition, within from six to nine months. Formerly, a great number of calves were fatted for the London market; but this has declined much within the last ten years. Some useful cart-colts are bred on the marshes, but these are only sufficient for the teams of the breeders. The Norfolk sheep were lately the principal flocks; but they are now succeeded by the South Down breed, which are found to be hardier, and every way a more profitable race: the smaller farmers keep the Hertfordshire breed, which are much improved by a cross of the Wiltshire tups. A considerable number of the Shropshire and Berkshire hogs are grazed here on clovers for the distillers, which, for the last two or three years have paid well.

There are two decoys for the different species of wild-fowl, and breeding-shores for oysters; but any detail of their ma-

nagement, and terraqueous produce, would here be superfluous.

Workmanship.—The labour is principally by the piece, and is generally well executed; the wages are adequate to the price of provisions. Ploughman 10l. per annum, to be in the house; or 10s. per week, living out; each having their harvest month made up five guineas. Day labour, 1s.; 1s. 6d. in winter, and 20d. in summer, without beer; the hours from six to six in summer, from seven till dark in winter.

The *Tythes* are chiefly under composition to several farmers. The number of houses is about 100, containing somewhat more than 500 inhabitants. A workhouse has been lately established, which is managed so as to lessen rates, while it affords additional comfort to the parochial poor. A useful school was established by a late rector for the education of the children of inhabitants endowed with land in Mile End, value 60l. per annum.

The parish has increased much in population within the last seven years, so that it depends no longer on the casual visitation of strange husbandmen to get in its harvest. The roads, from the worst, may now be classed among the best in the kingdom.

ON THE CULTIVATION OF WILLOWS.

To the Editor of the Agricultural Magazine.

SIR,

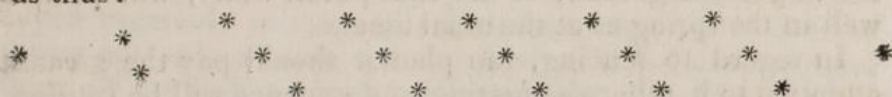
THE following observations, relative to the method I make use of in cultivating willows on waste moist lands, I flatter myself will not prove unacceptable. I have found from experience the advantage of it, and am convinced my country will be benefited, should it be generally adopted.

I would first advise the laying out the ground into lands like hop lands, from three to four yards wide, with a ditch on each side, three feet wide at the top, 1 foot at the bottom, and $2\frac{1}{2}$ deep. The earth that comes out of the ditch should be thrown on the land. But if there is not a sufficient fall for the water to get off, the ditch should be deeper and wider, till you have near a yard of earth above the level of the water.

As soon as this is done, the ground must be double dug, viz. trenched two spades depth, except your ground be very boggy, which will afford room for the plants to shoot, and will save the expence of weeding, which otherwise must be incurred in the first summer after the plants are set; for if they are not kept clear of weeds the first year, the hopes of the planter will certainly be destroyed.

The willow I recommend as most advantageous, on every account, is the broad-leafed, red-hearted, Huntingdonshire willow; every other species I have tried, and find reason to give a decided preference to this.

The sets or truncheons must be cut from twenty inches to two feet long; particular care should be taken in the cutting, that the bark should not be fringed or bruised, or in any other respect injured; for in that case, the plant will be weak and puny. They should be cut, not on a block but in the hand, obliquely, and with a very sharp bill or instrument. They must be dibbled into the earth, by an iron crow, to the depth of from 14 to 20 inches; so that not more than six or less than four, appear above. If the truncheon should not fill the hole, the earth must be trampled close round it, in order that the air may be excluded. Care must be taken that the plant be set as the pole grows. The cuttings should be from poles of about three years growth. Maiden poles are the best; they should be set three foot asunder, in the quincunx form, as thus:



Those truncheons will shoot out many branches, two or three of which will grow to poles if the land is good; if not, only one. Those poles I have sold at eight years growth, for 214l. per acre, neat money; the kidds, or brush-wood, pay for the felling. Had I suffered them to have stood two years longer, they would have produced 300l. per acre. Should any of the plants look weak and puny or not shoot vigorously, it will be necessary to dig in a scuttle-full of manure to the roots, which I have no doubt in saying will pay.

Though I have planted no less than 10 acres, I cannot positively, from my own knowledge, say what the value would have been, had they remained on the ground for 15 or 20 years, having been called on for sets by the gentlemen of the neighbourhood, which I have sold for 3l. a thousand. I must here observe, that the stools from whence the sets are cut, shoot very luxuriantly, and will produce from three to four poles.

The length of poles at eight years growth were from 33 to 36 feet, and most of them were large enough to make three rails, two at the bottom and one at the top: but the great use to which they are applied, is the purpose of making hurdles, flakes, gates, and other farming implements, being a wood uncommonly tough and light, owing, as I conceive, to a new method I made use of in planting them, close to the ground. If it is the design of the planter to let them grow into timber (which, I would venture to say, would be far superior to deal,

for the purpose of flooring or other light work, particularly as it will neither splinter nor fire, and if suffered to remain for 20 to 25 years, would make good masts for small craft, as they shoot up perfectly straight, and without any collateral branches) it is necessary, at the first or second year's growth, to observe which pole is the strongest, as the remaining poles must be cut away. In about 15 years time, I am led to suppose, they will want thinning; of course, the inferior must be taken, and the superior suffered to remain.

The times of planting must be from January to the end of March; but the sets for that purpose should be cut from December to the end of February, when the sap is down.* If, however, there are people so injudicious as to sell sets in spring, it will be to the advantage of the purchaser to plant them, as the sap is then in the poles. The reason why many are induced to cut at that time is on the supposed account of their peeling better; but I can affirm from experience, that poles cut in December, January, or February, and laid in rows upon the ground, or the ends put in water, will peel as well in the spring as at the usual time.

In regard to fencing, the planter should pay the greatest attention to it, otherwise his time and expence will be fruitless.

* And the reason is, that if poles are cut in the spring (the sap being up) the stool will at last be weakened with bleeding if not killed, and of course prevented from shooting so vigorously as if cut at the preceding time.

COMMUNICATION ON THE MODE OF PREPARING AND OF
APPLYING COMPOSTS FOR MANURE.

To the Editor of the Agricultural Magazine.

SIR,

THE following extract of a letter is on a branch of practical husbandry, to which you have paid peculiar attention in your Magazine. It is among the valuable papers of a great public institution, which has extensively promoted the best interests of society in this country. I shall submit it to the attention of your readers without a single comment.

I must solicit your attention to a new and cheap method of planting potatoes, and which I never knew to be attempted by any one but myself. The following is the manner in which I tried the experiment: A quantity of land in my farm wanted draining, and I had occasion for a large main-drain for that purpose: in the cutting thereof I found a quantity of earth in a solid bed, resembling peat, but of a more solid substance than peat generally is. I threw it into heaps, and after the ochery water had left it, mixed it with lime, which appeared to me to form an excellent manure. After this, I

fallowed a field of a gravelly soil, drilled it for potatoes, and put the same quantity of this compost into the drills, as I should otherwise have done of black dung; and the produce from 8 statute acres was 864 loads of 13 score to the load. I then ploughed it for wheat, and had a most excellent crop; sowed it with white clover and grass-seeds, and let it lie for grass; it has been, and is now one of the best pastures in the neighbourhood. The land, before the improvement, was worth about 11. 10s. an acre, and after taking two very great crops from it, is now worth about 31. an acre. The general opinion of the country was against the use of lime in the setting of potatoes: it has, however, answered beyond expectation: and had I been under the necessity of procuring dung for my potatoes instead of compost, it would have cost me six times as much money.

Having made the above experiment with potatoes and wheat, I was inclined to try the same sort of compost upon grasslands. In a little valley, between two small hills, in my farm, I found a very large bed of peat, composed of decayed vegetable substances, which was boggy, and in some places upwards of nine feet in depth. This I drained, and drew off the stagnant water with which it was filled: it appeared to me, the whole bed, in consequence of being laid dry, had fermented; for when we afterwards cut it, we found it converted to very fine mould. I caused it to be trenched to the next stratum, which was marle, and mixed it with lime hot from the kiln; but very soon found that I must slack the lime before mixing, or it would have burnt it to ashes, by undergoing a fresh degree of fermentation. The quantity I mixed was 9,000 tons with 1,327 horse-loads of lime, which cost me about 160l.; and I gave one penny per cubic yard for the trenching and mixing: and having about thirty acres of gravelly soil, I begun in October to cover my land with this compost, which, in a very short time proved advantageous; for the grass began to spring as if it had been April, and soon produced a very luxuriant pasture, of about four acres in extent. This I covered first, and turned into it eight milch cows about the 15th of December. They fed thereon till the 1st of March, and gave me a very great quantity of milk and butter; and the butter was rich and yellow like spring butter. The cows, while in this pasture, had very little hay; and that, during the night; of which they would eat only a very few pounds. Since I took out my cows, I have pastured the land with 20 in-lamb ewes, of the large white-faced or Malham beed. They are now pasturing, and I doubt not but it would feed sheep very fat. I have now covered about 26 acres more, which promises to be as successful as the other, and amounting to, in the whole, 30 acres. This, prior to the

improvements, was worth 2l. 10s. an acre, and is now worth 4l. an acre.

This compost is, I believe, equal to the best manure I could obtain, and the advantage arising from peat compost, with lime, when laid down upon gravel, sandy, or clay soils, is almost invaluable. The quantity of this compost which I have now ready prepared, together with what I have used, amounts to 9,000 tons, which has been raised since last summer; and the total expence is 530l. The quantity per acre, is one hundred and forty tons, which costs me about 8l. per acre. Had it been dunged the common way, it would have cost me 16l. per acre, and would not have answered so well. The remainder of my compost is upwards of 4,000 tons: I have thirty acres more to cover, the greatest quantity of which I intend to plant with potatoes. By the statement above, you will see the annual value of the land at present, and what its value was prior to those improvements.

Rackes, near Bolton-le-
Moors, Lancashire,

I remain, Sir, yours &c.

JOHN HORRIDGE.

ON TAPLIN'S MEDICINES. IN REPLY TO C. D.
OF CHELMSFORD.

To the Editor of the Agricultural Magazine.

SIR,

IN compliance with the wish of C. D. expressed in page 169, of your last Number, I have inclosed, for insertion in your Magazine, the four following Cathartic Balls. Your correspondent will immediately perceive, from the different kinds and proportions of the ingredients, that they are suited to horses of various ages and constitutions, and therefore something will be left to his discretion in their application.

Succotrine aloes.....	1 oz.
India rhubarb.....	2 drachms.
Jalap.....	1 do.
Cream of tartar.....	1 do.
Ginger in powder.....	2 scruples.
Essential oil of cloves.....	20 drops
Essential oil of aniseed.....	20 do.
Syrup of buckthorn sufficient to form the ball.	

Succotrine aloes.....	10 drachms.
India rhubarb.....	2 do.
Jalap.....	2 do.
Cream of tartar.....	3 do.
Ginger in powder.....	2 do.
Syrup of buckthorn sufficient to form the ball.	

Barbadoes aloes.....9 drachms.
 Castille soap.....2 do.
 Cream of tartar.....2 do.
 Diagyridium.....1 do.
 Ginger in powder.....1 do.
 Syrup of buckthorn sufficient to form the ball.

Barbadoes aloes.....10 drachms.
 Castille soap..... $\frac{1}{2}$ oz.
 Cream of tartar.....2 drachms.
 Ginger in powder.....2 do.
 Jalap in powder..... $\frac{1}{2}$ ounce.
 Oil of aniseed.....40 drops.
 Oil of cloves.....20 do.
 Syrup of buckthorn sufficient to form the ball.

I think the opinion C. D. entertains of Mr. Taplin, whom he calls a respectable authority, as applied to skill in the pharmaceutic department of the Veterinary art, is somewhat above that writer's deserts. Certainly, if he be correct in this opinion, a large portion of the papers in your work that have appeared under my signature, must be very inaccurate in the positions advanced. Whenever I have differed from Mr. Taplin, on subjects connected with his professional pursuits, I have not thought it necessary to mention his name, or to advert to his publications; his works have had their day, they have proceeded through numerous editions, but it has been at last discovered, that they have been estimated beyond their merits; and as the public is not now misled, I have not been at all disposed to offend Mr. Taplin or his disciples, by precipitating their fall.

Your correspondent amuses us a little when he says: "With some want of candour, I attributed the ill success of my experiment, not to the mercenary disposition of the chemist, but to the deficiency of Mr. Taplin's talents." I am very much affraid that the chemist, of whose mercenary disposition he so gravely complains, will have full as much reason as Mr. Taplin to charge him with want of candour; but, perhaps, the fairer way would be, neither to attribute blame to either the one or the other, until the experiment be not only carefully, but frequently made.

I observe by the Address to your Correspondents, page 236 of your last number, that you have received a letter from Veterinarius Alter, in which he has stated some general objections to the principles or practice I have recommended. I hope V. A. will accept the invitation you have given him, and

ation of his objections ;” and I do repeat the assurance, that “*Veterinarius* will gladly join with him in any cool and dispassionate inquiry.”

At the conclusion of this paragraph, you seem to imply, that the communication of *V. A.* is not precisely in the form you would wish it to appear in your work. I earnestly hope no unnecessary difficulties will be raised to prevent its appearance, as I am much disposed to think the sentiments of *V. A.* will deserve and receive respect and attention, whatever may be the uncouth garb they shall assume. I am disposed to address him in the flattering line of the lyric poet.

“*Tu nihil invita dices faciesve M nerva.*”

Hor. De Art: Poet.

I am, Sir, yours, &c.

Westminster, Oct. 4, 1803.

VETERINARIUS.

ON THE SMUT IN WHEAT.

To the Editor of the Agricultural Magazine.

SIR,

IN your last Magazine, I observe a letter from Mr. E. Dowler, on the Smut in Wheat, wherein he says, “I was lately reading in a first-rate agricultural book, where the author ridicules all preparations for seed-wheat, as being useless, and seems quite certain the blight is the cause.” The agricultural book to which he alludes, is, I presume, the *New Farmer’s Calendar*; for Mr. Lawrence there says, “the unspeakable nonsense of steeping wheat-seed with the intention of preventing the ears from being blighted by certain airs or dews, which may chance to fall upon them nine months afterwards, seems to have revived again of late. There can result no harm, that I know of, from a farmer’s amusing himself with these steeps or brines, which may possibly tend to fructification (although I doubt that), at least to drive away the worm and vermin from the seed. Washing repeatedly with fair water has certainly the excellent use of detecting the light and barren grains, which should never be sowed. Every one knows the common practice of laying the seed in a heap, and drying it with lime.” And in another page, “the effects of blight and smut upon corn, and vegetables of all kinds, are too common and well known to need description; but it is far different with the cause, to which, in my opinion, custom has assigned a most fanciful origin. To suppose that corn caught blight or smuttiness from the seed, is, perhaps, about as rational as to attribute an accidental cold to a defect in the parental seed of the patient; and to steep the seed of corn, with a view of preserving the future crop from smut, is a pro-

ceeding equally sage, and entitled to equal success, as if a man should apply to Dr. Brodrum, or any other Doctor of equal celebrity, for a medicine to be taken at Gunpowder Treason, in order to cure a cold, which may possibly attack him the Michaelmas next ensuing.

“ All these affections, under whatever term, blight or mildew, originate in obstructed circulation, stagnation, and corruption of the vegetable juices. The immediate causes are, sudden changes of the atmosphere from opening heat to pinching cold, which instantaneously close up the vegetable pores, and obstruct the circulation of the sap; those fat, moist vapours, called honey-dews, which descending from a thick and hazy atmosphere, alight on the plants, and not being exhaled, from defect of sun and air, remain to promote obstruction and disease; or the chill occasioned by superabundant moisture, either of rain or dew, remaining unexhaled or unabsorbed, upon a hard and retentive surface of soil. It is a disputable point, in my opinion, whether the honey-dew originate in vapour from the atmosphere, or consist merely in the extravasated juices of the morbid plant.”

“ Should these causes of the disease prove themselves legitimate, both in theory and experience, to what end are we troubling our heads with others which can pretend to no certain ground in either?”

He also says, “ How often have experimenters found their brined seed blighted or smutted, whilst their unbrined has escaped? How often is part of a plant blighted, and part left sound? I have been assured, by a man who farmed near half a century, that he could never discern any difference, but that his dressed seed was equally liable with that which he sowed in its natural state; nay, that he had never scrupled to sow smutty wheat, from which he had grown as pure corn as from the purest seed.”

Various hypotheses have been advanced, Mr. Editor, to account for the Smut in Wheat and the Curl in Potatoes. For many years I have paid great attention to these baneful maladies, both in the pages of the speculative philosopher, and in the field of practice; and I must confess, that to every theory I have been inclined to adopt, objections and difficulties have presented themselves in the course of what I thought just reasoning. Even the mind of Mr. Lawrence has not been altogether free from considerations of this nature, for he seems aware, that those who believe the cause of Smut to be in the seed, may reasonably urge against his theory, that the hazy atmosphere, dews, &c. to which he has imputed the disease, would, in most cases, fall upon every ear, and consequently, *if it were well founded*, every ear would be damaged; and with a view of obviating this objection, he says, “ I have

known a field of wheat, the seed of which had been fashionably brined and doctored, blighted in those parts most exposed, particularly in those ears which stood up erect above the rest, whilst the lower corn escaped; and it appeared plain, to demonstration, that the sheltered corn, or that which was fortunately out of the atmospheric stroke, owed little thanks to the Doctor; as to the exposed and blighted, there could be no longer any question about the power of prevention."

But as I am persuaded, that almost all those practical agriculturists, who have paid the requisite attention to smutted crops, have frequently observed, in standing corn where most of the ears were *equally* exposed, that those which stood "up erect above the rest," were nearly free from smut, while many of those less exposed were totally black, I cannot admit that his remark destroys the force of those arguments which may be advanced in opposition to his hypothesis.

Without *positively* maintaining that smut is occasioned by infected seed, I may be allowed to remark, that, when we advert to certain circumstances in the animal kingdom and reason from analogy, it will probably be considered as unfortunate for Mr. Lawrence, that he has mentioned, "the parental seed of the patient." On this part of the subject, however, the professional knowledge of your ingenious correspondents, Dr. Wilkinson and Lucas Medicus, will enable him to speak with *confidence*, and I should be glad to see it in such able hands.

Mr. Dowlen seems to be of opinion, that the disease is the effect of impure seed; and, I own, I am more inclined to support that than any other theory; it is but fair to observe, however, that the very first line of his letter—"The Smut in wheat being very prevalent this year"—will furnish its adversaries with a powerful argument. For, on the lands of farmers who take equal pains in *all* seasons in choosing and preparing the seed, we cannot, on *this hypothesis*, account for the greater prevalence of Smut in one year than in another.

In answer to one of Mr. Lawrence's questions, I can truly state, that in the course of long and extensive practice, I have never discovered the produce of my good and properly prepared seed wheat,* smutted, *while that of my unprepared escaped*. On the contrary, whenever I have sown any in the latter state, I have always observed much Smut in the crops raised from it; and in answer to the latter part of the question from that author (the observations of a man who farmed nearly half a century), I refer your readers to the following account of an accurate comparative experiment.

On the 15th of March last, I sowed two contiguous ridges,

* This is what, I presume, he means by brining.

(in the middle of a very large field) equal in soil, condition, and exposure, with wheat of the same variety, raised on the same kind of soil in precisely the same mode of management, and thoroughly *mixed*. The seed contained a very small quantity of smut, perhaps one black ball to a quart; but the other grains were not at all discoloured. The ridges were set out in an east and west direction, each 80 yards long and 9 broad. On the west half of the northern ridge, I sowed the seed without any preparation whatever; and on the east, after being well washed in clean river water. On the west half of the other ridge, the wheat was sown after having been wet with old chamber-lye; and on the east half, after being prepared (provincially, *pickled*) in the usual manner, with old chamber-lye and lime in fine powder. All the land was ploughed and sown (broad cast) on the same day, without any variation of weather, and equally well harrowed. We had a calm, dry, and tolerably warm blooming season. Some time after the ears were out, I examined the crop very minutely. That, after the unprepared seed, the washed seed, and the wheat wet with chamber-lye, contained a great, and that from the seed which received the chamber-lye and lime, a very small, quantity of smut.* With a view of finding the proportion (at harvest) with some degree of precision, I took four sheaves from the middle of the crop raised from the pickled seed, mixt them thoroughly, reduced them to an equal size, viz. to the circumference of 24 inches, and then carefully pickt out and counted the number of smutted ears they contained. I pursued *precisely* the same mode with the crops upon the other pieces of ground, and the results were as under.

The 4 sheaves after the pickled seed contained.....	165 smutted ears.
The 4 do. from the seed which was washed in clean water.....	1212 do. do.
The 4 do. from the seed wet with chamberlye.....	723 do. do.
The 4 do. from the seed which received no washing or preparation.....	1270 do. do.

When we consider these results, and those of other experiments, and that 18 out of 20 farmers have long prepared their seed-wheat with lime and chamber-lye, or salt-water and lime; we cannot but remark the extreme impru-

* The straw of this appeared as good as that of the found wheat. Upon every piece of ground I found ears partly smutted and partly found. In part of these ears I found some rows of grain containing found wheat near the middle of the row, and smut both above and below it.

dence (to say the least of it) of an agricultural writer who condemns or ridicules the practice of preparing, or, as Mr. Lawrence calls it, "doctoring," seed wheat,* and that "the man who farmed near half a century" must have been an *inaccurate* observer.

I think it is stated in some of our agricultural publications, that one of the strong acids *much* diluted with water, has been successfully used in preparing seed wheat, with a view of preventing smut; a disease which has been improperly confounded with blight or mildew. The latter remedy I never tried, I have, however, on several occasions, used sea water (so strongly impregnated with salt, that an egg would swim on it) and lime; and also the drainings of fold-yards and lime, and am of opinion that these mixtures are not nearly so efficacious as the latter article, and strong chamber-lye. The best mode of preparation is, I think, to immerse the wheat in the chamber-lye, stirring it well (about 5 to 10 minutes) and skimming off the light grains, &c. The chamber-lye should be let out by a tap, and the wheat spread on a floor, and so well mixed with the lime that every grain may receive a part of it. If this mode be carefully practised, with seed free from smut, I can, *from experience*, assure the husbandman that he will never suffer, in any considerable degree, from that disease. As the lime and chamber-lye will soon destroy the vegetative principle of the grain *if it be suffered to remain in a heap, or in bags*, it should be committed to the ground within 6 or 8 hours after it has been thus prepared. I have sometimes known it considerably injured after being kept 24 hours *thinly* spread out upon a well aired floor.†

When the wheat used in the above experiment was prepared, a proper vessel was not at hand, and therefore the chamber-lye was sprinkled upon it. This, however, is not a good method, for we lose the chamber-lye, and the advantage of skimming off the light grains, black balls, &c. and notwithstanding frequent turnings, it sometimes happens that *all* the grains do not receive a sufficient quantity of the liquid. Probably Mr. Lawrence would smile at this, and remind us of what Dr. Sangrado declared, when his patients died in spite of his infallible specific, namely, that their misfortunes arose from not having been "dosed enough." Such a *memento*, however, would scarcely deserve a comment. For nothing is more completely proved than this, that in many

* Which he has reckoned a *harmless* operation.

† When the seed is in a very moist state it will not pass *regularly* through the drill machine, and therefore it is necessary to have it drier in the drill than the broad cast husbandry.

cases, in various occupations, the most effectual remedies are often rendered abortive by unskilful management.

I am, Sir, yours, &c.

AGRICOLA NORTHUMBRIENSIS.

THE CHOICE OF CATTLE, QUANTITY OF SEED,
BARNs, &c.

To the Editor of the Agricultural Magazine.

SIR,

I Have paid great attention to the remarks of Agricola Norfolkensis, P. J. and Mr. Bartley, on my communications in regard to Seed-corn and Sheep; and now beg leave to acknowledge my obligations to these able correspondents, whose observations will, I doubt not, be very beneficial to many of your readers. I assure you, Mr. Editor, I feel highly gratified, that my inquiries have attracted the attention of your most valuable friends, and produced so much useful discussion. Such being the result of my feeble exertions to obtain, for myself and your numerous readers, the important opinion of *experienced* men, I am encouraged to persevere in my inquiries, and you and your friends may rest assured, that when my small stock of knowledge shall have been so much increased (by unremitting research and accurate observation) as to enable me to instruct others, I will not be sparing in communicating to the world, through the medium of your valuable work, all such matter as I conceive will contribute, in any degree, to increase our stock of rural knowledge, or that will have a tendency to ameliorate those systems which affect the cultivation of our lands.

But while I bestow that praise on several of your friends, which their distinguished merits deserve, I cannot but condemn the supercilious silence of some of those chemical agriculturists who, till lately, contributed to your excellent publication. They appear to have written in a pleasing manner and style, and, perhaps, ingeniously communicated what several of your readers would deem of importance; but after I, in behalf of myself and a numerous body of husbandmen, who have not had opportunities of acquiring philosophical knowledge, requested certain explanations, they continued as silent as if we *Ploughmen* were capable of understanding their learned papers without such ample explanations. Perhaps they have been offended at the suspicions I expressed, that they had advanced much matter they were unable satisfactorily to explain. I am still, however, rather inclined to believe, that they have given abundant reason for several of your readers to entertain a similar opinion; and the idea seems to be corroborated by this fact: That since a practical farmer (*Agricola Northumbriensis*) obligingly came forward with an offer of assisting in the

disquisitions, and of endeavouring to bring their theories to the test of experience, they have discontinued their papers, excepting A. B. (No. 60), whose letter, in my humble opinion, has but little, if any, relation to agriculture, and who has, if I rightly comprehend his meaning, advanced a theory, which has a tendency to undermine our belief in the account given by Moses, of the creation of the world.

Carbon, that wonderful matter, which your chemical friends have represented as the most powerful agent in fertilizing the soil and promoting the most beneficial and luxuriant vegetation, is not yet described; and I must repeat the questions—What is it? and how can the husbandman be most advantageously supplied with it? I must, also, again request permission to draw the attention of your correspondents to what I have stated relative to the criteria by which the most profitable cattle and sheep are distinguished. For when I am in the markets for live stock, I am much at a loss in laying out my money to the greatest advantage. In my last, I accompanied some graziers to market, I watched their motions, I bought cattle and sheep of as large a size as their purchases, (equally forward in condition) for less money. Mine were fed on as good land and as rough a pasture as theirs, but now, when they are all fit for the butcher, I find that I cannot obtain so much profit as others; from which I conclude, that there is some secret in buying and feeding, of which I am ignorant. I supposed it was perfectly unnecessary to handle lean cattle, and that size was the principal matter to attend to. The above connoisseurs, however, I found, carefully handled, even the leanest. I followed their example; and as I was then told, that thick skins were best for resisting heat, cold, or wet, and that an animal that handled hard and firm, was the most healthy, I preferred all such. Mine were larger boned, as well as of a larger size, and consequently more likely to weigh well; still, however, I see that the experienced graziers (who do not seem willing to impart information to such as me) will obtain a greater gain from the butcher, from 10 to 14 per cent. than my purchases will leave. These graziers seemed to sacrifice something considerable to fine and small horns; I paid no regard to these, and bought thick-horned cattle a good deal cheaper: but, as it is impossible that the size or form of the horns can affect an animal in feeding, I conclude that the success of these buyers arises from some other circumstance. Is it probable that they give their feeding animals any thing with their grass, which promotes pinguetation? or has it been ascertained, that condiments are profitable, either with grass or other kinds of food?

I have heard much in favour of the fertilizing nature of compost, and last year saw some very rich crops after the ap-

plication of such manure; I therefore mixed a good deal of my long dung with good earth, which I used a considerable time after, being thus prepared; but my crops after it, are much inferior to those I last year observed upon similar soil, though my land was sown in favourable condition, and though the weather was, upon the whole, as propitious for such ground, this season as in the last. This, with the best modes of increasing the quantity and using of dung, are subjects on which I shall, with much pleasure, see the observations of some of your correspondents. On that of conducting comparative experiments in agriculture, I should also be exceedingly obliged to them for their sentiments; and especially if they will state whether we should be influenced by those on a small, or on a large scale. If the former are deemed, by your *experienced* friends, equally safe, I should suppose such means of obtaining knowledge would be more generally resorted to. The smut in wheat has this year been more injurious than in most seasons; the best mode of prevention has therefore been the subject of conversation in this part of the Country; Various modes are recommended, and, *which is the best?* is a question I wish to see answered in your Magazine.

I have lately had an opportunity of hearing the opinions of two practical farmers on the communications of your Norfolk friends on the subject of seed corn. Their opinions are not materially, if at all, different from those of the above intelligent correspondents, except with regard to the quantity of seed Oats recommended by Agricola Norfolciensis; viz. 3 bushels per acre. This quantity they reckon too small, I found however, that they could not positively assert, *from experiments*, that it was not more judicious seeding than 5 or 6 bushels, an acre. They informed me that, as some kind of oats *tillered* more than others, and were, besides, smaller in the grain, a less quantity per acre of seed, was required of them, than of other kinds. Now on this subject I shall be glad to see the opinion of Norfolciensis more at length, and it will be obliging if he will, at the same time, communicate his sentiments as to the advantages, if any, of changing seed corn, viz. of getting it from places at a distance and from different kinds of land, for this is a subject on which there seems to be *various* opinions among farmers.

Yours, &c.

A. NOVICE.

P. S. As the last postscript with which I troubled you, remains unanswered, I am apprehensive either that you have offended Mr. Middleton on the subject of tithes, or that, that intelligent correspondent is dead. I must therefore request the attention

of others to my enquiries as to the culture of winter tares to be succeeded by turnips.

My landlord has offered, on my paying a certain proportion of the expence, to erect a capacious Barn on my farm, capable of holding much the greatest part of my Corn crops. Some Agriculturists, I understand, reckon this a most unnecessary and unprofitable application of money, preferring the Northumberland and Scotch modes of *Stacking* the Corn near a *small* Barn. I have also heard that the Northern farmers condemn that *troublesome* and *expensive* method of covering, or thatching stacks, which some farmers pursue here and to the southward. If any of your experienced readers will be so good as to inform me which mode of securing unthrashed corn from damage by wet weather, &c. is best, I shall be much obliged.

A. N.

REMARKS ON THE PATENT GRANTED TO JOHN BROWN OF POOLE, IN THE COUNTY OF DORSET, MERCHANT, FOR IMPROVEMENTS APPLICABLE TO THE WHEELS OF CARRIAGES, AND TO VARIOUS OTHER USEFUL PURPOSES.

To the Editor of the Agricultural Magazine.

SIR,

ACCORDING to your desire, I have sent you by this opportunity an explanation of the patent introduced into your last number, because I perfectly agree with your remark, in the note, page 161, that "it is of little use to have a mere dry detail of the form and circumstances of the discovery, and of the geometrical figures to which it bears reference, without an elucidation of the various situations and particulars in the arts, by which the advantages in the invention may either be correctly understood, or intelligibly implied."*

The plan I think most expedient to adopt is, to introduce into the notes at the foot of the page the more intricate and scientific explanations, and to insert here for the inspection of the generality of your readers, only what is clear and palpable to common observation.

I am to presume that the person whose attention is attracted to the present paper has already prepared himself

* I have three or four specifications besides that I have lately sent you, of which I design to inclose the drawings that you may be prepared to introduce them into such of your succeeding numbers as you may think proper. When I see in what numbers they appear, I will take care the explanations shall follow in the publication of the succeeding month.

for the subject by the specification introductory to your last number. If so, he will have seen, that the whole object of the discovery of the ingenious merchant at Poole, has been to lessen the resistance from friction; and whether this principle be applied to the wheels of carriages, to windlasses and capstans, or in whatever other form rotary motion may be employed, the invention is uniformly directed to that design.

Friction or attrition, is the act of rubbing or grating the surface of one body against that of another, or it denotes, the resistance a moving body meets with from the surface on which it proceeds. Now the use of wheels in the draught of carriages, is 1st, that of diminishing or more easily overcoming the resistance arising from the friction of the carriage; and 2dly, that of more readily surmounting obstacles, which form angular prominences on the plane over which the carriage is drawn. Wheels then serve to transfer the friction from the under surface of the carriage, to the axle, and the nave of the wheel. The reader will immediately perceive, that this is the whole of the friction in the present construction of carriages. No alteration that has been applied, no skill that has been employed, has been found sufficient to take away from the nave and axle all inequality; and hence has arisen the necessity of anointing these parts that come in contact, with unctuous matter, which has materially conduced to lessen the friction.*

But this has not been found sufficient, for some of the most obvious reasons founded on the laws of friction. One of the first laws is, as the weight of a body moving on another is increased, so is the friction. This we see experimentally in a balance which when only loaded with a small weight easily turns, but the facility exists no longer when it is charged with a considerable weight. This applies also to the wheels of carriages. In a wheel-barrow, or the little vehicles for children, the friction is very small, but in a loaded waggon, or artillery carriage, it is so great as to require the strength of many horses to overcome it.

It is on account then of the ponderous burthens frequently necessary to be conveyed in rustic operations (requiring car-

* It is found by experience, that the flat surfaces of metals, or other bodies may be so far polished as to increase friction; because the attraction of cohesion becomes sensible, as we bring the surfaces of bodies nearer in contact. This may be exemplified by the familiar and easy experiment of two small leaden globes or bullets, each of which being equally flattened in one part of the surface, and highly polished where so flattened, when applied together correctly, the union is so intimate, that they cannot be separated without considerable exertion.

riages on a very different construction from the landaus, barouches, and sociables of modern fashion,) that any contrivance which lessens the friction in this respect, is highly important to agriculture.

Having thus shortly explained the nature of friction as applied to wheels; the next consideration is, by what expedient Mr. Brown has endeavoured to avoid it. The axle instead of reposing on the ring of the nave of the wheel, rests upon friction-wheels which turn round with it, and by this means, the attrition is transferred from the circumference of those interior wheels to their pivots, or to the several centers round which they move. The principle is precisely the same as that resorted to in the common pulley, which resists less when turning upon its axis, than when it is fixed; in both cases, the friction is removed from the circumference to the center. I readily give Mr. Brown the credit of the practical introduction of that principle into this country; but I cannot so far flatter this ingenious gentleman, as to say he has the honour of being the first inventor of it.* Paul Casati an Italian Jesuit, and a profound mathematician who flourished in the 17th century, is the original author of the discovery; and he carried the principle still further, by making a series of subordinate wheels, on which the first friction-wheels which came in contact with the axle were to operate. It perhaps neither occurred to that skilful mechanic, or to Mr. Brown, that the axle itself might move in a friction-wheel, and thus a considerable advantage be attained without adding much to the complexity of the machine. This additional complexity is certainly a serious objection to the system of subordinate friction-wheels recommended by the learned ecclesiastic.

Various contrivances have been resorted to, to assist the motion of carriages, some of which deserve particular attention. Large wheels are always more advantageous for rolling than small ones. Applying this to the subject before us, if we consider wheels with regard to their friction upon the axles, it is evident that small wheels must turn oftener round than large ones, and this they must do in proportion as their circumferences are less. Hence a wheel which is twice as large as another, will have twice the advantage in respect to

* It is perhaps proper here to state that this prior discovery of Casati, in no respect interferes with the exclusive rights to which Mr. Brown is entitled from the Royal grant he has obtained. "The use and publication of an invention in foreign countries, however ancient, does not prevent the thing so used and published, being considered a new invention in the contemplation of patent law under the statute." Collier's Law of Patents, p. 100.

the friction, supposing the apertures of the naves, and the size of the axle, and also the weights upon them to be equal. The size of the wheels therefore should be brought in aid of Mr. Brown's invention.*

Whatever might be my inclination to dilate on this curious subject connected with those laws of experimental philosophy which are the most conducive to public utility, I am sensible that in a periodical work variety must be consulted, and therefore, I shall refer your readers to Desagulier's *Exp. Phil.* which I have before quoted, and to Jacob's *Observations on Wheel Carriages*, a gentleman well known for his extensive contracts with government for carriages under the present exertions for the public defence.

What I have further to offer will be comprised in a few words directed to shew the great advantage which may be derived by agriculture from this invention, a subject indeed which has been in some degree anticipated by the necessary details on the nature and object of the discovery.

Those who have seen the contests amongst philosophers on the mere subject of the calculation of friction, will not be surprised if I am diffident in speaking of the precise diminution of animal strength required for the draught of carriages under the new construction.† Perhaps I may state, without danger of contradiction, that the adoption of this

* But this is not the only advantage consequent on the enlargement of the wheels. If we consider the wheels as they sink into the earth, or fall into holes, the bearing of the great wheel being double that of the small one, it will sink but half so deep; and if the small wheel should meet with a hole of the same diameter with itself, it would wholly sink in, whilst only a segment less than half of the great wheel would fall in: the same thing would also happen in marshy ground, where the small wheel would sink wholly in the same hole which the great one would sink into but in part. The large wheel would also have the advantage of a small one in rising over eminences or rubs that occurred, so that the former would go over rubs much higher than the latter; and indeed over any eminence, provided their height be not equal to its semi diameter. Desaguliers has reduced this matter to a mathematical calculation in his *Exp. Phil.* vol. 1, p. 171, &c.

† Such of your readers as wish to inform themselves, may consult Mr. Amontou, whose estimate has been confirmed on the principles of natural reason, and geometry by M. Parent; and it has also been countenanced by the authority of Camus, and De la Hire. Thus supported, I may be permitted shortly to state it. In wood, iron, lead, and brass, which are the principal materials used in machines, he finds the resistance, caused by friction, to be nearly the same, when those materials are anointed with oil, or other fatty matter; (but this fact has been disputed by Muschenbroeck, and experiments urged in proof of the contrary): and this resistance, independent of the quantity of surface, he makes to be nearly equal to a third part of the force, wherewith the bodies are pressed against each other. Mr. Emerson, in his principles of mechanics, deduces from experiments the following remarks relating to the quantity of friction; when a cubic piece of soft wood of eight pounds weight, moves upon a smooth plane of soft

contrivance will save one horse out of three. If we consider the immense quantity of horses which are employed for the purposes of trade in this great commercial country, the vast number which are devoted to the cultivation of 70 millions of acres in the united kingdom, we cannot avoid seeing by mere inspection for a moment the importance of such a discovery. Numberless accounts have been stated on the enormous revenue consumed by those beautiful, docile, and laborious animals; I shall not think it necessary to repeat them here, it will be sufficient to say, that a prodigious capital will be saved by these means, which may be applied to the most essential purposes of public improvement, and private advantage.

Your plate I observe Sir, does not give the fifth or last figure noticed in the specification, and I do not disapprove of the exclusion, as it merely applies to the hawse hole, or the aperture for the cable in the stern of a ship which bears no reference to the subject of your work: but I very much like the introduction of the second, third, and fourth figure, because windlasses and capstans, although marine terms, are merely appropriate expressions for a certain species of horizontal and perpendicular cranes, an engine so well known in building and commerce, that it is quite unnecessary to define it. The employment of threshing machines, and of apparatus in ten thousand forms on the great and opulent farms of the kingdom, has made every branch of mechanical ingenuity applicable to the designs of cultivation; and certain it is, that the improvement of the soil, and the increase of the produce of this kingdom, more depends on the engagement of these inventions in the business of the field, than on any other circumstance whatever. I am happy Sir, to say, that the superiority in the manufactures and commerce of this country is principally owing to the practical adoption of the discoveries of experimental philosophy; but I am sorry to find, that until our own time, agriculture has derived very little from these sources.

It is time Sir, at the commencement of the 19th century, to shew that the most ancient, the most useful, the most innocent, and the most essential of all human pursuits is not

wood, at the rate of three feet per second, its friction is about one-third of the weight; but if it be rough, the friction is little less than half the weight: on the same supposition, when both the pieces of wood are very smooth, the friction is about one-fourth of the weight: the friction of soft wood on hard, or of hard wood upon soft, is one-fifth, or one-half of the weight; of hard wood upon hard wood, one-seventh or one-eighth; of polished steel moving on steel or pewter one-fourth, moving on copper or lead, one-fifth of the weight.

neglected; that men of science and enterprize are concerned in the duties of public subsistence, that ignorance and torpidity no longer prevail among the English peasantry, and that the commerce of our towns is not more rapid in its progress, than the culture of our provinces.

*Little Smith-Street, Col-
lege-Street, Westminster,
3d Oct. 1804.*

I am, Sir, yours, &c.

JOHN DYER COLLIER.

ON BLIGHT IN CORN, AND HINTS RESPECTING
CATTLE.

A Correspondent in your last number, has introduced the long agitated subject of blight, and however he may have overlooked it himself, all well-informed husbandmen, will instantly discover an omen in his first sentence. "*The blight in wheat has been this year so generally destructive.*" Why has it been, this year, so generally destructive? Has it ever been otherwise, or can it possibly ever be otherwise, in such years? *Sat. verbum.*

K. J. cannot, or ought not, be uninformed, that the whole, and indeed a much more numerous list of such articles as he somewhat faintly recommends, to wit, arsenic, alum, vitriol, lime, brines, &c. has been, almost annually, in a course of probation, in various parts of England, for nearly a century past; with what success is but too obvious. The writer of this has in former days, and during the term of his pupillage on his father's grounds, and indeed full often since, had occasion to smile at the blight and mildew upon the *arseniated and brined* part of the wheat, when that which was left destitute of all preventive, has flourished in a state of the utmost purity and soundness! A Mr. Dowlen, it appears, a Sussex farmer, is about to publish a remedy for the inveterate vegetable disease. I should be very sorry to make the smallest attempt against the progress of discovery and improvement, and far from suspecting any man of the sinister design of imposing on public credulity. I will acknowledge most willingly, that Mr. Dowlen acts *bona fide*, and really believes himself, in the verity of that which he intends to recommend to the public; but it ought to be his business first, and *will* be that of the farming public, ultimately to discover whether he radically understands what he is about. I perfectly recollect a friend of mine presenting the Baron Von Haake, in 1769, with a ten pound note, for a paper of his wonderful composition; but we did not find at the ensuing harvest, the value of *tenpence* difference, either for better or worse, in the doctored or rather baroned wheat.

But, Sir, I shall conclude with a topic of infinitely greater agricultural consequence, because of greater practicability than the above. There is a certain correspondent of yours, whose designation is Agricola Northumbriensis, and a more copious, indefatigable, interesting, and intelligent correspondent no Magazine ever possessed. Could this really practical correspondent be induced by our joint requests, to furnish an account of the peculiar varieties of animals, in use on his district, with their presumed merits, and the diseases to which they are subject, the common names of these diseases, and the supposed causes, he would lay the public, as well as the Magazine, under a very considerable additional obligation. The same request may be made to other correspondents, and if generally complied with, it would furnish a mass of information from various quarters, of which we stand very much in need.

I am, Sir,

With much respect, &c. &c.

L. L.

ENUMERATION OF PATENTS LATELY ENROLLED.

1804. **W**ILLIAM HAWKES, the younger, of Gateshead, in the county of Durham, Iron-manufacturer; for sundry improvements, in constructing and making chains for the use of mines, and other purposes.

Aug. 4. John Brown, of the town of Poole, in the county of Dorset, Merchant; for improvements in the wheels of carriages, applicable also to windlasses, capstans, and various other useful purposes.

— 4. William Pether, of the parish of St. Michael, in the city of Bristol; for certain methods, on a new principle, either for preventing or curing smokey chimnies.

— 4. William Warris, of Sheffield, in the county of York, Optician; for an improvement in the mounting of glasses, commonly called Opera Glasses.

— 4. Edward Greaves, of Sheffield, in the county of York, Razor-manufacturer; for improvements on razors.

CRITICAL CATALOGUE.

I. *Annals of Philosophy, Natural History, Chemistry, Literature, Agriculture, and the Mechanical and Fine Arts. For the Year 1802.* By Several Gentlemen. Vol III, 1804.

IN our Critical Catalogue of June 1801, (Vol. IV. page 434) we reviewed the first volume of the Annals of Philosophy, by the late Dr. Garnet. We have since had to lament the decease of this ingenious and learned Professor. He contrived the project of this work, and from its obvious utility, comprising in a narrow compass a general view of science and literature, it has since been continued.

We understand that the execution of the present volume, in every part, excepting the class of Natural History and Agriculture, has been entrusted to the same gentlemen who assisted in the compilation of the former volumes. Having expressed our sentiments so much at large, on the earlier part of this work, we shall at present confine our observations to the two departments to which we have just adverted.

Under the head "Natural History," we are told in the preface, "the harvest has been very productive, and perhaps, contains a greater number of important articles, than will occur in the like period of time, for many years." Yet when we refer to the scanty catalogue of productions, in the three or four pages assigned to this important subject, we find the remark to which we have adverted in no degree confirmed, and we will venture to assert, that a Parisian production, under the hands of Mr. Deterville, of which we have had occasion to take some notice in the sequel of this Catalogue, is worth all the books introduced into the Annals of Philosophy on the subject, with this pompous annunciation.

The class of Agriculture is submitted to the notice of the public, with the following prefatory observations.

"Since our remarks in the preceding volume on the subject of agriculture, were submitted to the public, the spirit of enterprize to which we adverted, has been excited by the agricultural societies in different parts of the kingdom; and every successive year seems to promise a series of improvements, which will diffuse luxuriance, and happiness, throughout these Islands.

"To some of the most important advances in this department of inquiry, we have invited the attention of our readers in the subsequent articles; and it will be the most gratifying portion of our periodical labours to shew, that the exuberance of nature is so successfully promoted by the hand of art, as to preclude the probability of any future scarcity, and to render this country independent of foreign supplies, amid the calamities of war, and the vicissitudes of political institution."

The subjects discussed are the following:

1. The Size of Farms.
2. The Culture of Buck Wheat.
3. Grazing Farms.
4. The Effect of Climate on Produce.

Ag. Mag. Vol. 11.

O o

5. The Disorders of Sheep.
6. On Spring Wheat.
7. On the Obstacles to the Conversion of old Pastures into Tillage.
8. On the Mode of laying down Land to Grass.
9. On Orchards.
10. On extreme Branch-grafting.
11. On the Cultivation of Turnips.
12. On a Composition for curing the Diseases, &c. of Fruit Trees.
13. On the English Territory under Tillage, and its Produce.
14. On Wheat drilled after Clover.
15. On the Culture of Wheat after Beans.
16. On the Cultivation of Peat-Moss land.
17. On Apples and Pears.

The eleventh article on the cultivation of turnips, and the fourteenth on a new expedient for drilling wheat after clover, the editor has done us the honour to select from our own Magazine, and we have no difficulty in commending his taste on this occasion, because we had no concern in the composition of these pieces; which were supplied from the practical knowledge and extraordinary talents, of our correspondents in Northumberland and Norfolk.

These papers having already appeared, (Vol. IX. page 352, and Vol. IX. page 400,) in our work, we shall of course, avoid the repetition of them, whatever may be the merit of their contents, but shall give specimens of this department of the Annals, from the thirteenth and sixteenth articles, in the list we have detailed.

“ English Territory under Tillage, and its Produce.

“ From the best information that I have been able to obtain from the Agricultural Provincial Reports, the statistical account of Scotland, and the valuable information contained in the various writings of Mr. Arthur Young, as well as from other documents, it appears, that of this large quantity of arable land, there is about 1,000,000 of acres yearly in fallow; 1,400,000, in potatoes, turnips, cabbages, carrots, and tares; about 2,600,000, in clover or other grasses, chiefly for hay; and about 14,000,000 in corn; by which I mean, in the large acceptation of the word, every variety of grain that we sow, whether for man or beast; including, therefore, wheat, barley, oats, beans, peas, and buck-wheat; which leaves accordingly, no less than 13,000,000 of acres to be managed in the wretched manner that I have already described: this, after being cropped till it can yield no more, is allowed to rest for some years, when the same unprofitable management is entered on again.

“ Of the whole quantity of land that is annually sown with corn, namely 14,000,000 of acres, not more than a fourth part appears to be under any approved system of husbandry; and nothing can place the effect of good management in a clearer view, than the difference between the crops of those lands that are well cultivated, and those that are not. While the average crops of the latter cannot be rated at more than seventeen bushels per acre, the others are fully seven quarters and a half, or sixty bushels.

“ Hence it appears, that a large part of our corn is obtained from a small portion of land, no less than 22,500,000 quarters, or nearly

one half of our consumption, being produced by 3,000,000 of acres or a ninth part of those lands which hitherto have been appropriated to tillage. If, therefore, other 4,000,000 of acres were equally well cultivated, even a greater quantity of corn than we consume, might be obtained from 7,000,000, which would leave no less than 19,000,000 to be improved hereafter, both for the purpose of exporting corn to other countries, and for giving support to additional population, which abundance of provisions would not fail to produce.

“ But, instead of this, by the bad management under which the rest of our lands in tillage is very generally kept, chiefly from their being in farms that are too small, and small farmers being commonly so poor that they cannot afford to improve them, the average produce of those parts of them that are sown with corn, being to the amount of 11,000,000 of acres, does not appear to be more than I have mentioned.

“ Accordingly, from the whole of this quantity of land, only 23,000,000 quarters are obtained; and as this, together with 22,500,000 quarters that we derive from the other grounds that I have mentioned, the two together amounting to 46,000,000, is all that we produce, and our annual consumption being 48,000,000, the difference between the two being 2,000,000 quarters, is the quantity that in an average state of our crops, we must find it necessary to import; while, in years of scarcity, the quantity that we need, may increase to such a degree, that we may not be able to procure it, as, even with all the wealth that we possess, is unfortunately the case at present. In such circumstances all that we can do is, to lessen our consumption of corn, and submit to a calamity which is not in our power to remove.

“ Till of late, the quantity of corn that we imported ran from half a million to 700,000 quarters; but, reckoning on what has been imported in the course of the current year, and of the preceding four years, the average amount of it in the whole of that period will run, as I have reason to believe, from 1,500,000 quarters, to 2,000,000.”

“ *On the Cultivation of Peat-moss Land.*

“ In this part of the country, (Ayrshire) considerable tracts of peat-moss have lately been brought into cultivation. The general method of improvement has been by liming; which, with the forming into ridges, is often attended with an expence of eight or ten pounds per acre. Burning of the moss has been successfully tried by several persons, although it is much decried by the favourers of the *Swindridge-muir System*.—As this is the only method I know, of bringing any extent of moss into cultivation without the benefit of lime, I shall attempt to give your correspondent such directions for practising that mode of culture, as I have learned from observation, and from the experience of others.

“ When the moss is very dry, in summer, let small fires be kindled in those places which are a little elevated; or where, from the surface being broken, the turf has begun to rot. Small patches may, by these means, be burnt at such convenient distances that the ashes may, for the most part, be thrown or spread over the whole surface with a spade or shovel. After the field has been thus burnt, it may be formed into ridges, and the ashes spread as the labour advances.

“ If the surface of the moss be smooth and unbroken, it may not be easily burnt in the manner above recommended; it must therefore be previously formed into ridges with the plough or spade, leaving a stripe of six or eight inches breadth in every furrow unturned. These stripes must afterwards be cut into very thin slices, and thrown on the ridges to dry. A proper opportunity must then be taken, for kindling them in different places of the field, when the fire will spread over the whole surface and leave it covered with a fine crust of ashes. It will readily occur, that the best time for burning must be before the draught has penetrated to any considerable depth; for, if the surface be covered with ashes to the thickness of an inch or two inches, it is abundantly sufficient. When the moss has been laboured during the winter months, it is generally burnt the following spring. I have been informed by one person, that (when there was an appearance of rain) he has often set fire to his moss in the morning, and sown the seed before night. In those places where the fire was not quite extinguished, before sowing, he would have beat the surface with a spade, or smothered it by throwing on a little moss. The ashes would have been so warm, that the seed would literally have jumped; yet the vegetation was so quick, that, although his neighbours had been two weeks earlier in sowing upon their clay-lands, his crop would have been soonest cut.

“ It may be here observed, that, besides burning after the manner I have explained, some people give a light dressing, of perhaps 40 or 50 bolls of slacked lime, or at the rate of five or six tons of stones per acre. I am assured that the lime will do no manner of good to the two first crops, as these, with the ashes alone, are generally rather too strong; but if the cropping is to be longer continued, a small quantity of lime will be of service. Novice Junior may, however, agree with me in opinion, that instead of following our plan, of taking three or more successive crops of oats from newly improved peat-moss, it would be advantageous to lay it down earlier with grass-seeds; for it will be observed, that these fresh soils are peculiarly favourable to the raising of hay-crops. The hay-seed generally sown on these soils, is called soft grass. It admits of being cut for several years; and the second year's crop, is always better than the first.

“ When a sufficient quantity of dung can be procured, some reckon it good management to plant the moss the first year with potatoes, in the form of lazy beds. Two of these beds, may afterwards be thrown together; and when sown next season with oats, a good crop always follows. It is however allowed, that the benefit of this manure is sooner lost than that of lime or ashes.

“ It now remains to speak of the expence attending the cultivation of peat-moss by burning. The ridges are most commonly formed with the spade, and by a mode of digging, called coupling; which is, by cutting the turf into oblong pieces, and turning them about half over, or on their edges, so as to resemble ploughing. When the moss is smooth, and easily turned, it may be dugged in this manner, for from forty to fifty shillings per acre. And the only other piece of labour seems to be, the covering of the seed, which may be done with a thorn bush, or with hand hoes, or with a light harrow, as the turf is more or less tender.

“ The expence therefore per acre, will be nearly as follows :

Digging	2	5	0
Burning and spreading the ashes	0	10	0
Covering the leed, four persons being sufficient to one acre in a day	0	10	0

Expence of labour £. 3 5 0

“ If the ridges are formed with the plough, it is presumed, that at least twenty shillings may be deducted from the article of digging.”

We understand, that to obviate the inconveniences which may arise from having the publication so long withheld, it is the intention of the Editors to publish in the fourth volume, the Philosophical Intelligence, &c. of the two years, 1803, and 1804, and to have that volume before the public, very early in the year 1805.

- II. *Geschichte der teutschen Landwirthschaft, &c. The History of Agriculture in Germany, from the earliest Times, to the Conclusion of the 15th Century.* By Charles Gottlob Anton. Gœrliz. Published by Christian Gottlieb Anton. 1st. Vol. 1799. 486 pages without the Table, with four Plates. 2d. Vol. 1800. 276 pages. 8vo.

THE Author, in a short preface, explains the motives which induced him to undertake this work. He began to study the practice of agriculture, and therefore, naturally wished to make himself acquainted with the history of its progress. In this desire he was very little assisted, either by ancient or modern works, but an honourable exception must be made, in favour of a work of Dr. Rœffig; being an inquiry into the same subject, from the 16th century, to the present time. On the review of this production, Mr. Anton formed the idea of the History of Agriculture, in Germany, from the earliest records, to the date that appears in our title. In order to execute this plan, he found it necessary to examine an infinity of documents, on the middle ages; and he hopes, that if some of them have escaped his notice, the difficulty of the research will not equally escape the candid reader.

A synoptic table explains the scheme of the work. He details the state of Germany before its conquest by the Romans; describes its mountains, its morasses, its woods, inhabited by various tribes of barbarians; and in the sequel, the expansive districts of the Hercynian Forest.

He next takes a view of the various classes of human beings, in these savage domains; he conceives that the Persians, the Gauls, the Greeks, the Teutons, the Sclavonians, as having one common origin, and he examines the radicals of their respective languages, in support of his opinion. The fact is, however, that we are supplied with very few materials, on which to found a general position, from these barbarous dialects. Something may be collected from the common denomination they received, and something more from the evidence of Pliny. Milk and beans constituted their principal nourishment; true it is, that parsnips, asparagus, &c. grew abundantly in Germany, but these plants were not indigenous; they were transplanted thither, at a period much nearer our own time. They were then unacquainted with the management of the flock, they knew not how to protect

the sheep, and facilitate their increase; the fleece also was wholly neglected, while they supplied their occasional wants, with the skin, the flesh, and the milk. Pork was a common article of diet, but it was not until the succeeding century, that swine were domesticated. Hemp and flax were employed, even at that early period, in the manufactures.

After the separation of the Slaves and the Teutons, the latter began to be emancipated from their barbarous condition, and not only attended to animal, but to vegetable improvement; but it was not until after the discovery of the plough, that they could become conversant with the important articles of wheat and barley. The harrow was, however, wholly unknown, and all the recent improvements in agriculture, seem to have been placed at an immeasurable distance. In process of time, the savage European, the rough huntsman of the wood, began to be sensible of the blessings of the pastoral life: he avails himself of the utilities of the animal creation, and the formidable boar forsook his nature, and occupied a portion of the dwelling of his master. The use of the culinary plants was not yet discovered, but fruit-trees were known; and the apple and the pear, became an essential part of the food of man. As experience was acquired, corn was introduced, and a pleasant beverage was procured, from the admixture of honey and water.

Mr. Anton, in these disquisitions, always draws to his aid, the science of etymology: and he finds in these primeval inventions, corresponding terms and fruits, in the languages of the nations to which he refers. From these preliminary ideas, the author considers himself competent to supply a detail of the earliest state of agriculture in Germany.

He compares his account to the commencement of the third century, with the details given by Cæsar, Tacitus, and Pliny. These writers represent the Germans as cloathed in skins, and as supported on oats. Pomponius Mela adds, that raw flesh was a part of their sustenance. The epocha which succeeded the time of the Roman historians, was devoted to the chase, and to the pastoral duties. At that time, very imperfect ideas were formed of cultivation, and the forests very slowly began to be cleared for that purpose. The beasts of the woods began gradually to diminish, and the subsistence from hunting, became more and more precarious: then it was, that the nourishment of cattle became a necessary study, and that the pursuits of agriculture became useful and important; yet still territorial property was extremely limited and uncertain, and persons of influence assumed an authority in these kind of possessions, wholly unknown to a more civilized state of society.

The beasts of prey were then confined to the forests: among these was the shaggy bear. The hardy youth loved to seek in their dens, these ferocious animals; their skins became the symbols of his triumphs, as the brush of the fox, with our more effeminate offspring. The elk and the rein-deer, trusting to their native activity, defied the distant pursuit, and obtained refuge in the more northern climes.

The objects of the pastoral care, were bullocks, cows, sheep, hogs, and a species of the horse. Until the 15th century, they not only employed the latter in war, but their skins were an article of cloaths

ing; and the flesh supplied food to the greedy inhabitant. The character of the natives was not remarkable for its vivacity, but they were capable of enduring almost incessant fatigue. The bull was small and probably without horns. The treatment of sheep, although more essential, attracted little attention. They used the flesh, the milk, and the skin, the latter of which they called fell; a term which has been applied to the woolly produce down to our own times.* The extensive forests of oaks, supplied the swine with the food best adapted to their nature and constitution; and pork was the nourishment most palatable to the Teutons.

Among the feathered tribe of Germany, the Romans notice with particular respect, the goose; the plumage of which was sought for, for the gratification of the luxurious. The thrush was frequently seen in the winter. In the Hercynian forest, the writers of that early time, speak of a bird, the feathers of which, appeared in the night, like a flame of fire. Mr. Anton thinks, that it was a species of the *fulgora laternaria et caurelaria*, which the Romans mistook for a bird; but these fulgora, are only known in China, and in America, and not a single specimen has been discovered in Europe. Perhaps, then, the most rational conclusion is, that the expression is merely figurative, for a bird of bright and beautiful plumage. The woods were also favourable to the increase of bees, and among the finny tribe, are noticed, the salmon of the Rhine, the pike, and the sturgeon.

The free German, divided with his slaves, a portion of the produce of his fields. The latter, were either purchased, or captives in war; their condition was much preferable to the unhappy objects of Roman bondage: they differed in nothing essential from their masters, excepting in the privation of property, and of political rights. The slaves frequented part of the lands of the lords, and this was the first institution of farming. The art of manuring, of blending the different earths to produce fertility, of changing the crops to economize the nutritious principle, was then wholly unknown; and equally so, the different seasons of sowing; the month of May was the regular time for this operation.

The fourth book is comprised in the second volume; it is devoted, exclusively, to the interval, from the extinction of the Carovingian race, to the origin of a regular government; or to the diet, anno domino, 1158. This period includes a succession of 256 years, fertile in events, which must necessarily have a considerable influence on the state of agriculture. Such are the wars with the slaves, which terminated with the complete submission of that class: we have likewise, here introduced, whole colonies of peasants, from the Low Countries; the origin of towns under a peculiar government, originally German, and then appeared also the crusades, succeeded by the Roman law; which to the misfortune of Germany, extinguished all those native regulations, founded upon the particular wants and manners of a brave and generous people.

Mr. Anton treats of all these important events, in distinct chapters; he then proceeds to the condition of the towns, the state of the lands,

* Our readers need not be informed, that the ordinary distinction of a dealer in sheep-skins, is in our language, a Fellmonger.

of the rural buildings, of the bondsmen, and domestics. He then proceeds to the services imposed on the cultivators of the earth, to the contributions required of them, to the means of manumission, to artizans, and to agriculture in general. He treats of measures employed, the mills, the manufactures, the application of the vineyard, of the pastures, the management of the beasts, and in particular, of horses; of horned animals, of hogs, of sheep, goats, and poultry; to which he adds, the culture of the orchard, of the garden, and every other subject of importance in the department of history he has undertaken.

What we have said, although reduced to a very narrow compass, is sufficient to shew something of the value of the production of Mr. Anton. It is the more useful, because the author has taken the pains to give the authorities from which his facts, and opinions are taken; so that the reader is enabled at his pleasure, to collect, arrange, and enlarge the materials, and to show his own conclusions. The work is not yet completed, we shall watch with solicitude its progress, and shall not fail to impart to our readers, the outline of the further details from this source, with which the art and history of agriculture shall be supplied.

III. *Nouveau Dictionnaire d'Histoire Naturelle, &c. A New Dictionary of Natural History, as Applicable to the Arts, but principally to Agriculture, and Rural and Domestic Economy.* By Sonnini, Drey, Vieillot, Delmarest, junr. Parmentur, Huzard, Bosc, Olivier, Latreille, Chaptal, Cels, Thouin, Dutour, Tollard, Patrin, & Libes. In 24 Vols. 8vo. of nearly 600 pages each, with plates containing 2000 subjects, designed after nature, by Deseve. Paris. Published by Deterville.

THIS work was undertaken, as appears in the title page, by many learned and ingenious men, most of whom are members of the National Institute. In our review of this work, we are naturally led to consider, that superiority in the execution, which entitles it to the first rank among works of this description, which have been submitted to the inspection of the public.

The Dictionary of Valmont de Bomare, which is the most modern, in the first place, presents itself as a fit object of comparison with the work we are now examining. We admit that work to deserve credit for the execution at the time when it appeared; but it is greatly inferior to this work under the hands of M. Deterville, who has employed so many persons, eminent for their literature, in this extensive undertaking.

The last fasciculus of this production is now appearing to crown the labours of the learned, executed with a degree of promptitude, very unusual in such a comprehensive enterprize; and yet the velocity with which the wishes of the public have been gratified, has not occasioned any diminution in the correctness and elegance of the work. The 24th which is the last volume, particularly details the system of classification, a department scarcely announced by the Editor, who no doubt preferred admitting the production to speak for itself, to the quackery, too common, of an ostentatious series of promises, which are oftener forgotten than performed.

The Dictionary of Natural History, by an accurate calculation we have made, appears to comprize three times the number of articles, included in that of Bomare. The article under the title rose-bush, is by Mr. Datour, and is divided into three distinct sections; the last treats of the culture of the rose-bush, and of the properties and use of the rose. The second, comprehends minute descriptions of forty species of the rose-bush. The first is introductory, and from which we have subjoined an extract. It will be seen, that although the subject has been generally considered exhausted, many interesting parts of it are yet reserved, for the display of the talents of the literary naturalists.

“ Rose-bush, *rosa* Linn. (*Icosandua Polygynia*). It is universally known, that this denomination is given to a shrub, commonly armed with thorns of various heights, and on which a flower of exquisite beauty is produced. Who is unacquainted with what is cherished in the bosom of every lovely woman, what is sought by every disciple of Cupid, and what all the poets have celebrated by the sweetest melody. Anacreon has named it the fragrant perfume of the Gods, the consolation of mortals, and the fair ornament of the graces. Sappho speaks of the rose, as the glory of the vegetable creation, the enamel of the meadows; its ravishing beauties captivate the soul of Venus.

“ Bernarde, one of our modern poets, enraptured with the charms of the rose, is not contented to array it in all its native beauties: he invests it with a soul, he addresses it as an intelligent being, and in an amorous transport he exclaims,

“ Tendre fruit des pleurs de l'Aurore,
Objet des baisers du Zéphir,
Reine de l'empire de Flore,
Hâte toi de t'épanouir.

Que dis-je? diffère encore,
Diffère un moment de t'ouvrir;
L'instant qui doit le faire éclore
Est celui qui doit te flétrir.

ODES ANACR.

“ This wish formed by the poet, is common by every admirer of nature, when he perceives in the spring, the opening bud of the rose: and surely Bernarde is justified, when he denominates it, the queen of flowers.

“ Where if you seek in the garden of Flora, can you discover a production in that gay world of nature, which is to be compared with the rose. Numerous are the plants which strike the eye, from the exquisite delicacy of their surface, and the brilliancy of their colours, but most of these are destitute of fragrance: such is the tulip, such the ranunculus. On the contrary, many plants embalm the air with their grateful perfume, which afford nothing to satisfy the optic sense. The lilac, the orange flower, and the superb lilly, it is true, unite the charms of the exterior, with odoriferous gratification, but place

these ornaments of the garden on the side of the rose, and how do their transparent beauties fade before the eye! How many things are deficient to constitute that perfection which is universally acknowledged in this favourite flower. The rose is within itself, an object of perfection: it alone possesses all that taste or imagination can expect or desire: shape, splendour, freshness, glow, transparency, and fragrance.

“ If, (continues the ingenious) author, the rose were wholly unknown to us, and a naturalist from Persia, or from the Indies, should present it to our observation; what astonishment; what a complication of delight would it not attract? What price could we assign to it, that would approach its value; and yet from the frequent opportunity we possess of noticing it, we dare to pass it, without the attention it deserves and requires.

“ On every revolving spring, the rose is regenerated; every returning year, new beauties are disclosed. Although the most common of all the flowers, it is the most esteemed, and invites the hand amidst a hundred others, which display their beauties to the solar beam. The thorns by which it is defended, only increase the appetite to possess it; to acquire it is a conquest; to surrender it, is dishonour. Nor is it surprising, this lovely flower is formed to gratify every sense, with which human being is endowed. The velvet down of the petals please the touch, the lively colours delight the eye, the pure aromatic gratifies the nasal organs. In short, the rose, in every quality which adorns it, is irresistibly seductive, and possesses attractions in which every other hortulan production is deficient. She possesses charms by which, even in the decline of her beauty, she obtains the reverence of every surrounding object, and triumphs over her rivals, even in the bloom of vernal beauty. The admirers of this exquisite production, are ever at a loss to find a comparison for its perfection. The blush of the virgin, the freshness of the morning, the loveliness of youth, the ruby fingers of Aurora, the animation of the spring; all the subjects of laughter-loving nature, seem to be blessed with its image, and its very name embellishes every sentence, every phrase, every word with which it is connected. Would you describe the delights of the golden age, the refreshing sleep of the nocturnal hours, the pure and sacred pleasures of hymeneal enjoyment, you select the rose in its radiant hues to express your feelings.

“ In whatever situation you are placed, whether in the region of prosperity or adversity, this flower is ever delightful. It is impossible to see it, without the view being accompanied by some charming sensation. Its presence enlivens the imagination, drives away melancholy, and by its magic powers, it transforms grief into enjoyment.

The rose is pleasing at every period of our lives, and accommodates itself to all our senses, under every vicissitude to which they are subject. In every moment of its short existence, when it is raising from the bud, when it is expanded to the orb of day, or when it inclines its faded honours to the earth; in all these several stages, it seems to bear a near affinity to the progressive condition of man. Pendant in the evening on its thorny stalk, pale and languishing, it assimilates itself to pensive man, and he finds a fit lesson for his reflections. He, to whom life unfolds all her pleasures, contemplates with extacy, the

glowing perfections of the rose; the delicacy of her form, and the splendour of her colours, aptly depict the florid season of hilarity. The lovely female delights to see it in all its dewy freshness, she gathers it in the morning, places it in her bosom surrounded by its buds, appropriate representatives of the fond hope she indulges. The successful lover, and the fond husband, discover the same symbols of enjoyment. As it is at the same instant the pledge of innocence, of modesty, and of voluptuous gratification; it naturally is associated with all their pleasures, and it becomes at the same moment, the expectation and the reward of their affections. In the decline of life, this production reminds us of the pleasures of youth, and even in the wintry period of age, when our senses are blunted, this flower awakens us to unwonted enjoyment, and we retain our attachment to it, to the last hour of fainting existence.

“ Thus the rose is applicable to every season and condition of life, to every state of mental and corporeal feeling. But like life itself, it passes quickly forward, and its glory disappears. It is a fugitive beauty which is born and dies on the same day. Agreeably with this sentiment, the poet Malherbe, endeavouring to console Duperries, for the loss of his daughter, addresses him in the following terms.”

“ Ta fille
Etoit du monde où les plus belles choses,
Ont le pire destin;
Et rose elle a vécu ce que vivent les roses,
L'espace d'un matin.”

“ After this fine beautiful eulogium on the most beautiful production of vegetable nature, the author proceeds to consider its rank, under the classification of Tournefort, and of Jussieu: he then examines the mistakes which have arisen from the species, and varieties enumerated by different naturalists, from not having a sufficient regard to the essential and prominent distinctions. He shews the respect which the ancients entertained for this plant, the care with which it was cultivated by them, that it composed a part of the crown of triumph, and that its branches were interwoven with the car of state. He then advances to the generic distinctions which a more accurate knowledge of this production has assigned.”

The extract of this single article, which we have indeed taken at hazard, will afford some tolerable idea of the general excellence of the work. The limit to which we are prescribed, does not permit us to extend our enquiries to other divisions, we shall, therefore, content ourselves with observing, that a great number of them are treated in a style of novelty that will be wholly unexpected, and with a degree of minuteness, which could only be supplied by a perfect comprehension of the subject.

With these observations, we shall dismiss a production which will be considered one of the brightest ornaments of the age, in which it has appeared.

HISTORY.

Agriculture.

PROCEEDINGS OF AGRICULTURAL SOCIETIES..

Cleveland Agricultural Society.

AT a numerous and respectable meeting of persons interested in the agriculture of Cleveland, held the 22d day of September last, at Stokesley, pursuant to public advertisement, for the purpose of taking into consideration the expediency and means of forming an agricultural society in Cleveland.

The Honourable LAWRENCE DUNDAS, M. P. in the Chair.

The following resolutions were unanimously agreed to, viz.

1st. That the society be now established in and for the district called Cleveland, (which comprises the Wapentake and Langbaruch) for the encouragement of agricultural pursuits, as well as for rewarding the industry of the day labourer and cottager, under the name of The Cleveland Agricultural Society.

2d. That a subscription be now entered into and remain open to future subscribers, for the purpose of carrying into effect the objects of the society.

3d. That every subscriber of ten guineas, or upwards, shall be considered as a member for life; and every annual subscriber of one guinea, or upwards, shall be considered a member until he shall give notice to the secretary of his intention to withdraw his name and subscription, and shall be answerable for his subscription for the current year.

4th. That two general meetings of the society shall be held at Stokesley and Guisborough, alternately, in each year, viz. on Palm fair day at Guisborough, and the first Saturday in October at Stokesley, and that such meetings may be adjourned from time to time, and to such places as shall appear necessary.

5th. That the president, two vice-presidents, a secretary, and treasurer, and a committee of twenty-one members shall be chosen annually at the general meeting in October, and that not less than five of the committee shall be competent to act; and in the absence of the president, they shall appoint their own chairman, and may adjourn from time to time to such places as occasion may require.

6th. That the committee shall propose the premium to be given, which shall be referred to, and settled, and decided upon at the ensuing general meeting, and the committee shall appoint the judges to award such premiums.

7th. That every member present at any general meeting, shall pay two shillings for his ordinary, and the treasurer shall pay the like sum for every absent member, and collect the same in addition to the subscriptions; and the whole expence of each person's dinner and liquor, shall not exceed five shillings for each member present.

8th. That the first meeting of the committee, and also the first general meeting, shall be held at Thomas Smith's, the Golden Lion in Stokesley, on Saturday the 6th day of October, inst. at eleven o'clock in the forenoon, and that the above resolutions, and all future rules for regulating the society, may be altered and amended, or new rules made at any general meeting of the society.

9th. That the Right Honourable Thomas Lord Dundas, be appointed president for the ensuing year.

The Honourable Lawrence Dundas and Thomas Hustler, Esq. vice presidents.

Mr. Wm. Powel, secretary and treasurer, and the following members be appointed of the committee, (viz.)

The very Rev. the Dean of York, the Rev. Charles Baillee, Wm. Marwood, Esq. John Wharton, Esq. Rob. Chaloner, Esq. David Burton Fowler, Esq. John Harrison, Esq. Bartholomew Budd, Esq. Wm. Ward Jackson, Esq. Tho. Wilkinson, Esq. Andrew Ferne, Esq. Henry Barton, Esq. James Favell, Esq. William Hustler, Esq. William Wilton, Esq. George Hutton, Esq. Mr. Richard Watson, Mr. John Mowbray, Mr. John Parrington, Mr. John Andrew, and Mr. John Meardsheau.

LAURENCE DUNDAS, Chairman.

Farming Society for the County of Wexford.

AT a general meeting of the farming society for the county of Wexford, held at Enniscorthy, on the 19th of September, 1804, the following resolutions were agreed on :

- 1st. That the same officers and committee be continued for the present year.
 - 2d. That the shews of cattle be held alternately in the towns of Wexford and Enniscorthy.
 - 3d. That the sum of five guineas be given to Richard Haydon, of Johnstown, as an additional premium for having sowed last year the greatest quantity of clover seed, in consideration for his stating in writing to the society, the process used by him in sowing the same.
 - 4th. That the next meeting of this society, be held at Wexford on the first of May next, and that Sol. Richards, Wm. Harvey, John Harvey, Abraham Brownrigg, and Cha Dawson, esq. be appointed a committee to arrange the premiums of the said shew.
- Mr. B. Sparrow, Mr. Brownrigg, and Mr. Meyler, were then chosen to adjudge the premiums.

NEAT CATTLE.

Premiums withheld for want of merit.

SHEEP.

- 1st CLASS. For the best ram, to Wm. Doff Richards, esq. a gold medal.
 For the second best ram, to Mr Breen, a silver medal.
 For the third best, to Geo. Lehunte, esq. a silver medal.
 For the best five ewes, to Mr. Brern, a gold medal.
 For the second best five ewes, to Mr. Doff Richards, esq. a silver medal.
- 2d CLASS. For the best three ewes, to Mr. Lambert, a medal and two guineas.

AGRICULTURE.

- For the best crop of turnips, Right Honourable Geo. Ogle, a gold medal.
 For the second best, to Sol. Richards, esq. a silver medal.
 For the best field of transplanted rape, Richard Bookey, esq. a gold medal.
 For the second best, to Abraham Brownrigg, esq. a silver medal.
 For the best crop of clover, to Wm. Richards, esq. a gold medal.
 For the best crop of vetches, to Abraham Brownrigg, esq. a gold medal.
 For the best saved vetches for seed, to the Rev. Richard Radcliffe, a gold medal.
- 2d CLASS. For the best field of potatoes, to John Corley, of Balleyhague, a medal and three guineas.
- For the labourer who shall have worked the greatest number of days in the same service, from the 19th of Sept. 1803, to the 19th of Sept. 1804.
 To Wm. Turlong, servant to Mrs. Hore, three guineas.
 To John Sinnot, servant to Mr. T. Lett, two guineas.
 To John Keelin, servant to Mr. Radcliff, one guinea.
 To the labourer of any description who shall have lived the greatest number of years, not less than five, in the same service, and behaved with honesty, sobriety, and industry.

To Darby Nowlan, having lived sixty years in the Salsborough family, three guineas.

To Jos. Redmond having lived forty-six years in Mr. Harvey's family, two guineas.

To Tho. Rost, having lived forty-two years in Mr. Brownrigg's family, one guinea.

Signed by order, JAS. BRETTEY, secretary.

Roscommon Farming Society.

At their shew, held the 18th inst. the following premiums were adjudged.

BULLS.

No. 10, For the best bull three years old and upwards, a medal, to Christ. Taaffe, of Grange, esq, no competitor

No. 11, For the best bull, two years old, a medal, to Christ. Taaffe, esq.

No. 12, For the best bull, one year old, a medal, Thomas Mitchel, of Castle Strange, esq.

No. 13, For the best of the prize bulls, a gold medal, Christ. Taaffe, esq.

COWS.

No. 14. For the best cow, five years old and upwards, giving milk, and having had a calf within ten months. *A Medal.* To John G. Ogelvic, of Castle Coote Mills, Esq.

No. 15. For the best cow, four years old, with similar qualifications. *A Medal.* To John Brown, of Mount Prospect, Esq.

HEIFERS.

No. 16. For the best heifer, three years old. *A Medal.* To Luke Harkan, of Ralileen, Esq.

No. 17. For the best heifer, two yaars old. *A Medal.* To John Browne, Esq.

No. 18. For the best heifer, one year old. *A Medal.* To John Browne, Esq.

No. 19. For the best prize cows or heifers. *A Gold Medal.* To John Browne, Esq.

SHEEP.

No. 20. For the best ram, two years old and upwards. *A Medal.* To Christopher Taaffe, Esq.

No. 21. For the best ram, one year old. *A Medal.* To the Rev. Thomas Radcliff. *No competitor.*

No. 22. For the best of the prize rams. *A Gold Medal.* To the Rev. Thomas Radcliff.

No. 23. For the best pen of five ewes, two years old and upwards. *A Medal.* To Christopher Taaffe, Esq.

No. 24. For the best pen of five ewes, one year old. *A Medal.* To Christopher Taaffe. Esq.

No. 25. For the best of the prize pens of ewes. *A Gold Medal.* To Christopher Taaffe, Esq.

SWINE.

No. 26. For the best boar, two years old and upwards. *A Medal.* To Daniel Kelly, of Coryins, Esq. *No competitor.*

No. 27. For the best boar, one year old. *A Medal.* To John Browne, Esq. *No competitor.*

No. 28. For the best boar, six months old. *A Medal.* (No claimant.)

No. 29. For the best of the prize boars. *A Gold Medal.* John Browne, Esq.

No. 30. For the best sow, two years old and upwards. *A Medal.* To Mr. Geohagan Lynch. *No competitor.*

No. 31. For the best sow, one year old. *A Medal.* To St. George Caulfield, of Donammon Cattle, Esq.

No. 32. For the best sow, six months old. *A Medal.* To John George Ogilvie, Esq. *No competitor.*

No. 33. For the best of the prize sows. *A Gold Medal.* To Christopher Taaffe, Esq.

SEED CORN.

No. 34. For the best barrel of seed-wheat, to be produced the day of shew, and to become the property of the Society, 5*l.* To the Rev. Thomas Radcliff.

No. 35. For the best barrel of seed-barley, 3*l.* To the Rev. Thomas Radcliff. *No competitor.*

No. 36. For the best barrel of seed-oats, 3*l.* To Mr. Robert Wilgelfworth.

N. B. In class No. 81, Rev. William M'Gloughlin's sow, was successfully objected to, as not being county bred, and therefore, was not taken into consideration.

JOHN BROWNE, Secretary and Treasurer.

The Society were much gratified, at the increased competition for prizes, and at the manifest improvement in the stock exhibited this year.

Ballinasloe Farming Society. Oct. 1804.

ADJUDICATION.

NEAT CATTLE.

Long horned, viz. Leicester, Lancashire, Irish, &c.

CLASS 1. For the best bull, three years old or upwards, 20*l.*

Marquis of Sligo, Brown Jack, by Princess, Razorback.

Charles P. Doyne, Esq. Rofs Mahon, Esq. Messrs. Wynne and Radcliff, John Browne, Esq. Robert Shaw, Esq.

Premium adjudged to the Marquis of Sligo.

CLASS 2. For the best bull two years old, 10*l.*

Sir W. G. Newcomen, Bart. James Lewis, Esq. Messrs. Wynne and Radcliff.

Premium adjudged to Sir W. G. Newcomen.

CLASS 3. For the best bull one year old, 10*l.*

James Lewis, Esq. Charles P. Doyne, Esq. Messrs. Wynne and Radcliff, Rofs Mahon, Esq. Messrs. J. P. and S. Garnet, George Grierson, Esq. Robert Perse, Esq.

Premium adjudged to James Lewis, Esq.

CLASS 4. For the best cow five years old giving milk, 10*l.*

Rofs Mahon, Esq. Remnant, by Paget's Shakspeare.

Charles P. Doyne, Esq. James Lewis, Esq. Mr. Radcliff, Sir W. G. Newcomen, Bart.

Premium adjudged to Rofs Mahon, Esq.

CLASS 5. For the best cow four years old giving milk, 10*l.*

Owen Wynne, Esq. Blossom, by Astley's Shakspeare.

C. P. Doyne, Esq. Rofs Mahon, Esq.

Premium adjudged to Owen Wynne, Esq.

CLASS 6. For the best cow three years old giving milk, 10*l.*

Rofs Mahon, Esq. Modish, by Paget's Shakspeare.

Premium adjudged to Rofs Mahon, Esq.

CLASS 7. For the best heifer two years old, 10*l.*

Owen Wynne, Esq. Juliet, by Hamlet.

James Lewis, Esq. John Browne, Esq. Sir W. G. Newcomen, Bart. Marquis of Sligo, Rofs Mahon, Esq. Robert Perse, Esq.

Premium adjudged to Owen Wynne, Esq.

CLASS 8. For the best heifer one year old, 10*l.*

Messrs. Garnett, Languish, by Browne's Prince.

John Dawson Whyte, Esq. Mr. Radcliff, James Lewis, Esq. Marquis of Sligo, George Grierson, Esq. Rofs Mahon, Esq. John Browne, Esq.

Premium adjudged to Messrs. Garnett.

CLASS 9. For the best steer four years old, 5l.

Mr. Radcliff.

Premium adjudged to Mr. Radcliff.

CLASS 10. For the best steer three years old, 5l.

Rofs Mahon, Esq. John Armstrong Drought, Esq. Christopher Taaffe, Esquire.

Premium adjudged to Rofs Mahon, Esq.

CLASS 11. For the best steer two years old, 5l.

John Armstrong Drought, Esq. Rofs Mahon, Esq. Christopher Taaffe, Esq. Richard Reynell, Esq. Reynella.

Premium withheld for want of sufficient merit.

Middle horned. Hereford, Devon, Suffex, Glamorgan, &c.

CLASS 12. For the best bull three years old, and upwards, 20l.

Richard Reynell, Esq. Hereford. John Browne, Esq. Hereford. Earl of Farnham, Devon.

Premium adjudged to Richard Reynell, Esq.

CLASS 13. For the best bull two years old, 10l.

George Beatty, Esq. Longhorned-crofs. Richard Fox, Esq. Devon.

Premium withheld for want of sufficient merit.

CLASS 14. For the best bull one year old, 10l.

Earl of Farnham, Hutton, Devon, not sufficient merit.

Richard Reynell, Esq. not qualified, being under age.

Premium withheld.

CLASS 15. For the best cow five years old, or upwards, giving milk, 10l.

Earl of Farnham, famous, Devon, Hon. Sir Edward Crafton, Bart. Hereford.

Premium adjudged to the Earl of Farnham.

CLASS 16. For the best cow four years old, giving milk, 10l.

Richard Reynell, Esq. Hereford. Earl of Farnham, Devon. John Brown, Esq. Hereford. Rev. James Symes, Suffex.

Premium adjudged to Richard Reynell, Esq.

CLASS 17. For the best cow three years old, giving milk, 10l.

Earl of Farnham Sally, Devon, by Slatty's bull. Hon. Sir Edw. Crofton, Bart. Hereford. Richard Reynell, Esq. Hereford.

Premium adjudged to the Earl of Farnham.

CLASS 18. For the best heifer two years old, 10l.

Earl of Farnham, Devon. John Brown, Esq. Hereford. Richard Reynell, Esq. Hereford.

Premium withheld for want of merit.

CLASS 19. For the best heifer one year old, 10l.

Earl of Farnham. Fawn by Bedford, Devon.

Premium adjudged to the Earl of Farnham.

CLASS 20. For the best steer, four years old, 5l.

No Claimant.

CLASS 21. For the best steer three years old, 5l.

No Claimant.

CLASS 22. For the best steer two years old, 5l.

Richard Reynell, Esq. Hereford.

Premium adjudged to Richard Reynell, Esq.

Short horned or polled, viz. Durham, Holderness, Alderney, Kerry, Galloway, Suffolk, &c.

CLASS 23. To the best bull three years old, or upwards, 20l.

J. French, Esq. Bashaw, Durham, by son of Collin's grey bull, size of the Durham ox.

Premium adjudged to J. French, Esq.

CLASS 24. For the best bull two years old, 10l.
Hon. Sir Edward Crofton, bart. Galloway, from Lord Galloway's stock.

Sir W. G. Newcomen, bart. Teeswater.

Premium adjudged to Sir Edward Crofton.

CLASS 25. For the best bull one year old, 10l.

Rev. Thomas French, Durham. Sir W. G. Newcomen, bart. Teeswater.

Premium adjudged to Rev. Thomas French.

CLASS 26. For the best cow five years old, or upwards, giving milk, 10l.

Sir Edward Crofton, Galloway. Sir W. G. Newcomen, Teeswater. J. French, esq. Durham. Marquis of Sligo, Holderness.

Premium adjudged to Sir Edward Crofton.

CLASS 27. For the best cow four years old, giving milk, 10l.

Marquis of Sligo, Teeswater. Sir W. G. Newcomen, bart. Teeswater.

Premium adjudged to the Marquis of Sligo.

CLASS 28. For the best cow three years old, giving milk, 10l.

J. French, esq. not sufficient merit: Sir W. G. Newcomen, not qualified.

Premium withheld.

CLASS 29. For the best heifer two years old, 10l.

Sir W. G. Newcomen, Teeswater. J. French, esq. Durham.

Premium adjudged to Sir W. G. Newcomen.

CLASS 30. For the best heifer one year old, 10l.

Sir W. G. Newcomen.

Premium adjudged to Sir W. G. Newcomen.

CLASS 31. For the best steer four years old, 5l.

No claimant.

CLASS 32. For the best steer three years old, 5l.

Sir W. G. Newcomen.

Premium adjudged to Sir W. G. Newcomen.

CLASS 33. For the best steer two years old.

Sir W. G. Newcomen.

Premium adjudged to Sir W. G. Newcomen.

CLASS 34. For the best of the prize bulls, the gold medal.

Richard Reynell, esq. Hereford. Marquis of Sligo, long-horned. James Lewis, esq. long-horned. Sir W. G. Newcomen, long-horned. Sir Edward Crofton, Galloway. J. French, esq. Durham.

The place of the prize bulls in Class 25 was not returned to the secretary, by mistake.

The gold medal adjudged to Richard Reynell, esq.

CLASS 35. For the best prize cow, the gold medal.

No adjudication.

CLASS 36. For the best of the prize steers, the silver medal.

Rofs Mahon, esq. long-horned. Richard Reynell, esq. Hereford. Mr. Radcliff, long-horned. Sir W. G. Newcomen, Teeswater, Class 32.

The silver medal adjudged to Rofs Mahon, esq.

Mr. Mahon is recommended to exhibit his steer in a fat state at the next October shew.

SHEEP.

Long or combing woolled, viz. New Leicester, Romney Marsh, &c.

CLASS 37. For the best ram two years old or upwards, 20l.

Rofs Mahon, esq. No. 5, by N, New Leicester. Sir W. G. Newcomen, ditto. John Browne, esq. ditto. Messrs. French, ditto. Sir R. St. George and J. Wade, esq. ditto. Earl of Farnham, Exmoor.

Premium adjudged to Rofs Mahon, esq.

CLASS 38. For the best ram one year old, 20l.

Roger Scully, esq. New Leicester. Rofs Mahon, esq. ditto. Sir W. G.

Ag. Mag. Vol. II.

Q q

Newcomen. Robert Shaw, esq. not qualified. Samuel Weede, esq. not qualified.

Premium adjudged to Roger Scully, esq.

CLASS 39. For the best pen of five ewes one year old, 20l.

Richard Lloyd, esq. New Leiceſter. Roſs Mahon, esq. ditto. John Fitzpatrick, esq. jun. ditto. Chriſtopher Taaffe, esq. half Leiceſter.

Premium adjudged to Richard Lloyd, esq.

CLASS 40. For the best long woolled ram's fleece grown in Ireland, 10l Earl of Farnham, Exmore. Mr. Radcliff, New Leiceſter. Richard Lloyd, esq. ditto.

Premium adjudged to the Earl of Farnham.

Short or clothing woolled, viz. South Down, Ryland, &c.

CLASS 41. For the best ram two years old or upwards, 20l.

Owen Wynne, esq. from Woburn, South Down. George Guerſon, esq. ditto. J. French, esq. Spaniſh Ryland. Marquis of Sligo, South Down. John Elman, esq. Suſſex Down. Earl of Farnham, Spaniſh and Ryland.

Premium adjudged to Owen Wynne, esq.

CLASS 42. For the best ram one year old, 20l.

Marquis of Sligo, South Down.

Premium adjudged to the Marquis of Sligo.

CLASS 43. For the best pen of five ewes one year old, 20l.

Owen Wynne, esq. South Down. Marquis of Sligo, ditto. Rev. Mr. Symes, ditto. J. French, esq. Spaniſh and Ryland.

Premium adjudged to Owen Wynne, esq.

CLASS 44. For the best clothing-woolled ram's fleece grown in Ireland.

Earl of Farnham, Claſs 41, by a Marino ram from his Majesty's flock on a Ryland ewe. Marquis of Sligo, South Down. John Elman, esq. ditto.

Premium adjudged to the Earl of Farnham.

CLASS 45. For the best pen of native Irish ſhort-woolled ewes one year old, 5l. Robert Shaw, esq.

Premium adjudged to Robert Shaw, esq.

SHEEP.—Spaniſh Marino.

CLASS 46. For the best ram, two years old, and upwards, 20l.

Do. 47. For the best ram, one year old, 20l.

Do. 48. For the best pen of five ewes, 20l.

Do. 49. For the best ram's fleece grown in Ireland, 10l.

Do. 50. For imported Spaniſh ſheep, 20s. ſo as not to exceed the ſum of 100l.

No claimants for Spaniſh ſheep.

SHEEP OF ANY BREED.

CLASS 51. For the twenty best ewes, the property of an individual, and bred by him, which ſhall be ſhown, and *bona fide* ſold, at Ballinaſloe, 20l.

Richard Lloyd, esq. (new Leiceſter) Samuel Wade, esq. (do.)

Premium adjudged to Richard Lloyd, esq.

CLASS 52. For the forty best wethers, two years old, as in claſs 51.

Bernard Mahon, esq. Lord Aſhtown, William French, esq.

Premium withheld for want of ſufficient merit.

CLASS 53. For the best of the prize rams, the gold medal.

Roſs Mahon, esq. (new Leiceſter) claſs 57. Roger Scully, esq. (do.)

claſs 58. Owen Wynne, esq. (South Down) claſs 41. Marquis of Sligo, (do.) claſs 42.

The gold medal adjudged to Roſs Mahon, esq.

CLASS 54. For the best ewe which ſhall be ſhewn, the gold medal.

Richard Lloyd, esq. (new Leiceſter) Owen Winne, esq. (South Down) John Fitzpatrick, esq. (New Leiceſter) Roſs Mahon, esq. (do.) Chriſt. Taaffe, esq. (New Leiceſter croſs).

HORSES.

CLASS 55. For the best draft ſtallion, 20l.

Owen Wynne, esq. Strongbow (Suffolk Punch).

Premium adjudged to Owen Wynne, esq.

CLASS 56. For the next best, 15l.

No claimants.

SWINE.

CLASS 57. For the best boar, exceeding two years old, 10l.

George Grierson, esq. Major Ogilvie.

Premium adjudged to George Grierson, esq.

CLASS 58. For the best boar, one year old, 10l.

John Brown, esq. John Wade, esq.

Premium adjudged to John Browne, esq.

CLASS 59. For the best sow, exceeding two years old, 10l.

Richard Reynell, esq.

Premium adjudged to Richard Reynell, esq.

CLASS 60. For the best sow, one year old, 10l.

John Johnson, esq. John Wade, esq. Bindon Blood, esq. St. George Caulfield, esq.

Premium adjudged to John Johnson, esq.

CLASS 61. For the best sow, not exceeding one year old, 10l.

John Wade, esq.

Premium adjudged to John Wade, esq.

CLASS 62. For the best of the prize boars, the silver medal.

John Wade, esq. class 57. John Brown, esq. class 58. George Grierson, esq. class 56.

The silver medal adjudged to J. Wade, esq.

CLASS 63. For the best of the prize sows, the silver medal.

John Jopson, esq. John Wade, esq. Rich. Reynell, esq.

The silver medal adjudged to J. Johnson, esq.

NEAT CATTLE.

Five guineas each for the best bull one year old, bred in Ireland, thirty-five guineas.

Jas. Lewis, esq. (long horned), Charles Doyne, esq. (ditto), Geo. Geieron, esq. (ditto), Messrs. Garnet, (ditto), Sir W. G. Newcomen, bart. forfeit, Sir Francis Hopkins, bart. forfeit, Henry Parnell, esq. forfeit.

Adjudged to Jas. Lewis, esq.

Five guineas each for the best heifer, one year old, bred in Ireland, thirty guineas.

Messrs. Garnett Languish, (long-horned), Jas. Lewis, esq. (ditto), Geo. Grierson, esq. (ditto), Sir W. G. Newcomen, bart. forfeit, Sir Francis Hopkins, bart. forfeit, Henry Parnell, esq.

Adjudged to Messrs. Garnett.

Ten guineas each for the best long-horned heifer, one year old, the produce of a cow now in the possession of each of the subscribers for seven years, seventy guineas.

J. D. White, esq. Jas. Lewis, esq. Marquis Sligo, Geo. Guerson, esq. John Browne, esq. forfeit, C. P. Doyne, esq. forfeit, Henry Parnell, esq. forfeit.

Adjudged to J. D. White, esq.

Five guineas each for the best heifer two years old, bred by the subscriber, the produce of an Irish cow, ten guineas.

J. Browne, esq. Tho. Going, esq.

Adjudged to J. Browne, esq.

SHEEP.

Five guineas each for the best pen of five theaves, bred by subscribers, twenty guineas.

J. Fitzpatrick, jun. esq. J. Browne, esq. Michael Carrol, esq. Jos. Bernard, esq.

The only pen of five theaves exhibited, were those of Mr. Fitzpatrick.

JUDGES.

For neat cattle.—Rev. H. B. Dudley, Essex, Roger Scully, esq. Tho. Going, esq.

For sheep.—Jas. Lewis, esq. Rob. Dexter, esq. Rob. Moore Fishburne, esq.

For horses.—Arthur French, esq. Tho. Tennison, esq. Rev. Dr. S. Little.

For Swine.—Ros Matron, esq. Rich. Lloyd, esq. Samuel Garnett, esq.

For Wool.—Rich. Uldworth, esq. Rich. Sadlier, esq. John Fennel, esq. assisted by Ormsby, Wool Stapler.

This was the fifth annual shew of breeding stock since the commencement of the institution. The improvement has been progressive, and has surpassed the most sanguine hopes of the society. The young stock appeared far superior to those from which they were bred, which is to be attributed to judicious selection, and the soil and climate of Ireland so favourable to cattle; a few excellent specimens were exhibited, the produce of a single cross on the native breeds. Two distinct varieties of neat cattle appeared, each contending for a decided superiority over all the rest. Such a competition repeated for a number of years, must ultimately overcome prejudice, and determine which is the best: the sheep were excellent in their kinds; the New Leicesters still hold their place as the most profitable for the Lowland pastures, and the South Downs for the Upland districts: the latter were much better than any hitherto produced, and some of them were deservedly admired. There were also some fine-woolled sheep, by Spanish rams on Ryeland ewes. More attention than usual was paid to the different kinds of wool. The judges were gentlemen of experience, and they were assisted by a professional man.

The only draft stallion exhibited was a Suffolk Punch. Nothing is more wanted in Ireland than an improvement in horses, and this breed, being strong, active, and vigorous, promises to be an acquisition. The improved breed of swine have spread through every part of Ireland, and are likely soon to displace the awkward unprofitable animal which was a disgrace to the country.

The society dined together in their new apartments, and though unfinished, accommodated them comfortably. Several of the most respectable noblemen, gentlemen, and farmers, were present. Nothing has tended more to harmonise the country than those meetings. Hundreds of gentlemen, from the remotest parts of Ireland, who probably would never have known each other, were at Ballenasloe, and vie with each other only in public spirit.

Mr. Forster the worthy and respected president, added new life to the Society. The absence of the Marquis of Sligo; whose delicate health prevented his attending the meeting, was universally regretted. The society were particularly indebted to the judges, for the uncommon patience with which they exerted the laborious task assigned to them. Mr. Dudley who came to Ireland, on a visit to Mr. Forster, at the earnest request of the committee, very obligingly undertook the office of judge of the neat cattle, and suggested some important regulations, which will probably be adopted at the arrangement of the future shew.

Several appropriate toasts were drank, among which were the following.

The King, three times three, The Queen and Royal Family, the Prince of Wales, the Lord Lieutenant, Memory of the Duke of Bedford, Board of Agriculture, and its President, Lord Sheffield, Hyland Society, and its President, the Duke of Argyle, Mr. Forster, and the Farming Society of Ireland, Marquis of Sligo, Vice-President, Breeding in all its branches, Speed the Plough, the Gentlemen who have promoted the objects of the Society, by contending for the premiums, the Yeomanry of Ireland, The export trade of Ireland, and may our enemies be the first.

After the health of the King, "God save great George our King," was admirably sung by Mr. G.—, with several beautiful verses composed by himself. The whole company joined in chorus with the most enthusiastic demonstrations of joy.

Berkshire Agricultural Society.

George Vanfittart, Esq. and William Morland Esq; Stewards.

The meeting was held at Wantage, on Saturday, the 20th day of October, 1804, when the following rewards were distributed.

PLOUGHS.

To the owner of the best-constructed plough, which was worked by the best and cheapest team, either of oxen or horses, a piece of plate, value 10l.

To the best ploughman, two guineas.

To the second, one guinea.

To the third, half a guinea.

CATTIE.

For the best fat cow, which had been kept in Berkshire for the last three years, three guineas.

For the best boar, kept and used in Berkshire, from Christmas to October, two guineas.

For the best two year old heifer, two guineas.

For the best cart colt, three guineas.

HUSBANDMEN.

The labourer in husbandry, who had reared the largest family without relief from the parish, two guineas.

To the second, one guinea.

To the third, half a guinea.

SERVANTS IN HUSBANDRY.

To the man servant in husbandry, who had lived the greatest number of years in the service of any member of the society, or his predecessor, and was then in the service of such member, two guineas.

To the second, one guinea.

To the third, half a guinea.

To the woman servant, two guineas.

To the second, one guinea.

To the third, half a guinea.

Labourers and servants, becoming candidates for the above rewards need not apply personally, but obtain the form of the certificate of Mr. Becket, or Mr. Palmer, Wantage, or of the secretaries.

The certificate is signed by a member, and delivered to the secretaries before one o'clock in the afternoon of the day of meeting.

The winner of a prize at any former meeting, was not permitted to become a candidate for a similar prize; but this rule did not apply to the rewards for plough and ploughmen. And with respect to labourers and servants in husbandry, those persons who have gained the second or third prizes only, again become candidates, but on condition that the whole reward (including what they have before received) did not exceed the highest prize.

The members of the committee reserved to themselves the power of withholding any of the above rewards, if they think there is no particular merit in the claimant, particularly with respect to the ploughs.

The ploughs were on the ground at ten o'clock, and began to work at eleven o'clock. The ground set apart for this purpose was known by applying at the Alfred's Head Inn, on the morning of the meeting, or on the preceding evening.

Dinner was provided at the Alfred's Head Inn, at two o'clock.

Newbury, Oct. 4th, 1804.

Budd and Gray, Secretaries.

(We fear the result of the above competitions will not be transmitted to us in time to make its appearance this month.)

Cornwall Agricultural Society.

The following premiums are offered for the encouragement of Agriculture and Domestic Economy in this county.

Ag. Mag. Vol. 11.

R 1

PLOWING.

Premium 1. To the best ploughman, 3*l.* 3*s.* or a coat and waistcoat; his driver, 10*s.* 6*d.*—2. To the 2*d* best ditto, 2*l.* 2*s.* or a coat; his driver, 5*s.*—3. To the 3*d* best ditto, 1*l.* 1*s.* or a jacket; his driver, 2*s.* 6*d.*—4. To the best plougher, who shall be a parish apprentice, 1*l.* 1*s.* or a jacket; the driver, a parish apprentice, 2*s.* 6*d.* The drivers not to exceed the age of sixteen. That there be two ploughing matches this year; the first at Padstow, on Tuesday, the 9*th* day of October next, and the second at Probus, on the first Tuesday in March next. The trials to be made in a ley field, combed and burnt, for a crop of wheat at Padstow, and for a crop of oats at Probus. Ploughs of any description to be admitted. Thirty yards square of land, (about the fifth part of an acre) to be the quantity assigned to each plough, which is to be ploughed in two or three split ridges, as the ground may admit of. Two hours to be allowed for finishing it. The parish apprentices to plough at the same time and place, in a separate piece of ground. The owner of each plough to enter the same, and the names of his ploughman and driver, with the secretary, or at the George Inn, Padstow, for the ploughing match there; or at the house of Amos Week, Probus, for the ploughing match at that place, at least three days before the day appointed for each ploughing match. The ploughing to begin precisely at eleven o'clock; and dinner to be on the table at two. N. B. No person is to follow the ploughmen, or go over the ground marked for that purpose.

BULLS.

5. For the best bull, 10*l.* 10*s.*—6. For the 2*d* best ditto, 5*l.* 5*s.*—7. For the best bull, not exceeding two years and a half old, 5*l.* 5*s.*—8. For the 2*d* best, 3*l.* 3*s.*

HEIFERS.

9. For the best milch heifer, under three and a half years old, 5*l.* 5*s.*—10. For the 2*d* best ditto, under two and a half years old, 3*l.* 3*s.* Satisfactory certificates of their ages to be produced to the secretary previous to the exhibition.

RAMS.

11. For the best ram, free of all England, 10*l.* 10*s.*—12. For the best ram yeaned in Cornwall, the property of a person within the county, 5*l.* 5*s.*—13. For the 2*d* best ditto, 3*l.* 3*s.*—14. For the best hog ram ditto, 5*l.* 5*s.*—15. For the 2*d* best ditto, 3*l.* 3*s.* All the sheep to be fed as in premium 16. To be shewn at Bodmin, on Tuesday, next before the 3*d* of June, 1805, at ten o'clock precisely. The owner to have the above cattle and sheep (except premium 11) in his possession in the county at least one month before the exhibition.

N. B. The rams to be shorn on the spot, under the direction of proper inspectors. The owners to provide shearers.

FATTED SHEEP.

16. To the person who shall produce to the society, at their annual exhibition of cattle at Bodmin in June next, the best fat four-teeth wether sheep, slaughtered, regard being had to the live and dead weight, fed in Cornwall, on grass, hay, turnips, potatoes, or other green vegetable food, 3*l.* 3*s.*—17. To the next best ditto, (as in premium 16) 2*l.* 2*s.*—18. For the best fat two-teeth wether sheep (as in premium 16) 3*l.* 3*s.* The same sheep to obtain only one of the last three premiums. These sheep to be slaughtered at Bodmin, the day before the exhibition. To be shewn in their coats, and afterwards sheared. None to be admitted into the slaughter-house after twelve o'clock; and to be sheared, slaughtered, weighed, and dressed, according to the direction of the Secretary.

WOOL.

19. To the person who shall produce at the said annual exhibition, in June, the heaviest entire fleece of wool, from a ram, regard being had to the value per pound, the time of growth, and the weight of the animal producing such fleece, 2*l.* 2*s.*—20. Second best ditto, 1*l.* 1*s.*

SHEEP-SHEARING.

21. To the best shearer of sheep, 3l. 3s. 22. To the second best ditto, 2l. 2s. 23. To the third best ditto, 1l. 1s. 24. To the fourth best ditto, 10s. 6d. These premiums to be free for all persons resident in or out of the county of Cornwall. To be shorn publicly at the annual exhibition at Bodmin, in June next. The sheep to be procured by the Society, the shears by the shearers. Each person to shear two sheep. The Shearing to begin precisely at ten o'clock. The best work in the shortest time to be preferred. N. B. No ploughman or sheed shearer, or any of the cattle or sheep before-mentioned, that have, upon former occasions, won the best premium, to be allowed to enter for, or claim, any of the aforesaid premiums.

CART.

25. To the person who shall produce to the Society at their Meeting, at Bodmin, in June 1805, a cart, which shall be then most approved of, for the strength, lightness, and cheapness of its construction, and for its general fitness to be used, both on the fields and on the roads, 5l. 5s.

BEES.

26. To any labourer in this county, who shall be the owner of the greatest number of stocks of bees, of which a certificate under the hand of the clergyman of his parish, shall be produced at the next General Meeting, 2l. 2s.

Premiums are likewise offered for New and Improved Husbandry Implements, Cheese, the Comparative Culture of Wheat, Spring Feed, and Orchards.

No person to stand a candidate for, or be entitled to either of the above mentioned premiums, for any subject which has upon a former occasion, obtained from this Society the best premium.

Prices of Raw Hides, Hay and Straw, &c. for October, 1804.

Raw Hides.	1st Week		2d Week		3d Week.		4th Week.	
	s.d.	s.d.	s.d.	s.d.	s.d.	s.d.	s.d.	s.d.
Best Heifers & Steers, pr ft.	3 8	to 4 4	3 8	to 4 4	3 8	to 4 4	3 8	to 4 4
Middling — —	3 4	to 3 6	3 4	to 3 6	3 4	to 3 6	3 4	to 3 6
Ordinary — —	3 0	to 3 2	3 0	to 3 2	3 0	to 3 2	3 0	to 3 2
Market Calf — —	10 6		10 6		10 6		10 6	
Eng. Horse — —	14s	to 17s	14s	to 17s	14s	to 17s	14s	to 17s
Pelts — — —	2 6	to 3 6	2 0	to 2 9	2 6	to 3 8	2 6	to 4 0
Lamb Skins — —	3 0	to 4 0	3 0	to 4 4	3 0	to 4 0	3 0	to 4 6
<i>Prices of Hay and Straw.</i>								
St. James's—Hay —	3 12	3	3 8	0	3 17	6	3 11	6
Straw — — —	1 16	0	1 7	9	1 19	0	1 14	6
Whitech.—Hay — —	3 18	0	4 0	0	4 0	0	4 3	0
Clover — — —	4 15	0	4 14	6	5 6	6	4 17	6
Straw — — —	1 11	0	1 16	6	1 17	0	1 15	0
<i>Newbury.</i>								
Wheat — — —	53s	to 90s	48s	to 95s	58s	to 96s	50s	to 100s
Barley — — —	34s	6d to 38s	35s	to 38s	36s	to 40s	36s	to 40s
Oats — — —	26s	to 29s	25s	to 33s	24s	to 30s	22s	to 29s
Beans — — —	—s	to —s	—s	to —s	—s	to —s	—s	to —s
New ditto — — —	—s	to —s	—s	to —s	—s	to —s	—s	to —s
Peas — — —	—s	to —s	—s	to —s	—s	to —s	—s	to —s
<i>Salisbury.</i>								
Wheat — — —	68s	to 76s	70s	to 82s	60s	to 82s	74s	to 86s
New ditto — — —	—s	to —s	—s	to —s	—s	to —s	—s	to —s
Barley — — —	30s	to 36s	35s	to 38s	32s	to 40s	36s	to 42s
Beans — — —	—s	to —s	—s	to —s	—s	to —s	—s	to —s
Oats — — —	26s	to 32s	25s	to 33s	26s	to 30s	26s	to 32s
Peas — — —	—s	to —s	—s	to —s	—s	to —s	—s	to —s

Prices of Hops, Meat, Seeds, Leather, Tallow, &c. for October 1804.

Price of Hops.		First Week		2d Week		3th Week		4d Week	
Bags.		s.	s.	s.	s.	s.	s.	s.	s.
Kent	—	70 to	78	70 to	80	70 to	84	80 to	96
Suffex	—	70 to	76	70 to	75	70 to	78	80 to	94
Essex	—	70 to	76	70 to	78	70 to	80	80 to	99
Pockets.									
Kent	—	78 to	92	80 to	92	78 to	94	74 to	84
Suffex	—	78 to	83	80 to	86	76 to	86	70 to	80
Farnham	—	120 to	140	100 to	140	120 to	140	120 to	150
Seeds.									
Red Clover per cwt.	—	60 to	95	40 to	95	40 to	105	40 to	105
White Clover, ditto	—	60 to	98	60 to	160	60 to	105	60 to	105
Trefoil, ditto	—	21 to	36	20 to	38	18 to	42	18 to	42
Carraway ditto	—	85 to	90	88 to	92	90 to	94	95 to	100
Coriander ditto	—	10 to	12	9 to	11	9 to	11	9 to	11
Turnip, (per bushel)	—	14 to	24	16 to	20	16 to	20	16 to	20
White Mustard Seed	—	8 to	10	8 to	10	8 to	10	8 to	10
Brown ditto	—	12 to	16	12 to	16	12 to	16	12 to	16
Canary Seed	—	7 to	8	7 to	8	7 to	8	7 to	8
Rape Seed, (per last)	—	780 to	820	840 to	880	840 to	900	800 to	880
Meat at Smithfield,		s. d.		s. d.		s. d.		s. d.	
To sink the offal, p. ft. 8lb.	—	3	8 to 4	4	0 to 5	4	0 to 5	4	0 to 5
Beef	—	3	8 to 4	4	0 to 5	4	0 to 5	4	0 to 5
Mutton	—	4	1 to 5	4	0 to 5	4	0 to 5	3	6 to 4
Veal	—	4	0 to 5	5	0 to 6	5	0 to 6	4	0 to 5
Pork	—	4	0 to 4	4	0 to 5	3	8 to 4	3	0 to 4
Lamb	—	4	0 to 5	4	0 to 5	4	0 to 5	3	8 to 4
Head of Cattle—Beasts about	—	4,300		2,200		2,200		2,100	
Sheep	—	20,000		23,000		18,000		18,500	
Price of Leather.		d. d.		d. d.		d. d.		d. d.	
Butts, 50lb. to 56lb. each	—	23	to 24	22½	to 23½	23	to 24	22½	to 23½
Ditto, 60lb. to 65lb each	—	—	to 26	25	to 26	25	to 26	—	to 25
Merchants Backs	—	—	to 23	—	to 22½	—	to 23	—	to 23
Dressing Hides	—	23	to 24	22	to 23	22	to 23	21½	to 22½
Fine Coach Hides	—	24	to 25	24	to 25	2½	to 24	22½	to 24
Crop Hides for cutting	—	23	to 23½	23	to 23½	22½	to 23	22	to 23
Flat Ordinary	—	22	to 22½	22	to 23	22	to 23½	21	to 21½
Calf Skins, 30 to 40lb. p. doz.	—	30	to 36	32	to 36	33	to 36	32	to 36
Ditto, 50lb. to 70lb. do.	—	30	to 35	30	to 35	33	to 36	33	to 36
Ditto, 70lb. to 80lb. do.	—	28	to 32	30	to 32	30	to 32	30	to 33
Sm. Seals (Greenland)	—	45	to 50	42	to 55	42	to 44	—	to 42
Large do.	—	51	to 71	51	to 71	51	to 71	61	to 71
Tanned Horse Hides	—	20s	to 30s	20s	to 34s	20s	to 34s	20s	to 34s
Goat Skins per doz.	—	25s	to 65s	25s	to 65s	—	to —	—	to —
Price of Tallow.		s. d.		s. d.		s. d.		s. d.	
St. James's Market	—	4	5	4	5	4	6	4	6
Clare Market	—	4	5	4	5	4	6	4	6
Whitechapel Market	—	4	4	4	4	4	5½	4	5½
Per stone of 8lb. Average	—	4	4½	4	4½	4	6	4	5½
Town Tallow	—	75	6	75	0	75	0	76	0
Russia ditto (Candles)	—	73	0	73	0	73	0	73	0
Russia ditto (Soap)	—	69	6	69	0	69	0	69	6
Melting Stuff	—	59	0	60	0	60	0	61	0
Ditto rough	—	41	0	41	0	42	0	42	0
Graves	—	4	0	14	0	14	0	14	0
Good Dregs	—	11	0	11	0	11	0	11	0
Yellow Soap	—	82	0	82	0	82	0	82	0
Mottled ditto	—	90	0	90	0	90	0	90	0
Curd ditto	—	94	0	94	0	94	0	94	0
Candles, per dozen,	—	11	6	12	0	12		12	0
Moulds	—	12	6	13	0	13		13	0

AVERAGE PRICES OF CORN, by the quarter of eight Winchester bushels; and of OATMEAL, per boll, of 140 pounds Avoirdupoise:
From the Returns received in the Week, ended OCTOBER 20, 1804.

INLAND COUNTIES.

COUNTIES.	Wheat.		Rye		Barley.		Oats.		Beans.		Peas.		Oatmeal.	
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
Middlesex	71	7	35	1	38	11	28	3	41	6	45	9		
Surrey	80	8	41	9	40	4	30	4	40	0	45	6		
Hertford	62	6	35	6	33	2	25	6	32	6	38	0		
Bedford	71	6	39	4	33	9	23	10	38	5	41	7		
Huntingdon	58	7			32	0	24	6	35	10	38	4		
Northampton	61	8	35	0	33	2	24	6	37	6	38	0		
Rutland	65	0			36	0	20	6	42	0			57	3
Leicester	61	9			32	7	24	2	36	7	37	8	37	9
Nottingham	75	10	39	0	37	8	26	4	42	0				
Derby	72	0			34	6	28	2	45	8	42	0	35	9
Stafford	66	3			37	7	30	8	44	9			38	2
Salop	64	6	42	0	38	1	27	6	48	0	43	4	65	10
Hereford	64	9	38	4	41	4	25	2	43	6	43	10	59	3
Worcester	66	1			38	11	30	11	47	8	44	9		
Warwick	68	11			41	11	30	11	46	7	35	0	46	5
Wilts	75	4			39	4	28	8	49	8	43	0		
Berks	80	10			38	0	28	11	45	4	48	1		
Oxford	70	9			36	11	27	0	40	5	44	1		
Bucks	71	11			36	0	27	6	38	6	43	0		
Brecon	74	4	43	2	36	0	24	0					38	8
Montgomery	62	4			28	9	22	4			39	5	50	10
Radnor	62	3			38	8	25	2						

Maritime Counties.

Essex	76	8	41	9	37	6	31	3	38	7	42	0		
Kent	70	0	41	0	38	10	30	0	41	2	45	6		
Suffex	76	4			30	6	31	2					38	8
Suffolk	71	7	33	10	35	0	26	8	33	2	41	4		
Cambridge	63	0	33	0	31	3	18	6	36	3	34	8		
Norfolk	63	8	33	1	33	3	22	5	32	7	38	11		
Lincoln	67	9	35	5	33	10	21	11	40	6	38	0		
York	68	1	44	9	35	4	24	7	41	5			45	4
Durham	70	3				24	10							
Northumberland	60	9	36	4	29	7	22	9					20	0
Cumberland	58	2	39	4	29	10	22	4						
Westmorland	62	2	45	0	27	6	24	6					19	7
Lancaster	63	10			39	9	28	2					22	7
Chester	62	1				26	9	46	3				23	4
Flint	68	8			30	0	23	6						
Denbigh	72	6			40	8	23	8					45	10
Anglesea					26	0	21	0						
Carnarvon	65	0			31	8	20	0					45	4
Merioneth		9	44	0	34	0	21	4					40	10
Cardigan	7	3			35	8	18	8						
Pembroke	50	6			35	4	19	10						
Carmarthen	74	10			36	3	19	11						
Glamorgan	68	2			36	2	20	9						
Gloucester	66	10			39	6	25	5	45	4	47	4		
Somerset	72	1			41	2	26	4	48	0				
Monmouth	71	7			42	11								
Devon	76	8			38	1	27	8						
Cornwall	67	9			32	11	21	5						
Dorset	78	7			40	0	29	0						
Hants	78	4			39	2	32	5	40	6				

LONDON PRICES OF GRAIN for October, 1804.

MARK-LANE, Monday, October 1.

The supply of Bread-Corn for this morning's market was not great, and, as usual, the want of fine samples rendered the price of Wheat, of that description, full as dear as last Monday; the ordinary sorts, however, bear no proportion in price with the above.

Barley, from the short quantity at market, is rather dearer; and Malt, of fine quality, as the brewing season approaches, is likewise getting higher.

In Beans, and most other articles, there is also a briskness, particularly in new fine Wheat Pease.

Oats are plentiful, and prices about last week's currency.

Price of Grain, on board Ship, as under.

Wheat	56s to 76s	Malt	66s to 72s od	Grey Peas	36s to 42s od
Fine	77s to 79s od	Oats	24s to 29s	Beans, new	40s to 45
Rye	38s to 42s	Polands ditto	30s to 31s od	Old ditto	—s 46
Barley	31s to 36s 6d	White Peas	40s to 48s od	Ticks	33s to 38

Monday, October 8.

Our supply of Wheat was a tolerable good one to-day, and having many buyers, occasioned the sales to be brisk, though not on much higher terms than last Monday.

Barley continues a rising article, and Malts obtains 4s. and 5s. per quarter more money than last week. White Pease are likewise dearer; Beans of both sorts the same. Oats arrive in large quantities, and the fine fetch full as good prices as noted in our last currency, but the ordinary are very dull, and rather lower.

Flour 70s. per sack.

Wheat	58s to 76s	Malt	72s to 78s od	Grey Peas	40s to 44s 6
Fine	78s to 80s od	Oats	23s to 28s	Beans, new	38s to 43s od
Rye	39s to 42s od	Polands ditto	29s to 30s od	Old ditto	46s od
Barley	35s to 40s od	White Peas	43s to 52s od	Ticks,	32s to 40s od

Monday, October 15.

The supply not being great this morning, our fine Wheats, both English and Foreign, obtained 2s. per quarter more than last Monday. Flour is getting dearer, but not to warrant an advance upon 70s. for this day, whatever the subsequent sales of the week may command. Barley comes sparing to hand, and is dearer. Fine Malt is also higher. Pease and Beans of the various sorts and qualities all look upwards. Oats may be termed a good supply—they are not dearer.

Wheat	57s to 78s	Malt	74s to 80s od	Grey Peas	38s to 44s od
Fine	80s to 82s od	Oats	23s to 27s	Beans, new	37s to 43s od
Rye	40s to 43s od	Polands ditto	28s to 29s 6d	Old ditto	46s od
Barley	37s to 42s od	White Peas	48s to 53s od	Ticks	33s to 41s od

Monday, October 22.

The supply not being great, and buyers very numerous, our sales of wheat were made on higher terms this morning than on last Monday. Barley and Malt are both likewise on the rise, as is almost every other article of grain, the criterion of which may be ascertained by reference to our prices below. Oats, though a good supply, have gained a little advance. Flour is dearer, as the present, compared with last week's currency, will shew.

Wheat	50s to 60s	Malt	78s to 84s od	Grey Peas	36s to 45s 6d
Fine	65s to 85s od	Oats	25s to 30s	Beans, new	38s to 44s od
Rye	38s to 44s	Polands	31s to 32s od	Old ditto	48s od
Barley	38s to 45s od	White Peas	50s to 54s od	Ticks	36s to 42s od

TO OUR CORRESPONDENTS.

OUR obligations to our friendly and intelligent Correspondent, N. B. are increased by his intimation on the utility of inserting some translations from the French writer he has named. It is true, we do not consider an entire translation of the work to which he alludes would be acceptable to our readers, but if N. B. would favour us with a few pages for two, three, or four of our Monthly Publications, selected at his own convenience, from the most instructive and curious sections, we have no doubt they would be a valuable acquisition.

We have answers to some papers of our valuable Correspondent, A. N. which are unfortunately too late for insertion this month. We will say thus much, however respecting them, that we think they have sufficient merit to deserve a reply.

The Younger Scaliger has favoured us with some strictures on recent foreign productions on the subject of Agriculture, which will appear in the Critical Catalogue for the ensuing month.

We are glad our Correspondent was pleased with the Paper from Mercator Terraconensis, on the State of Agriculture in a Northern Kingdom; and he has shewed his satisfaction in a form to us very acceptable, by a communication on the Husbandry of Spain, at the most flourishing period of its history, when the scientific Arabian availed himself of the aid of all the sister arts, to render productive the most generous soil on the face of the globe.